

# Romania

## Environmental Performance Reviews



Third Review





UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

# ENVIRONMENTAL PERFORMANCE REVIEWS

## ROMANIA

### Third Review



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## *Foreword*

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The Third Environmental Performance Review (EPR) of Romania builds on the substantial experience accumulated by the United Nations Economic Commission for Europe (ECE) and its member States in using the EPR tool to regularly assess progress achieved in reconciling national economic and environmental objectives. Over a quarter of a century, EPRs have resulted in: stronger institutions for environmental governance, management and performance; improved financial frameworks for environmental protection; advanced environmental monitoring and information systems; better integration of environmental concerns into sectoral policies; strengthened public participation; enhanced environmental awareness; and increased international cooperation. EPRs bring together good practices and a wealth of experience from all ECE member States in a mutually enriching learning exchange.

Overall, Romania advanced well in setting the conditions necessary for implementing the 2030 Agenda for Sustainable Development. Since the last review, Romania adopted a new Strategy for Sustainable Development 2030 and established cross-sectoral governance and institutional structures, notably the Intergovernmental Committee for Sustainable Development and the State Department for Sustainable Development. The country has updated its environmental legislation by adopting several new laws and amending existing legislation. The environmental policy framework was also updated. Priority issues requiring further attention by Romania, as identified in the EPR, include: the promotion of sustainable development and support of the cross-cutting work of the Department for Sustainable Development; the streamlining and stabilization of the environmental legal framework; the improvement of interministerial cooperation to ensure continuity and coherence in environmental policy; the strengthening of regulatory and compliance assurance mechanisms; the boosting of strategic planning and implementation efforts to address climate change and biodiversity loss; the guarantee of public participation in decision-making on environmental matters; and the enhancement of open access to environmental information. Furthermore, the Third EPR highlights the need for: more strategic management of water resources; the expansion of the solid waste integrated management systems to cover the entire country; the greening of the economy through green public procurement and private sector participation; the building of resilience to climate change; and support of the path to a low-carbon economy and society.

Romania's Third EPR was conducted during the challenging times of the coronavirus (COVID-19) pandemic. To help the country address concerns related to pandemics, the EPR recommends the improvement of air quality and raising awareness about the negative health impacts of air pollution as a critical factor in mitigating the impact of COVID-19 and other future possible airborne threats, and adapting procedures to ensure effective public participation in decision-making on environmental matters in times of pandemics.

I would like to highlight the richness of the Third EPR of Romania, addressing 54 Sustainable Development Goal (SDG) targets and making 61 recommendations. I trust that the third review will serve as a powerful tool to support decision makers and policymakers as well as representatives of civil society in their efforts to improve environmental governance, management and performance and achieve the SDGs in Romania.

ECE wishes the Government of Romania further success in carrying out the tasks involved in meeting its environmental objectives, including through the implementation of the recommendations in the third review. I also hope that the lessons learned from the peer review process in Romania will benefit other countries throughout the ECE region.



Ms. Olga Algayerova

United Nations Under-Secretary-General Executive Secretary  
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## *Preface*

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The Third EPR of Romania takes stock of progress made in the governance and management of the environment since the second review in 2012, assesses the implementation of the recommendations of that EPR and makes new recommendations for the country to implement. In addition, the Third EPR looks into developments related to the country's attainment of relevant targets of the 2030 Agenda for Sustainable Development.

The review covers legal and policy frameworks and compliance assurance mechanisms. It also focuses on greening the economy, environmental information, monitoring and assessment, environmental democracy and education for sustainable development (ESD). At the domestic–international interface, it includes a substantive analysis of the country's participation in and commitments to international agreements, as well as its climate change adaptation and mitigation measures. Furthermore, the EPR addresses issues of specific importance to Romania related to air protection, water management, waste and chemicals management and biodiversity and protected areas. Finally, the review includes an assessment of 54 SDG targets, including nine targets being reviewed in several chapters from different perspectives. In some cases, a comprehensive analysis of SDGs and targets is hindered by the lack of data and information.

The Third EPR of Romania began in May 2019 with a preparatory mission to agree on the structure of the report and the schedule for its completion. A team of international experts took part in the review mission from 3 to 11 December 2019. Romania received the draft report for comments in September 2020 and, in October 2020, it was submitted to the ECE Expert Group on Environmental Performance Reviews for consideration. During its meeting on 20–23 October 2020, the Expert Group discussed the draft report with a delegation from Romania, focusing on the conclusions and recommendations made by the international experts. The recommendations, with suggested amendments from the Expert Group, were then submitted for peer review to the ECE Committee on Environmental Policy at its twenty-sixth session on 9–10 November 2020, which was attended by a high-level delegation from Romania. The Committee adopted the EPR recommendations.

The Committee and the ECE secretariat are grateful to the Government of Romania and its experts who worked with the international experts and contributed their knowledge and expertise. ECE would also like to express its deep appreciation to the German Federal Ministry for Environment, Nature Conservation, Building and Nuclear Safety and the German Federal Environment Agency for their support by providing funds through the Advisory Assistance Programme for their financial support to this review.

Sincere thanks also go to Hungary and Portugal for having provided their experts to this review. Furthermore, ECE is grateful to the United Nations Children's Fund (UNICEF) for its support of this review.

In addition, ECE takes this opportunity to thank Austria, Germany and Switzerland for their financial support to the EPR Programme and expresses its deep appreciation to Estonia, Georgia, Germany, Hungary, Italy, Montenegro and Switzerland for having provided their experts for the ECE Expert Group on Environmental Performance Reviews, which undertook the expert review of this report.



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### **ECE COMMITTEE ON ENVIRONMENTAL POLICY PEER REVIEWS THE ENVIRONMENTAL PERFORMANCE OF ROMANIA**

At its twenty-sixth session (Geneva, 9–10 November 2020), the ECE Committee on Environmental Policy peer reviewed the environmental performance of Romania and adopted the recommendations contained in the Third EPR of Romania (ECE/CEP/2020/2, paras 39–42 and 50 (a)).<sup>1</sup>

To mark this event, the ECE issued a Press Release “Recommendations of Third Environmental Performance Review will help Romania towards advance sustainable development”.<sup>2</sup>

*Excerpt from the Report of the Committee on Environmental Policy on its twenty-sixth session*

The Committee proceeded with the peer review of the environmental performance of Romania. The review’s 11 chapters and associated recommendations (information paper No. 2/Rev.1) had earlier been examined by the ECE Expert Group on Environmental Performance Reviews together with Romanian experts virtually from 20 to 23 October 2020.

The Secretary of State of the Ministry of Environment, Water and Forests of Romania, highlighted the main priorities for the country in terms of advancing environmental governance, including the codification of numerous environmental legislative acts in order to ensure their consolidation, the improvement of interministerial cooperation to ensure continuity and coherence in environmental policy, the strengthening of regulatory and compliance assurance mechanisms, the boosting of strategic planning and implementation efforts to address climate change and biodiversity loss, and the guarantee of public participation in decision-making on environmental matters. Romania was also seeking to strengthen its activities to protect the Carpathian Mountains by enhancing institutional coordination and administrative capacity for the implementation of the Framework Convention on the Protection and Sustainable Development of the Carpathians and its Protocols.

The Chair of the Expert Group on Environmental Performance Reviews (Estonia) informed the Committee on Environmental Policy of the main outcomes of the Expert Group’s work in 2020, highlighting the richness of the Third EPR of Romania, with its 61 recommendations and addressing 52 targets of the Sustainable Development Goals. He also emphasized the constraints of virtual meetings, while recognizing the positive aspect of enabling a broader participation of experts from the reviewed country.

Sharing key findings in selected areas of the Third EPR of Romania, the rapporteur designated by the Expert Group on Environmental Performance Reviews (Italy) drew attention to priority issues that needed to be tackled by the country, including the promotion of sustainable development and support of the cross-cutting work of the Department for Sustainable Development, the streamlining and stabilization of the environmental legal framework, and the enhancement of open access to environmental information by upgrading and further

<sup>1</sup> The Report of the Committee on Environmental Policy on its twenty-sixth session (ECE/CEP/2020/2) is available on the ECE website at <https://unece.org/environmental-policy/events/twenty-sixth-session-committee-environmental-policy>.

<sup>2</sup> The ECE Press Release is available on the ECE website at: <https://unece.org/environment/press/recommendations-third-environmental-performance-review-will-help-romania-towards>.

developing the country's integrated environmental information system. The rapporteur also highlighted the need for more strategic management of water resources in Romania, the expansion of the solid waste integrated management system to cover the entire country, the greening of the economy through green public procurement and private sector participation, the building of resilience to climate change and support for the path to a low-carbon economy and society. Lastly, in relation to the pandemic, the Review recommended the improvement of air quality and the raising of awareness about the negative health impacts of air pollution as a critical factor in mitigating the impact of COVID-19 and other future possible airborne threats, as well as adapting the public participation procedure to ensure effective public participation in decision-making on environmental matters in times of pandemic.

The Committee adopted the recommendations contained in the Third EPR of Romania.

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## KEY ABBREVIATIONS AND ACRONYMS

ANRSC	National Regulatory Authority for Municipal Services of Public Utilities
ASRO	Organismul Național de Standardizare (national standardization body)
BAT	best available techniques
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CJEU	Court of Justice of the European Union
CLP	classification, labelling and packaging
CSR	corporate social responsibility
DDBRA	Danube Delta Biosphere Reserve Administration
EC	European Commission
ECE	United Nations Economic Commission for Europe
EE	environmental education
EEA	European Environment Agency
EFA	Environment Fund Administration
EEE	electrical and electronic equipment
EIA	environmental impact assessment
EMAS	Eco-Management and Audit Scheme
EMEP	Co-operative programme for monitoring and evaluation of the long-range transmission of air pollutants in Europe (European Monitoring and Evaluation Programme)
EMS	environmental management system
EPR	Environmental Performance Review
EPR	extended producer responsibility
ESD	education for sustainable development
ESIF	European structural and investment funds
ETS	emissions trading system
EU	European Union
FDI	foreign direct investment
GC	green certificate
GD	Government Decision
GDP	gross domestic product
GEO	Government Emergency Ordinance
GHG	greenhouse gas
GMO	genetically modified organism
GPP	green public procurement
ICPDR	International Commission for the Protection of the Danube River
IDA	intercommunity development association
IED	Industrial Emissions Directive
IIR	Informative Inventory Report
IMPEL	European Union Network for the Implementation and Enforcement of Environmental Law
INSPIRE	Infrastructure for Spatial Information in the European Community
IPCC	Intergovernmental Panel on Climate Change
IPPC	integrated pollution prevention and control
LCP	large combustion plant
ISO	International Organization for Standardization
IUCN	International Union for Conservation of Nature
LEPA	local environmental protection agency
LULUCF	land use, land-use change and forestry
MEA	multilateral environmental agreement
MO	Ministerial Order
MoEWF	Ministry of Environment, Waters and Forests
MoER	Ministry of Education and Research
MoU	memorandum of understanding
MSW	municipal solid waste
NANPA	National Agency for Natural Protected Areas
NBSAP	National Strategy and Action Plan for Biodiversity Conservation
NEPA	National Environmental Protection Agency
NEG	National Environmental Guard
NGO	non-governmental organization
NIRDF	National Institute for Research and Development in Forestry named after Marin Drăcea
NMP	National Management Plan for the Danube River Basin for the period 2016–2021

NMVOC	non-methane volatile organic compound
NPP	nuclear power plant
NWMP	National Waste Management Plan
ODA	official development assistance
ODS	ozone-depleting substance(s)
OECD	Organisation for Economic Co-operation and Development
PCB	polychlorinated biphenyl
PE	population equivalent
POP	persistent organic pollutant
PM	particulate matter
PPP	public–private partnership
PPP	purchasing power parity
PRTR	pollutant release and transfer register
RBMP	river basin management plan
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RENAR	Romanian Accreditation Association
RES	renewable energy source(s)
RIA	regulatory impact assessment
Romanian Waters	National Administration “Romanian Waters”
Romsilva	National Forest Administration “Romsilva”
SCI	site of community importance
SEA	strategic environmental assessment
SEIS	Shared Environmental Information System
SPA	special protection area
SWIMS	solid waste integrated management system
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
WEEE	waste electrical and electronic equipment
WHO	World Health Organization

## SIGNS AND MEASURES

..	not available
-	nil or negligible
€	euro
US\$	United States dollar
eq.	equivalent
GWh	gigawatt-hour
ha	hectare
kg	kilogram
km	kilometre
km <sup>2</sup>	square kilometre
kt	kiloton
kW	kilowatt
kWh	kilowatt-hour
l	litre
m	metre
m <sup>2</sup>	square metre
m <sup>3</sup>	cubic metre
mg	milligram
Mg	megagram
mm	millimetre
MW	megawatt
MWh	megawatt-hour
t	ton (1,000 kg)
µg/m <sup>3</sup>	microgram/cubic metre
y	year

**CURRENCY CONVERSION**

Exchange rate (period average)

	<b>Lei per euro</b>	<b>Lei per US\$</b>
<b>2010</b>	4.21	3.18
<b>2011</b>	4.24	3.05
<b>2012</b>	4.46	3.47
<b>2013</b>	4.42	3.33
<b>2014</b>	4.44	3.35
<b>2015</b>	4.45	4.01
<b>2016</b>	4.49	4.06
<b>2017</b>	4.57	4.05
<b>2018</b>	4.65	3.94
<b>2019</b>	4.75	4.24
<b>2020</b>	4.84	4.24

Source: ECE statistical database (accessed 16 February 2021).

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## *Executive summary*

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*The Third Environmental Performance Review (EPR) of Romania assesses the progress made by the country in managing its environment and in addressing new challenges since the Second EPR in 2012, including progress in achieving Sustainable Development Goals (SDGs).*

### **Sustainable Development Goals**

*Romania has set up its national framework for delivering on the 2030 Agenda for Sustainable Development (2030 Agenda) and achieving the 17 SDGs, including policy and institutional prerequisites. The country supports the implementation of the 2030 Agenda at the highest political level, as demonstrated by a joint statement issued in 2016 by both houses of Parliament highlighting the need for sustainable development to be at the core of public policy. Before that, in 2015, the country established the Subcommittee for Sustainable Development within the lower house of Parliament.*

*Romania developed in 2017–2018, through a multistakeholder comprehensive consultation process, a new strategy on sustainable development – the National Strategy for the Sustainable Development of Romania 2030 (SDS 2030) – aligning the national context to the 2030 Agenda and serving as the strategic framework for ensuring the coherence of sectoral policies for the successful implementation of the SDGs. The Action Plan for implementation of the new Strategy is in the drafting process and expected to be finalized by mid-2022.*

*SDS 2030 was developed with the idea that it should be understood by all; its length and simplicity reflect that. However, the Strategy does not contain information on mechanisms to achieve SDGs and targets, and a vision of the dynamics of their achievement. Financial resources for implementation of SDS 2030 are yet to be identified and ensured. Regular reporting mechanisms on implementation of SDS 2030, including data collection and coordination across the subnational levels, remain to be established. Also, the principles of SDS 2030 are not yet reflected throughout the policy framework.*

*The main institutional framework for sustainable development is established in Romania. In 2017, the Department for Sustainable Development was created within the Prime Minister's Office and, in 2019, the Government established the Interdepartmental Committee for Sustainable Development, consisting of members of the Government and chaired by the Prime Minister. SDS 2030 provides the framework for creating other bodies and structures, thereby enabling the involvement of all key stakeholders in future decision-making on sustainable development.*

*In 2018, Romania issued its Voluntary National Review of implementation of the SDGs, focusing on SDGs 6, 7, 11, 12, 15 and 17. Based on the SDGs Index and Dashboards 2019, Romania was well positioned at 42nd of 162 countries.*

*The National Institute of Statistics is working on updating the existing Sustainable Development Indicators system, which was developed based on the previous National Strategy for Sustainable Development. It maintains a publicly available database, “Sustainable Development Indicators in Romania (SDIR)”, in Romanian and English. The database includes indicators pursuant to the objectives and actions established by the National Strategy for Sustainable Development for 2013, 2020 and 2030. Romania is also reporting on SDG global indicators to Eurostat, which regularly monitors progress towards the SDGs in a European Union (EU) context.*

*Romania promotes SDGs through formal and non-formal education and training. Since 2016, students from the general education path are familiarized with the SDGs, sometimes during classes but mostly during tutoring hours and extra-curricular activities. The ministry in charge of education has a dedicated space on its website on education for sustainable development (ESD) and the SDGs, containing awareness-raising information and national and international documents and resources on ESD and sustainable development.*

## Legal, policy and institutional framework

*In Romania, the Government has a limited law-making mandate that includes government decisions (GDs) as implementing acts, regular ordinances during parliamentary recesses and government emergency ordinances (GEOs) in emergency situations.* While organic laws regulating areas of high importance cannot be amended by ordinary laws, the latter can be amended by GEOs, which are passed without public consultation.

*Romania is party to the Aarhus Convention and Law No. 52/2003 on transparency of decision-making in public administration, with subsequent amendments, grants to its citizens participation in decision-making in environmental matters,* thereby contributing to developing a sustainable future through promotion of environmental justice.

*The environmental legal framework is prone to frequent changes because of the need to harmonize it with the ever-growing EU environmental legislation and as a consequence of overusing emergency procedures through GEOs.* Environment-related emergency procedures account for a large part of law-making in Romania, thus not respecting citizens' right to participate in decision-making on environmental matters. The substance regulated by environment-related GEOs does not reflect urgency and their validity is not limited to overcoming an urgent issue. This in turn negatively affects legal certainty, the coherence of legislation and the stability of the environmental legal framework.

*Maintaining a simple and understandable legislative framework could greatly contribute to the efficiency and effectiveness of the implementation of the environmental legislation.* Key environmental legal acts in Romania have passed through numerous amendments during the last two decades, creating a patchwork of laws, GEOs, and other legal acts, making the environmental legal framework unnecessarily complicated and lacking in clarity and coherence. The country recognized the need for simplifying legislation through the Strategy for Better Regulation 2014–2020 but, as at December 2019, tangible results are not evident.

*Romania introduced the regulatory impact assessment (RIA) instrument in 2005; however, the country's challenge is to enhance the use and quality of RIA, including using it at early stages of legal drafting to ensure a results-oriented legal framework.* The use of RIA can address many shortcomings of the environmental legal framework, ensuring that implementation of regulatory acts could be financed, that they are not overlapping or contradictory with other existing legislation and that public consultation processes contribute to the quality of legislation. The environmental dimension of RIA could contribute to achieving the SDGs.

*The environmental policy framework demonstrates systemic instability.* The main policy document, the Government Programme, does not provide directions to institutional strategic plans covering overall strategic directions of the sectoral policies. The strategic planning, including on environmental matters, is generally not connected with budgetary cycles.

*Long before their expiry, environmental strategies are replaced with completely new documents instead of being reviewed in line with new circumstances, thus defining different goals, priorities, and timeframes.* In addition, draft environmental strategic documents are trapped in a long and costly strategic environmental assessment (SEA) process coupled with administrative adoption procedures, which means documents are already outdated at the time of adoption. Since 2012, 30 SEA procedures were completed in Romania for plans and programmes at the national and regional levels, while some were started in the period 2016–2017 and are not yet completed.

*Policy documents rarely contain measurable indicators and precise targets.* Their implementation lacks monitoring and reporting and typically an analysis of their impact is not carried out, thus weakening the policy framework, and diminishing its usefulness, putting in jeopardy further policy planning based on results and evidence, especially in terms of aligning the policy framework with the 2030 Agenda for Sustainable Development.

*The central part of the institutional framework for environmental protection is rather unstable in terms of leadership, scope of responsibilities and prioritized subsectors.* In the period between 2012 and 2020, the ministry in charge of the environment changed its composition eight times.



*The Ministry of Environment, Waters and Forests maintains efficient interlinkage with institutions subordinated to it or under its authority.* Strict division of responsibilities among different ministries or sectors is noticeable throughout both the legal and policy frameworks.

### **Regulatory and compliance assurance mechanisms**

*Since 2012, the country made progress in its regulatory and compliance assurance mechanisms.* Changes have been introduced to permitting and licensing to align the national system with EU legislation. The competent authorities have been reorganized, notably with the removal of the regional level in the National Environmental Protection Agency (NEPA), and new legislation was introduced for integrated environmental permits. Nonetheless, many of the more technical aspects of permitting and licensing persist from the early 2000s.

*Integrated environmental permitting has been successfully revised and the regulated community has evolved greatly since 2012.* However, permitting of some major polluters continues to pose a challenge, notably in terms of urban wastewater and large coal combustion plants.

*Romania introduced a requirement for operators to apply for an annual visa on a permit,* to be granted by the authority that issued the permit, which de facto reduces the validity to one year, renewable indefinitely. Implementing procedures for the annual visa were issued in May 2020. Recent legislative changes regarding annual visas on permits and a change in the scope of construction permits may alter the effectiveness of the permitting regime.

*Implementation remains the main challenge in environmental protection,* Romania being among the EU Member States with the highest number of environmental infringements, including for the authorization of projects without the necessary assessments and permits. However, all six infringement cases brought by the European Commission regarding impact assessment have since been closed.

*Environmental impact assessment (EIA) legislation has been successfully revised to bring about a more integrated approach; the necessary guidelines continue to be issued.* However, the introduction of legislation that waives environmental protection laws for projects of national importance sets a bad precedent for regional infrastructure and other large projects. EIA practice, and permitting, in relation to mining and forestry projects is of greatest concern to civil society.

*Environmental authorities are able to provide effective tools, such as the Forest Inspector initiative.* Generally, arrangements for public participation in decision-making on environmental matters and access to environmental information are inadequate; access to justice in environmental matters has proven to be an important avenue for addressing failures. Public complaints are not routed efficiently. Non-governmental organizations (NGOs) report that public participation in permitting and EIA is constrained, as is public access to relevant information in relation to permitting and inspection, EIA and forest management planning.

*Local authorities sometimes pay insufficient attention to the ramifications of rezoning, including mixed residential/commercial zoning, and to the required minimum distances from certain land uses.* This inevitably leads to objections from residents to permitting of industrial activities and to complaints about noise, smell and waste. Appeals by the public have proven to be a vital check on such issues.

*Emission, ambient quality and product standards are being strengthened by the continuing alignment with EU and ISO standards.* The move away from national to international standards is not accompanied by the translation and availability of standards in Romanian.

*The frequency of inspection has declined since 2012, but there is evidence of more severe sanctions being sought and applied in several areas.* Numerous authorities cooperate and coordinate their compliance activities to increase effectiveness. The inspections by local authorities of construction and demolition waste is weak, though action is being taken to fill the current legal gaps.

*The availability of legal expertise across the environmental authorities is uneven, as is the capacity of prosecutors and courts to address cases brought by the environmental authorities.* Despite some progress, few prosecutors are experienced in environmental law and the legal profession has insufficient expertise in environmental crime.

Sanctions risk being blocked pending appeal, which allows damaging behaviour to continue. Sanctions, particularly fines imposed on legal entities, may also be too low to be dissuasive in some sectors. Illegal logging is a concern of the public and the true situation is disputed.

*Not enough efforts are made to encourage the uptake of the European Eco-Management and Audit Scheme (EMAS), environmental management systems and, especially, eco-labelling and sustainability reporting.* The environmental liability regime remains at an early stage of development. ISO 14001 proved to be of interest but the number of certificates has recently declined, while EMAS has failed to attract companies. Eco-labelling has also failed to take off. The picture regarding sustainability reporting is unclear, with transnational corporations showing most interest. Sustainability reporting does not place sufficient emphasis on environmental and anti-corruption matters.

*The changes in institutional arrangements have been beneficial.* The regional level in NEPA was removed without having caused difficulties and the Forest Guard has been established, constituting an important addition. However, the Forest Guard is not strong enough to respond to public concern about illegal logging and wildlife crimes. The National Environmental Guard (NEG) is a key, well-organized actor. Technical Review Committees provide a valuable mechanism for coordination.

*Many authorities see a shortfall of about one fifth in their current staffing relative to their post structure.* Many of the bodies that are subsidiary to the Ministry of Environment, Waters and Forests, among others, have fewer staff on post than was foreseen to fulfil responsibilities in relation to permitting, EIA and inspection. The future workload of local environmental protection agency (LEPA) staff, which is heavy, is uncertain, given changes in the scope of construction permits and in the annual visa on environmental permits.

*The main source of information on regulatory and compliance assurance mechanisms is the annual activity reports produced by the various responsible bodies.* The availability and form of such reports is variable. Some reports are essentially long lists of activities, while others are in a scanned format, which prevents automatic search or extraction of related data, thereby hindering the assessment of performance, which is dependent upon the availability of accessible, timely and adequate information.

## **Greening the economy and financing environmental protection**

*Economic-incentive mechanisms for greening the economy are used in the main areas of concern such as air and water pollution and waste generation.* The tax rates, however, are low and do not necessarily provide incentives for the reduction of negative externalities. In energy taxes, excise duties are applied to all energy products used for transport and heating, including electricity, coal and natural gas. Excise duty rates are at least at the EU minimum rates although a small “diesel differential” remains.

*The economic incentive mechanisms already in place require further action to promote efficient use of natural resources.* While economic incentive mechanisms, such as taxes, subsidies and tradable permits, are in place, Romania still faces challenges in achieving its environmental goals, in particular in water and waste management and air quality protection. Hence, further actions on environmental taxation are justified due to the considerable potential for increasing revenue from environmental taxes.

*The country levies user charges for water abstraction and royalties for the extraction of minerals, oil and gas. In the area of municipal utility services, while tariffs are set in order to ensure cost recovery, waste and water companies still face operational difficulties.* The infrastructure is obsolete and requires funds for maintenance and upgrading, and available funds are not easily mobilized and absorbed, which seems to reveal low capacity within responsible authorities. Although a national regulator has been in place for more than a decade, the regulatory framework does not include proper benchmarking and appropriate performance incentives. This applies also to waste management.

*The potential benefits from public–private partnerships (PPPs) in the provision of municipal utility services and the financing of the associated infrastructure remain to be fully explored.* In the energy sector, electricity tariffs have approached cost-reflective levels and cross-subsidies from business entities to households have been reduced. Government capacity in negotiation of and monitoring PPP contracts is limited.

*Environmental expenditures are financed mainly from earmarked revenue from environmental taxes and charges on motor vehicles and from the sale of EU Emissions Trading System certificates.* Most of the electricity market is now liberalized. The role of renewable energy sources in total electricity supply has been promoted with a system of feed-in tariffs. Efforts are ongoing to improve energy efficiency with government subsidies.

*The country has benefited from foreign financial assistance,* with the EU having a leading role since 2007. Still, low institutional capacity and infrastructure development have hindered the country's fund absorption capacity. The country is at risk of forgoing amounts of money for the next funding period.

*Green jobs and green markets have increased; some challenges to their development remain.* Companies consider that product market regulations are too cumbersome with administrative procedures being long and complicated. Also, Romania still has low (green) innovation and knowledge indicators.

*Policies favouring circular economy initiatives and better recycling and waste management practices, for instance, are useful in decreasing material consumption while increasing resource productivity.* However, expenditures on research and development (R&D) in environmental protection remain low, reaching only 0.004 per cent of government expenditures in environmental protection. This necessary condition for green technological change is not met. The country lags behind the EU in R&D and a number of indices of innovation and connectedness.

### **Environmental monitoring and information**

*The National Air Quality Monitoring Network has somewhat improved, with an increase in the number of stations and the replacement of instruments during periodic maintenance activities for monitoring and calibration equipment.* At the same time, the number of technically outdated and obsolete monitoring stations remains substantial. Gaps remain concerning the appropriate number and type of air quality sampling points. The country is faced with a systemic failure to comply with the EU obligations to monitor air quality.

*Overdependence on funding from international projects has resulted in the fluctuation and decline of monitoring capacity and infrastructure overall.* Government attempts to have effective implementation of the programme that covers activities for the development and optimization of the National Air Quality Monitoring Network are severely impeded by the overall insufficient human, technical and financial capacity to ensure comprehensive monitoring of air quality.

*The environmental radioactivity network lacks financial and human resources to maintain and upgrade the existing equipment.* The wear on the equipment has become visible, for which permanent maintenance cannot be assured in an adequate manner. The lack of sufficient personnel capable of operating the equipment can affect prompt response in an emergency situation, as well as timely response to current activities.

*The National Reference Laboratory for Air Quality and the National Reference Radioactivity Laboratory operated by NEPA both face challenges related to insufficient funding and staff* to ensure adequate servicing, updating, and calibrating of the monitoring and calibration equipment. In the past seven years, the equipment of laboratories has not been changed, while the staff capacity has been reduced.

*A noise monitoring system remains to be put in place, as do noise action plans and noise maps,* although local environmental laboratories assess noise by measurements for the State of the Environment Report.

*Romania started working on a biodiversity monitoring system through two projects run to support the country's reporting under the EU Habitats and the EU Birds Directives.* However, a system for biodiversity monitoring has not yet been established in practice. Some wild species and habitats are included in programmes and research projects undertaken by universities, museums, research institutes and some NGOs. Relevant authorities have carried out some monitoring of flora and fauna and bird populations in known locations as a basis for understanding where challenges may occur.

*The National Forest Inventory does not represent a census of all trees in Romania.* The Government pledged financial and logistical resources for the third cycle of the National Forest Inventory and a budget allocation for the purchase of satellite maps to further develop the work of the satellite traceability system.

*All environmental statistics produced by the National Institute of Statistics are made publicly available online on the Institute's website in both English and Romanian.* However, the Environmental Accounts Publication is not available free of charge and online statistical data are not easily accessible via links provided on the website. These two impediments hinder open access to the environmental data. Moreover, time series data are not regularly updated.

*Although Romanian public authorities must share spatial data free of charge between public administrations, the lack of resources, knowledge and collaboration have delayed implementation.* Access to air quality data and the generation of air quality monitoring reports via a web interface are complicated and not user friendly.

*Romania's efforts regarding the implementation of the corporate social responsibility (CSR) principles has seen some results.* Nonetheless, the country does not have a mechanism in place for data collection on the number of CSR or sustainability reports published by companies.

*The current level of environmental reporting by Romanian-listed companies is low.* In fact, some enterprises do not submit information to LEPAs. The information and data reported in corporate environmental reports are generally incomplete and largely irrelevant for users.

### **Environmental democracy**

*Access to information on environmental matters improved with the development by NEPA of the Integrated Environmental Information System as a tool to enhance the availability and accessibility of information online.* The Integrated Environmental Information System has not been expanded, modernized and further developed due to lack of adequate resources. Not all information therein is accessible online free of charge to the public, thereby hindering timely access to pertinent environmental information, on both the state of the environment and environment-related matters.

*The ministry in charge of the environment published the Public Authorities Guide for Access to Environmental Information.* The development of the Guide is a clear indication that the environmental public authorities are trying to improve public access to information.

*Access to environmental legislation is well provided on the government legal portal <http://legislatie.just.ro/>, as well as on the website of the ministry in charge of the environment and subsidiary institutions, albeit not always in the latest consolidated version.*

*The biggest challenge in access to information is the discrepancy between the large amount of information provided on the website of the ministry in charge of the environment and the actual need of the public for specific environmental data* on emissions into air and discharges into water, and the forest management plans of the state and private operators, which are not readily available.

*Certain information on environmental matters (e.g. amount of water used by hydropower plants, discharges into water, daily emissions into air from power plants and forest management plans) is not readily provided upon request by NGOs.* Enforcing compliance with the court decision regarding the non-provision of requested environmental information by public authorities and state enterprises, ruled in favour of NGOs, is not addressed.

*During the last several years, no resources were allocated for in-service training of staff in the ministry in charge of the environment and NEPA.* Furthermore, public authorities in charge of various economic and other sectors do not benefit from training on access to information on environmental matters.

*There has been no major change in the organization of public participation in decision-making on environmental matters, with the exception of the new Law on EIA, requiring the public authorities to put the public interest above any request for confidentiality, thereby facilitating access to the information necessary for meaningful public participation, provided that the legal provisions for public participation are implemented effectively.*

*Overall, the procedures for public participation in decision-making on strategic planning and legislation are well established* with public authorities making draft documents available on their websites (mostly for 10 days only, which is the minimum prescribed by law), enabling the public to submit comments. Regular training courses on

meaningful public participation in decision-making on environmental matters for civil servants of public authorities at the central and local levels are yet to be established.

*Environmental public authorities are making efforts to comply with the legal provisions in force and enable public participation for projects and permitting procedures.* From the NGOs' point of view, more proactive measures and efforts by the authorities at all stages of public participation in decision-making on environmental matters are necessary if public participation is to be organized in a meaningful and effective way.

*In 2020, during the COVID-19 pandemic, the ministry in charge of the environment and its subsidiary institutions advised members of the public to submit all requests and comments via electronic means.* NEPA continued to organize several public hearings in person. The national procedures for access to information, public participation in decision-making and access to justice have yet to be adapted in line with the "Statement on the application of the Aarhus Convention during the COVID-19 pandemic and the economic recovery phase", adopted in September 2020.

*The ministry in charge of the environment elaborated a Strategy for the implementation of the provisions of Decision VI/8h regarding Romania's compliance with the requirements of the Aarhus Convention,* including addressing normative, strategic and organizational issues, thereby showing the country's commitment to improve its compliance.

*The Environment Fund Administration is running two programmes under which environmental NGOs can benefit from financial support for upgrading their vehicles to less polluting types.* Environmental NGOs can also partner with public authorities to participate in awareness-raising activities in the area of separate waste collection and recycling. At the same time, programmes for financing environmental protection, specifically targeting environmental NGO participation, are lacking.

*Including one member of an environmental NGO on the Advisory Committee of the Environment Fund Administration is a positive development.* At the same time, representatives of environmental NGOs are not consulted and engaged in establishing and running programmes for financing activities in various areas of environmental protection, especially those of emerging concern.

*The Environment Fund Administration has limited activities to support the engagement of environmental NGOs in environmental protection activities.* Special programmes are lacking to support running small and medium-sized projects in various areas of environmental protection and awareness-raising. There is no special programme to work with eco-schools, enabling them to apply for small grants, supporting their activities to develop and maintain eco-friendly approaches and "green" the school premises.

*There have been no major changes to access to justice in environmental matters since 2012. The new Law on EIA has provisions on access to justice,* enabling the public concerned to challenge, on procedural or substantive grounds, a decision or an omission of the competent public authority that is subject to public participation, including an approval for development, in line with the provisions of the Law on Administrative Litigation.

*The enforcement of court rulings in environmental matters is lagging behind.* Many court cases in environmental matters are filed by NGOs, mostly challenging the non-provision of requested environmental information by public authorities and state enterprises, many of which have been decided in favour of NGOs. Enforcing compliance with a court decision remains a challenge.

*Environmental cases in the courts usually last two to three years. They drain the financial and time resources of NGOs.* Often, environmental NGOs cannot afford to file cases in court or to continue challenging a court decision following an appeal, as their financial resources become exhausted.

*Courts do not have judges specialized in environmental cases or enough experts specialized in environmental law.* Some universities provide optional courses on environmental law for students of the legal faculty. Regular training for public authorities and judicial institutions to develop their capacity on access to justice in environmental matters is not carried out.

*NGOs are not eligible for legal aid provided by the State.* Pro bono legal aid in the environmental area is mostly received from national and international NGOs, associations and foundations.

### **Education for sustainable development**

*A comprehensive strategy dedicated entirely to environmental education (EE) and/or ESD, accompanied by a plan of concrete actions, as well as a monitoring mechanism to regularly measure progress in implementation, are still lacking in the country.* SDS 2030 includes a dedicated section on ESD and several related national targets, the achievement of which require taking practical action on ESD.

*EE and, to some extent, ESD are integrated into the formal education system mainly through the optional curriculum, civic education and extra-curricular activities, as well as in several subjects of the compulsory curriculum,* including at the initiative of individual teachers and responding to rising interest among students on issues such as climate change, plastic pollution, human rights, global warming, overpopulation and renewable energies. A systematic approach to developing, promoting and implementing EE and/or ESD in the national education system is lacking.

*EE and/or ESD is not integrated into the compulsory education of future teachers or in-service training of working teachers.* Targeted research to advance the development of EE and/or ESD best adapted to Romania's education system needs is not yet being conducted. Units dealing with EE and/or ESD are yet to be established in relevant public authorities at all levels.

*Public authorities in charge of education and of the environment are carrying out many activities to promote environmental protection and sustainable development, and, to some extent, EE and ESD. Environmental NGOs are leading in non-formal and informal EE and ESD.* Many of these activities are conducted through national and international projects. Several national strategies and programmes mention issues related to environmental protection and sustainable development, and, in a few cases, refer explicitly to EE and ESD.

*The development and implementation of EE and ESD in formal, non-formal and informal education at all levels requires adequate financial resources allocated systematically to relevant public authorities and research and education institutions.* The Eco-schools programme in Romania has nearly 300 enrolled educational institutions as at December 2019 and is a good approach to promoting EE and ESD.

### **Implementation of international agreements and commitments**

*Romania is party to most global and regional multilateral environmental agreements (MEAs).* Romania is not party to the Convention for the Control and Management of Ships' Ballast Water and Sediments, nor to the 2009 Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships.

*Romania has ratified the most recent MEAs.* Despite Romania's accelerated alignment to EU requirements and international environmental obligations, the level of implementation of MEAs remains low and enforcement assessments are not a common practice. Information about the implementation of policies related to MEAs, their results, achievements and impacts is very scarce.

*NGOs are never included in the Romanian delegations to MEAs' meetings of the parties or conferences of the parties; neither are they involved in the preparation of the country's position for international meetings.* However, NGOs are sometimes involved in the preparation of national reports or in projects related to the implementation of MEAs.

*Romania made efforts to comply with its international reporting obligations on biological diversity;* in some cases, however, the deadline for sending the report has not been met. Reporting to MEAs and non-binding processes implies the collection of data, which are often difficult to gather due to hardware and software maintenance costs and the need for trained personnel.

*As at December 2019, Romania has used one third of the European structural and investment funds (ESIF), totalling €30.84 billion, available to it.* The country must guarantee an average contribution of around 15 per cent of the total in order to spend the remaining two thirds by 31 December 2023.

*The Interministerial Committee for the Coordination of the Integration of Environmental Protection into Sectoral Policies and Strategies at the National Level enhanced its activity in 2011*, when it was given responsibilities for coordination of sustainable development in Romania. It has been working thus far in a role to support sustainable development.

*The Department for Sustainable Development was created in 2017 within the Prime Minister's Office, causing uncertainty as to the roles of the ministry in charge of the environment and the Interministerial Committee in the management of sustainable development and green economy.* Consequently, work on commitments on green economy has stopped.

*Air pollution from the transport sector is growing, road congestion is escalating and the health of the population is worsening.* Romania was not taking part in the Transport, Health and Environment Pan-European Programme (THE PEP) in 2019, despite studies showing an increase in road transport and decrease in rail transport.

*Romania is a country particularly and severely affected by desertification. The agri-environmental incentive package of the Rural Development Programme 2014–2020 did not produce the expected results.* The instrument chosen was not the most adequate tool to reduce the factors that contribute to desertification. The country has not set land degradation neutrality targets to halt the current trend that Romania faces with regard to desertification.

*Romania is party to the Framework Convention on the Protection and Sustainable Development of the Carpathians (Carpathian Convention) and has ratified its five protocols and accepted the amendment on climate change.* As at October 2020, only one staff member in the Ministry of Environment, Waters and Forests is in charge of coordinating implementation activities under the Convention and its protocols, which makes it difficult to organize all activities in an adequate and timely manner in line with the full potential of the country, given the large area of the Carpathians located in Romania.

## Climate change

*Romania is able to achieve and maintain the EU reduction targets, even if the higher economic growth scenarios come about.* This is due to the rapid and substantial decrease in greenhouse gas (GHG) emissions in the period 1989–1995 resulting from the rapid closure of many unprofitable manufacturing industries after the transition to a market economy. As an EU Member State, the country is required to achieve the EU targets to reduce GHG emissions by 20 per cent in 2020 and at least 40 per cent in 2030, compared with 1990.

*Romania has established a policy framework for addressing climate change*, including the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2030 and the National Action Plan for the Implementation of the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2020. However, the country has yet to publish reports on the implementation of the sectoral and cross-sectoral actions based on indicators identified for each action to help monitor progress in implementation.

*Romania set the renewable energy production target for 2030 at 30.7 per cent, to be achieved through diversifying and balancing the energy production mix.* The policy documents guiding the country action towards attainment of this target include the National Energy Strategy 2019–2030, with a perspective of 2050, and the draft Integrated National Plan on Energy and Climate Change 2021–2030.

*The Government has established the legal basis for support schemes designed to improve the energy performance of buildings by co-financing.* The low energy efficiency of residential and commercial buildings is largely due to the lack or insufficient level of thermal insulation in most buildings. The Strategy for mobilizing investments in the renovation of residential and commercial buildings existing at national level, both public and private, sets ambitious objectives concerning the energy efficiency of buildings, which is expected to provide large economic, social and environmental benefits.

*In the period 2012–2017, GHG emissions from transport increased by around 17.9 per cent, mainly because of the road transport subsector, which is responsible for 96 per cent of the GHG emissions of the transport sector.* Compared with emissions in the base year 1989, GHG emissions from transport in 2017 had increased by over

61.5 per cent. The car fleet is relatively old and is expected to grow in the future with rising incomes. The infrastructure in urban areas is insufficient to absorb this growth, which leads to congestion, parking problems and severe air pollution. The 2016 General Transport Masterplan includes measures to slow the growth of transport emissions.

*Flood protection infrastructure and water management organization lack sufficient investments to be adequately prepared for challenges linked to climate change.* Climate change is expected to have a major impact on water resources and management in Romania. An increase in the frequency and magnitude of floods, including flash floods and extreme droughts, especially in the south-east, is predicted. An increase in extreme droughts caused by climate change has a big influence on the application of irrigation, which has largely declined after the transition to a market economy.

*No mitigation measures are taken to decrease GHG emissions by improving the current low productivity levels in agriculture.* The impact of climate change on agriculture in Romania varies depending on geographical location, but the overall effect is negative as a result of increased flooding, more frequent and longer droughts and increased soil erosion.

## **Air protection**

*The concentration of air pollutants, assessed on the basis of available data for the period 2009–2018, shows a descending trend, although some issues of concern remain, such as particulate matter (PM) and NO<sub>2</sub> concentrations above the annual limit values in some cities.* Residential stationary combustion is a key emission source for all major pollutants, accounting for a dominant proportion of national emissions of PM, carbon monoxide, cadmium, zinc, polycyclic aromatic hydrocarbons (PAHs), dioxins and furans.

*The air quality monitoring network requires optimization.* Despite the number of air quality monitoring stations (148) and their spatial distribution throughout the country, Romania is under the procedure of infringement of EU law regarding gaps in air quality monitoring. The number of air quality zones and agglomerations defined in Romania (54 in total) is demanding in terms of requirements for air quality monitoring, especially considering the high maintenance costs of the monitoring equipment.

*Air quality data need improvement.* During the period 2009–2018, more than half of the 148 stations did not produce sufficient data during the whole period. Data sets have gaps; complete data sets are available for only 49 per cent of stations for SO<sub>2</sub>, 74 per cent for O<sub>3</sub>, 30 per cent for NO<sub>2</sub>, 32 per cent for PM<sub>10</sub> and 21 per cent for PM<sub>2.5</sub>. Data reported to the European Environment Agency (EEA) lack time coverage and therefore do not provide a reliable description of the situation, especially those data acquired by laboratory analysis (contents of heavy metals and PAHs in PM) and data from outdated and poorly maintained stations throughout the monitoring network. There is only one accredited laboratory in Romania for air quality assessment – the National Reference Laboratory for Air Quality located in NEPA, in Bucharest.

*Romania regularly reports to the EU and the Air Convention on its air quality and emissions of pollutants into the air* and makes publicly available on NEPA's website the summaries of analysis of the large volume of data produced. At the same time, Romania stopped reporting to the Convention's monitoring and evaluation programme (EMEP) in 2014, although three stations in the network are still marked as "EMEP stations" for monitoring of transboundary impacts.

*Reducing the health impact of air pollution is of paramount importance for Romania, where it is estimated that 26,490 premature deaths annually are due to exposure to high concentrations of PM, NO<sub>2</sub> and O<sub>3</sub>.* The major impact (23,400 premature deaths) derives from exposure to high concentrations of PM<sub>2.5</sub>. Of the 148 air quality monitoring stations, only three have automatic analysers for PM<sub>2.5</sub>. Romania is implementing various projects that contribute to the reduction of air pollution, but the effects of those activities and their cumulative impact on pollution reduction are not analysed, compiled and reported. The number of rural background stations and of automatic stations monitoring PM<sub>2.5</sub> is insufficient to assess the impact of air pollution on ecosystems and human health. Large industries are not required to monitor air quality and report results to NEPA.

*Establishing a functional strategic framework for the improvement of air quality is a priority for the country.* A national policy with measures to reduce PM concentrations throughout the country and a national air pollution



control programme are yet to be developed. Public health policy does not elaborate on this issue either. Only Bucharest, where roughly 10 per cent of the total population of the country is concentrated, was requested to develop an air quality plan with measures to reduce PM<sub>2.5</sub> concentrations. The Ministry of Environment, Waters and Forests issued a methodology for the elaboration of air quality plans, short-term action plans and plans for maintaining air quality.

*Information on air quality provided to citizens by the state administration is incomplete, lacking the necessary interpretation of monitoring results, indices and emissions inventories, advice to the general public in the event of bad air quality and guidance on the use of the air quality database.* The portal [www.calitateaer.ro](http://www.calitateaer.ro) stores raw data on air quality, but these data are not easily accessible and not relevant to the general public unless accompanied by suitable analysis and explanations.

## Water management

*Romania has made progress in water management.* Romania regularly updates water-relevant legislation based on EU developments. At the policy level, a water strategy bringing all aspects of water management together is lacking. Water demand has decreased and then remained stable due to industrial modernization and household water consumption metering. Ongoing investments in water infrastructure developments do not cover expansion of water supply and sewerage networks, nor the renovation of dams. A dialogue involving all governmental and non-governmental stakeholder groups is yet to be established.

*The impact of discharges not connected to the sewerage network, pollution from agricultural activities, and the population's limited access to water supply and sanitation systems in rural areas are issues of concern for the country.* The main water stress in the Black Sea area is pollution from households due to unmanaged urban sprawl and illegal construction along the coast. The level of connection to sewage treatment plants leads to the conclusion that the targets for the implementation of the EU Urban Wastewater Treatment Directive will be difficult to achieve, particularly in rural areas.

*The proportion of the population connected to water supply systems increased from 60.23 per cent in 2012 to 69.20 per cent in 2018.* At the current pace of growth of coverage with piped water services, Romania will be able to achieve universal access only between 2040 and 2050.

*The proportion of the population using safely managed drinking water services increased from 81.89 per cent in 2010 to 81.99 per cent in 2020, an increase of 0.1 per cent in the last decade.* By maintaining this pace, only 82.07 per cent of the population would be using safely managed drinking water services in 2030.

*The proportion of the population using safely managed sanitation services increased from 62.36 per cent in 2010 to 83.14 per cent in 2020, an increase of 33.3 per cent in a decade.* Romania would be able to reach 100 per cent by 2030 by keeping up this rate of progress.

*In 2018, the proportion of domestic and industrial wastewater flows safely treated was 56.71 per cent. In 2020, 83.70 per cent of bodies of water in Romania were of good ambient water quality, of which 93.20 of rivers, 44.40 per cent of groundwater bodies and 66.70 per cent of open water bodies were of good ambient water quality.*

*A new institutional framework in which municipalities delegated water supply and sanitation services to new public regional operating companies allowed the replacement of municipal operators by regional public operators and large private operators.* At governmental level, in 2019, the Ministry of Environment, Waters and Forests became responsible for drafting water-related legislation and coordinating water-related concerns.

*Romania scored 77 per cent on implementation of integrated water resources management in 2020.* This low rate is due to the lack of investment (on management instruments and financing the score was 44 per cent) and the lack of data on gender-specific objectives at subnational levels and gender-specific objectives and plans at transboundary level (on institutions and participation the score was 65 per cent). However, Romania reported 100 per cent of transboundary water bodies as having an operational arrangement for water cooperation.

*In 2016, 99.86 per cent of drinking water analyses were compliant for microbiological parameters in the drinking water supply zones that supply more than 1,000 m<sup>3</sup>/day or more than 5,000 inhabitants.* However, no in-depth

analysis was carried out assessing whether all the EU Drinking Water Directive's requirements are fulfilled. The estimated mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene was 0.36 deaths per 100,000 Romanian population in 2016. The EU average was 0.3 deaths per 100,000 population in the same year.

## **Waste and chemicals management**

*Romania has managed to introduce many of the principles of the modern waste management system*, despite the challenging additional tasks for the Government, municipalities, companies and individuals linked with the evolving character of the EU environmental legislation and policy. Principles of prioritization of waste generation prevention and its reuse or recovery from disposal are anchored in the legal system, though its sound implementation remains to be addressed.

*The waste management and chemicals sector gained access to an advanced environmental policy and legal framework, smoothing the path towards sustainable development.* To achieve its commitments at the international level, the country endorsed efficient policies at the municipal level. Low performance in the management of some waste streams (e.g. biodegradable waste, construction and demolition waste, and energy sector waste) is attributed to the regulations not covering the whole life cycle of waste, the lack of standards for end-of-waste status and the lack of quality standards for products from waste (e.g. compost). Enabling and facilitating provisions (e.g. a list of waste codes referring to biodegradable waste) are also missing from the regulations.

*There is some overlap in the institutional framework for municipal waste management.* Responsibilities for licensing waste management operations are split between the LEPAs, which issue the environmental permits, and the National Romanian Regulator for Public Services, which licenses operators of waste collection and disposal services in the municipal sector. Local administration staff are not yet fully prepared to manage the waste management agenda soundly.

*To modernize the municipal waste management system, Romania has been gradually introducing solid waste integrated management systems (SWIMS), which had a positive effect in increasing the coverage of urban and rural areas with waste collection services.* By 2019, up to 20 systems were fully functional and successfully operated. Remaining municipalities outsource sanitation services, which results in longer transportation distances and higher costs. Despite this effort, rates of separate collection and recycling in the municipal sector are low.

*The development of waste management systems is hindered by several factors, including a shortage of specific legal, policy and technical standards.* The country did not introduce the key element of an integrated waste management system, i.e. a waste disposal tax applicable to all wastes disposed of in landfills. Operators of waste management facilities for other than municipal waste are not motivated to invest in new waste management technologies or outsource waste management services via progressive and specialized waste management companies. Similarly, industries are not incentivized to invest in new technologies and operations that would result in lower quantities of waste or more environmentally friendly materials and operations.

*The trend of waste generated per capita is decreasing, which results more from economic patterns than the effect of policy measures.* Romania has not moved closer to the target on the amount generated and on hazardous waste treated, because it did not establish motivating financial schemes and a landfill tax. Management of polychlorinated biphenyls (PCBs) in the country does not have focused institutional support.

*Current levels of waste collection service tariffs for citizens appear to be sustainable as they are affordable*, mainly thanks to EU funding of the necessary infrastructure. However, citizens do not bear all the costs of the municipal solid waste (MSW) management system, thereby jeopardising the infrastructure refurbishment, replacement, renewal and extension. Citizens' direct participation in and active contribution to the development of a sustainable waste management system is a precondition of their sense of its ownership.

*The closure of hundreds of non-compliant landfills and their replacement with compliant installations is a key achievement of Romania* and a prerequisite for improvement of water quality, its management and other environmental assets. Nevertheless, many of these sites have not yet been rehabilitated according to the EU Landfill Directive.

*Management of contaminated sites made progress in terms of policymaking. A strategy is in place and the first results include the investigation and inventory of the contaminated sites and potentially contaminated sites.* Because the early privatization contracts did not reflect on the emerging environmental standards in the 1990s, the present owners are responsible for contamination that does not originate from their activities. Investment needs for waste management infrastructure and rehabilitation of contaminated sites are addressed through the collection of a landfill tax and bank guarantees.

*The waste coding system and statistical data collection and reporting to the central, EU and international levels have been put into practice,* with occasional delays in data delivery. Waste reporting schemes and obligations are not fulfilled consistently, lacking integration into a system enabling the cross-checking of data. This practice results in inconsistency or gaps in waste management data, for example, on construction and demolition waste.

## **Biodiversity and protected areas**

*Romania has a rich biodiversity and a high proportion of intact natural ecosystems. Almost half of the country's land area is covered with natural and semi-natural ecosystems.* The high density of large carnivores and the extensive forests covering the Carpathian Mountains are the best-known aspects of the biodiversity richness. Romania possesses the largest areas of virgin forests in the EU, undisturbed by human activities. It is remarkable that the country has been able to preserve this unique ecosystem, which is one of the last remaining virgin forests in Europe.

*According to the second National Forest Inventory, the forest coverage has increased since the first-cycle Inventory and the natural regeneration rate is stable.* Most of the 29 national and natural parks are located on forest land and more than 2.6 million ha of forest area is included in the EU Natura 2000 network.

*Currently, 23.4 per cent of the total territory of the country is under the protected area system.* The EU Habitats and Birds Directives are fully transposed in Romania. Establishing new protected areas and expanding the boundaries of existing protected areas, including by designating 606 sites under the Natura 2000 network, are in the pipeline.

*Despite the positive trends, biodiversity in Romania is threatened by overgrazing, expanded urbanization, desertification, overexploitation of natural resources, illegal logging, and the impacts of climate change and extreme events.* Moreover, financing for biodiversity conservation remains at a low level, at about 0.03 per cent of total governmental environmental expenditures.

*The National Strategy and Action Plan for Biodiversity Conservation (NBSAP) for 2014–2020, which was approved in 2013 and updated in 2017, sets the general strategic framework for biodiversity and nature protection in the country,* identifying strategic objectives and corresponding actions to be implemented by 2020. An ambitious action plan was also approved; however, sources of funding are yet to be identified.

*The national Red Lists are yet to be developed due to differing views within the Romanian academic community.* NBSAP proposes the implementation of measures to improve ecological connectivity. Several projects have been implemented in that regard to maintain species migration corridors and thus improve connectivity in protected areas. The inventory and monitoring of species and habitats to support decision-making on measures for effective maintenance and improvement of species conservation is carried out individually by protected areas, but there is no national-level monitoring system.

*The protected area management system is comprehensive and unique.* Over 1,600 natural protected areas are managed by different institutions, including the National Agency for Natural Protected Areas (NANPA), Romsilva, the Danube Delta Biosphere Reserve Administration (DDBRA), local councils and private legal entities. Before NANPA was established in 2016, 40 per cent of all designated protected areas did not have any park administration; hence, no management activities were implemented on those sites. However, due to the limited capacity of NANPA, not all planned measures are being implemented.

*Not all protected areas have management plans.* Some management plans are not approved in sufficient time to ensure the implementation of measures and carry out monitoring and assessment, making it hard to assess the

impact of economic activities on the state of protected areas. Funding for the implementation of the management plans started in 2016 with support from the Ministry of European Funds.

*No compensation has been made to landowners or tenants for restrictions on land-use imposed in the management plans of the natural protected areas*, although by law the ministry in charge of the environment is expected to develop and approve the methodology for requesting, calculating and granting such compensation.

*A coordination mechanism for consulting and involving all relevant stakeholders at the early stages of drafting and decision-making in the area of natural protected areas management is lacking*. Public participation in decision-making on natural protected areas is implemented during public hearings and the public opportunity for commenting on draft legal documents is organized by the ministry in charge of the environment.

*The country has neither carried out an assessment of ecosystem services nor developed a methodology for conducting such an assessment* with a view to providing such services for the local communities who live in protected areas and are affected by the restrictions imposed on their land use.

*The current legal framework does not require periodic re-evaluation of the conservation value of the natural protected areas of national interest*. At the same time, natural protected areas of national interest in the nature reserves category were designated based on summary templates completed by the LEPA without the support of scientific studies, which, in some cases, led to predominantly common species being included in protected areas while vulnerable species were left in the adjacent areas.

*Virgin and quasi-virgin forests are strictly protected and included in the National Catalogue of Virgin and Quasi-virgin Forests established as an instrument to identify, register and protect the valuable forest*. As at May 2019, an area of 29,060 ha is officially included in the Catalogue and further identification and mapping of virgin forests are ongoing. Some adjacent forests have been identified as virgin and quasi-virgin but are not included in the national catalogue. There is no official confirmation and documentation of illegal logging in the core zone of national parks.

*The country does not compile data on total expenditures related to biodiversity, forests and ecosystems conservation* and is not in a position to report on the revenue generated and finance mobilized from biodiversity-relevant economic instruments. Most of the funding to implement biodiversity conservation and conduct research monitoring comes from external sources.

### **Implementation of recommendations from the Second EPR**

The Second EPR of Romania (2012) made 39 recommendations incorporating 73 sub-recommendations, of which 22 were implemented (30 per cent), 10 are in progress (14 per cent), 9 were partially implemented (12 per cent) and 32 were not implemented (44 per cent). Thus, the country has an implementation rate (recommendations implemented, partially implemented or in progress) of 56 per cent.

Of the 73 sub-recommendations, 36 (49 per cent) are still relevant for the country to pursue their implementation. The substance of these recommendations has been addressed in the recommendations of the Third EPR.

Annex 1 presents an overview of implementation of recommendations of the Second EPR in a matrix as well as a summary. A detailed assessment of the status of their implementation is integrated in the relevant chapters.

## Successes in 2012–2020 and priorities for the future

The 10 most significant actions Romania has taken to improve its environmental performance are:<sup>3</sup>

1. Established policy and institutional frameworks for implementing the 2030 Agenda for Sustainable Development;
2. Revised the regulatory and compliance mechanisms and institutions, including integrated environmental permitting and the EIA legal framework;
3. Launched the Forest Inspector initiative to involve the public in addressing illegal logging;
4. Developed the Integrated Environmental Information System;
5. Ratified the most recent multilateral environmental agreements;
6. Established a policy framework for addressing climate change;
7. Established the legal basis for support schemes to improve the energy performance of buildings;
8. Made progress in water management and in providing access to safely managed sanitation services for its population;
9. Closed hundreds of non-compliant landfills and replaced them with compliant installations;
10. Introduced principles of the modern waste management system and modernized the municipal waste management system.

The 10 most important environmental priorities for Romania in the next 5–8 years are:<sup>4</sup>

1. Streamlining and stabilizing the environmental legal and policy frameworks, and monitoring and reporting on their implementation;
2. Ensuring adequate on-the-ground implementation of environmental protection, and of monitoring and reporting on the state of the environment;
3. Enhancing open access to environmental information, guaranteeing effective public participation in decision-making on environmental matters and advancing education for sustainable development in practice;
4. Improving air quality and raising public awareness of the negative impact of air pollution;
5. Upgrading the strategic management of water resources;
6. Expanding solid waste integrated management systems;
7. Boosting action to address climate change and biodiversity loss;
8. Greening the economy, including by working with the private sector and extending green public procurement;
9. Supporting the transition to a low-carbon economy and society;
10. Intensifying the implementation of its international commitments.

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<sup>3</sup> No ranking is implied.

<sup>4</sup> No ranking is implied.



# INTRODUCTION

## 1. Physical context

Romania is situated in the south-eastern part of central Europe. It has a land area of 238,391 km<sup>2</sup>, of which approximately 8,500 km<sup>2</sup> are bodies of water. The total border length is 2,508 km. Romania shares its border with Bulgaria to the south (border length 608 km), Serbia to the east (476 km), Hungary to the north (443 km), Ukraine to the north (362 km) and to the east (169 km), and the Republic of Moldova to the north-east (450 km). Romania also has 247 km of Black Sea coastline to the east of the country.

The Carpathian Arch, the eastern part of Europe's central mountain system, traverses Romania. The highest peaks of the Romanian Carpathians are Moldoveanu Peak at 2,544 m and Negoiu Peak at 2,535 m. The terrain of the country is almost evenly divided between mountains, hills and plains, each covering about 30 per cent of its total surface area.

Romania is characterized by a temperate-continental climate. The Carpathian Mountains function as a

barrier to the Atlantic air masses, confining their oceanic influences to the west and centre of the country, and keeping the continental climate influences of the east European plain to the north. Generally, the winters are cold and cloudy with frequent snow and fog, and the summers are sunny with frequent showers and thunderstorms.

The average annual precipitation is between 600 mm and 700 mm, with high rainfall (1,000 mm to 1,400 mm) in mountainous areas and low rainfall (below 400 mm) in the coastal areas. The average annual temperature is 11°C in the south and 7°C in the north.

Of the 2,587 km total length of the Danube River, 1,075 km flow within Romania's borders, making it the country's largest river. Other important rivers, all part of the Danube's water system, are the Mures River (length 766 km), Prut River (742 km), Olt River (615 km) and Siret River (571 km). There are around 3,500 lakes in Romania, many of which are small, freshwater mountain lakes.

**Photo I.1: View of south ridgeline, Piatra Craiului National Park**



*Photo credit: Mircea Vergheteș*

## 2. Demographic and social contexts

Since 1989, Romania's total population has generally had a declining trend. In 2010, Romania had 20.2 million inhabitants; this had diminished to 19.4 million in 2019. The population density in 2019 was 81.8 inhabitants per km<sup>2</sup>. The rural population share in 2018 was 46.0 per cent and the urban population share 54.0 per cent. The capital, Bucharest, was home to approximately 2,106 million people in 2016.

According to the 2019 study by the Organisation for Economic Co-operation and Development (OECD), Talent Abroad: A Review of Romanian Emigrants, outward migration has caused about 75 per cent of Romania's population decline. The decrease in the number of births combined with the rising death rate is the source of the residual decline. In 2018, the birth rate was 9.6 births per 1,000 population and the death rate 13.5 deaths per 1,000 population. Meanwhile, life expectancy is growing, and the proportion of the population over 65 years old reached 18.4 per cent in 2018. The infant mortality rate has continued its positive long-term diminishing trend and dropped to 7.2 per 1,000 live births in 2017.

Human development is measured by the United Nations Development Programme (UNDP)'s Human Development Index (HDI), which combines several indicators such as life expectancy, educational attainment and income in an index, expressed as a value between 0 and 1, with a higher value indicating higher development. In 2010, Romania still belonged to the group of countries with "high" human development, but in 2018, the country had advanced to the group with "very high" human development. Romania's HDI in 2019 was 0.828, ranking it 49th of the 189 countries with comparable data, while neighbouring Bulgaria, Ukraine and the Republic of Moldova ranked 56th, 74th and 90th respectively.

The 2012 Second Environmental Performance Review (EPR) of Romania noted that the country's overall standard of living had improved over the review period from 2000 to 2011, when real gross domestic product (GDP) per capita rose by nearly 60 per cent. The growth has continued since the Second EPR. Between 2010 and 2019, real GDP per capita increased by 47.1 per cent, bringing the average Romanian living standard closer to that of the European Union (EU) EU-28 countries. In 2010, the GDP per capita at purchasing power parity (PPP) corresponded to 59.06 per cent of the EU-28 GDP per capita, and in 2017 to 72.47 per cent.

**Photo I.2: Brasov**



*Photo credit: Angela Sochirca*

**Table 1: Demographic indicators, 2010–2019**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Population (millions)	20.2	20.1	20.1	20.0	19.9	19.8	19.7	19.6	19.5	19.4
Birth rate, crude (per 1,000)*	10.5	9.7	10.0	9.4	10.0	10.2	10.4	10.3	9.6	..
Total fertility rate	1.6	1.5	1.5	1.5	1.6	1.6	1.6	1.7	1.8	..
Life expectancy at birth (years)	73.7	74.4	74.4	75.1	75.0	74.9	75.2	75.3	75.3	..
Life expectancy at birth: female (years)	77.7	78.2	78.1	78.7	78.7	78.6	79.0	79.1	79.2	..
Life expectancy at birth: male (years)	70.0	70.8	70.9	71.6	71.3	71.4	71.6	71.7	71.7	..
Population under 15 years old (%)	15.8	15.8	15.8	15.6	15.5	15.5	15.5	15.6	15.7	..
Population above 65 years old (%)	16.1	16.1	16.2	16.4	16.8	17.2	17.6	18.0	18.4	..
Death rate, crude (per 1,000 people)	12.8	12.5	12.7	12.4	12.8	13.2	13.1	13.3	13.5	..
Mortality rate, infant (per 1,000 live births)	9.8	9.4	10.0	8.9	8.2	7.5	7.0	7.2	..	..

Sources: ECE database, April 2020 and World Bank, October 2019.

Note: \* World Bank, <http://data.worldbank.org/country/romania> (accessed October 2019).



Despite improvements in per capita income and living standards, problems persist with poverty and social exclusion. Romania ranked 26th of 28 EU countries in a comparison of living standards in 2017 – the same as in 2010. However, while 41.4 per cent of the population (8.8 million people) were at risk of poverty and exclusion in 2010, this had diminished to 35.7 per cent of the population (6.9 million people) in 2017.

According to Eurostat, the inequality level of Romania in 2017 was 7: i.e. the top 20 per cent of the population earned seven times more than the bottom 20 per cent. Child poverty is at an all-time high. A 2019 Save the Children Global Childhood Report stated that about 21.5 per cent of Romanian children live in severe material deprivation, the highest rate in the EU, which has an average of 5.9 per cent. Moreover, 32 per cent of Romania's children live below the poverty line. Poverty is worst in rural areas. About 46.0 per cent of the population live in rural areas and about 70 per cent of this population live in poverty.

In 2011, 89.5 per cent of Romania's population were Romanian and about 10.5 per cent were part of a minority population. Romania has 19 different minorities, but just two of these groups, Hungarians and Roma(ni), constitute 88.3 per cent of the country's minority populations and 9.18 per cent of the total population of Romania. Minority population groups are largest in Transylvania and the Banat, situated in the north and west of the country.

In 2002, the Hungarian population was about 1.5 million, but it had diminished to 1.3 million by 2011. Although Hungarians are located countrywide, there are a few counties, such as Harghita and Covasna, where Hungarians form a majority of the population (84.8 and 73.6 per cent respectively). For the Hungarian population, the important issues are related to cultural identity, language and the possibility of local self-governance. Their demands are largely intended to preserve their cultural identity – the ability to use their own language in education, have local administrative autonomy or express their identity with their own flags. Although the Romanian Hungarians have clearly stated that regional autonomy would not violate the territorial unity or sovereignty of Romania, their demands for greater autonomy have never attracted much support from the Romanian Government in Bucharest.

The problems and issues facing the Roma population are much more varied than those facing the Hungarian minority. They are related to education, vocational prospects, unemployment, health and poverty. Estimations of the number of Romanian citizens belonging to the Roma population vary a lot. In the

2011 population and housing census, 621,573 Romanian citizens declared themselves to be Roma, which represented 3.3 per cent of the total population, but the Council of Europe has used the much higher figure of 1,850,000 Roma citizens, while the World Bank estimated the number of Roma people to be not more than one million.

About 63 per cent of the people who declared themselves to be Roma live in rural areas and only 39.3 per cent declared their main language as the Romani language.

There is an educational attainment gap between the Roma and non-Roma population. The illiteracy rate of Roma is much higher than that of other population groups. The illiteracy rate of the Roma population aged 10 or above was 14.1 per cent, compared with 1.0 per cent of Romanians and 0.8 per cent of Hungarians in the same age group. Educational attainment differences continue into higher education. Only 0.7 per cent of the Roma population has higher education, compared with 14.8 per cent of Romanians and 10.2 per cent of Hungarians.

The lower educational level of the Roma population limits their access to the labour market. In 2011, the employment rate for Roma people was 36.3 per cent, compared with 58.5 per cent for non-Roma. At the same time, the unemployment rate for Roma was 48.6 per cent, very much higher than the 7.4 per cent national unemployment rate.

There are economic disparities between the Roma and non-Roma populations. In 2011, three out of four Roma people were suffering from relative poverty, whereas only one out of four non-Roma were in a similar situation. The absolute poverty rate is at least four times higher for the Roma minority than for the non-Roma population (54 per cent for Roma vs 13 per cent for non-Roma).

The precarious socioeconomic conditions and their low educational level, together with access barriers to health services, have had an impact on the health of the Roma population. Maternal mortality among Roma women is 15 times higher than the national average. The mortality rate for Roma children aged 0–1 year is four times higher than the national average. Almost half (45.7 per cent) of Roma children do not receive free vaccination made available by the Ministry of Health through the National Immunization Programme, either because of refusal of vaccination or mothers' lack of information or education, or of shortcomings in the primary healthcare services.

### 3. Economic context

Since 2000, Romania has experienced an economic expansion and, according to the World Bank, it is now an upper-middle-income country. GDP increased from US\$376.2 billion in 2010 to US\$530.8 billion in 2019, a 40.7 per cent increase in eight years.

The inflation rate, measured by the consumer price index, which was very high at 45.7 per cent in 2000, fell to 6.1 per cent in 2010. After 2010, inflation continued to diminish and even went negative to -1.6 per cent in 2016, after which it increased to 3.8 per cent in 2019.

Continuous GDP growth and low inflation have influenced the country's unemployment rate. The unemployment rate as a percentage of the total labour force was 7.0 per cent in 2010 and hovered around that level for five years before starting to decrease in 2016, finally falling to 3.9 per cent in 2019.

Before 2010, foreign direct investment (FDI) into the country fluctuated wildly, but since then the annual figures have been positive and, despite the small decrease in 2014 and 2015, the trend has generally been upwards. During the review period, annual FDI in Romania almost doubled. The 2010 inflow of almost US\$3 billion in FDI increased to US\$5.9 billion in 2019.

The gross external debt of Romania grew rapidly from US\$11 billion in 2000 to its peak of US\$139 billion in 2011. After 2011, the debt burden diminished to US\$104 billion in 2016 but rose again to almost US\$123 billion in 2019.

The export volume of goods and services more than doubled from US\$122.1 million in 2010 to US\$260.1 million in 2019, a consequence of more diversified export offerings. The export of goods and services increased from 32.4 per cent of GDP in 2010 to 40.4 per cent in 2019. In 2019, the top three export categories were electrical machinery (17.7 per cent), vehicles (17.0 per cent) and machinery including computers (11.3 per cent).

Romania acceded to the EU in 2007 and in 2019 its foreign trade is mainly oriented towards the EU. Intra-EU trade accounts for 77 per cent of the country's exports. Romania's main export partners are Germany (23 per cent), Italy (11 per cent) and France (7 per cent), while 3 per cent of the country's exports outside the EU go to Turkey and 2 per cent to the United States. Romania's main export goods are machinery equipment, vehicles, metal products, minerals, fuels, chemicals, textiles and agricultural products. The main

imports are machinery and industrial products, simple processed goods, fuels and energy, and manufactured goods.

**Photo I.3: Secular Forest Slătioara, also known as the Wooden Cathedral of Bucovina, a UNESCO World Heritage Site**



*Photo credit: Romsilva, MoEWF*

The import situation is similar to that of exports: 75 per cent of Romania's imports come from EU member countries (the top three being Germany (20 per cent), Italy (9 per cent) and Hungary (7 per cent)), while its main import partners outside the EU are China (5 per cent) and Turkey (4 per cent).

The most important sectors of Romania's economy in 2018 were industry (26.1 per cent), wholesale and retail trade, transport, accommodation and food services (20.2 per cent) and public administration, defence, education, human health and social work activities (14.5 per cent).

The Romanian currency, the leu (lei in the plural), subdivided into 100 bani (ban in the singular), underwent reform in July 2005. The goal was to stabilize the currency and prepare the country for adoption of the euro. Between 2010 and 2019, the leu

weakened 12.71 per cent against the euro and 33.31 per cent against the United States dollar. Romania's accession agreement with the EU requires the country to replace the leu with the euro as soon as the country has fulfilled all of the four nominal euro convergence criteria as stated in the Treaty on the Functioning of the European Union. According to the National Plan to Change to the Euro, the scheduled date for adoption of the euro in Romania is 2024.

#### 4. Gender

Romania has committed itself to several international obligations on gender issues. It ratified the Convention on the Elimination of all Forms of Discrimination against Women in 1982 and provided the Convention with its combined seventh and eighth Report in 2017. In 2016, Romania also ratified the Council of Europe Convention on preventing and combating violence against women and domestic violence. The country has been a member of the EU since 2007, and its labour legislation meets all EU laws and labour standards. In addition, Romania has ratified all International Labour Organization (ILO) conventions referred to in the Fair Wear Foundation's Code of Labour Practices, except for the Minimum Wage-

Fixing Machinery Convention, 1928 (No. 26) and Occupational Safety and Health Convention, 1981 (No. 155).

The national legislation covers several important gender-related areas. The Constitution provides for protections against violence against women and girls and Law No. 211/2004 protects victims from sexual violence. Law No. 217/2003 on the prevention of and fight against domestic violence, which covers both domestic violence and intimate partner violence, was revised in 2012, expanding the definition of violence as well as the rights of victims. Maternity leave is established in the Labour Code, while, under the Family Code, women and men have equal parental authority over children during marriage and following a divorce.

The National Strategy for the Promotion of Equal Opportunity and Treatment between Women and Men for 2018–2021 has three general objectives: promoting universal access for girls and women to sexual and reproductive health; reconciliation of professional life with family and private life; and encouraging women's participation in the decision-making process.

**Photo I.4: First Romanian School Museum, Brasov**



*Photo credit: Angela Sochirca*

Table 2: Selected economic indicators, 2010–2019

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
GDP growth rate, at prices and PPP of 2010 (% change over previous year)	- 3.9	1.9	2.0	3.8	3.6	3.0	4.7	7.3	4.5	4.2
GDP at current prices (millions of NCU\$*)	528 514.0	558 890.0	591 799.0	634 968.0	669 704.0	711 930.0	763 652.0	857 896.0	951 728.0	1 059 803.0
GDP per capita at current prices (NCUs)	26 104.0	27 740.0	29 501.0	31 766.0	33 626.0	35 916.0	38 751.0	43 786.0	48 865.0	54 712.0
GDP at current prices and PPP (US\$ million)	343 947.0	360 566.0	378 489.0	395 316.0	411 272.0	428 246.0	475 197.0	532 611.0	568 469.0	625 164.0
GDP per capita at current prices and PPP (US\$)	16 988.0	17 896.0	18 868.0	19 777.0	20 650.0	21 604.0	24 114.0	27 184.0	29 187.0	32 274.0
GDP at prices and PPP of 2010 (US\$ million)	377 166.0	384 355.0	392 198.0	406 988.0	421 675.0	434 130.0	454 547.0	487 817.0	509 645.0	530 808.0
GDP per capita at prices and PPP of 2010 (US\$)	18 628.0	19 077.0	19 551.0	20 361.0	21 172.0	21 901.0	23 066.0	24 898.0	26 167.0	27 403.0
Inflation, GDP deflator (% change over the previous year)	3.6	3.8	3.8	3.4	1.8	3.3	2.4	4.7	6.2	6.9
Consumer price index (% change over the previous year)	6.1	5.8	3.3	4.0	1.1	- 0.6	- 1.6	1.3	4.6	3.8
PPI (% change over the previous year)	4.0	6.6	4.8	3.7	0.2	- 1.8	- 2.6	3.1	5.2	5.1
Registered unemployment (% of labour force, end of period)	7.0	7.2	6.8	7.1	6.8	6.8	5.9	4.9	4.2	3.9
Current account balance (millions of NCUs)	- 26 961.5	- 28 290.7	- 28 457.5	- 4 975.2	- 1 202.6	- 4 069.4	- 10 664.8	- 23 933.6	- 41 410.5	- 48 261.0
Current account balance (US\$ million at current exchange rate)	- 8 478.5	- 9 276.5	- 8 200.1	- 1 494.9	- 359.0	- 1 015.3	- 2 626.7	- 5 906.2	- 10 503.1	- 11 383.9
Current account balance (as % of GDP)	- 5.1	- 5.1	- 4.8	- 0.8	- 0.2	- 0.6	- 1.4	- 2.8	- 4.3	- 4.6
FDI (US\$ million at current exchange rate)	- 2 978.1	- 2 313.3	- 3 255.0	- 3 915.3	- 3 600.0	- 3 287.5	- 4 996.3	- 5 566.6	- 5 840.1	- 5 944.6
Cumulative FDI (US\$ million at current exchange rate)	65 438.0	67 751.3	71 006.3	74 921.6	78 521.6	81 809.1	86 805.4	92 371.9	98 212.0	98 212.0
Foreign currency reserves (US\$ million at current exchange rate)	..	..	..	..	..	..	..	..	..	..
Gross external debt (US\$ million)	122 869.0	139 067.3	129 662.4	133 960.6	129 239.7	105 040.4	104 273.4	109 863.5	117 853.0	122 894.0
Exports of goods and services (US\$ million at prices and PPP of 2010)	122 135.0	136 933.0	138 446.0	166 936.0	181 186.0	189 490.0	220 451.0	237 570.0	250 209.0	260 124.0
Imports of goods and services (US\$ million at prices and PPP of 2010)	147 144.0	161 448.0	158 516.0	172 922.0	188 208.0	204 220.0	238 097.0	265 400.0	288 292.0	306 895.0
Exports of goods and services (% of GDP)	32.4	37.1	37.5	40.0	41.4	41.4	41.8	42.0	41.9	40.4
Imports of goods and services (% of GDP)	39.0	42.9	42.8	40.9	41.8	42.2	42.8	44.5	45.3	44.2
Ratio of gross debt to exports (%)	100.6	101.6	93.7	80.2	71.3	55.4	47.3	46.2	47.1	47.2
Ratio of gross debt to GDP (%)	35.7	38.6	34.3	33.9	31.4	24.5	21.9	20.6	20.7	19.7
Population (million)	20.2	20.1	20.1	20.0	19.9	19.8	19.7	19.6	19.5	19.4

Source: ECE database.

Note: \*NCU = national currency unit.

There has been mixed progress in the representation of women in the country's political life. In 2019, women held 19.8 per cent of the seats in the Romanian Parliament, well below the EU-27 average of 32.1 per cent. Nonetheless, this was a notable advance on 2012, when only 9.9 per cent of members of parliament were women. Women's representation in the national level of government has followed the opposite trajectory, however, dropping from 36.4 per cent in 2016 to 17.6 per cent in 2019.

In 2019, women held 14.3 per cent of councillor seats on the councils of the 41 counties. Female representation at municipal level was slightly lower. The country has 3,188 municipal councils and, in 2019, 11.8 per cent of the seats were held by women.

Seven of 32 Romanian members of the European Parliament (MEPs) were women in 2019.

In 2019, Romania ranked 25th on the Gender Equality Index of the European Institute of Gender Equality. Romania is progressing towards gender equality at a slower pace than other EU Member States. Its rank has dropped one place since 2005 and its scores are lower than the EU's scores in all domains. Gender inequalities are most pronounced in the domain of power (38.8 points), time (50.3) and knowledge (51.5).

Inequality Index, Romania was in the country group of very high human development and, with a score 0.316, ranked 52nd of 189 countries. The World Economic Forum's Gender Gap Report gave Romania a score of 0.711, ranking it 63rd of 149 countries.

In a worldwide gender equality comparison, Romania has done relatively well. In the 2019 UNDP Gender

Romania has made little progress against Sustainable Development Goal (SDG) 4, target 4.3 (By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university) and global indicator 4.3.1 (Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex). Between 2011 and 2016, the total participation rate in formal and non-formal education and training declined from 8 per cent to 7 per cent. The participation rate was somewhat similar by sex: the female participation rate declined from 8 per cent to 7.5 per cent, while the male participation rate declined from 8 per cent to 6.4 per cent. Data on the proportion of 15–24-year-olds enrolled in

vocational education, available for three years 2010–2012, show a decrease from 21.1 to 20.2 per cent (from 18.4 to 17.4 per cent for female; 23.6 to 22.8 for male). The enrolment ratio for tertiary education went down by 20.3 per cent, from 64 per cent in 2010 to 51 per cent in 2018; the female enrolment ratio decreased from 74.4 to 57.4 per cent, which is almost twice the drop from 54.2 to 45.1 per cent in the male enrolment ratio. Romania's ratio (at 49.4 per cent in 2017) is between the global enrolment ratio in tertiary education (38 per cent in 2017) and the ratio in high-income countries (77 per cent in 2017). Given the generally declining trend over the past decade, the country will be expected to take action to redress the situation.<sup>5</sup>

With regard to SDG target 4.5 (By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations) and global indicator 4.5.1 (Female/male parity index for all education indicators), gender parity has remained steady. During the 16-year period from 2000 to 2017, the gender parity index ratio for participation in organized learning was basically 1.0, i.e. parity (1.02 in 2000, 1.00 in 2011, and 0.999 in 2018). The gender parity index ratio for participation in formal and non-formal education and training (as per indicator 4.5.1) was 1.13 in 2007, 1.00 in 2011, and 1.15 in 2017, demonstrating a slightly higher rate of female participation in formal and non-formal education than male.

## 5. Political institutions

Romania is a parliamentary republic, and its Constitution provides for separation of the executive, legislative and judicial branches. The Constitution was approved in a national referendum in 1991 and amended in 2003.

The President is the Head of State, elected by universal suffrage for a five-year term and eligible to serve no more than two consecutive terms. The President directs and implements domestic and foreign policy.

The executive branch consists of the President and the Prime Minister, who is appointed by the President with the consent of the Parliament. The Cabinet, or the Council of Ministers, is headed and appointed by the Prime Minister. As at December 2019, the Government consists of 16 ministries.<sup>6</sup>

<sup>5</sup> <http://uis.unesco.org/en/topic/sustainable-development-goal-4>.

<sup>6</sup> [www.gov.ro/en](http://www.gov.ro/en).

Romania has a bicameral 465-member Parliament composed of the Senate (136 members) and the Chamber of Deputies (329 members). Deputies for both chambers are elected by popular vote in a mixed member proportional system and serve a four-year term. Citizens have two votes, one for each chamber. Candidates who gain at least 50 per cent of the votes cast win a seat in the legislature directly. Votes for the unelected candidates are counted together nationally and the remaining seats are distributed among political parties in proportion to their share of the vote.

The threshold to win parliamentary representation is 5 per cent for political parties and 8 per cent to 10 per cent for political alliances. The parties that did not surpass the national threshold of 5 per cent can still obtain parliamentary representation by winning at least six districts in the elections for the Chamber of Deputies or three districts in the elections for the Senate.

Romanian local government is divided into three administrative levels: counties, towns and communes.

There are 41 counties and one municipality, the capital, Bucharest. Various ministries have their own subordinate administrative entities at county, town and commune levels in the form of inspectorates and public directorates.

The judiciary is made up of a hierarchical system of courts, organized as follows: the Supreme Court of Justice, courts of appeal, tribunals, specialized tribunals, military courts, regional courts and the Arbitration Court. The Supreme Court of Justice comprises 11 judges appointed for three-year terms by the President in consultation with the Council of Magistrates.

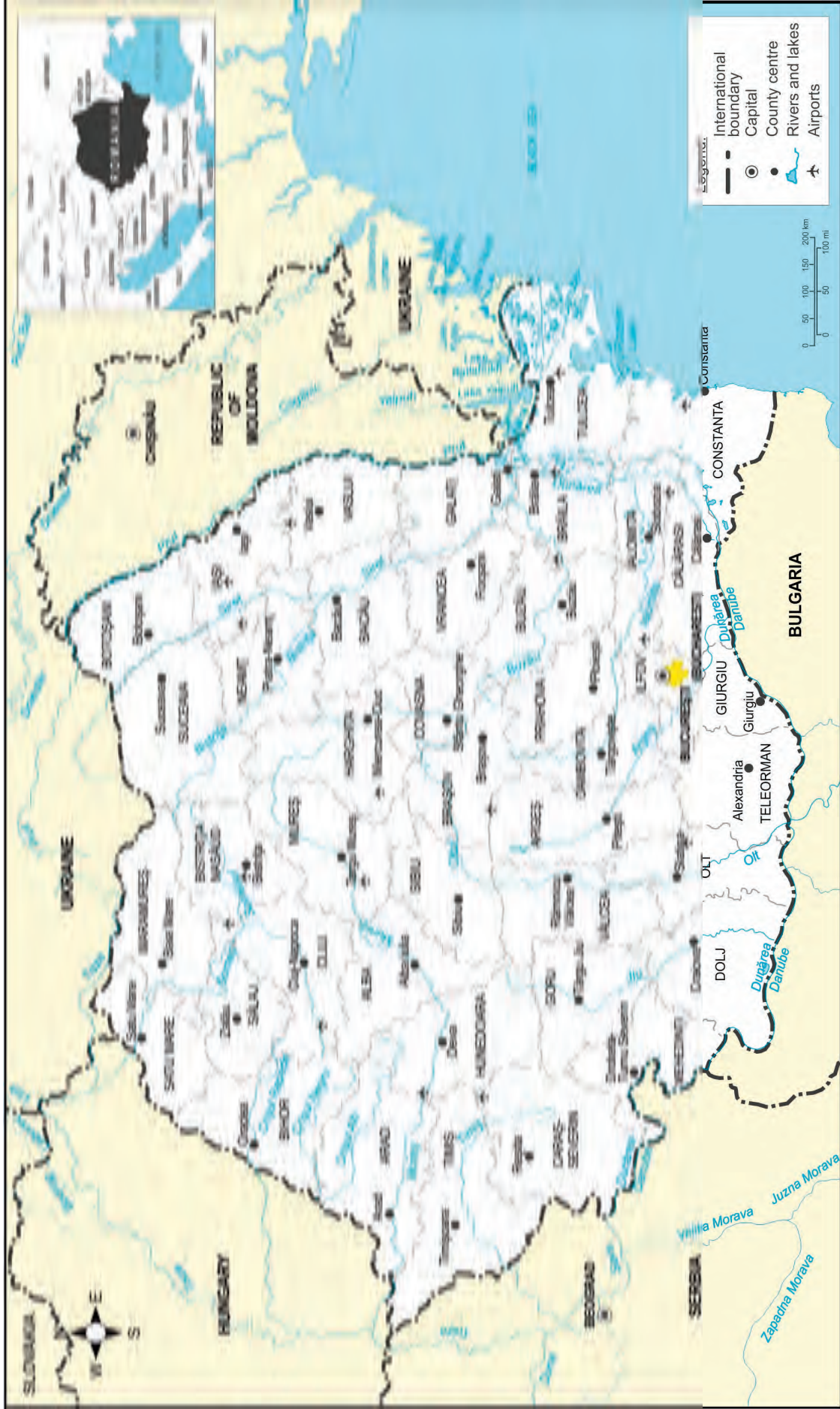
The Constitutional Court is a separate institution that rules on whether the laws, decrees or other instruments enacted by the authorities are in conformity with the Constitution. It is comprised of nine members each serving a nine-year term; the President, the Senate and the Chamber of Deputies each appoint three members.

**Photo I.5: Cheile Corcoaiei, Domogled–Valea Cernei National Park**



*Photo credit: Mircea Vergheș*

Map 1: Administrative map of Romania



Source: Prepared by ECE based on the map provided by the Ministry of Environment, Waters and Forests, 2019.  
Note: The boundaries and names shown on this map do not imply official endorsement or acceptance by the United Nations.





***PART I: ENVIRONMENTAL GOVERNANCE AND  
FINANCING***



## Chapter 1

# LEGAL, POLICY AND INSTITUTIONAL FRAMEWORK

### 1.1 Legal framework

#### *Law-making*

In Romania, the Parliament adopts so-called organic laws, which regulate areas of high importance (such as state borders, citizenship, organization and functioning of courts) by qualified majority and ordinary laws by simple majority. The Government has a limited law-making mandate given by the Romanian Constitution. Apart from government decisions (GDs), which are considered implementing acts and can be issued at any time, the Government can issue regular ordinances only during parliamentary recesses, while government emergency ordinances (GEOs) are to be issued only in emergency situations. However, the number and substance of the issued emergency ordinances is clearly pointing to their overuse (e.g. the Government issued 77 emergency ordinances during 2019).<sup>7</sup> This practice is against principles incorporated in the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention), which Romania ratified in 2000, and Law No. 52/2003 on transparency of decision-making in public administration, subsequent amendments to which grant citizens participation in decision-making in environmental matters.

Organic laws cannot be amended by ordinary ones, but ordinary laws can be amended by GEOs, which are passed without public consultation. The Romanian Constitution prescribes that an emergency ordinance shall only come into force after it has been submitted for debate in an emergency procedure to the Chamber, having the competence to be notified, and that the ordinances that the Parliament has been notified about shall be approved or rejected in a law: “The notified Chamber shall be convened by all means within five days after submission of an emergency ordinance. If, within 30 days at the latest of the submitting date, the notified Chamber does not pronounce on the ordinance, the latter shall be deemed adopted and shall be sent to the other Chamber, which shall also make a decision in an emergency procedure.” However,

legislative practice often differs from the prescribed procedure. Sometimes emergency ordinances are subsequently adopted by an additional law, but several years can pass between adoption of the emergency ordinance and the law that approves it. In many cases, the ordinance is just deemed adopted without discussion in the Parliament.

“Emergency” procedures for environmental management lack public participatory process and necessary discussions among interested stakeholders. Relying on these procedures affects the quality of the environmental legislation, which invokes more frequent changes and legal certainty. Moreover, emergency ordinances do not have an “expiry date” since, in fact, they do not resolve emergency situations of limited duration but, rather, fundamental legal issues, an example being GEO No. 195/2005 on environmental protection with its numerous subsequent amendments. The general practice is to amend legal acts many times, keeping their original number, which presents difficulties for proper legal analysis when it comes to identification of the latest amendment and finding a final consolidated version. Additionally, certain issues are not only covered by several laws but also by a number of emergency ordinances and other legal acts. This negatively affects the clarity, consistency and coherence of legislation, as well as the stability of the legislative framework.

Environmental information, including environmental legislation, should be available to the public free of charge, in accordance with Romanian legislation. The website of the Ministry of Environment, Waters and Forests contains a large volume of information, but listed environmental legislation is outdated due to frequent changes in the legislative framework and irregular updates of the site.

Both central and local government administrations can issue various legislative acts, such as ministerial orders (MOs), instructions and regulations. On the top of the national legislation, the legal framework, especially on the environment, is predominantly shaped by the EU legislation and international treaties.

<sup>7</sup> Parliament of Romania, Chamber of Deputies, legal database, [www.cdep.ro/pls/legis/legis\\_pck.frame](http://www.cdep.ro/pls/legis/legis_pck.frame).

**Photo 1.1: Ministry of Environment, Waters and Forests, 2021**

Photo credit: MoEWF

### *Use of regulatory impact assessment*

In 2005, regulatory impact assessment (RIA)-related procedures were introduced in Romania. The mode of RIA use is regulated by GD No. 1361/2006 regarding the content of the instrument for presenting the draft normative acts submitted for the Government's approval, which had been amended several times by 2015. At least in theory, legislative proposals cannot enter the legislative process without RIA approval. In practice, the use and the quality of RIA are highly uneven, and many RIAs are superficial. In line with GD No. 1361/2006, RIA should assess the impact on the environment as: impact on the use of natural resources; impact on protected species, natural habitats, protected areas and landscapes; and impact on the quality of the environment, detailed on each of the environmental factors. RIA is usually used in the late stage of legal drafting, as a means to justify the need for additional regulation, which, in many cases, leads to overregulation instead of a results-oriented legal framework. Romania's 2018 National Reform Programme stresses the Government's commitment to improve RIA but, as at December 2019, no improvements have taken place. The Strategy for Better Regulation 2014–2020 (GD No. 1076/2014) also foresees implementation of the extended RIA process.

### *Environmental laws*

#### Harmonization with the EU legislation

In the environmental sector, as at December 2019, Romania is among those EU Member States with the

highest number of infringements of EU legislation. Since Romania joined the EU in 2007, it has been charged with 154 cases of infringement of EU environmental law. During the first five years of EU membership, Romania succeeded in closing 89 of the 90 cases filed, which left only one case unresolved in January 2012. That case, related to air quality in Bucharest, is still active<sup>8</sup> and the European Commission (EC) referred it to the Court of Justice of the European Union (CJEU) in May 2018. From 2012 until December 2019, Romania faced an additional 64 infringement cases, of which 53 have been closed and 11 were still active in December 2019. These active infringements are related to air quality, waste management, water management, the Natura 2000 network and failure to conform with transposition of EU legislation on the protection of animals used for scientific purposes into Romanian legislation.

In the period 2007–2019, most (111) of the 154 cases were so-called non-communication cases, for example, failure to notify the EU on transposition of legislation. This points to the lack of a proper mechanism within the public administration to perform this task before receiving formal notice from the EC, which, in a few cases, led to the referral of Romania to the CJEU and the imposition of fines. It also indicates that, in many cases, Romania did not transpose EU legislation in a timely manner. The number of non-communication cases has decreased significantly in recent years; in 2018–2019 three cases were active. The rest of the cases were mainly related to waste management, nature, water and air protection and application of general environmental protection mechanisms such as environmental impact assessment

<sup>8</sup> <http://curia.europa.eu/juris/liste.jsf?lgrec=fr&td=per%20cent3BALL&language=en&num=C-638/18&jur=C>.

(EIA). Of 11 active infringement cases, three are already referred to the CJEU: the unresolved case on air quality in Bucharest; failing to close 68 waste disposal sites, which are not licensed as landfills; and failing to prescribe specific measures for environmental protection from mining waste in Bosneag pond extension.

At the beginning of 2020, the EC decided to start two additional procedures against Romania for breach of environmental legislation. On 12 February, the EC decided to send a letter of formal notice to Romania, giving it one month to take the necessary measures to properly implement the EU Timber Regulation (EU) No. 995/2010, which prevents timber companies from producing and placing on the EU market products made from illegally harvested logs. In another infringement procedure started on 12 February 2020, the EC sent formal notice to Romania to adopt its first national air pollution control programme, as required under Directive (EU) 2016/2284 on the reduction of national emissions of certain atmospheric pollutants.

### Environmental protection

The main environmental principles, institutional competences and general rules related to the main environmental governance mechanisms, such as licensing and EIA, are regulated by GEO No. 195/2005 on environmental protection, which has been amended 23 times, including the last two amendments issued in 2019.

Law No. 292/2018 on the assessment of the impact of certain public and private projects on the environment was adopted in December 2018, although the deadline for transposition of Directive 2014/52/EU amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment was May 2017. The Law repeals the Order of the Minister of the Environment and Forests, the Minister of Administration and Interior, the Minister of Agriculture and Rural Development and the Minister of Regional Development and Tourism No. 135/76/84/1.284/2010 regarding the approval of the methodology for applying the environmental impact assessment for public and private projects, issued in 2010, and the Order of the Minister of the Environment No. 1.026/2009 regarding the approval of the conditions for the elaboration of the environmental report, the report on the impact on the environment, the environmental balance sheet, the location report, the safety report and the appropriate evaluation study, issued in 2009. The Law, apart from transposing Directive 2014/52/EU, is expected to improve public participation in the EIA procedure (chapter 2).

### Air quality

Air quality is regulated by Law No. 104/2011 on ambient air quality. The Law was amended twice, by GD No. 336/2015 and GD No. 806/2016. Both decisions transposed Directive (EU) 2015/1480 laying down the rules concerning reference methods, data validation and location of sampling points for the assessment of ambient air quality. The legal framework on air quality was improved by GD No. 257/2015 regarding the approval of the methodology for the elaboration of air quality plans, short-term action plans, plans for maintaining air quality, MO No. 36/2016 of the Ministry of Environment, Waters and Forests on approval of air quality zones and agglomerations, and GD No. 283/2017 amending GD No. 1.856/2005 on national emission ceilings for certain atmospheric pollutants. It was followed by Law No. 293/2018 on Reduction of National Emissions of Certain Atmospheric Pollutants. In 2018, two additional orders of the Ministry of Environment, MO No. 598/2018 and MO No. 657/2018, were adopted to regulate management regimes in air quality zones and agglomerations.

Four active cases of infringement of EU law are related to air quality. In the first case, which dates back to 2009, the EC referred Romania to the CJEU in October 2018, after two formal notices and three reasoned opinions. The main arguments of the EC are that, since 2007, the daily limit values for concentrations of PM<sub>10</sub> have been systematically and constantly exceeded in Bucharest and that, despite those exceedances, Romania has not established plans for that zone that comply with relevant EU legislation. The second case started in 2013, and thus far Romania has received three formal notices regarding non-compliance of several large combustion plants (LCPs) with emission limit values of SO<sub>2</sub>, NO<sub>x</sub> and dust. The non-compliance led to the exceedance of the national emission ceilings set under Romania's transitional national plan and an additional infringement procedure (the third active infringement) due to failure to control SO<sub>2</sub> emissions from two LCPs, Govora 2 and Deva 2, which have pushed Romania's emissions over the established national ceilings for those pollutants. No action was taken by Romania on that matter. The fourth active infringement case regarding gaps in monitoring of air pollution was started in 2017 and to date Romania has received two formal notices on the matter.

### Water

Water protection is regulated by Law No. 107/1996 on Water and its 25 subsequent amendments (nine times

amended with emergency ordinances), of which 13 were adopted after 2012. There are two active infringement cases related to water protection in Romania. The EC initiated an infringement procedure against Romania over the micro-hydropower projects on the Dejani-Lupşa and Vistişoara Rivers on the northern slope of the Făgăraş Mountains in 2015. An additional letter of formal notice to Romania was sent in 2018 due to its failure to comply with EU rules on urban wastewater treatment in large urban areas. Following Romania's accession to the EU, large agglomerations should have ensured adequate collection of urban wastewater by 31 December 2013 and its treatment by 31 December 2015. The final deadline for Romania to comply with Directive 91/271/EEC on urban wastewater treatment (Urban Wastewater Treatment Directive) was 31 December 2018, according to the country's Accession Treaty. In July 2018, 189 large agglomerations were still not in conformity with the urban wastewater collection obligations under EU law, while 198 large agglomerations did not comply with treatment obligations.

The 2018 World Bank report "Romania Water – Diagnostic Report: Moving toward EU Compliance, Inclusion, and Water Security" states that the focus on compliance with the EU water legislation created a positive momentum for water reforms in Romania, with the country carrying out extensive assessment and mapping of the status of all water bodies across the country and identifying measures to be carried out in an integrated manner to move towards sustainable management, including for mitigating flood risks and starting to implement massive infrastructure investment for pollution abatement. It goes on to state that, in spite of the many challenges encountered and delays in implementation, there have been benefits for public health and the protection of water resources in Romania.

#### Nature protection

GEO No. 57/2007 on the regime of protected natural areas, conservation of natural habitats, wild flora and fauna regulates nature protection. It has been amended 22 times, 18 times since 2012. Law No. 95/2016 on the establishment of the National Agency for Natural Protected Areas and amendment of GEO No. 57/2007 establishes the National Agency for Natural Protected

Areas (NANPA), and GEO No. 75/2018 for the amendment and supplementation of legislative acts on environmental protection and on foreigners' status centralizes the management of protected areas and gives NANPA competences that were previously entrusted to different public institutions, non-governmental organizations (NGOs) and other custodians. Of the 606 Natura 2000 sites registered in Romania by 2018, 234 were originally managed by entities that were not the part of the state administration in charge of nature protection. The fact that the decision on centralizing this function was made in the form of an emergency ordinance means that the public and a number of interested stakeholders were not given the opportunity to participate in decision-making.

Twenty-seven senators contested the decision before the Constitutional Court of Romania. The Court decided (by Decision No. 214/2019) that the Government did not demonstrate urgency on all the matters regulated by GEO No. 75/2018 and declared it unconstitutional in June 2019. Following that decision, Law No 220/2019 amending some normative acts on environmental protection, including most of the provisions of GEO No. 75/2018, was adopted through a regular parliamentary procedure. Apart from regulating procedure for changing the boundaries of protected areas, the Law allows NANPA to maintain cooperation contracts with previously appointed custodians, and especially with those who are the beneficiaries of the projects funded by the EU under the Large Infrastructure Operational Programme 2014–2020, in order to establish the rights and obligations of the parties related to implementation of those projects.

In its Environmental Implementation Review 2019, the EC notes that the implementation of nature protection legislation is still a challenge in Romania, and, in July 2019, Romania received a formal notice due to the incomplete Natura 2000 network. As at December 2019, Romania has not designated any sites of community importance as special areas of conservation and has therefore exceeded the six-year deadline under Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive). Less than 50 per cent of protected natural areas have adopted management plans.

## 2: Văcărești Natural Park, Bucharest



Photo credit: Helmut Ignat, Văcărești Natural Park Association

### Waste management

The legal framework on waste management consists of Law No. 211/2011 on Waste Management, GEO No. 5/2015 on waste electrical and electronic equipment (WEEE), Law No. 212/2015 on Management of End-of-life Vehicles and Law No. 249/2015 on Management of Packaging and Packaging Waste. Law No. 211/2011 has been amended six times since 2016. The EC Environmental Implementation Review 2019 states that the legal framework in the waste sector in Romania is not yet stabilized.

Four of the 11 active infringement cases in December 2019 are related to waste legislation. The EC referred two of these cases to the CJEU. Although Romania's transition period granted through the Accession Treaty for the implementation of Directive 1999/31/EC on the landfill of waste (Landfill Directive) ended in 2017, the case on landfills started in 2012 with warnings by the EC regarding landfills which operated in breach of EU waste and landfill legislation, representing a serious risk for human health and the environment. In October 2018, the CJEU declared that, by having failed to close as soon as possible 68 disposal sites, Romania is in breach of its obligations and should pay the fine. The case on mining waste referred to the CJEU had the same conclusion. Romania was fined due to significant pollution from dust coming from the Bosneag pond extension which,

particularly at times when the wind is stronger, has a harmful effect on the health of the local inhabitants and the environment.

In 2019, the EC opened two additional waste-related infringement procedures against Romania. These two procedures are related to missing reports on implementation of several waste acts on WEEE, batteries and accumulators, end-of life vehicles and shipments of waste, and late transposition or failing to report on designation of competent authorities and national provisions related to ship recycling. Although the latest infringements do not require costly investments and could be overcome quite easily, they reveal systemic weak points of public administration. According to the EC's 2018 Early Warning Report, Romania is considered at risk of non-compliance with the 2020 municipal waste recycling target of 50 per cent, which might trigger additional disputes.

### Chemicals

In the period 2007–2016, Romania had some 50 cases of late transposition on chemicals management.

### Animal welfare

As at December 2019, there is only one infringement procedure in this area, related to failure to conform with transposition into Romanian legislation of Directive 2010/63/EU on the protection of animals

used for scientific purposes. Formal notice to Romania was sent in July 2018. This issue is regulated by Law No. 43/2014 on the protection of animals used for scientific purposes, which was amended immediately after the EU notice by Law No. 199/2018 and again by Law No. 149/2019.

### Environmental noise

Environmental noise is mainly regulated by GD No. 321/2005 on evaluation and management of environmental noise. Among active infringement procedures there is one on late transposition of Directive (EU) 2015/996 establishing common noise assessment methods. Romania faces challenges related to implementation of environmental noise legislation regarding noise mapping and ensuring its availability through the Infrastructure for Spatial Information in the European Community (INSPIRE) geoportal, which provides spatial distribution of environmental data.

#### *Environment-related provisions in sectoral legislation*

### Energy

The main legal act in the energy sector is Law No. 123/2012 on electricity and natural gas. Since 2012, the Law has been amended more than 20 times. The Law integrates principles of environmental protection and gives the competence to the ministry in charge of energy to supervise the implementation of energy-related environmental protection measures, while operators and the Energy Regulatory Agency should ensure compliance with environmental regulations in general. Law No. 121/2014 on Energy Efficiency sets a national indicative target of 19 per cent for reducing energy consumption by 2020 in Romania. According to the 2018 report on progress made by EU Member States towards the national energy efficiency targets for 2020, in 2017, Romania managed to keep its primary energy consumption level below its indicative 2020 target.

The Energy Efficiency Directive (EU) 2018/2002, which sets energy efficiency targets by 2030, should be transposed by 25 June 2020. In 2015, Romania was the first country in Europe to achieve the EU target regarding the share of renewables in the generation mix, far ahead of the 2020 deadline. Romania plans to increase its target for 2030 to 30.5 per cent through the renewed Integrated National Plan on Energy and Climate Change 2021–2030. Law No. 196/2016 on the minimum income for quantitative inclusion regulates the protection of vulnerable consumers, including reducing energy poverty. According to the

Law, households are entitled to receive a subsidy when their net adjusted income, calculated on the basis of a specific methodology, is less than 600 lei per month, this being one indicator, but not the only one, for energy poverty. The Law entered into force in 2018.

### Industry and mining

Environmental protection from industrial activities in Romania is generally regulated by Law No. 278/2013 on industrial emissions as amended by GEO No. 101/2017. Industrial activities that are not subject to integrated environmental permits are regulated by environmental permits introduced by the Order of the Minister of Environment and Sustainable Development No. 1798/2007 on the approval of the procedure for environmental licence issuing. The Law No. 85/2003 on Mining, as subsequently amended, regulates licensing in this area, requiring from the licence holders an appropriate financial guarantee for environmental rehabilitation, as set out in the Environmental Rehabilitation Plan, which shall be developed by every licence holder, as prescribed by the Law.

Despite these provisions, Romania has 548 mining sites (quarries, mines, ponds) where mineral resources have been exhausted or their extraction has become technically or economically non-feasible, so their closure and rehabilitation was approved by GDs. The Government also established the Mines Conservation and Closure Company “Conversmin” (GD No. 313/2002) to carry out mine closure and remediation. While some coal mines (Petrila, Paroseni, Lupeni) are being closed in accordance with Council Decision 2010/787/EU allowing state support for this purpose, the Law on Mining is still in conflict with State Aid Rules of the EU, which prevents further state action in this area.

### Spatial planning

The amendment introduced in 2011 (GEO No. 7/2011) to Law No. 350/2001 on spatial planning and urbanism recognizes the need to protect landscapes and natural heritage, based on the GDs made upon opinions of the ministry in charge of the environment and local authorities. The amendment of 2013 (Law No. 190/2013 regarding the approval of GEO No. 7/2011) prescribes that the competent public authority when issuing a building permit must take into account the existence of a risk of breach of environmental protection norms. However, the amendment deletes the provision that originally prohibited the building of objects that violate nature protection.



## Agriculture

The legal framework on agriculture is comprehensive, consisting of more than 20 laws and by-laws regulating, among other things, the management of agricultural land, agricultural funds, fishery, aquaculture, apiculture, vine production, production and use of wild mushrooms, medicinal and aromatic plants. The most recent package (Laws No. 133/2019 and No. 166/2019) stipulates the measures to regulate the market of agricultural products and establishment of the agency for the quality and marketing of agrifood products. There is also a new Law No. 32/2019 on animal husbandry, following earlier rejection by the Senate in 2014.

Provisions related to the protection of the environment are mostly related to the Code of Good Agricultural Practice, which was firstly adopted in 2000 by GD No. 904/2000, approving the Action plan for water protection against pollution caused by nitrates from agricultural sources, and was further improved in 2015. It is also worth mentioning that beekeeping activity in Romania, as regulated by the Law No. 383/2013 on Apiculture, emphasizes the traditional character of beekeeping practice and protection of bees. GEO No. 34/2000 on organic food products and establishment of measures on green agrifood products, with its subsequent amendments, regulates organic agriculture.

## Forestry

The Forest Code (Law No. 46/2008) was substantially amended in 2015 by Law No. 133/2015 in order to reduce illegal logging. The main changes are related to forest management. About half of Romania's forests are in state hands, managed by the National Forests Administration "Romsilva". The other half, held privately, are managed by forest districts (private or state) or by private owners. Forest management plans became mandatory for forest properties over 10 ha. The Code also sets a 30 per cent maximum market share per tree species, which was contested on the grounds of EU competition law. In 2019, civil society in Romania called for even stricter forest legislation and better protection of forests inside protected areas. The Code also introduced provisions related to climate change and ecosystem services.

Despite the new legislation (Forest Code amendment 2015), the new institutional structure (National Forest Guard) and an updated policy draft, Romania still

faces problems with forests management. Illegal logging led to large public protests in several Romanian cities in November 2019. After the protests, the Ministry of Environment confirmed that 20 million m<sup>3</sup> of wood are illegally logged annually. At a scientific debate organized in Bucharest on 5 December 2019, both the Scientific Council of the National Institute for Research and Development in Forestry named after Marin Drăcea (NIRDF) and the Academy of Agricultural and Forestry Sciences named after Gheorghe Ionescu Şişeşti, disagreed with the Ministry by presenting their points of view on the methodology of logging accounts.<sup>9</sup> In February 2020, the EC sent formal notice to Romania regarding the breach of Regulation (EU) No 995/2010 laying down the obligations of operators who place timber and timber products on the market. As stated in the Commission's press release,<sup>10</sup> in the case of Romania, the national authorities have been unable to effectively check the operators and apply appropriate sanctions for placing on the market products made from illegally harvested logs. Inconsistencies in the national legislation do not allow Romanian authorities to check large amounts of illegally harvested timber. In addition, the Commission has found that Romanian authorities manage the forests (including authorizing logging) without evaluating beforehand the impacts on protected habitats as required under the Habitats Directive and Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (SEA Directive). Furthermore, there are shortcomings in public access to environmental information in the forest management plans. The Commission also found that protected forest habitats have been lost within protected Natura 2000 sites, in breach of the Habitats Directive and Directive 2009/147/EC on the conservation of wild birds (Birds Directive).

## Transport

Legislative activities in the transport sector were most intensive during 2015 with adoption of 14 different laws that regulate registration of vehicles, railways, financial measures, International Maritime Organization construction codes, civil aviation, and respect for human rights in the transport sector, taxi and rental transport, and establish the State inspectorate for control of road transport. In accordance with Directive 2009/28/EC on renewable energy, at least 10 per cent of energy in the transport sector should come from renewable energy sources (RES) in order to reduce the impact of transport on air

<sup>9</sup> [www.icas.ro/uploads/media/INCDS\\_Marin\\_Dracea\\_punct\\_de\\_vedere.pdf](http://www.icas.ro/uploads/media/INCDS_Marin_Dracea_punct_de_vedere.pdf) and [www.icas.ro/uploads/media/ANALIZA\\_IFN\\_5DEC-ASAS\\_FIN.pdf](http://www.icas.ro/uploads/media/ANALIZA_IFN_5DEC-ASAS_FIN.pdf).

<sup>10</sup> [https://ec.europa.eu/commission/presscorner/detail/en/inf\\_20\\_202](https://ec.europa.eu/commission/presscorner/detail/en/inf_20_202).

pollution and climate change. To that purpose, GD No. 935/2011 on promotion of use of biofuels and bioliquids and Law No. 34/2017 on installation of the infrastructure for alternative fuels promote e-mobility in Romania.

### Housing

Law No. 114/1996 on housing has been amended more than 20 times. The last amendment, made in 2017 (Law No. 143/2017), adds the chapter on solidarity housing. This is meant for persons or families evicted from their homes on legal grounds due to unmet mortgage commitments. Solidarity houses belong to the local public authorities and are rented to people in need who pay part of the rent, up to 10 per cent of their income, while the rest is subsidized from the local budget of the administrative-territorial unit where the housing is located. Rental contracts are concluded for the period of five years and can be renewed. If the local authorities own more dwellings than are needed for such persons or families evicted from their homes, they can be offered at the subsidized rental to other categories of people who cannot afford housing.

**Photo 1.3: Ragweed (*Ambrosia artemisiifolia*), an allergenic plant**



*Photo credit: MoEWF*

*Note:* The Government acts to combat the allergenic plant ragweed near buildings in cities and other human settlements, by adopting on 27 January 2021 a GD to simplify the application of Law No. 62/2018 on the control of ragweed.

According to Eurostat, 14 per cent of Romanian citizens encounter environmental problems because of noise around their dwelling, while 19 per cent have complained about pollution. However, those issues are not addressed by the Romanian legal framework on housing. Law No. 114/1996 states that, as a minimum condition, a dwelling should have access to electricity

and drinking water and controlled disposal of wastewater and household waste.

### Tourism

Law No. 275/2018 on organization and conduct of tourism activity in Romania requires the central authority in charge of tourism to cooperate with public authorities on environmental matters and make joint decisions on conditions of use of the natural tourist resources, as well as to cooperate with local public administration and the National Mineral Resource Agency regarding conservation and exploitation of natural resources with therapeutic properties. Tourist operators have an obligation to ensure the protection of the environment in accordance with environmental legislation. The Law requires preservation of bathing water quality and notification to water management, environmental protection and public health authorities when there are polluting substances in sea water.

### Health

Since its adoption, Law No. 95/2006 on the reform in the health sector has been amended 66 times, in the majority of cases on an ad hoc basis through emergency ordinances. Various legislative acts, in both the environmental and health sectors, highlight mandatory cooperation between the health and environmental authorities.

## **1.2 Policy framework**

### *Governmental policy documents*

The Government programme serves as a basis for further development of the sectoral policy documents made by ministries according to their competences. The Government Programme covering the period 2017–2020 was replaced twice by decisions of the Romanian Parliament on granting confidence to the new governments, adopting the Government Programme 2018–2020 in January 2018 by Decision No. 01/2018 and in November 2019 by Decision No. 22/2019. Bearing in mind that the latest Government was dismissed by a no-confidence vote on 5 February 2020, the current Government Programme is expected to be replaced with a new programme.

The Partnership Agreement for Romania 2014–2020, signed by Romania and the EC, and having a broad scope, configures a development strategy with direct impact on policy and its implementation. In the Agreement, Romania committed to achieve certain goals and targets. Several are on the environment, under one of the five strategic priorities defined:

Encouraging sustainable and efficient use of natural resources through promotion of energy efficiency and a low carbon economy, protection of the environment and adaptation to climate change. The Agreement reflects one obligation derived from the Accession Treaty: pursuing the development of water and wastewater services, completing the compliance of agglomerations above 10,000 inhabitants and substantially contributing to the equipment of agglomerations above 2,000 inhabitants.

At the same time, Romania has a wide-ranging framework of thematic strategies and programmes on environmental issues and of environment-related sectoral strategies.

All the strategies, plans and programmes developed consider the responsibilities of Romania as an EU Member State and incorporate the EU policy, legal and regulatory frameworks. The Accession Treaty provided some transition periods for the implementation of environmental obligations that have already ended (until 31 December 2015 for the industrial plants falling under the incidence of Council Directive 96/61/EC concerning integrated pollution prevention and control (IPPC); until 16 July 2017 for the non-complying municipal waste deposits; until 31 December 2018 for the requirements on the residual urban water collection and treatment systems).

#### Government Programme

The 2019 Government Programme sets some priority actions in the sector of environmental protection, related to forest management, water protection, waste, nature protection and air quality. The Programme is very much oriented towards compliance with EU environmental law.

In forest management, it focuses on improvement of the legislative framework regarding the harvesting of timber from the forest fund and granting of firewood to the population and elaboration of a national plan to combat illegal logging. The recent formal notice of the EC on infringement of the Timber Regulation (EU) No. 995/2010 shows that additional efforts are needed in this direction.

In water protection, the Government was planning to intensify dialogue with the EC regarding compliance related to treatment of municipal wastewater in order to find solutions to avoid infringement. Considering that the infringement procedure on this matter has been ongoing since June 2018 and cannot be avoided, the dialogue was probably intended towards paying the infringement fee. Similar actions are proposed in waste management and air protection.

Romania is expected not to meet the target of 50 per cent recycling of municipal waste by 2020, since the rate, as stated in the 2019 Government Programme, is only 14 per cent (7 per cent recycling of materials and 7 per cent composting). The Programme proposes elaboration of a project of technical and operational assistance financed from EC funds to support the local authorities in order to increase the institutional capacity for implementation of the separate collection of waste and establish minimum service standards for the separate collection of waste.

Regarding nature protection, the Government planned to revise GEO No. 75/2018 which regulates custody rights over protected natural areas by improving the process of designating and managing protected sites and strengthening both communication with stakeholders and the administrative capacity of NANPA.

On air protection, the Government recognized the necessity of compliance with the objectives of air quality in cities, updating and improving the air quality monitoring network and ensuring prompt reporting of air quality data. The infringement notice of 12 February 2020 regarding Romania's failure to develop an air pollution control programme in a timely manner shows that further efforts are needed in this sector.

#### Institutional Strategic Plan

The Institutional Strategic Plan (ISP) for the period 2018–2021 of the ministry in charge of the environment (issued in 2018) was revised by the General Secretariat of the Government as part of the project on improving the efficiency of public spending, funded by the World Bank, thus developing the ISP for the period 2019–2022. The document states that no major changes occurred in the structure of the new ISP compared with that of 2018–2021 and that reporting its implementation is not institutionalized, as no formal system for collecting, reporting and aggregating data is in place. The ISP has eight strategic objectives:

1. Protection and conservation of biodiversity, and promotion of the services provided by ecosystems and sustainable use of biodiversity components;
2. Efficient management of waste, contaminated sites and hazardous substances and promotion of circular economy in compliance with the sustainable development principle to protect human health and the environment;
3. Development of the national meteorological system;

4. Improvement of the assessment and the management of air quality, air emissions, environmental noise and environmental radioactivity;
5. Prevention and control of industrial pollution and effective management of industrial accidents risk;
6. Horizontal legislation and the creation of infrastructure for spatial information;
7. Reduction of greenhouse gas (GHG) emissions from economic activities in accordance with the EU targets and adaptation to climate change impact, both current and future;
8. Strengthening of institutional capacity.

### National Reform Programme

The National Reform Programme (2017–2020) is the framework platform for defining the development priorities guiding Romania's development until 2020 in order to achieve the Europe 2020 Strategy objectives and for defining structural reforms to meet the challenges identified by the EC for Romania. Although the title of the document points to reforms, its substance is more a report on ongoing and planned projects aimed at achievement of specific objectives within defined priorities. Its priorities defined under the section "Environment and climate change" are:

- Building a low-carbon economy;
- Reducing GHG emissions from the energy and transport sectors;
- Mitigating climate change effects;
- Supporting sustainable development and improving the quality of the environment;
- Improving the management of waste, including hazardous waste;
- Protecting nature and conserving biodiversity.

The implementation of the National Climate Change and Low Carbon Growth Strategy (GD No. 739/2016) and the National Strategy for the Sustainable Development of Romania 2030 (SDS 2030) (GD No. 877/2018) would support achieving the first four priorities; however, they are not prioritized in the Government Programme and ISP.

*Strategic documents on sustainable development and green economy*

### National sustainable development strategies

The National Sustainable Development Strategy – Horizons 2013–2020–2030 was adopted in 2008. Nine years later, in 2017, the Government decided to develop a new strategy – the National Strategy for the Sustainable Development of Romania 2030 (SDS 2030). At this point, line ministries were asked to write

reports on implementation of the previous strategy, but those were only internally used in preparation of the new document and never published. SDS 2030 aligns the national context to the 2030 Agenda for Sustainable Development and represents the strategic framework for ensuring the coherence of sectoral policies for the successful implementation of the SDGs.

An initial analysis of the current policy and legal framework was necessary during preparation of SDS 2030 in order to develop guidelines for its alignment with the 2030 Agenda. A comprehensive public consultation process was organized during preparation of the draft strategy, involving more than 1,000 people. In November 2018, the Government adopted the National Strategy for the Sustainable Development of Romania 2030 by GD No. 877/2018. As of November 2020, the Action Plan for implementation of the new strategy is in the drafting process and expected to be finalized by mid-2022; hence, no implementation reports exist on SDS 2030 either. Financial resources for implementation of SDS 2030 are not yet identified and ensured.

As at December 2019, based on global reporting, for example, the SDGs Index and Dashboards 2019, Romania was well positioned at 42nd of 162 countries. Recommendation 1.1 (a) of the Second EPR of Romania is partially implemented with the adoption of SDS 2030. The current lack of a financial solution to ensure implementation of SDS 2030 hampers the full implementation of this recommendation. Recommendation 1.1 (b) of the Second EPR concerning the set-up of the National Sustainable Development Council is implemented by establishing in 2020 by Government Decision the Advisory Council on Sustainable Development as a consultative body consisting of 34 persons, including representatives of the scientific and academic community, business community, social partners and civil society. The activities of the Council are supported in the framework of the "Sustainable Romania" project co-financed by the European Social Fund through the Administrative Capacity Operational Programme 2014–2020.

In 2018, Romania issued its Voluntary National Review of implementation of the SDGs, focusing on SDGs 6, 7, 11, 12, 15 and 17.

### Green economy

Several strategic documents promote green economy principles in Romania. The National Strategy for Green Jobs for the period 2018–2025 and the action

plan for its implementation (GD No. 594/2018) have three main objectives:

- Stimulating entrepreneurship and creating green jobs, with a focus on the high-competitiveness sectors identified in the 2015–2020 National Competitiveness Strategy and in the 2014–2020 National Research, Development and Innovation Strategy;
- Developing workforce skills in order to ensure quality employment in competitive sectors that can generate green jobs;
- Strengthening cooperation with relevant actors and dialogue with social partners in sectors with high potential for creating green jobs.

Among Batumi Initiative for Green Economy (BIG-E) commitments, Romania opted for development of the National Sustainable Consumption and Production Strategy, as well as the establishment of a thematic group of experts on green economy within the Interministerial Committee for the Coordination of the Integration of Environmental Protection into Sectoral Policies and Strategies at the National Level. At the twenty-fourth session of the ECE Committee on Environmental Policy held in January 2019, Romania informed the Committee that its efforts regarding BIG-E commitments are ongoing. Under the development of the National Sustainable Consumption and Production Strategy, it was reported that the Interministerial Committee, through a working group on the development of the SDGs at national level, worked on mapping the existing policies and actions at national level and involvement of stakeholders in promotional activities on sustainable consumption and production.

The thematic group of experts on green economy within the Interministerial Committee was not yet established, but Romania reported on adoption of the Law No. 69/2016 on Green Public Procurement, and elaboration of a guide that includes minimum environmental protection criteria for product and service groups as well as standard specifications, which will serve as the next step in development of the National Green Public Procurement Action Plan.

#### Economic and social development

In Romania, there are many initiatives related to economic and social development integrated into various strategic documents, such as the Strategy on Social Inclusion and Poverty Reduction 2015–2020, National Strategy “A Society without Barriers for People with Disabilities”, National Strategy for the Protection of the Elderly and the Promotion of Active Ageing, Strategy on the Inclusion of the Romanian

Citizens belonging to the Roma Minority and National Rural Development Programme 2014–2020. However, the impact of these strategic documents is hardly measurable due to a general lack of reporting on the implementation and impact of adopted policies.

#### *Strategic documents on the environment*

##### Air quality

Although the Government Programme 2017–2020 foresees the development of the national strategy on air quality, such a document has not been developed. In addition, Directive (EU) 2016/2284 requires EU Member States to develop air pollution control programmes by 2020, but Romania had not started drafting these programmes as at December 2019.

Air-related policy documents are local air quality plans that are under the responsibility of mayors. The Romanian law requires air quality plans for improvement of air quality in zones where there are exceedances of concentrations of pollutants, and maintenance air quality plans in zones where air quality is compliant with set limit values. Of 41 air quality zones and 13 agglomerations, air quality plans with measures for improvement of air quality are approved for seven municipalities (Baceu, Braila, Braşov, Bucharest, Galati, Iasi and Magurele) and maintenance plans for 14 counties. No reports on implementation of these plans or analysis of the effects of implemented measures are available.

In accordance with the Protocol Concerning the Conditions and Arrangements for Admission of the Republic of Bulgaria and Romania to the European Union, Romania was granted transition periods to implement Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from LCPs. The deadline for gradual compliance by 34 LCP installations with emission limit values for sulfur dioxide, 64 LCP installations with emission limit values for nitrogen oxides and 22 LCP installations with emission limit values for dust expired on 31 December 2013. Romania had an additional transition period for six LCP installations to meet emission limit values for nitrogen oxides in the period between 1 January 2016 and 31 December 2017.

In the meantime, Directive 2001/80/EC was repealed by Directive 2010/75/EU on industrial emissions (Industrial Emissions Directive), which instituted stricter requirements regarding emission limit values for LCPs. In 2017, Romania adopted the revised National Transition Plan for LCPs (MO No. 1430/1063/2017 of the Ministry of Environment),

postponing achievement of emission limit values for 32 LCP installations to 30 June 2020.

### Waste management

The National Strategy for Waste Management for the period 2014–2020 was approved by GD No. 870/2013. The National Waste Management Plan (NWMP) (GD No. 942/2017) was adopted with a delay in December 2017. Projections of the quantities of waste are given for the period 2015–2025, and the Plan covers the period 2018–2025. It also contains a waste prevention programme until 2025. The waste management plans at county level are under preparation. In 2017, Romania's recycling rate (including composting) reported to Eurostat was 14 per cent, while its landfilling rate was 70 per cent, one of the highest in Europe. The EC considers Romania at risk of missing the 2020 target of 50 per cent preparation for reuse/recycling of municipal waste. In the Early Warning Report for Romania on the implementation of EU waste legislation,<sup>11</sup> the Commission highlights that:

- Separate collection service, including for bio-waste, is not being sufficiently implemented;
- There are not enough economic incentives to move away from disposal;
- Extended producer responsibility (EPR) schemes for packaging are not efficient and do not fully cover the costs of separate collection;
- The necessary infrastructure is still lacking;
- More investment is needed in projects higher up the waste hierarchy (e.g. recycling) that go beyond treatment of residual waste; and
- Public engagement in separate collection is very low.

The National Strategy and National Action Plan for Management of Contaminated Sites (GD No. 683/2015) in Romania were developed in 2014 with the aim to outline the principles of management of contaminated sites by 2015, defined as short term, to solve the problem of contaminated sites requiring urgent action by 2020, defined as mid-term, and to complete the action by 2050. No reports are available on mentioned policy acts but, considering active infringements of EU law and data on waste management, results remain limited. During 2016–2017 the Ministry of Economy drafted a mining strategy including a list of 548 sites contaminated by mining waste, but it is still not adopted, lacking another strategic impact assessment (SEA) report after the revision.

### Water

Romania issued a second cycle of its river basin management plan (RBMP) in December 2015. The whole territory is assigned to a single River Basin District (Danube). According to the 2019 EC report on the implementation of Directive 2000/60/EC establishing a framework for Community action in the field of water policy (Water Framework Directive) in Romania, nearly 75 per cent of the planned measures established in the first cycle have been implemented. As explained in the document, there have been some delays in the implementation of the first Programme of Measures due to a lack of finance, the lack of a mechanism and delays in the tendering of contracts. In line with the Law No. 107/1996 on Water as amended, the RBMP and Flood Risk Management Plans have not been integrated into a single plan.

### Nature protection

The National Strategy and Action Plan for Biodiversity Conservation 2013–2020 has already expired, in January 2020. No implementation reports were made available and there is no information on plans to revise the strategy or draft a new one.

### Climate change

Romania adopted the National Climate Change Strategy for the period 2013–2020 in 2012. In the meantime, in 2016, the Government adopted the National Climate Change and Low Carbon Growth Strategy (GD No. 739/2016) complemented with a National Action Plan 2016–2020, which is an update and extension of the National Climate Change Strategy 2013–2020. The EC Environmental Implementation Review 2019 states that reports on the implementation of the new Strategy have not been published. Romania drafted the national energy–climate plan for the period 2021–2030 but it is not yet adopted.

*Sectoral development with a possible impact on the environment*

### Energy

A draft energy strategy was intended to cover the period 2016–2030, but during the SEA procedure it was updated several times; hence, the last version has a timespan 2019–2030 with perspectives for 2050.

<sup>11</sup> [https://ec.europa.eu/environment/waste/pdf/early\\_warning\\_report\\_RO.pdf](https://ec.europa.eu/environment/waste/pdf/early_warning_report_RO.pdf).

**Photo 1.4: Institutional and political engagement regarding waste management**



*Photo credit: MoEWF*

**Photo: 1.5: Banatic black pine (*Pinus nigra, ssp. banatica*)**



*Photo credit: Mircea Vergheș*

According to the National Reform Strategy 2019, the main reasons that led to updating the draft are the correlation with the Government Programme, updating of the economic data and correlation with the evolution of the “Clean Energy Package”.

The draft strategy has five key strategic objectives to be achieved in the time horizon 2030 to 2050: increasing the level of energy security; competitive energy markets as the basis of a competitive economy; clean energy with low GHG emissions and other pollutants; modernization of the energy management system; and protecting vulnerable consumers and reducing energy poverty to ensure human rights. Objectives of the draft strategy are in line with the 2030 Agenda, related to several SDGs.

However, despite the recent update of the draft strategy, under the obligation stemming from the EU climate and energy package, Romania drafted a new strategic document for the energy sector, the Integrated National Plan on Energy and Climate Change 2021–2030. The deadline for submitting the final plan to the EU was 31 December 2019 and Romania is already late in fulfilling this obligation.

#### Mining and quarrying

The draft mining strategy for the period 2017–2035 is not adopted. After three SEA reports produced during the course of 2017, the strategy was revised accordingly and needs another SEA analysis, which requires time and funds. The final SEA report was expected in June 2018, but at the end of 2019 the development of this report had not commenced.

#### Industry

After a period of deindustrialization, Romania started strategic planning in the industrial sector in 2013. The National Strategy for Competitiveness 2015–2020 (GD No. 775/2015) identified challenges and set several objectives, such as industrial revitalization through smart specialization and transformation of knowledge into a source of competitive upgrading, redefining industrial policies through the orientation towards innovation and strengthening the functioning of the market mechanism and integration of network industries in the industrial value chain. The National Strategy for Research, Development and Innovation 2014–2020 (GD No. 929/2014) focuses on smart specialization in several areas of strategic interest: biochemistry; information and communications technology; space and security; energy; the environment; climate change; and eonanotechnologies and advanced materials.

#### Agriculture, fishery and apiculture

Although agricultural sector strategic directions are strongly influenced by the EU Common Agricultural Policy (CAP), there are a number of policy documents at the national level prioritizing certain activities to be funded through CAP instruments or other sources. In the period 2014–2020, a total public contribution of more than €9.5 billion (€8.1 billion from the EU budget, €12.3 million transferred from the direct payments allocation for 2015–2017 and €1.34 billion of national co-funding) has been allocated for measures that will benefit rural areas. Support to organic agriculture is granted through co-financing programmes, with funding from the EC, professional organizations and the state budget.

The Rural Development Programme 2014–2020 focused on the following priorities: improving competitiveness in the agrifood sector; preserving ecosystems and ensuring the efficient use of natural resources; and boosting the economic and social revitalization of rural areas. The Programme promotes diffusion of knowledge among farmers through appropriate advisory services, adapting research activities and results to the needs of farmers and food producers, the availability of capital and technology for modern agricultural activities, the involvement of the young generation in agribusiness, restructuring and modernizing small farms into market-oriented farms, and setting up producer groups and organizations and integrated food chains.

There is also the Multiannual Agricultural Plan, as well as an operational programme for fisheries and maritime business for the same period (2014–2020). The National Apiculture Programme for the period 2020–2022 and the Sectoral Research and Development Plan for Agriculture and Rural Development 2019–2020 are expected to be financed with €100 million from the state budget for projects for applied research and innovation in the agricultural sector.

#### Forestry

In October 2017, the Government opened public consultations on the draft forestry strategy for the period 2018–2027. More than two years later, the strategy is not yet adopted. Apparently, there were no interested companies licensed to perform SEA.

#### Transport

The 2008 Strategy for Sustainable Transport for the period 2007–2013 and 2020, 2030 aims for sustainable development of the transport sector, economy and



environment, increasing the accessibility of Romania, ensuring the intermodality of the transport system, promoting the balanced development of all modes of transport and improving the quality and efficiency of services. Effects of this strategy were not reported and not elaborated during the preparation of a new master plan. In 2011, the Ministry of Transport approved the Intermodal Transport Strategy for 2020 (MO No. 457/2011 of the Ministry of Transport and Infrastructure). As at December 2019, there is a draft general master plan for transport. The planning horizon is the year 2040, and 2030 for the results of the Transport Model. The plan states that, given the level of uncertainty associated with long-term forecasting, any action beyond the year 2030 should be reconfirmed based on an updated plan (e.g. carried out within 10 years, i.e. by 2025). However, the draft plan was prepared in 2016 and is not yet adopted, although it was prepared in accordance with ex ante conditionality for the European structural and investment funds (ESIF).

### Tourism

The main tourism policy document is the National Tourism Development Master Plan for Romania 2007–2026. This is further elaborated in the National Eco-Tourism Strategy 2019–2029 (GD No. 358/2019) and the National Strategy for Spa Tourism (GD No. 571/2019).

The National Eco-Tourism Strategy contains a detailed description of ecotourism activities offered in Romanian national parks. Following the Strategy, Romania has elaborated a system for designation of eco-destinations based on the European Ecotourism Labelling Standard, which is recognized by the Global Sustainable Tourism Council. Two destinations were designated initially (Zărnești-Piatra Craiului and Mara-Cosau-Creasta Cocosului). Another three destinations, the “Bison Land” in Neamț County, Hateg Land and Dornelor Land, are already certified as ecotourism destinations by the Ministry of Tourism under the name “Gate of the Carpathians”.

### Health

The National Health Strategy “Health for Prosperity” (GD No. 1028/2014) covers the period 2014–2020 and has a strong community component, aiming to integrate the social and health-care aspects for the rural population. It is based on the principle of providing equal access to essential services, cost-effectiveness and optimization of health services with emphasis on prevention. This approach stems from the fact that the Romanian health system used to rely on hospital care as the main method of intervention, causing one of the highest recorded rates of hospitalization in the EU.

**Photo 1.5: Traditional pasturing and touristic steam train in Vaser, Maramureș Mountains Natural Park**



*Photo credit: Romsilva, MoEWF*

### *Policy coherence for sustainable development*

Immediately after adoption of the 2030 Agenda, Romania established the Subcommittee for Sustainable Development within the lower house of the Parliament in November 2015.

In April 2016, both houses of the Parliament issued a joint statement by Declaration No. 1/2016 supporting the implementation of the 2030 Agenda, highlighting the need for sustainable development to be at the core of public policy and thus expressing the strong political will of Romania, at the highest political level, to align with the 2030 Agenda. The Declaration highlights that the Parliament is a main actor in promoting the SDGs due to its legislative and budgetary powers and proposes establishing a Department for Sustainable Development within the Prime Minister's Office in order to ensure high-level intersectoral coordination for development of an adequate long-term policy framework. The Declaration also highlights the need for a coherent and unitary approach to the SDGs throughout parliamentary activities to facilitate the continuity of commitment of all political forces, independent of future parliamentary majorities.

During the Romanian Presidency of the Council of the EU, Romania took an important initiative to enhance sustainable development partnerships among EU Member States and third parties. The Conference organized "Agenda 2030: Partnerships for Sustainable Development" in Bucharest in April 2019, involving participants from the EU, Western Balkans, Eastern Partnership and Central Asia, which resulted in the Bucharest Declaration. The Declaration emphasizes the need for urgent action on implementing the 2030 Agenda through operationalizing sustainable development strategies and action plans, the importance of having coherent strategies to ensure the SDGs are being taken into consideration when implementing relevant public policy, and the importance of focusing on the linkages among the three pillars of sustainable development. The Declaration also calls for more robust partnerships and effective multilevel and multi-stakeholder governance for sustainable development, including national, EU, regional and local authorities and civil society.

The Department for Sustainable Development within the Prime Minister's Office was established by GD No. 313/2017 in May 2017, and SDS 2030 was adopted in November 2018 by GD No. 877/2018. In 2019, the Government established the Interdepartmental Committee for Sustainable Development (GD No. 272/2019), consisting of

members of the Government and chaired by the Prime Minister. Until the establishment of the Department for Sustainable Development within the Prime Minister's Office, interministerial cooperation on sustainable development was coordinated by the Interministerial Committee for the Coordination of the Integration of Environmental Protection into Sectoral Policies and Strategies at the National Level, which was established within the ministry responsible for environmental protection.

The new structure is expected to ensure better inter-institutional cooperation, since Romania has recognized that coordination of public policy to align it with the 2030 Agenda goes beyond the traditional institutional framework. However, the main actors of inter-institutional cooperation are sustainable development hubs to be established within each ministry. As stipulated in SDS 2030, these hubs, with competency on sustainable development, are formed by existing staff who will pursue SDG implementation related to the field of activity specific to their institution. They also act as liaison persons between their institutions and the Department of Sustainable Development on the one hand, and the National Institute of Statistics on the other, for monitoring and reporting. This division of tasks might be practical, but strictly sticking to targets falling within the public policy domain of a certain ministry or institution can hinder the wider cooperation that is necessary to adequately address numerous cross-cutting issues, evaluate every target from various angles and create comprehensive responses incorporating contributions from multiple sectors.

According to SDS 2030, decision-making on sustainable development is going to be assisted by the Consultative Council for Sustainable Development established by GD No. 114/2020. SDS 2030 also proposes to establish a Coalition for Sustainable Development involving large groups (e.g. of young people, NGOs, private sector organizations, local authorities, trade unions, employers' associations, research, development and innovation institutions, the academic community, the mass media, religious organizations, farmers, senior citizens and families), based on sustained, permanent dialogue. With all the established bodies and structure planned through the SDS 2030, Romania covered involvement of all key stakeholders in future-decision making on sustainable development.

Participatory process is an effective tool in implementing the SDGs. Romania pursued extensive involvement of stakeholders through the year-long process of development of SDS 2030. The Department for Sustainable Development organized several

national debates with NGOs, the private sector, trade unions, research institutes and academia, and meetings with Parliament's Subcommittee for Sustainable Development, ministries and the SDS 2030 drafting committee, involving more than 1,000 participants. In addition, eight regional seminars were held, in each development region, in the process of localizing the 2030 Agenda.

SDS 2030 was developed with the idea that it should be understood by all, and its length and simplicity reflect that. However, it lacks essential information on mechanisms to achieve SDGs and targets, as well as a vision of the dynamics of their achievement, which is also necessary to enhance understanding of the Strategy. The action plan for implementation of SDS 2030 is in development and is expected to be finalized in mid-2022. All three pillars of sustainable development are in SDS 2030, connected through focusing on citizens and community. It highlights that the economic performance of the country is often measured in figures that do not reflect the needs and potential of each citizen and recognizes the need to boost social capital, ensure sustainable development at the community level and cultivate the sense of belonging to the community in order to foster the entrepreneurial and civic spirit and sense of responsibility for environmental protection.

The most indicative examples of cross-sectoral linkages in SDS 2030 appear in relation to environmental SDGs and targets: climate change, ecosystems and ecosystem services and green economy. As at December 2019, the principles of SDS 2030 are not reflected throughout the policy framework. Intersectoral linkages are weak and a substantial social and environmental approach to developing sectoral strategies is rare or purely declarative. Romania's robust administrative apparatus functions on principles of clear delineation of responsibilities, which, in many cases, leaves "common grounds" that do not attract sufficient attention from any particular quarter.

In line with usual practice in the Romanian policy framework, SDS 2030 does not contain a mechanism for regular reporting on implementation, except that "periodical reporting to the EU" has been foreseen. The Department for Sustainable Development is in charge of reporting on implementation of SDS 2030. It prepares annual reports on the state of implementation of the Strategy, which it submits to the

Interdepartmental Committee for Sustainable Development for approval. It is then presented to the Romanian Parliament. As at December 2019, the National Institute of Statistics is working on updating the existing Sustainable Development Indicators system, which was developed based on the previous National Strategy for Sustainable Development. The database of Sustainable Development Indicators of Romania includes 103 indicators, with data series available in the national statistical system since 2000.

The new Sustainable Development Indicators system is harmonizing with the indicators used in the EU and integrates the economic, social and environmental indicators used to assess the three-dimensional evaluation of sustainable development in Romania. According to SDS 2030, updating of the system is expected to be completed by the end of 2020.

Since SDS 2030 does not contain specific targets and measures, it was not possible to estimate the funds required for its implementation. Moreover, no assessment of available funds used to achieve the SDGs and combine them with emerging challenges and ensure the implementation of SDS 2030 in its initial phase, including finding financial mechanisms for funding in the long term, is being done.

#### *Strategic environmental assessment, including public participation*

Since 2012 and as at December 2019, 12 SEA procedures were completed for plans and programmes at the national level (table 1.1) and 18 for regional plans and programmes. In addition, there were 13 cases (12 national plans and one regional plan) in which the competent authority (Ministry of Environment) decided that the SEA procedure is not necessary during the screening phase. Also, some procedures were started but are not yet completed (e.g. the forestry strategy, mining strategy and energy strategy).

The number of SEA procedures has been drastically reduced compared with the period 2007–2011 when there were, on average, 250 SEA procedures per year, although MO No. 995/2006 of the Minister of Environment and Water Management for approving the list of plans and programmes subject to SEA procedure was repealed only in 2016 by MO No. 777/2016 of the Ministry of Environment, Waters and Forests.

**Table 1.1: Completed SEA procedures for plans and programmes at national level, 2013–2017**

Year	Strategic documents
2013	National Strategy for Waste Management
2013	National Plan for Development of Hydrographic Basins
2014	National Strategy and National Action Plan for Contaminated Sites Management
2015	National Programme for Rural Development 2014–2020
2015	National Plan for Transition for Combustion Plants under the provisions of Directive 2010/75/EU on industrial emissions
2015	Operational Programme for Big Infrastructure 2014–2020
2015	Regional Operational Programme 2014–2020
2015	General Master Plan for Transport 2014–2030 (not yet adopted)
2015	Operational Programme for Fishery and Maritime Business 2014–2020
2015	National Strategy regarding Climate Change and Economic Growth Based on Low Carbon Emissions
2016	Strategy for Territorial Development
2017	National Plan for Waste Management

Note: No SEA procedures were completed during 2012.

The central public authority for environmental protection implements SEA procedures for plans and programmes at the national and regional levels and local environmental protection agencies (LEPAs) at the local or county level. In any case, the authority responsible for plans or programmes undergoing an SEA procedure has certain obligations during the process, especially when it comes to public participation. These obligations include publishing a notice on the availability of the draft plan or programme in newspapers and on its web page, informing the public on finalizing of the environmental report and on the schedule and place of public consultations and addresses to which interested stakeholders can submit written comments.

Comments are sent to the authority in charge of the plan or programme and the competent authority for environmental protection (the Ministry or respective LEPA). The authority in charge of the plan or programme is responsible for informing the public about all decisions made during the SEA process, as well as environmental considerations integrated into the plan or programme, the opinions expressed by the public and by other authorities and, as appropriate, how the results of transboundary consultations have been considered in the decision-making process. Bearing in mind that both preparation of plans and programmes and SEA documentation are often outsourced to consultants, the quality of the reports on public participation could vary from case to case. Some authorities are publishing very detailed reports answering every single comment and question, while others just mention which comments were addressed, without any further explanation. Hence, public comments are sometimes treated with due respect, while, in certain cases, the programme or plan proponent is simply formally fulfilling all the legal requirements regarding public participation. In Romania, the public has the opportunity to comment on the screening decision within 10 calendar days of

publication of the announcement. The competent authority for environmental protection may reconsider the decision at the screening stage, based on justified proposals by the public. Despite this opportunity, in practice, public participation mainly takes place in the final stages of the SEA procedure, as the early stages do not generate any interest and, in many cases, no public opinions are submitted during the public debates.

Recommendation 2.1(a) of the Second EPR of Romania asked the Ministry of Environment and Forests to review the regulatory acts that define activities subject to SEA in order to decrease the number of cases subject to it and streamline assessment procedures. By repealing the act that listed plans and programmes subject to SEA, Romania implemented the recommendation. The second part of this recommendation (2.1(b)) was partially implemented by GD No. 1000/2012 regarding the reorganization and functioning of the National Environmental Protection Agency (NEPA) and of the public institutions that are subordinated to it (chapter 2).

Otherwise, no major changes were made in the legislation on SEA. The adoption of some draft policy documents is blocked by the SEA procedure, because an authorized entity has to perform SEA and, in some cases, there is a lack of interest or availability of funds to complete the SEA procedure.

### **1.3 Institutional framework for sustainable development and the environment**

#### *Institutional framework for sustainable development*

In the period 2012–2017, sustainable development policy was coordinated by the Ministry of Environment and the Interministerial Committee for

the Coordination of the Integration of Environmental Protection into Sectoral Policies and Strategies at the National Level, which had a prominent role in implementation of the National Sustainable Development Strategy – Horizons 2013–2020–2030. The Interministerial Committee was comprised of state secretaries from all the ministries and governmental institutions and chaired by the Minister of Environment. In 2015, the Subcommittee for Sustainable Development was established within the lower house of the Romanian Parliament.

The Department for Sustainable Development within the Prime Minister’s Office is entrusted to coordinate the implementation activities stemming from the SDGs of the 2030 Agenda (figure 1.1). The maximum number of positions in the Department is 10, excluding the State Councillor heading the Department and his or her cabinet. According to SDS 2030, the Department for Sustainable Development shall ensure policy coherence on sustainable development and will be consulted in the case of draft laws with direct impact on achievement of the goals defined in the Strategy. Efficient implementation of these tasks might place an extra burden on the Department, considering the broadness and all-pervading nature of sustainable development, as well as frequent changes to the Romanian legal and policy framework. The adoption of SDS 2030 and creation of the Department support the achievement of SDG

target 17.14 (Enhance policy coherence for sustainable development).

The Interdepartmental Committee for Sustainable Development consists of members of the Government, chaired by the Prime Minister. The Committee issues an advisory opinion on the annual report, prepared by the Department for Sustainable Development, on the state of implementation of SDS 2030, which it submits to the Government for presentation to the Parliament, which approves its action plans. The Department for Sustainable Development is the permanent secretariat of the Committee.

The Consultative Council for Sustainable Development functions as the advisory body and also provides scientific and technical support, initiating and drawing up policy documents and methodologies for implementation of the 2030 Agenda. The Consultative Council comprises 34 members of the scientific and academic community, business community, social partners and civil society. In addition, sustainable development hubs are established at the level of central public authorities. The idea is that existing staff in these institutions continue working on SDGs and targets specific to their institutional portfolio while, at the same time, acting as liaison persons between their institution and the Department for Sustainable Development and National Institute of Statistics for monitoring and reporting.

**Figure 1.1: Institutional framework for implementation of SDS 2030**



Source: Department for Sustainable Development within the Prime Minister’s Office, 2020.

The Romanian Agency for International Cooperation for Development was established in 2016 with responsibility to implement development and humanitarian programmes and projects. There is also a legislative framework, adopted in 2016, aimed at streamlining development assistance to recipient countries of official development assistance (ODA) and strengthening cooperation with strategic partners. As presented in the Voluntary National Review 2018, Romania seeks to increasingly involve a range of actors working on development cooperation, such as governmental institutions, NGOs, the media, academia and the private sector to coordinate action at national level in accordance with the Multiannual Strategic Programme on International Cooperation for Development and Humanitarian Assistance 2018–2021.

*Institutional framework for the environment*

Ministry of Environment, Waters and Forests

Since 2012, following changes in the Romanian Government, there have been several changes in the title, scope of work and internal organization of the ministry in charge of the environment (table 1.2). All these transformations were coupled with frequent personnel changes.

In November 2019, a new Government was elected. In the new composition of the Government, the Ministry of Environment has been merged with the Ministry of Water and Forests (figure 1.2). The maximum number of employees in the current Ministry of Environment, Waters and Forests is 484, excluding the posts in the cabinet of the Minister. According to the last available legislation in force (GD No. 43/2020 on the organization and functioning of the Ministry of Environment, Waters and Forests), NEPA, National Environmental Guard (NEG), Danube Delta Biosphere Reserve Administration (DDBRA) and National Forest Guard are subordinated to the ministry in charge of the environment.

These institutions have legal personality and are fully financed from the state budget. While NANPA is

subordinated to the ministry in charge of the environment, it has legal personality but is financed from its own revenues and receives subsidies from the state budget. The National Meteorological Administration and Romsilva operate under the authority responsible for the environment. Units that work in coordination with the Ministry of Environment, Waters and Forests are the Environment Fund Administration and National Administration of Romanian Waters (Romanian Waters).

Apart from subordinated institutions, committees, councils and other bodies operating under the Ministry of Environment, Waters and Forests are the:

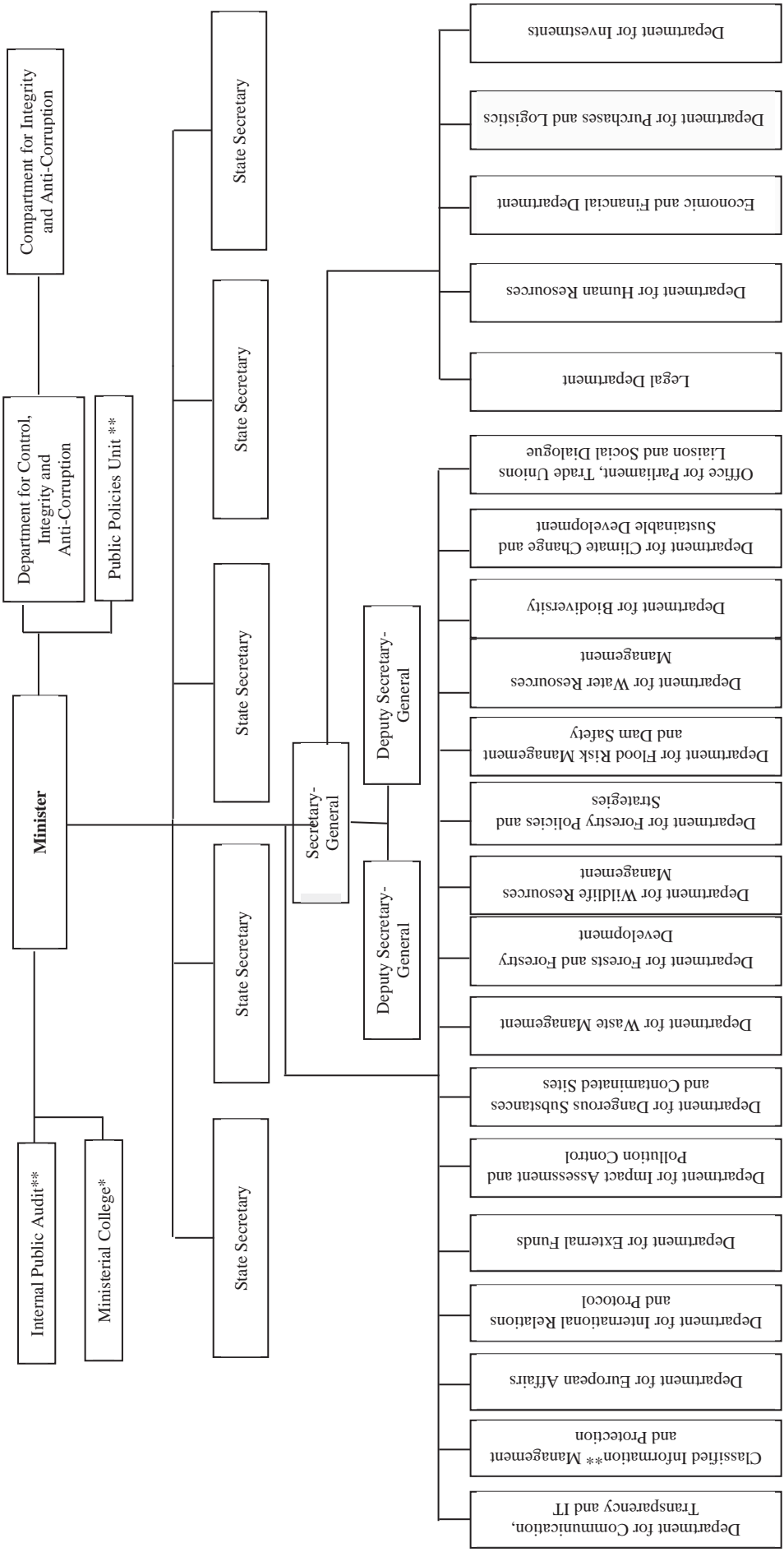
- Interministerial Committee for the Coordination of the Integration of Environmental Protection into Sectoral Policies and Strategies at the National Level;
- Interministerial Water Council;
- Commission for the Application of the Action Plan for Waters Protection Against Nitrate Pollution from Agricultural Sources ;
- Ministerial Committee for Emergency Situations;
- National Commission on Climate Change;
- National Commission for the Safety of Dams and Other Hydrotechnical Works;
- National Commission for the Safety of Flood Protection Dams;
- National Hunting Council;
- National Committee for the International Hydrological Programme;
- Centre for Ecological Reconstruction of Rivers
- Petrom Environmental Committee;
- Technical-economic Commission;
- Technical Commission for Forestry;
- EU Ecolabel Commission;
- EMAS Committee.

The Ministry of Environment, Waters and Forests has a long list of competences, but its main tasks are related to strategic planning and development of the regulatory framework.

**Table 1.2: Evolution of the ministry in charge of the environment, 2012–2020**

Period	Title
December 2009–February 2012	Ministry of Environment and Forests
February 2012–April 2012	Ministry of Environment
May 2012–December 2012	Ministry of Environment and Forests
December 2012–December 2014	Ministry of Environment and Climate Change
December 2014–January 2017	Ministry of Environment, Waters and Forests
January 2017–June 2017	Ministry of Environment and Climate Change
June 2017–November 2019	Ministry of Environment
November 2019–February 2020	Ministry of Environment, Waters and Forests

Figure 1.2: Structure of the Ministry of Environment, Waters and Forests



Source: Ministry of Environment, Waters and Forests, 2020.

Note: As at January 2020. \* Organized according to the legislation in force by order of the minister; \*\* Organized at the compartment level. Maximum number of positions: 484 (exclusively dignitaries and posts related to the Ministry's Cabinet).

### National Environmental Protection Agency

NEPA was established in 2004 and in 2005 the regional environmental protection agencies (REPAs) and LEPAs became subordinated to it. In 2012, REPAs were abolished. LEPAs are based in counties, so there are 42 branches throughout the country, in 41 counties and Bucharest municipality. In line with GD No. 43/2020, the maximum number of employees in NEPA and the LEPAs is 1,925; some 1,700 of these positions are filled. NEPA has about 200 employees while the maximum number set by legislation is 275. In line with its operation and functioning regulation, NEPA's main duties are:

- Providing technical support in the drafting of normative acts, sectoral strategies and action plans on environmental protection;
- Issuing regulatory acts, according to the legal provisions;
- Providing support to the implementation of policies, strategies and legislation on environmental protection.

However, in fact, the main duties of NEPA and the LEPAs are related to integrated environmental permitting (integrated pollution and prevention control (IPPC) permits) and permits on waste and nature protection. They are also in charge of monitoring air quality and environmental noise. The National Reference Laboratory for Air Quality is an integral part of NEPA and is the only accredited laboratory in the country for air quality assessment. Laboratories in the LEPAs are not accredited. However, in fact, the main duties of NEPA and the LEPAs are related to integrated environmental permitting (integrated pollution and prevention control (IPPC) permits) and permits on waste and nature protection. They are also in charge of monitoring air quality and environmental noise. The National Reference Laboratory for Air Quality is an integral part of NEPA and is the only accredited laboratory in the country for air quality assessment. Laboratories in the LEPAs are not accredited.

### National Environmental Guard

The National Environmental Guard (NEG) was established in 2003 with the mandate of performing environmental inspection. It is organized similarly to NEPA, with 41 county branches, plus the General Commissariat in Bucharest and one in the Danube Delta Region. In line with GD No. 43/2020, the maximum number of employees in NEG is 809 but, as at December 2019, only 559 were employed. In the Commissariat in Bucharest, which also serves as NEG headquarters, there are 14 inspectors. According to

NEG, of 90,000 permitted installations, some 20 per cent are supervised on an annual basis, which represent a significant administrative burden of some 80–100 inspections per inspector per year. NEG has an open telephone line 24 hours/day.

Regulated activities and installations are classified based on their environmental performance and the risk that they pose: A – inspected twice a year; B – inspected once a year; C – inspected once in two years; and D – inspected once in three years. Annual inspection plans are submitted to the ministry in charge of the environment for approval. NEG also performs ad hoc inspections upon request or notification from the operator in the event of malfunction (operators are legally obliged to inform NEG on any issue that might cause environmental non-compliance). Moreover, NEG organizes thematic inspections that are simultaneously organized throughout the country. While waste management was its thematic focus in 2019, the priority for 2020 are installations that are subject to integrated permitting. NEG closely cooperates with the police, border police, customs, Public Health Institute, Romanian Waters, Forest Guard and various other actors such as laboratories.

### National Agency for Natural Protected Areas

The establishment of NANPA in 2016 represents one of the major changes in environmental institutional set-up in Romania since 2012. The role of NANPA is to manage protected areas and especially Natura 2000 sites. The Agency should ensure unitary and efficient administration of the protected natural areas. Despite many efforts invested in decentralization of governance, this decision to establish NANPA moves towards recentralization of administrative power since territorial structures of the Agency do not have legal personality and are organized at the level of management or service.

Since 2018, in accordance with GEO No. 75/2018, the Agency has taken over all rights and obligations arising from the contracts, conventions, agreements and protocols regarding the management of protected natural areas concluded by the central public authority for environmental protection, waters and forests with different counterparts. It also took over the responsibilities over natural areas that were not previously protected.

### Danube Delta Biosphere Reserve Administration

The Danube Delta Biosphere Reserve has its own administration. GD No. 43/2020 prescribes the



maximum number of employees in the Danube Delta Biosphere Reserve Administration (DDBRA) as 171. According to Law No. 82/1993, the Danube Delta Biosphere Reserve is managed by a Scientific Council that includes representatives from DDBRA and all the other organizations involved in the reserve, such as local authorities, ministries, health services, research institutions, the Romanian Academy of Science and commercial enterprises.

DDBRA is led by a Governor, appointed by the Government at the proposal of the ministry in charge of the environment. The Scientific Council of the Reserve guides and supervises the activity of DDBRA. The Governor participates in meetings of the Scientific and the Advisory Councils. In the short period between June 2017 and January 2018, DDBRA was subordinated to the General Secretariat of the Government (GEOs No. 50/2017 and 1/2018).

The Administration is very active in cross-border cooperation. There are cooperation agreements and a joint management plan with the Republic of Moldova and Ukraine and active participation in the implementation of the EU Danube Strategy. Through different regional projects, policy documents were developed for the Danube Delta such as the Danube Delta Integrated Sustainable Development Strategy (World Bank), Climate Change Adaptation Strategy and Action Plan for the Danube Delta Region (WWF) and Flood Action Programme (International Commission for the Protection of the Danube River (ICPDR)).

#### Environment Fund Administration

The Environment Fund Administration functions as a specialized body of the central public administration and provides financial support for the realization of projects and programmes for environmental protection. It was established by GEO No. 196/2005 on the Environmental Fund. The Administration works under the supervision of the Steering Committee composed of the President and Vice-President of the Environment Fund Administration and Chiefs of Divisions.

The Steering Committee proposes projects to be funded by the Environment Fund to the Approval Committee, which makes decisions by voting. The Approval Committee is composed of representatives of state administration from the sectors of environmental protection, finance, economy, energy, transport, health, agriculture, regional development and public administration, along with NEPA, NEG, local administration, the employers' confederation,

environmental NGOs and the President of the Administration.

The Administration has 230 employees, 100 of them in the department in charge of collection and control of environmental taxes and 130 in the project unit. There are no branch offices, but some 60 representatives work all over the country on tax collection control.

The Fund is financed by various environmental taxes paid by polluters, including revenues from the EU emissions trading system (ETS), EU funds and the state budget. Programmes financed by the Fund include: the National Car Fleet Renewal Programme (RABLA Programme (chapter 8)), Programme on installation of heating systems using renewable energy, including the replacement or completion of heating systems using non-renewables (Programme Casa Verde (chapter 8)); Afforestation Programme; Programme of support for production of energy from renewable sources; Programme aimed at the protection of water resources, integrated water supply systems, treatment plants, sewage and wastewater treatment plants, and various educational and public awareness projects. Detailed financial reports are available on the website of the Fund (<https://afm.ro/>). In 2018, the Fund financed various projects to a total value of 449,521 million lei.

#### National Administration of Romanian Waters

The National Administration of Romanian Waters was established by GEO No. 107/2002. Its branches are organized by hydrographic basins, and so has in its subordination 11 water basin administrations, as follows: Argeş-Vedea, Banat, Buzău-Ialomița, Crișuri, Dobrogea-Litoral, Jiu, Mureș, Olt, Prut, Siret and Someș-Tisa. The National Institute of Hydrology and Water Management is also part of the structure of the National Administration.

#### National Forests Administration "Romsilva"

Romsilva is an autonomous company of national interest under the authority of the state through the central public authority in charge of forests. It is entrusted with the sustainable and unitary management of the state-owned forest fund, including protection, preservation and development of forests and the management of hunting and fishing grounds allocated to it. Romsilva manages 3,136 million ha of the state-owned forest fund (as at 31 December 2018), which represents 48 per cent of all forests in the country.

Romsilva also manages 22 national and natural parks, and the other protected areas that overlap them (e.g. Natura 2000 sites, natural monuments, nature reserves), in many of which the state-owned forest fund has a significant share, ensuring the conservation of biodiversity in these areas. In addition, Romsilva is in charge of thoroughbred horses (16 horse sections), the Posada hunting museum and the Silva Complex.

### National Forest Guard

In October 2015, the Government established the National Forest Guard to fight illegal logging (box 1.1) by GD No. 743/2015. The Guard is a territorial public institution, with legal personality, subordinated to the central public authority responsible for the national forest area, and financed entirely from the state budget. There are nine territorial units of the Guard in charge of implementation and control of the forestry and hunting regime within the national forestry fund.

### Local authorities

Environmental protection at the local level is mainly managed by local branches of the central administration (NEPA, NEG, NANPA, Romanian Waters), which are distributed in counties, regional offices (National Forest Guard) and basin offices (water basin authorities).

Responsibilities on environmental management of local authorities (municipal councils) are limited to waste management, drinking water supply and communal wastewater, in the context of provision of local public services.

Drinking water supply and communal wastewater treatment are provided through water and sewerage companies. In addition, the responsibility for the collection and management of municipal solid waste (MSW) belongs to the municipalities. On air quality,

county and municipal councils are responsible for drafting, adopting and implementing air quality plans.

### Interministerial cooperation

Interministerial cooperation mechanisms are established in numerous legal acts that detail the functions of interministerial bodies such as committees, commissions and steering bodies. The legislation also prescribes many cases when different ministries must be consulted or make joint decisions with the competent ministry. Usually, this brings cooperation up to high management level. Overregulation in this context prevents the ad hoc cooperation that is a necessary part of public servants' everyday jobs; they often have to obtain an authorization to communicate various issues with colleagues from other institutions.

The Interministerial Committee for the Coordination of the Integration of Environmental Protection into Sectoral Policies and Strategies at the National Level still holds the relevant competences in environmental protection. In the Second EPR of Romania, it was recommended that the Committee (a) improve the coordination and harmonization of relevant strategies and programmes, taking into account results of forward-looking analysis; and (b) improve monitoring and evaluation of progress made in the implementation of the adopted policy documents in order to provide regular feedback for revision of the ongoing actions and preparation of the new ones (Recommendation 1.2). The general state of the Romanian policy framework related to environmental protection shows that the recommendation is not yet implemented and remains valid, taking into account the lack of reporting on policy implementation and incoherent policy planning, not only between sectors and subsectors but also internally; for example, new policy documents on the same topic are often developed long before the expiry of the previous one, rarely referring to the effects of the precedent policy and lessons learned.

#### **Box 1.1: "Screaming trees" – Use of solar-powered smartphones against illegal deforestation in Romania**

The Romanian NGO Association Agent Green was founded in 2009. In 2017, it started the project "Screaming trees" in Covasna County to prevent illegal logging. The technical innovation of the project is based on smartphones mounted on the top of the trees, where they receive sunlight so are charged during the whole year through the solar panels. The package also includes signal boosters, amplifiers and antennae to capture as much of the signal as possible.

The system is giving trees a voice. By measuring volume, motor rotations and sound duration, the device detects chainsaws and then sends a notification, screaming for help. There is a live feed from installed Tweeting Trees devices at <http://screamingtrees.co/>. It enables the viewer to follow the measured data of volume, motor beats per minute (BPM) and sound duration. If volume and BPM reach the level of a running chainsaw, with a sound duration of at least 60 seconds, there is a parameter match and the device immediately sends a warning signal to Agent Green volunteers.

Recommendation 1.3 (a) asking the Government to ensure that public authorities with environment-related functions and impacts establish a dedicated environment unit, unless they already have one, was not implemented. Recommendation 1.3 (b) in the Second EPR of Romania urged the Government to ensure the strengthening of cooperation between public authorities with environment-related functions and impacts. This is partially implemented as interministerial cooperation mechanisms are established in numerous legal acts that detail the functions of different interministerial bodies such as committees, commissions and steering bodies.

However, overregulation in this context prevents ad hoc cooperation as public officers often have to obtain an authorization to communicate various issues with colleagues from other institutions.

#### **1.4 Assessment, conclusions and recommendations**

##### *Assessment*

The environmental legal framework is prone to frequent changes, not only because it must be harmonized with ever-growing EU environmental legislation but also because of an overuse of emergency procedures to introduce legal interventions addressing specific matters, but which often results in further changes. Environment-related emergency procedures account for a large part of law-making in Romania. These procedures lack public participation in decision-making and do not respect citizens' right to participate in decision-making in environmental matters as stipulated in the Aarhus Convention and Law No. 52/2003. The substance regulated by these legal acts does not reflect urgency and their validity is not limited to overcoming an urgent issue. This negatively affects legal certainty, the coherence of legislation and the stability of the legislative framework. Both environmental protection and nature protection are regulated by emergency ordinances that date to 2005 and 2007, respectively (GEO No. 195/2005 on environmental protection and GEO No. 57/2007 on the regime of the protected natural areas, the conservation of natural habitats of flora and fauna), and which had been amended more than 20 times by December 2019. The law-making practice related to keeping the original legal act uncodified for decades despite its numerous amendments reduces the clarity and consistency of the legal framework. The country recognized the need for simplifying legislation through the Strategy for Better Regulation 2014–2020 (GD No. 1076/2014) but, as at December 2019, tangible results are not evident.

The use of the regulatory impact assessment (RIA) instrument can address many shortcomings of the Romanian legal framework, ensuring that implementation of regulatory acts could be financed, that they are not overlapping or contradictory with other existing legislation and that public consultation processes contribute to the quality of legislation. The environmental, social and economic impacts, including impacts on small and medium enterprises and competitiveness, remain equally important. The environmental dimension of RIA could contribute towards moving in the direction of achievement of the SDGs.

The Romanian policy framework demonstrates systemic instability. The main policy document, the Government Programme, does not provide directions to institutional strategic plans (ISPs) covering overall strategic directions of the sectoral policies. For political reasons (change of governments), the Government Programme for the period 2017–2020 changed twice, while another change is expected during 2020 for the same reason. In the meantime, ISPs for the period 2018–2021 passed through mid-term revision in order to be aligned with the budgeting cycle 2019–2022 and became ISPs for the period 2019–2022. Hence, those documents are highly inconsistent in terms of timespan and priorities defined. Moreover, the National Reform Programme (2017–2020) contains different priorities. Despite the exercise the World Bank undertook with ISPs in the period 2019–2022, strategic planning is generally not connected with budgetary cycles.

This systemic instability is also reflected in the practice of developing strategies with ambitious horizons. On the one hand, instead of strategies being reviewed in line with new circumstances, they are replaced with a completely new document, long before the expiry of the precedent document, thus defining different goals and priorities and an extended time span. On the other hand, there are draft strategic documents trapped in a long and costly SEA process coupled with administrative adoption procedures, which makes the adopted document already outdated at the time of adoption. As at December 2019, strategic documents in the energy, mining, forestry and transport sectors are stuck in the process of adoption, even though these draft documents were prepared during 2016–2017. Policy documents rarely contain measurable indicators and precise targets. Their implementation is not monitored and reported and, in general, no analysis of their effects is carried out. All of this makes the policy framework weak and hardly useful. It also presents difficulties in attracting donor funds, including available EU funds.

By adopting Declaration No. 1/2016, the Parliament of Romania expressed the country's political commitment to supporting the 2030 Agenda at the highest level, calling for the continuity of that commitment beyond the electoral cycle at that moment. Romania also initiated signing of the Bucharest Declaration by representatives of EU Member States, and countries of the Western Balkans, Eastern Partnership and Central Asia, at the Conference in Bucharest in April 2019 promoting partnerships for sustainable development.

Progress has been achieved with the implementation of SDG target 17.14 through the adoption of SDS 2030 and creation of the Department for Sustainable Development within the Prime Minister's Office. This Department is responsible for interministerial and cross-sectoral cooperation on sustainable development and has the mandate to ensure policy coherence on sustainable development, although this task is insufficiently elaborated and lacks mechanisms to deal with unwanted conflicts and trade-offs between sectoral policies. Besides, SDS 2030 was not developed on the foundations of the existing policy documents, and an ex post systematic analysis of the existing policy framework was not carried out to assess their alignment with the 2030 Agenda, integrating SDGs and targets into policy documents and ensuring their interlinkage and coherence. The Consultative Council for Sustainable Development functions as an advisory body, also providing scientific and technical support, and initiates and draws up policy documents and methodologies for implementation of the 2030 Agenda.

Participatory process was applied during the development of SDS 2030 but is not guaranteed in all stages of implementation, monitoring and reporting on achievement of the SDGs. Achievement of policy coherence on a case-by-case basis, at the time of adoption of new policy documents, might be slow due to the time-consuming process resulting in an uneven level of harmonization across sectors. Regular reporting mechanisms on implementation of SDS 2030, including data collection and coordination across the subnational levels, are not established. Moreover, funds for implementation of SDS 2030 are not ensured yet.

By adopting SDS 2030, Recommendation 1.1(a) in the Second EPR of Romania is partially implemented; however, the missing part is related to a lasting solution for financing implementation of SDS 2030. Recommendation 1.1(b) is implemented by establishing in 2020 the Advisory Council for Sustainable Development. The Second EPR also recommended improvement of the coordination and

harmonization of relevant strategies and programmes and to improve monitoring and evaluation of progress made in the implementation of the adopted policy documents in order to provide regular feedback for revision (Recommendation 1.2). This recommendation is still valid as it is not yet implemented, due to the lack of coherence in policy planning and implementation status reporting to readjust related targets. Recommendation 1.3 is partially implemented as interministerial cooperation mechanisms are established in numerous legal acts, detailing the functions of different interministerial bodies such as committees, commissions and steering bodies. However, overregulation in this context prevents ad hoc cooperation as public officers often have to obtain an authorization to communicate various issues with colleagues from other institutions.

Since 2012, 30 SEA procedures were completed in Romania for plans and programmes at the national and regional levels, while some were started in the period 2016–2017 and are not yet completed. In the period between 2012 and 2020, the composition of the ministry responsible for environmental protection has been changed eight times. It shows the instability of the central part of the institutional framework for environmental protection in terms of leadership, scope of responsibilities and prioritized subsectors. Strict division of responsibilities among different ministries or sectors is noticeable throughout both the legal and policy framework. Notwithstanding, the Ministry of Environment, Waters and Forests maintains efficient interlinkage with institutions subordinated to it or under its authority.

### *Conclusions and recommendations*

#### Ensuring public participation in environmental decision-making

Romania is a party to the Aarhus Convention and Law No. 52/2003 on transparency of decision-making in public administration, with subsequent amendments, grants to its citizens participation in decision-making in environmental matters, which is an essential part of developing a sustainable future through promotion of environmental justice. However, numerous environmental issues in Romania are resolved by GEOs, which are not subject to mandatory public debate.

#### Recommendation 1.1:

*The Government should ensure that every legal act on environmental matters is adopted in accordance with Aarhus Convention provisions, allowing public participation in decision-making, and not through government emergency ordinances.*

### Broadening the use of regulatory impact assessment

RIA-related procedures were introduced in Romania in 2005 and were amended until 2015. According to GD No. 1361/2006, RIA should assess the impact on the environment. However, the use and quality of RIA remain highly uneven, and many RIAs are superficial. RIA procedures are usually used at a very late stage of legal drafting, justifying the need for additional regulation, often leading to overregulation instead of a results-oriented legal framework. While the Strategy for Better Regulation 2014–2020 foresees the implementation of the extended RIA process and the 2018 National Reform Programme stresses the Government's commitment to improve RIA, as at December 2019, no improvements have taken place.

#### Recommendation 1.2:

*The Government should ensure that the scheme of regulatory impact assessment is broadly applied to environment-related regulations to enable and facilitate their implementation, and that relevant systematic capacity-building activities for line ministries are put in practice.*

### Consistency and codification of environmental legislation

Key environmental legal acts in Romania have passed through numerous amendments during the last two decades, creating a patchwork of laws, emergency ordinances and other legal acts, and making the environmental legal framework unnecessarily complicated and lacking in clarity and coherence. Romania has already recognized the need to simplify legislation through the Strategy for Better Regulation 2014–2020. Maintaining a simple and understandable legislative framework could greatly contribute to the efficiency and effectiveness of the implementation of the environmental legislation.

#### Recommendation 1.3:

*The Government should consider revisiting and codifying environmental legislation in order to consolidate existing environmental laws and regulations and harmonize their terminology, principles and provisions.*

### Improvement of the policy framework

The policy framework is made unstable, inconsistent and weak by frequent changes in policy directions, the common practice of developing completely new

strategic documents instead of reviewing existing ones, long SEA and adoption procedures and the failure to ensure financial support for the implementation of adopted policies by connecting them to the budgetary cycles. Incoherent policy planning is not only present between sectors and subsectors, but also internally. For example, new policy documents on the same topic are often developed long before the expiry of the previous document, rarely referring to the effects of the preceding policy and lessons learned. In addition, the implementation of policy documents is not monitored and reported. Moreover, no analysis of their effects is carried out, which puts in jeopardy further policy planning based on results and evidence, especially in terms of aligning the policy framework with the 2030 Agenda.

#### Recommendation 1.4:

*The Government should:*

- (a) *Ensure the continuity and coherence of environmental policy planning;*
- (b) *Establish efficient and effective mechanisms for interministerial cooperation across all relevant ministries and offices;*
- (c) *Consider mechanisms for accelerating the adoption of draft strategic documents, while complying with SEA and public participation procedures;*
- (d) *Ensure capacity-building of experts engaged in SEA procedures and accreditation of SEA consultants;*
- (e) *Coordinate cycles of strategic and budgetary planning, ensuring funding for adopted or approved environment-related strategic documents;*
- (f) *Demand, through legal acts on the approval of policy documents, regular and systematic reporting on the implementation of adopted or approved strategic documents through measurable indicators and precise target values set in these policy documents;*
- (g) *Support the Department for Sustainable Development to ensure policy coherence for sustainable development through systematic analysis of the existing policies and provision of clear guidance on the integration of Sustainable Development Goals into sectoral policies, considering cross-sectoral linkages, ensuring that policies in different sectors are mutually supportive and avoiding uneven levels of harmonization of different sectors with respect to the 2030 Agenda.*



## Chapter 2

# REGULATORY AND COMPLIANCE ASSURANCE MECHANISMS

### 2.1 Permitting and licensing, including public participation

#### *Single-medium permitting*

An environmental permit is issued for new developments and existing facilities not subject to an integrated environmental permit. Until 2018, environmental permits were valid for five years. In 2019, an annual visa system was introduced.

Environmental permits cover matters such as water quality protection, protection of the atmosphere, protection against noise and vibration, protection of the soil and subsoil, radiation protection, protection of the forest estate, ecosystem protection, biodiversity and nature protection, waste and packaging management, management of dangerous substances and preparations, compatibility with urban and spatial plans, protection of human settlements and compliance with the provisions of international conventions to which Romania has acceded.

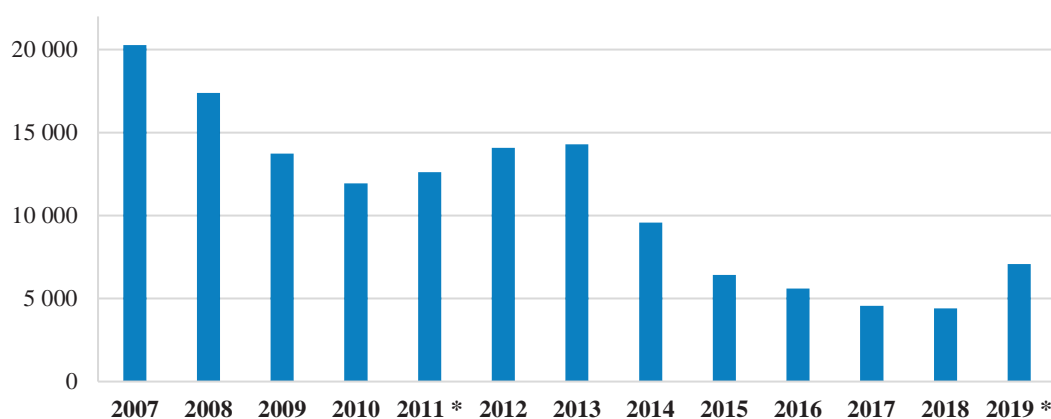
The number of environmental permits issued has declined significantly over the past 12–13 years, from 20,272 in 2007 to 14,077 in 2012 and 4,398 in 2018 (figure 2.1). There was an increase to 7,074 permits in the first nine months of 2019, as a result of the new legislation introducing the annual visa, which also

required that existing permits be submitted on the anniversary of the date on which they were originally granted. It is too early to say whether this will represent a long-term increase in workload.

NEPA produces annual activity reports, including useful statistics on permitting and other matters, available on its website. Initially, in 2013 and 2014, the reports were unwieldy (1,231 and 1,199 pages, respectively) and, as a result, not useful. Recent years have seen a change of practice, with more concise reports (65 and 84 pages in 2018 and 2019, respectively) uploaded in a sufficiently clear format to allow searching and the extraction of data.

On receiving an application for a new development, the competent authority must first carry out a preliminary assessment, generally desk based, to determine whether to consider the application under the environmental impact assessment (EIA) legislation. Only about one in 10 applications is subject to subsequent EIA screening. If the development is found to require EIA, the EIA procedure continues with a scoping exercise and will culminate in the issuance of an environmental agreement. Only once any construction has been completed does the environmental permitting procedure continue with site verification and the issuance of the environmental permit.

**Figure 2.1: Environmental permits issued by NEPA and its local branches, 2007–2019, number**



Source: NEPA, 2019.

Note: \* to October.

For a new development, the competent authority checks the request for the environmental permit, including that it has been made public, assesses compliance with the requirements of the environmental agreement obtained (if any), verifies the site conditions and makes public the decision to grant (or not) the environmental permit. That decision may be appealed within 15 working days of the date of publication.

For an existing facility, until the introduction in 2019 of the legislation on the annual visa, the competent environmental authority required the proponent to undertake an “environmental balance” of the facility, which is in effect an environmental audit. The report containing the conclusions of the environmental balance was subject to public debate, possibly including a public hearing. After the public debate, the environmental authority convened a meeting of the Technical Review Committee to consider the results of the environmental balance and the conclusions of the public debate and to decide whether the environmental permit was to be issued, with or without a compliance programme. The decision was then made public. The decision may be appealed within 30 working days of the date of posting.

The new legislation on the annual visa specifies that “the purpose of applying the annual visa is to confirm that the holder carries out the activity under the same conditions for which the environmental permit or the integrated environmental permit was issued and that no changes have been made that affect the conditions established by the regulatory acts”. The procedure for the annual visa was established through the adoption of MO No. 1150/2020 in May 2020.

All decisions regarding permits must be posted on the relevant authority’s website, and this was observed to be the case for the Braşov County “local” branch of NEPA (hereinafter LEPA) in December 2019, for example. LEPA’s are also required to upload all data into a NEPA-wide database, but this is not feasible in practice, because of the data volumes involved. In Braşov County, citizens participate actively in public hearings and do appeal against decisions taken on permits and licences, though not in court.

The issuing authority can suspend an environmental permit when its provisions are not respected. The developer has up to 60 days to respond to the obligations, before being suspended. The suspension is kept in place until the problems are resolved, but for no more than six months. If the problem persists after six months, the environmental agreement, environmental permit or integrated environmental permit is revoked.

The opportunities provided for public participation are widely criticized regarding both environmental permitting and integrated environmental permitting. NGOs consistently complain that information is not available or is incomplete, no minutes of the public hearing are produced, or the public’s views are not properly reflected, the public’s voices are not heard, their opinions are not taken into account or no justification is provided for why views were not taken into account. Civil society considers that the presence of NGOs and the public is noted only to show that effective opportunities for public participation have been provided, without actually providing such.

#### Waste generation and disposal

Ordinary generation of waste is covered by an environmental permit where required. All units or companies carrying out waste treatment activities are obliged to obtain an environmental permit or an integrated environmental permit issued by the competent environmental authorities. The register, maintained by NEPA, of operators not subject to environmental authorization according to the provisions of the waste law includes: (i) waste merchants who do not physically enter into possession of the waste; (ii) waste brokers; (iii) road transporters of non-hazardous waste; and (iv) economic operators that are either recovering waste or disposing of their own non-hazardous waste at the place of production.

#### Use of natural resources

Permits are required for harvesting (logging). The permits are based on volume estimates made by the enterprise’s forest engineer. Harvesting of timber and other non-timber forest products is allowed in certain categories of natural protected areas, depending on the objectives of their conservation and their internal zoning, which configures the management regime. Numerous successful court cases have been brought against unauthorized logging.

Hunting management entities, such as hunting associations, Romsilva, NIRDF and universities, manage 22 million ha of hunting land, comprising 2,150 small hunting areas. They are licensed by the Ministry of Environment, Waters and Forests. The hunting associations do not own the land, only the hunting rights, and the fauna belong to the State. A hunting association manages each of these in accordance with a contract concluded with the Forest Guard. The Ministry establishes the annual hunting quota, based on an assessment made by the hunting associations, and then issues an MO accordingly. NGOs question this methodology and believe that the assessment overestimates populations because of the



economic interests of the hunting associations. Individual hunters then pay the hunting associations an annual membership fee (e.g. about 2,000 lei) as well as per head for larger hunted species. They are licensed by their hunting association, which authorizes hunting within the limits imposed by the quota.

#### Use of underground resources, including mineral resources

The National Agency for Mineral Resources is responsible for issuing prospecting permits against a fee, valid for between one and three years, without the right to extension, and which are non-exclusive: several operators can be issued permits for the same geographical area. The operator must carry out a certain amount of work with a minimum value, as negotiated with the National Agency and set out in the permit. In addition, the National Agency issues annual production permits for limited mineral resources such as useful rocks, peat and alluvial gold.

#### Ozone-depleting substances

NEPA is responsible for permits and licences related to the production, import, export, use, recovery, recycling, regeneration and destruction of substances that deplete the ozone layer, further to the Montreal Protocol on Substances that Deplete the Ozone Layer and the corresponding EU regulation. The placing on the market of ozone-depleting substances (ODS) is banned according to Regulation No. 1005/2009.

#### Radioactive sources

The number of licensed radioactive sources (excluding nuclear fuel) has gradually increased from 5,311 in 2012 to close to 6,000 today (figure 2.2). Permits are valid for five years.

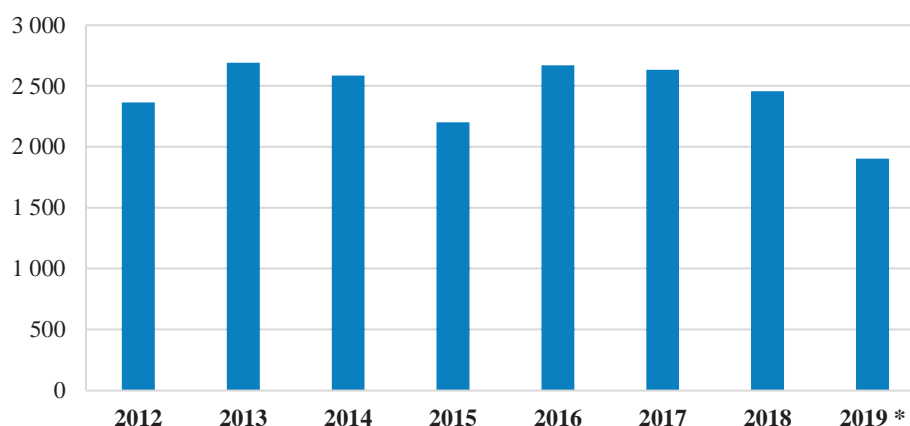
#### *Integrated permitting*

The 2013 integrated permitting legislation provides for the setting of emission limit values, which are based on the best available techniques (BAT) without prescribing the use of any technique or specific technology. As for single-medium permitting, an integrated environmental permit may be suspended by the issuing authority if the operator does not comply with its provisions, after a prior notification.

The number of so-called IED (Industrial Emissions Directive) installations has risen by 17 per cent from 2012 to 2018 (figure 2.3). In 2015, 48 per cent of IED installations were for the intensive rearing of poultry and pigs (figure 2.4). The picture has changed dramatically since 2004, when the energy sector represented 26 per cent of IPPC installations.

Until 2018, integrated environmental permits were valid for 10 years. As for single-medium permitting, with the introduction in 2019 of the new legislation on the annual visa, the renewal procedure for an existing facility is unclear but it appears to reduce scrutiny. However, changes to BAT should filter through to revised permit conditions more rapidly.

**Figure 2.2: Licensed radioactive sources, 2012–2019, number**

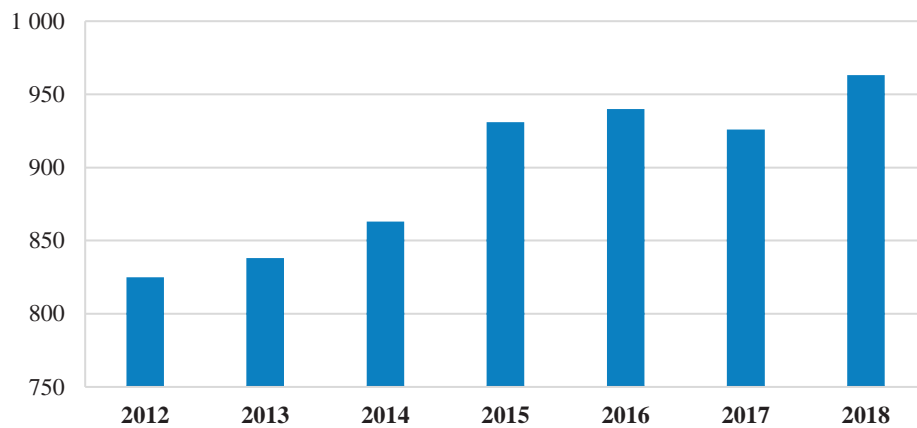


Source: National Commission for Nuclear Activities Control, 2019.

Note: \* to 30 October 2019.

**Photo 2.1: Sunset view with rangers on mountain ridgeline**

Photo credit: Mircea Verghet

**Figure 2.3: IED installations, 2012–2018, number**

Source: NEPA, 2019.

The legislation provides for agreements with other EU Member States for activities with possible transboundary effects. Accordingly, Romania notified Bulgaria about a chemical fertilizer plant for which an integrated environmental permit was to be issued. Bulgaria responded that it was satisfied with the information provided and did not need a bilateral agreement.

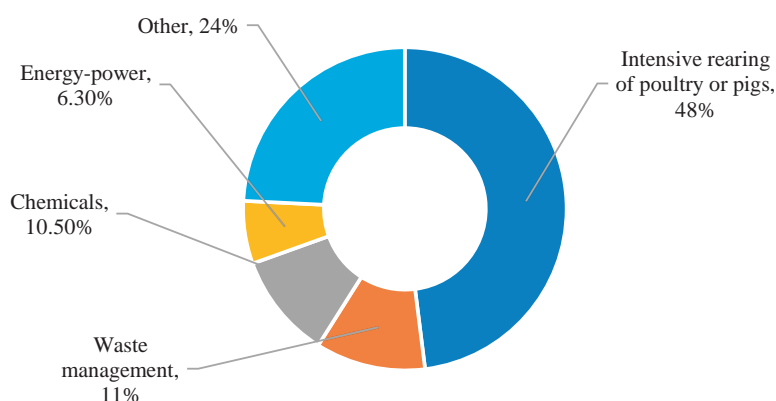
The legislation also provides for appeals against permitting decisions. Any person who is a member of the interested public and who has a legitimate interest, or is considered to have had their rights infringed, can

appeal to the competent administrative court. Relevant NGOs are included.

#### *Licensing*

#### Fishing

For marine fisheries, quotas are determined by the EC within the Common Fisheries Policy, whereas for freshwaters, Romanian scientific research institutes calculate maximum allowable catches of different species. Commercial fisheries are licensed for four years, though with an annual visa.

**Figure 2.4: IED installations by type, 2015, percentage**

Source: EC and Ministry of Environment, Waters and Forests, 2019.

### Water abstraction and wastewater discharge

Licences for water abstractions and discharges are valid for five years.

### Use of underground resources, including mineral resources

Exploration licences are awarded for a maximum of five years and can be extended by a maximum of three years, whereas production (or operating or exploitation in the case of minerals) licences are for up to 20 years and can be extended by multiple five-year periods. Exploration and production licences require the deposit of a financial guarantee with the Ministry of Economy to cover environmental rehabilitation costs. Production licences follow bilateral negotiations on the operations. Licences are protected by commercial confidentiality, but concession perimeters are publicly available, as are lists of concession agreement holders (51 on 30 October 2018). On 13 May 2019, the National Agency listed 22,816 mining licences, 88.8 per cent being for “useful rocks” (not sand and gravel), 3.1 per cent for waters (such as mineral water), 2.0 per cent for various metals, 1.4 per cent for coal, 1.4 per cent for geothermal resources and 1.3 per cent for ornamental rocks.

### Radioactive sources

Licences for the use of radioactive sources are issued by the National Commission for Nuclear Activities Control according to its own procedure. The number of licences has risen slightly over the period from 2012 (figure 2.5).

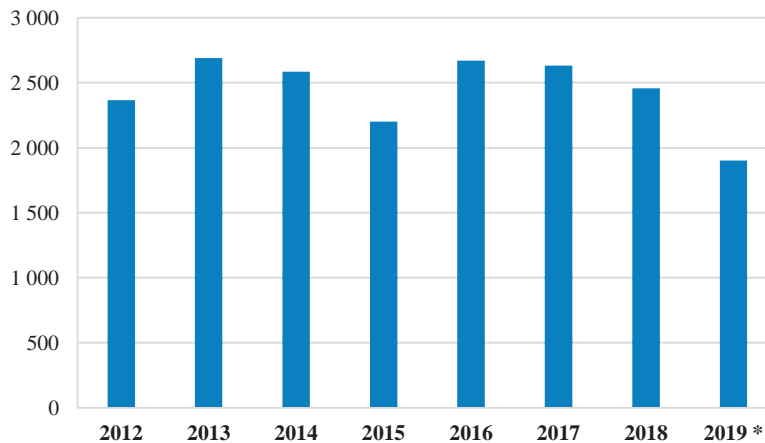
## **2.2 Environmental impact assessment, including public participation**

### *Domestic context*

Major changes have been made to the EIA procedure since 2012. The procedure comprises the screening and scoping stages, elaboration of the EIA report and quality review of the report. These stages are preceded by an initial evaluation of the project, conducted by the competent environmental authority, to identify the location of the project relative to natural protected areas and whether the project is developed on water or in relation to waters and needs a water approval.

The EIA procedure for a proposed activity leads, if successful, to an environmental agreement, which is an administrative act issued by the competent environmental authority and forming part of the development consent. The development consent itself varies in form depending on the proposed activity; for example, it may be a construction permit, an agreement for the use of land for intensive farming, an MO for deforestation or a water rights permit.

Once a development subject to EIA has been finalized, an inspection is organized, together with NEG, to check that it complies with the conditions of the environmental agreement. All the findings are written in a report, which is signed by the environmental competent authority for the EIA procedure, NEG and the developer. This report is given to the developer and it becomes part of the report for the reception of the finalized works. The report is also part of the dossier submitted by the operator when requesting the environmental or integrated environmental permit.

**Figure 2.5: Licences for the use of radioactive sources, 2012–2019, percentage**

Source: National Commission for Nuclear Activities Control, 2019.

Note: \* to 30 October 2019.

In 2016 and following pressure from civil society, NEG requested a fresh EIA of hydropower plans on the Jiu River, in line with legislation passed since the original approval of the project in 2003. The state enterprise developing hydropower appealed against this decision but, in October 2017, the Bucharest Court of Appeal withdrew the construction permit. Pending the appeal, construction continued.

Very many development applications are subject to initial assessment; for example, the local authority issued 3,759 notifications to the Braşov LEPA in 2018. The initial assessment is normally done as a desk study and a site visit is carried out only if it seems likely that the project should be considered within the EIA process, including screening. If so, by decision of the Technical Review Committee, on the advice of LEPA, the project is subjected to the EIA screening process. This process reduces further the number of developments that are subject to EIA; in the example from Braşov in 2018, 269 EIA screening decisions were taken. There may be a tendency to overapply – to make developments subject to EIA that perhaps did not really require it – though this situation is preferable to that of underapplying. On the other hand, some developers attempt to “salami slice” projects so that they fall below the threshold for EIA. The Braşov LEPA reports encountering poor quality or incomplete EIA documentation and having to request more information repeatedly.

Experts preparing the EIA must be accredited according to the themes covered, for example, to undertake a water impact assessment, prepare a security report in line with Council Directive 82/501/EEC on the major-accident hazards of certain industrial activities (Seveso Directive) or undertake assessment appropriate to the Habitats

Directive. For some smaller consultancies, this requirement may limit their ability to bid to carry out EIA of complex development projects.

Various means of publicity are mentioned in law and practice, including announcements on LEPA websites, though traditional means, such as posters on lampposts, may be neglected. According to the Ministry, EIA documentation is kept online by LEPA during the process; however, this was not observed in Braşov or at NEPA at the national level. The Ministry keeps documentation online for longer, for example for nuclear power-related activities and the Rosia Montana gold mine. The new EIA law makes clearer to the authorities that the public interest is of primary importance and that they should qualify information as confidential in a restrictive way and must publicly explain why any information was qualified as confidential. This last point illustrates how the Government has responded to one of several recommendations to Romania made by the Meeting of the Parties to the Aarhus Convention at its fifth session in 2014 and sixth session in 2017: to take the necessary legislative, regulatory, administrative or practical measures to ensure that public officials interpret the grounds for refusing access to environmental information in a restrictive way, taking into account the public interest served by disclosure, and in stating the reasons for a refusal to specify how the public interest served by disclosure was taken into account.

NGO concerns regarding public participation in EIA procedures, in public hearings and access to information, are similar to those mentioned for permitting, such as late invitations, lack of an agenda, lack of information, lack of minutes and inadequate recording and taking into account of public opinion. The authorities view public hearings somewhat

differently, finding them challenging and sometimes threatening. At the same time, all agree that the public is often active and engaged and that their comments, when considered, lead to improvements in EIA documentation. The public may find it difficult to comment at the scoping stage and the results of scoping tend to vary county to county. There is consensus that current IT systems are inadequate, particularly for the handling of large EIA reports.

Generally, public hearings are organized and moderated by a LEPA. Both the Ministry and the Braşov LEPA described the good practice of noting all comments and identifying who and how points were subsequently answered – directly in the hearing or later by the EIA author, operator or authorities – and posting the comments and responses on the LEPA's website.

Once the EIA documentation has been completed, and been subject to a public hearing, the Technical Review Committee meets. All members express their points of view on all documents, such as the appropriate assessment for habitats, security report under the Seveso Directive, IED requirements, water impact assessment and the EIA report. The points of view are considered by the environmental authority for integration into the EIA report, the project or the conditions imposed in the environmental agreement. Romanian Waters must make a water management decision before the environmental agreement is concluded. The environmental authority makes the ultimate decision, considering the points of view of the other authorities.

The environmental agreement then forms part of the dossier submitted to the county council, or local council with advice from the county council, in the application for the construction permit. Similar approaches are taken, for example, for the water management permit needed prior to construction. As for environmental permits, the issuing authority can suspend an environmental agreement when its provisions are not respected.

In the period since 2012, legislation was passed that waived environmental protection laws for certain projects of national importance. The passing of these laws and the way this was done proved highly controversial. The primary case relates to subregional gas pipeline projects. Initially, the plan had been to pass special legislation to accelerate the project for the development in Romania of the National Gas Transmission System on the Bulgaria-Romania-Hungary-Austria Corridor. The final legislation was

broadened to projects of national importance in the field of natural gas. However, Law No. 185/2016 provides that no derogation from EIA procedures is to be given for such projects; NEPA carried out an EIA of the gas transmission system in the Romanian section of the Corridor.

The belief was that development of such a nationally important project should not be held up by local planning decisions. Accordingly, the Law allows, among other things, for state forestry lands to be temporarily removed from forestry use and made available to the project, construction in national and natural parks (with the favourable opinion of the Ministry of Environment, Waters and Forests), issue of the main construction permit and some other permits within 15 days of the request, and a simplified procedure for conducting archaeological research, issuance of the required permits and issuance of the certificate for archaeological discharge. This last accelerative measure is of particular concern, as the Aarhus Convention's Compliance Committee found that Romania failed to comply with the Convention by not providing for any public participation in the procedure for issuing an archaeological discharge certificate.

There is also concern among NGOs about whether appropriate assessments are carried out prior to logging in national and natural parks. For example, they have alleged that Romsilva, while managing 22 of the country's 29 such parks, has been logging old-growth and primaeval forests without the analysis required under the EU Habitats and Birds Directives.

#### *Transboundary context*

The transboundary EIA procedure is overseen by the Ministry of Environment, Waters and Forests, with the domestic procedures being implemented by different authorities, depending on the level (Ministry, NEPA, LEPA or DDBRA). The environmental approval and environmental agreement are valid for the whole project implementation period. Recent cases are summarized in table 2.1. Romania, like most countries employing a transboundary EIA procedure, has encountered problems with the quality of translation of EIA documentation and the lack of translated versions of additional materials to which the EIA report refers. Consultations between national authorities sometimes lead to delays. Public hearings regarding nuclear power projects are particularly challenging because of the strong concerns voiced by NGOs and the public.

**Table 2.1: Transboundary EIA cases, 2016–2018**

Project	Affected country		Date of notification	Milestones
	Country of origin	(not exhaustive list)		
Used oil recycling plant, Oltenița	Romania	Bulgaria	Jun-17	Public hearing on 31 August 2018. Ongoing procedure.
Waste incinerator and mobile constructions placed in Arad, TPP area	Romania	Hungary	Apr-17	Hungary did not express wish to participate in procedure. National procedure continued without it.
Site extension of intermediate spent fuel storage and continued construction of modules in Cernavodă NPP	Romania	Bulgaria	Feb-17	Procedure was suspended.
Bridge over Tisa in Teplita area on Sighetu Marmatiei	Romania	Ukraine	Mar-16	Final decision on 3 March 2020.
Construction of Wind Farm Kostolac	Serbia	Romania	Sep-18	Public hearing on 3 October 2018. Final decision on 14 December 2018.
Extension of bulk and general cargo terminal at the Port of Smederevo	Serbia	Romania	Mar-18	Romania decided not to participate in the procedure, considering the low transboundary impact of the project.
Rivne NPP	Ukraine	Romania	Feb-18	Romania awaits environmental report. Ongoing procedure.
Construction of new block B3 on site of Kostolac B TPP	Serbia	Romania	30-Jun-16	Consultations on 31 August 2017. Public hearing on 31 August 2017. Final decision on 28 September 2017.
Upgrade of the Iron Gate 1 Navigation Lock at Hydropower Plant Djerdap I	Serbia	Romania	Jul-17	Public hearing on 27 February 2018. Final decision on 17 April 2018.
Zoporizhzhya NPP and South Ukrainian NPP	Ukraine	Romania	Mar-17	Public hearing on 24 November 2017. Ongoing procedure.
Gravel and sand extraction from alluvial sediments in bed of Danube River, Mishka section	Bulgaria	Romania	Dec-13	Public hearing in January 2017. Final decision in September 2017.
National Disposal Facility for Low and Intermediate Radioactive Waste in Kozloduy	Bulgaria	Romania	May-16	Public hearing on 9 June 2016. Final decision in 2016.

Source: Espoo Convention implementation report by Romania 2016–2018.

Note: NPP = nuclear power plant; TPP = thermal power plant.

Romania is the depository of the Multilateral Agreement among the Countries of South-Eastern Europe for Implementation of the Convention on Environmental Impact Assessment in a Transboundary Context. The agreement was adopted in 2008, having been negotiated among Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Montenegro, North Macedonia, Romania and Serbia. Romania ratified this Agreement in 2012, following its entry into force in 2011. In addition, Romania and Ukraine are in consultations regarding the drawing up of a bilateral agreement between the two countries on the implementation of the provisions of the Convention. These agreements facilitate the transboundary EIA procedure.

The Government has responded positively to China's Belt and Road Initiative and, in 2015, was the first country to sign a memorandum of understanding (MoU) on the promotion of the joint construction of the Silk Road Economic Belt (as it was then known). Officials have expressed an interest in linking the Initiative to the EU Danube Strategy. However, this common interest has yet to be translated into investment in concrete projects requiring EIA.

### 2.3 Environmental standards

The main standards are produced by the EU or International Organization for Standardization (ISO). National standards fill certain gaps. There used to be

more national product standards, but the national standardization body (Organismul Național de Standardizare, ASRO) lacks the resources to maintain these and, anyway, has to take care not to establish national standards that might inhibit the single market within the EU. Therefore, national standards tend to be stricter but voluntary, except for some Romanian products destined for the Romanian domestic market.

#### *Emission standards*

In terms of emissions and ambient quality standards, substance standards are set by the EU and ISO, whereas some methodological standards are national. Most national methodological standards have nonetheless been withdrawn because they referred to outdated equipment or reagents. The series of EC Implementing Decisions establish the BAT conclusions regarding the IED for a range of emission sources, such as the intensive rearing of pigs and the production of cement. Each of these decisions sets out a series of BAT-associated emission levels that act as emission standards.

#### Air

For permits, air emission standards are set by both media-specific legislation and the integrated emissions legislation, which refer in turn to EU ambient standards and BAT. As made clear in the integrated emissions legislation, the authority responsible for issuing the integrated environmental permit establishes emission limit values that ensure that, under normal operating conditions, the emissions do not exceed the emission levels associated with BAT. In addition, in areas where the ambient air quality limit values are exceeded for one or more pollutants, the LEPA may set stricter emission standards than otherwise provided by the legislation, according to the Law on Ambient Air Quality.

#### Water

Emission limit values to water are aligned with the Water Framework Directive and as established under other directives. Directive 2013/39/EU amending Directives 2000/60/EC and 2008/105/EC as regards priority substances in the field of water policy text with European Environment Agency (EEA) relevance (Priority Substances Directive), revised in 2013, sets environmental quality standards on water policy, repealing a series of earlier directives regarding water standards.

Standards for emissions (or discharges) to water are also provided by the EU legislation. For example,

discharges from urban wastewater treatment plants are subject to the standards included in the Urban Wastewater Treatment Directive.

#### Noise

In 2014 and 2018, two orders of the Minister of Health set a series of ambient noise levels, including for residential zones in different locations (e.g. inside and outside houses), times (day and night) and durations. The 2018 Order expanded the scope of the 2014 Order by including, for example, production areas and restaurants. The revised Order reflects Standard SR 10009:2017 Acoustics. Permissible noise level limits in the environment, which sets the permissible limits of the external noise level, differentiated by functional areas and spaces.

#### *Ambient quality standards*

#### Air

No significant changes have been made to ambient air quality standards since 2012. Directive 2008/50/EC on ambient air quality and cleaner air for Europe (Air Quality Directive) sets ambient air quality standards, such as for particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>), ozone (O<sub>3</sub>) and nitrogen dioxide (NO<sub>2</sub>). These are compared in table 2.2 against the WHO Air Quality Guidelines, which are sometimes stricter. The Law on Ambient Air Quality refers to multiple EU standard methods for the measurement of pollutant concentrations in ambient air and to national standard STAS 12574/1987 on air quality in protected areas.

#### Water

Environmental water quality standards have been revised since 2013 based on the provisions of the Water Framework Directive.

In addition, Romania abides by other EU water standards such as for bathing, natural mineral and drinking waters. The standards set in Directive 98/83/EC on the quality of water intended for human consumption (Drinking Water Directive), as revised in 2015, are generally based upon the WHO Guidelines for Drinking-water Quality, though the latter are more comprehensive. Table 2.3 compares EU and WHO guidelines for chemical parameters listed in the Directive; generally, either the two are the same or the EU standard is stricter. The Directive also specifies values for two microbiological parameters – *Escherichia coli* and *Enterococci* – both at zero per 100 ml.

**Table 2.2: Comparison of EU and WHO ambient air quality standards**

Pollutant	Averaging period	Air Quality Directive		WHO Air Quality Guidelines (Global update 2005)	
		Concentration	Comments	Concentration	Comments
PM <sub>2.5</sub>	Annual	20	Limit value from 1 January 2020	10	Annual mean
	24-hourly			25	Period of 24 hours. 99th percentile (3 days/year)
PM <sub>10</sub>	Annual	40	Limit value	20	Annual mean
	Daily	50	Limit value. Not to be exceeded more than 35 times per calendar	50	Period of 24 hours. 99th percentile (3 days/year)
Ozone (O <sub>3</sub> )	Daily	120	Target value. Not to be exceeded on more than 25 days per calendar year averaged over 3 years. Daily maximum 8-hour mean	100	Daily maximum 8-hour mean
Nitrogen dioxide (NO <sub>2</sub> )	Annual	40	Limit value	40	
	Hourly	200	Limit value. Not to be exceeded more than 18 times per calendar year	200	

Note: All concentrations in µg/m<sup>3</sup>.

### Soil

Soil contamination is addressed in an MO that sets reference values for traces of chemical elements in the soil, including alert and intervention thresholds. In 2019, the order was supplemented by a law on the management of contaminated sites, though without setting new ambient quality standards.

### *Product standards*

### Food

As a member of the EU, Romania implements the 2002 European Council Regulation that established the European Food Safety Authority and laid down procedures in matters of food safety.

### Construction materials

Romania implements the EU Construction Products Regulation to set standards for construction materials. Romanian legislation, including changes in 2018, then identifies the latest individual standards.

These are primarily harmonized quality standards to facilitate the internal market of the EU, though they also include safety standards, such as fire detection and alarm systems and fixed firefighting systems. The

standards are not directly related to environmental protection.

### Toys

Standards for toys have also continued to evolve since 2012. EU standards, including changes in 2019, are used for toys. Most are available in Romanian, but ASRO has not been contracted to translate the remaining ones by the Ministry of Economy, which is the competent body in this matter.

## **2.4 Compliance assurance mechanisms**

### *Self-monitoring and reporting by regulated entities*

Self-monitoring by the operator of an activity has many benefits, including use of the operator's knowledge of on-site processes, encouraging the operator to take responsibility for its own emissions and cost effectiveness.

When issuing environmental permits, the LEPA identifies soil, noise, all types of waste and all possible emissions to air, surface water and groundwater. Monitoring is imposed on each factor in the permit and the operator must use an accredited laboratory for any laboratory tests required.



**Table 2.3: EU chemical standards for drinking water, with corresponding WHO guideline values**

Parameter	Unit	EU parametric value	WHO guideline value	Stricter standard
Acrylamide	µg/l	0.1	0.5	EU
Antimony	µg/l	5.0	20.0	EU
Arsenic	µg/l	10.0	10.0	Same
Benzene	µg/l	1.0	10.0	EU
Benzo(a)pyrene	µg/l	0.0	0.7	EU
Boron	mg/l	1.0	2.4	EU
Bromate	µg/l	10.0	10.0	Same
Cadmium	µg/l	5.0	3.0	WHO
Chromium	µg/l	50.0	50.0	Same
Copper	mg/l	2.0	2.0	Same
Cyanide	µg/l	50.0	none	EU
1,2-dichloroethane	µg/l	3.0	30.0	EU
Epichlorohydrin	µg/l	0.1	0.4	EU
Fluoride	mg/l	1.5	1.5	Same
Lead	µg/l	10.0	10.0	Same
Mercury	µg/l	1.0	6 (inorganic)	EU
Nickel	µg/l	20.0	70.0	EU
Nitrate	mg/l	50.0	50.0	Same
Nitrite	mg/l	0.5	3.0	EU
Pesticides	µg/l	0.1	Individual pesticides	-
Pesticides — Total	µg/l	0.5	Individual pesticides	-
Polycyclic aromatic hydrocarbons	µg/l	0.1	0.7	EU
Selenium	µg/l	10.0	40.0	EU
Tetrachloroethene and Trichloroethene	µg/l	10.0	40.0 (tetrachloroethene) 20.0 (trichloroethene)	EU
Trihalomethanes — Total	µg/l	100.0	300 (chloroform) 100 (bromoform) 100 (dibromochloro-methane) 60 (bromo-dichloro-methane)	-
Vinyl chloride	µg/l	0.5	0.3	WHO

Note: Drinking Water Directive and WHO guidelines.

For integrated environmental permitting, monitoring requirements are based upon the decision on the BAT conclusions, supplemented as necessary by monitoring requirements reflecting local conditions.

The environmental agreement drawn up following an EIA includes monitoring conditions setting out the parameters and duration of monitoring. The conditions must be proportional to the nature, location and size of the project, as well as the severity of its effects on the environment.

The monitoring plan is drafted within the EIA report, but it can be adapted by the competent authority.

Self-monitoring reports must be sent to the LEPA, Romanian Waters and, as applicable, the Environment Fund Administration. Braşov LEPA, for example, did not indicate that permit holders were failing to report on their self-monitoring. The LEPA monitoring department checks the monitoring report when submitted. If problems are detected, NEG is notified.

### *Citizen monitoring*

NEG does not encourage citizen monitoring of environmental parameters as such monitoring is not recognized in court and NEG would have to repeat the measurements officially if taking enforcement measures. However, citizen complaints – or “petitions” – are an important source of information and are subject to specific national legislation, requiring, for example, a response within 30 days. In 2018, the Ministry of Environment, Waters and Forests received 1,671 petitions from the general public, while NEPA at the national level received 138.

The number of complaints to NEG at the national level are shown in figure 2.6; if a single complaint comes in, it is redirected to the county level, but if the problem persists, a team from headquarters might visit. The Braşov County branch of NEG received 624 emergency calls in 2018.

### *Environmental audit*

An environmental balance (a kind of compliance audit) is undertaken for an existing facility requesting a new environmental permit. The effect of the new legislation on the annual visa on this practice is unclear. In addition, organizations with certification against the ISO 14001 Environmental Management Systems (EMS) standard must undertake audits of their EMS if they are to retain their certificates.

More generally, environmental audit is not a common practice.

### *Inspections*

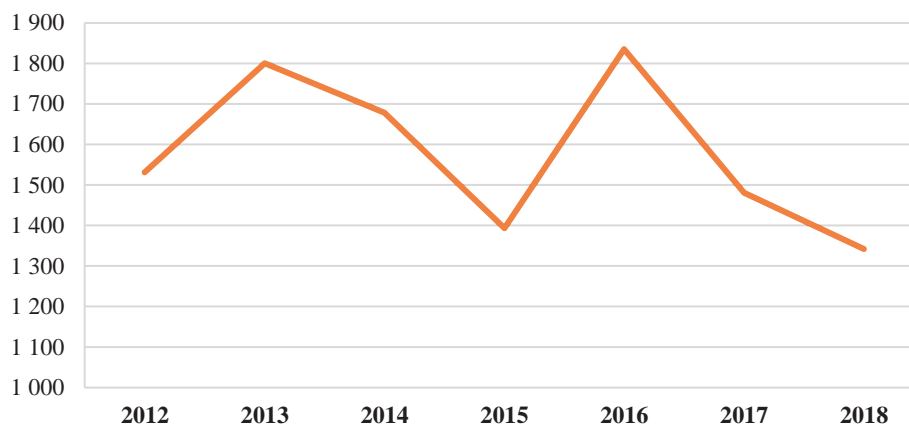
#### Environmental

Environmental inspections are undertaken by various bodies, but primarily NEG at the county level.

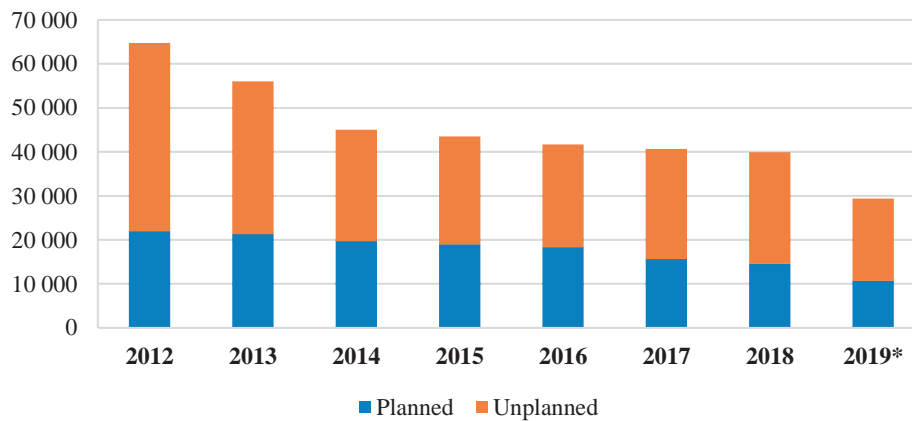
NEG produces annual, meaningful activity reports, available in a reasonably accessible format on the NEG website. NEG is responsible for inspecting about 90,000 activities with environmental permits. The number of inspections has declined since 2012 (figure 2.7). However, importantly, there is no correlation between the reduced number of inspections and the number of enforcement actions, suggesting that more effective and targeted inspections are being done.

The environmental inspections are performed with a certain frequency, depending on the risk classes and the performance of the operator. Operators who are compliant in terms of respecting emission limits as set out in their permit, reduce the number of complaints, implement measures and reduce their fines can achieve a change in class. The methodology for assignment to a class remains confidential.

**Figure 2.6: Complaints to the NEG General Commissariat, 2012–2018, number**



Source: NEG, 2019.

**Figure 2.7: Inspections by NEG, 2012–2019, number**

Source: NEG, 2019.

Note: \* to 30 September 2019.

The frequency of inspection has been reduced for each class of installation, under MO No. 256/2014, which revised the procedures for carrying out environmental inspections (figure 2.8). This reflects the increasing complexity of the permits and inspections. The risk methodology was revised according to the Order and reflected in computer software; the methodology is based on the EU Network for the Implementation and Enforcement of Environmental Law (IMPEL) guide on Integrated Risk Assessment Method to support inspections of installations with integrated environmental permits.

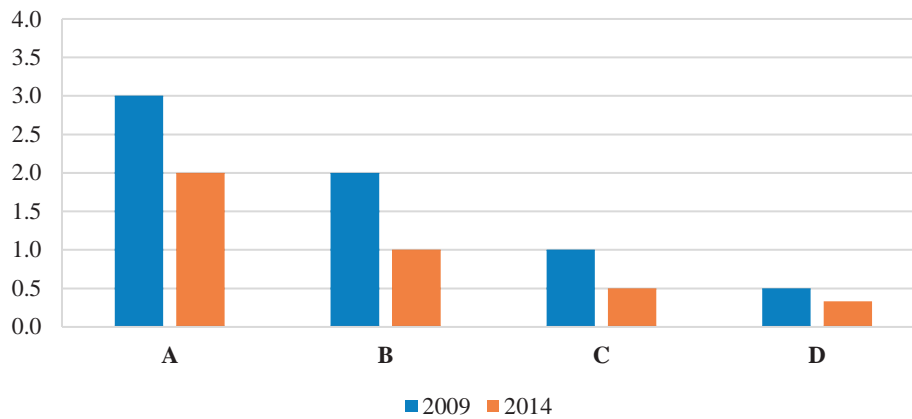
Inspections are either planned according to an annual plan, or unplanned (reactive), and may be announced or not (table 2.4). Unplanned inspections, though they might not be considered to be “unplanned” in other jurisdictions, are broken down clearly into different categories, such as: inspections to verify compliance with the conditions imposed in the regulatory acts; inspections following NEG self-assessment; inspections to resolve complaints; inspections to investigate accidents or incidents with environmental impact; inspections ordered by the Commissioner General at headquarters; inspections for the issuance, extension or revision of regulatory acts; inspections to identify new objectives; inspections to verify the implementation of the required measures; and inspections undertaken with other authorities (which can be either planned or unplanned).

NEG, at the county level, carries out environmental inspections according to an annual plan that is approved by the Commissioner General at headquarters. The NEG General Commissariat elaborates an annual plan of the whole organization’s

activities and proposes it for approval to the Ministry of Environment, Waters and Forests. The plans are not accessible to the public. Inspection reports are submitted to headquarters monthly and feed into the national activity reports. NEG reports to NEPA annually on accidental pollution. Until 2019, NEG headquarters undertook some routine inspections, of incinerators and installations with an integrated environmental permit, but, from 2020, these are taken over at the county level.

An inspection is done by a team of two commissioners, who review documents before the visit, looking at monitoring, complaints and their resolution, press reports and other sources, before developing an inspection plan. After the inspection, the team reports against the relevant EU directives. NEG’s reporting system, *Artemis*, is used to store information about inspections, archive inspections records and compare plans with actual inspections. Each commissioner carries out between 80 and 100 inspections each year. According to the legislation on integrated environmental permits, inspection reports are to be published, though personal data about operators are redacted in respect of the EU General Data Protection Regulation. A planned inspection can take up to two weeks to complete.

Recommendation 2.3 in the Second EPR of Romania to the then Ministry of Environment and Forests to review systematically key elements of its compliance monitoring strategy to optimize the balance between quantitative and qualitative elements was implemented.

**Figure 2.8: Inspection frequency per year by installation class, 2009, 2014, number**

Source: NEG, 2019.

**Table 2.4: Breakdown of inspections by NEG, 2018, number**

	Pollution control	Nature conservation
<b>Total</b>	<b>31 661</b>	<b>8 180</b>
Planned inspections	10 160	4 378
Unplanned inspections	21 501	3 802
of which		
Inspections to verify compliance with conditions in regulatory acts	-	766
Inspections following self-assessment by the Guard	657	424
Inspections due to complaints	4 639	543
Inspections to investigate accidents or incidents with an environmental impact	224	15
Regulatory inspections	-	127
Inspections on emissions	318	-
Inspections to verify implementation of measures	845	173
Inspections with other authorities	2 696	1 198
Identification of new activities or installations		52
Thematic inspections	3 261	1 592

Source: NEG activity reports, 2019.

NEG does not have its own laboratories for monitoring nor specialized personnel in this regard, relying instead on NEPA, Romanian Waters or the local public health department. If they are unable to assist, for example in relation to accidental pollution, NEG turns to a laboratory accredited by the Romanian Accreditation Association (RENAR). NEG does not have privileged access to the national pollutant release and transfer register (PRTR), which is managed by NEPA.

Joint inspections, carried out with other authorities, may be planned or unplanned and are based on collaboration protocols and the regulations. NEG joint inspections involve the Water Inspection Service of Romanian Waters, NANPA and the local health department. With the Forest Guard, the cooperation covers hunting and illegal wood processing (illegal

logging is handled by the Forest Guard), and also involves the police and park authorities. NEG also cooperates with the police, border police and customs, for example, regarding waste, including illegal and medical waste, and chemicals, including hazardous substances (table 2.5).

NEG, the police and hunting associations together address the illegal killing of animals. NEG works with the economic police on hazardous substances and sand and gravel extraction, for which there are many unlicensed operations. Local police have some competence on waste, for which they can impose fines. There is also cooperation with local police on water pollution. Table 2.5 illustrates the responsibilities for compliance with chemical regulations.

**Table 2.5: Authorities responsible for carrying out official controls in relation to chemical regulations, in cooperation with NEG**

Sector	Other authorities
Biocides	Directorates of public health, sanitary-veterinary and food safety at the county level (or Bucharest municipality)
Electrical and electronic equipment	National Authority for Consumer Protection
Export–import	General Directorate of Customs
Phytosanitary	Phytosanitary police
Explosive precursors	Romanian Police; National Authority for Consumer Protection
Mercury	General Inspectorate of the Romanian Police and the territorial units subordinated to it; National Customs Authority

Source: NEG, 2019.

NEG has observed an improvement regarding landfill infringements because a history of legal challenges makes it difficult for operators to access funds for remediation from the Environment Fund Administration. Annual thematic inspection campaigns may be based on any directive or law; in 2020, one campaign will relate to the IED. The campaigns are decided upon by the Ministry of Environment, Waters and Forests or the NEG Commissioner General. Romanian Waters' annual inspections programme is thematic, as approved by a GD. Besides water abstraction and discharge points, the Water Inspection Service visits waste dumps to check for diffuse discharges to surface and groundwaters. Romanian Waters produces annual, meaningful activity reports, available in a reasonably accessible format on its website, though only for 2013, 2015, 2017 and 2018. Table 2.6 illustrates the breakdown of planned or unplanned inspections by theme; table 2.7 shows the unplanned inspections by type. Overall, the Water Inspection Service inspected 9,808 activities in 2018 of 27,997 listed in the National Basin Register of Controlled Objects. Earlier statistics are not available to enable examination of trends.

Other actors include local authorities and city halls. For instance, local authorities are informed about demolition waste when issuing a building permit and they should verify that builders comply with environmental conditions, for example, regarding dust, noise and the disposal of waste. However, these conditions are rarely followed up by the local authorities, though they sometimes turn to the local NEG for assistance. A law is being drafted on construction and demolition waste to prevent dumping by construction companies.

The National Commission for Nuclear Activities Control carries out inspections and controls of radioactive sources and applies sanctions (table 2.8). The Commission sees some problems with practices

involving radiation sources, especially in the medical sector, where a lack in the safety culture is observed.

### Forests

Since the Second EPR of Romania, the nine regional Forest Guards were established, in 2015, in response to revelations about the extent of illegal logging in the country and the resulting public outcry. The following year saw a high point of 248,507 controls, dropping back to 222,627 in 2018. In 2013, 1.117 million cubic metres of illegally cut timber had been recorded; however, in the period 2014–2018, this was reduced to an average of 210,000 m<sup>3</sup> (207,000 m<sup>3</sup> in 2018), according to the General Directorate for Forests, though far higher figures have also been reported. The number of contraventions and offences found is shown in figure 2.9.

Inspections in forestry involve the Forest Guard, Romsilva and forestry staff within other forest management structures. Inspections take the form of site visits but also reviews of office documentation. The Forest Guard establishes annual inspection plans at the Ministry and forest district levels. Risk-based maps support the planning. In the Bucharest region, for example, the Guards find it difficult to respond as there are scattered small areas of forest across the large plain around the city; visits are generally every one or two years. The Guards consider that responding to many of the citizen complaints, often involving just one or two trees being cut, is an inefficient use of limited resources. Even if the local police respond, the Forest Guards still need to check against forest management plans. The Ministry of Environment, Waters and Forests cooperates with the Ministry of Internal Affairs through a joint action plan to prevent and tackle crimes related to the transport, storage, processing and marketing of timber. Inspections also address nature protection issues.

**Table 2.6: Inspections by Romanian Waters by theme, 2018, number**

Theme	Planned	Unplanned
Micro-hydroelectric plants	403	43
Sand and gravel	1 140	417
Reservoirs with risk levels of normal and low (C and D)	678	170
Tailings ponds, waste deposits, sterile sludge	250	38
Industrial Emissions Directive	695	43
Water treatment and purification stations	1 730	249
Sanitation, hygiene	2 454	340
Use of groundwaters	1 355	199
Bridges, culverts, underpasses	190	62
<b>Total thematic controls</b>	<b>8 895</b>	<b>1 561</b>
Other situations *	1 989	1 327
<b>Total</b>	<b>10 884</b>	<b>2 888</b>

Source: Romanian Waters activity reports, 2019.

Notes: \* Including smaller animal and poultry farms that do not fall under the IED, petrol filling stations, car washes, local public authorities that have only water supply systems, and various industrial units that do not fall under the IED.

**Table 2.7: Unplanned inspections by Romanian Waters by type, 2018, number**

Type	Number
Inspections following internal notifications (theft of mineral aggregates, water withdrawal without regulatory documents, etc.)	1 814
Inspections to resolve complaints (complaints and petitions)	1 075
Inspections for compliance with regulatory acts, for new projects or activities (water management permits and authorizations)	369
Inspections to investigate accidents or incidents with an impact on water (accidental pollution)	105
Inspections with other authorities	982
Other situations	2 970
<b>Total</b>	<b>7 315</b>

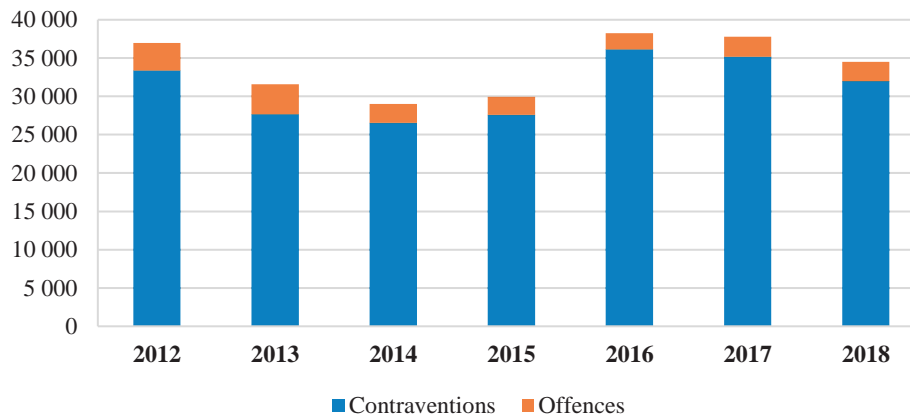
Source: Romanian Waters activity reports.

**Table 2.8: Radioactive sources, inspections and controls, infractions observed and sanctions applied, 2012–2019, number**

Actions	2012	2013	2014	2015	2016	2017	2018	2019*
Inspections and controls	1 314	1 585	1 070	1 460	1 454	1 372	1 578	1 274
Sanctions	43	47	35	76	61	101	102	83
Sanctions applied:								
Notices	20	19	23	36	27	50	54	57
Sanctions for contraventions	..	28	12	39	34	51	48	26
Exercising permit withdrawal	2	1	0	1	0	0	0	0
Proposals for criminal sanctions	0	0	2	0	0	0	0	0

Source: National Commission for Nuclear Activities Control, 2019.

Note: \* to 31 October 2019.

**Figure 2.9: Forestry contraventions and offences found, 2012–2018, number**

Source: General Directorate for Forests, 2019.

Inspections in forestry involve the Forest Guard, Romsilva and forestry staff within other forest management structures. Inspections take the form of site visits but also reviews of office documentation. The Forest Guard establishes annual inspection plans at the Ministry and forest district levels. Risk-based maps support the planning. In the Bucharest region, for example, the Guards find it difficult to respond as there are scattered small areas of forest across the large plain around the city; visits are generally every one or two years. The Guards consider that responding to many of the citizen complaints, often involving just one or two trees being cut, is an inefficient use of limited resources. Even if the local police respond, the Forest Guards still need to check against forest management plans. The Ministry of Environment, Waters and Forests cooperates with the Ministry of Internal Affairs through a joint action plan to prevent and tackle crimes related to the transport, storage, processing and marketing of timber. Inspections also address nature protection issues.

In the forestry sector, the authorities have implemented two important IT systems since the Second EPR of Romania. Since 2014, the transport of all wood products must be registered in its SUMAL (Integrated National Information System for Tracking Wood) database. The driver of a truck transporting wood must register the journey before setting off, using a smartphone or other GPS-enabled device; if there is no cell phone cover at that point, the data is uploaded automatically as soon as the truck emerges from the forest. The forest authorities upgraded SUMAL in 2016 to create the Forest Inspector ([www.inspectorulpadurii.ro](http://www.inspectorulpadurii.ro)), a user-friendly public interface to the database in real time that can also be accessed using a mobile app (figure 2.9). However, one year later, the Ministry blocked the update of information necessary for the operation of the app, resulting in thousands of false reports of illegal

logging. In August 2019, the Bucharest Tribunal obliged the Ministry to compensate the app developer after blocking its use. Some functionality has recently been removed and less data is now available, whereas increased transparency had been anticipated. However, the functionality allowing the viewing of Sentinel satellite imagery, intended to overcome problems with illegal loggers tricking the GPS system, was operational in January 2020.

### Fisheries

For marine fisheries, the National Agency for Fishing and Aquaculture undertakes coordinated controls with Frontex – the EU Border and Coast Guard Agency – and Black Sea riparian States. Because the National Agency has only small vessels, it also cooperates with the Coast Guard. The National Agency is exploring cooperation with Turkey.

Inland, the National Agency for Fishing and Aquaculture works with the Romanian Gendarmerie (Jandarmeria Română) to protect the inspectors and the transport police to ensure the transport of fish is properly documented. More generally, there is also good cooperation with the Ministry of Internal Affairs.

Bilaterally, the National Agency for Fishing and Aquaculture has carried out joint inspections with Bulgaria since 2012, about 16 times a year, with about six visits from the European Fisheries Control Agency. On the Danube River, the same prohibition periods apply to some species in Bulgaria, Romania and Ukraine, so the National Agency also visits Ukraine, though the cooperation is at an early stage. The common prohibition periods are a result of agreements with Bulgaria in 2017 and Ukraine in 2018. In the Danube Delta, which is almost completely under the control of Romania, and in the Danube River in the stretch controlled by Bulgaria and Romania, the

sturgeon population is being maintained and fisheries might reopen in two to three years, following the ban on commercial fishing of this species in the period 2016–2021.

**Photos 2.2 and 2.3: Smartphone app for forest and lumber transport, field check and reporting**



Photo credit: MoEWF

URL: [www.mmediu.ro/categorie/sumal-2-0/321](http://www.mmediu.ro/categorie/sumal-2-0/321).

SDG 14 (Conserve and sustainably use the oceans, seas and marine resources for sustainable

development) includes target 14.4 (By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics). This target is expected to be achieved by 2020. The global indicator 14.4.1 is the Proportion of fish stocks within biologically sustainable levels. At the EU level, the Common Fisheries Policy is the primary instrument to support target 14.4; no statistics in relation to this target have been published by the EU.

**Photo 2.4: Action to combat illegal fishing of sturgeon, Sacalin–Zătoane Strictly Protected Area, Danube Delta Biosphere Reserve**

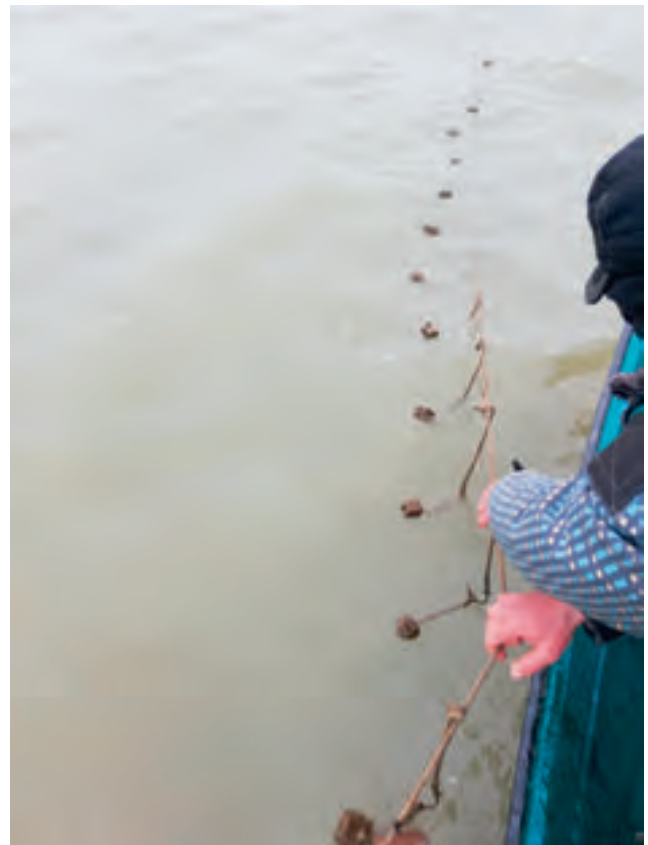


Photo credit: DDBRA, MoEWF

In Romania, a Multiannual National Strategic Plan for Aquaculture and an Operational Programme for Fisheries and Maritime Affairs 2014–2020 have provided a framework for action in line with target 14.4. SDS 2030 foresees that the country will “Responsibly and sustainably manage the fishing of wild and aquaculture species in accordance with the legally-established quotas and methods, and preserve, within reasonable limits, the viability of traditional activities in this field, including recreational and sports fishing” and “Involve other Black Sea countries in the



implementation of a responsible and sustainable plan for the exploitation of living aquatic species". Both aims are being addressed, though no quantified measures are available.

### Sanitary-epidemiological

The Ministry of Health's State Sanitary Inspectorate coordinates inspection activities in the 41 counties and Bucharest municipality. At the end of each year, the Ministry defines thematic actions for the following year and, during the year, carries out cross-checks. The Public Health Directorate of Bucharest municipality, for example, has a Public Health Service including 40–41 health inspectors, with three quarters of the staff in one office inspecting health and risk factors in personal and professional life, and the remainder in a second office inspecting health and sanitation facilities. Each month, the inspectors review different types of facility. Besides scheduled checks, the inspectors respond to notifications by individuals, facilities or the Ministry, or if they otherwise find out that there is a problem. The inspectors in the first office visit schools, food producers, swimming pools and many other facilities. They respond to food poisoning – with the Ministry carrying out an epidemiology assessment – and have access to a fast-alert system. These inspectors also check food in educational centres and health facilities.

The Ministry of Health also oversees drinking water, mineral water and bathing water inspection and cooperates with the Ministry of Environment, Waters and Forests on the catchments for drinking water supplies. There is regular monitoring by the inspectors and the water companies of water supplies. Public swimming pools are subject to self-inspection every two weeks, but they must use an accredited laboratory.

However, there are some gaps in coverage with no authorizations for some products, such as food supplements that are produced in Romania or imported, so health inspectors can only react if there is a complaint. The Ministry would like to have access to trade databases so as to better control the import of such products.

After inspection, a report is submitted to Ministry of Health. Inspection is according to the Ministry's specific methodology, timetable and target operators. The Ministry centralizes results and uploads a report on its website. The Ministry also issues licences for laboratories to support monitoring and inspection. County directorates on water quality issue mandatory authorizations for medical units and water supplies and, upon request, certificates of conformity with

sanitary conditions for restaurants and production units.

The Ministry of Health, and specifically the State Sanitary Inspectorate, produces annual, meaningful activity reports, available in a reasonably accessible format on the Ministry's website. There has been an overall drop in inspections by 32 per cent, with a halving of inspections in the food sector and a 99 per cent drop in inspections related to tobacco products, but also the introduction of biocide product controls (table 2.9). In 2018, the Ministry paid attention to 8,929 complaints received from the public.

### Industrial safety

Since the Second EPR of Romania, the legislation on major accident hazards was revised, in 2016, following the entry into force of the Seveso III Directive in 2015. For an industrial establishment subject to the Seveso Directive, and thus to the national law, a Seveso inspection is carried out each year for upper-tier establishments and at least every three years for lower-tier ones, in addition to the inspections carried out according to the risk class. The competent authorities at the local level, which draw up an annual inspection plan and carry out the inspections, are the county branch of NEG and the county inspectorate for emergency situations. At the national level, the Ministry of Environment, Waters and Forests and its subsidiary bodies work with the General Inspectorate for Emergency Situations in the Ministry of Internal Affairs. The period 2015–2018 saw a steady rate of inspections, with 326 in 2015 and 309 in 2018. However, the period also saw a clear rise in the number of warnings, fines and suspensions (figure 2.10).

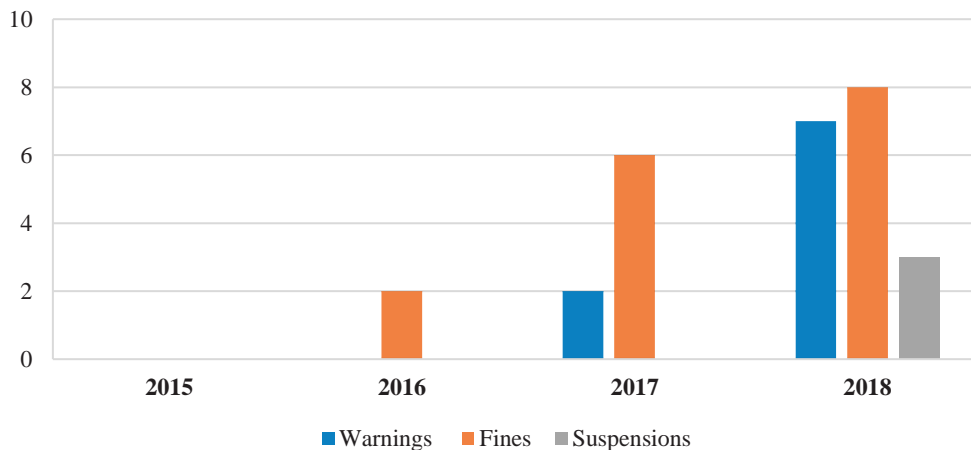
### *Non-compliance response*

The non-compliance response varies across environmental media and according to the severity of the non-compliance and other conditions. For example, breach of the environmental protection and water legislation and their prohibition of the discharge of polluting matter into water, except when permitted, may result in administrative fines of up to 100,000 lei and remediation measures imposed by NEG. Criminal liability may arise, for example, for wilful pollution with waste or dangerous substances, or failure to comply with restrictions or interdictions. Under civil law, individuals may also seek in court the remediation of environmental damage suffered by them because of non-compliance by companies.

**Table 2.9: Controls on activities, as carried out by health inspectors, 2013, 2018, number**

Control areas	2013	2018	Change (%)
Food and materials in contact with food	52 767	27 027	-49
Water quality for human consumption and water used for other human activities	10 948	12 486	14
Tourism units	3 110	3 978	28
Human habitat quality	18 842	12 634	-33
Tobacco products (to producers and importers) and, in 2013, smoking in public spaces	59 593	760	-99
Working environment	3 531	900	-75
Units of production, storage and sale of cosmetic products	10 444	7 077	-32
Product controls	27 864	23 007	-17
Units for production, storage and sale of biocide products	31 298	27 138	-13
Product controls		26 867	
Educational units	19 093	17 449	-9
Health units	21 093	13 440	-36
Management of liquid and solid waste and especially potentially hazardous waste	14 980	10 629	-29
Other		1 760	
Repeat controls of the planned units	3 717	3 806	2
<b>Total</b>	<b>277 280</b>	<b>188 958</b>	<b>-32</b>

Source: Ministry of Health activity reports, 2019.

**Figure 2.10: Sanctions resulting from Seveso inspections, by type, 2015–2018, number**

Source: NEG activity reports, 2019.

Sanctions have generally declined in number since 2012 in line with the reduced frequency of inspections, but there is evidence of a shift away from simple fines to more severe sanctions, both administrative (suspension of operations) and criminal. The legislation also provides for appeals to the competent administrative court against such decisions. The court's decision can be subsequently appealed.

NGOs observe that a suspension is often itself suspended by the operator obtaining an injunction in court. This allows the polluting or harmful behaviour

to continue and implies that the conditions for injunctive relief may not be relevant for environmental matters.

Some authorities have in-house legal expertise, though it is not always adequate. The Forest Guard has its own legal expertise to draw up cases against guidelines. The National Agency for Fishing and Aquaculture lacks legal expertise for enforcement. NEPA has limited in-house legal expertise, with few qualified staff and many cases to be covered, while the LEPAs exchange information on infringements. The sanitary-

epidemiological authority in Bucharest municipality relies on an external lawyer. In the Braşov County NEG, a legal expert compiles a case having obtained agreement from headquarters in Bucharest on the technical (not political) issues.

The Government has not implemented Recommendation 2.4 of the Second EPR of Romania to increase the capacity to address environmental cases within existing judicial authorities and by organizational adjustments, such as the creation of dedicated environmental courts or environmental divisions within existing courts. Environmental cases are tried in normal courts. There are no specialized judges and very few environmental experts in court.

In Bucharest municipality, the sanitary-epidemiological authority goes to court if there are challenges to fines and suspensions. Cases typically last six months, or less. When the Ministry of Health goes to court it wins, though on two or three occasions in the past five years the court has changed a fine to a warning if the information provided was inadequate.

#### Administrative measures

Inspectors can issue warnings and impose fines directly for infringements. The law covers both natural persons (who are subject to lower fines) and legal entities and allows the payment of fines to be reduced by half for infringements when paid within 15 days. If fines are contested, the matter is taken to court. Legal entities pay fines for non-compliance with environmental legislation to the state budget, whereas natural persons pay them to the local public administration. NGOs sometimes question the level of sanctions and two complained to the EC in April 2019 that fines against coal-fired power plant operators, which can be as low as 30,000 lei and have been rarely applied, are not the effective, proportionate and dissuasive sanctions required by the IED.

NEPA and its county branches issue warning notices for non-compliance with permit requirements, and have the authority to suspend or withdraw permits, following requests from NEG. NEG can itself apply the main administrative sanctions, being warnings and fines, and complementary sanctions – suspension or closure of an activity, proposing suspension of an activity, restoring the land to its initial state and the imposition of measures to remedy deficiencies found.

The approach of NEG is that initial sanctions should be light, but the operator must comply with measures. If not, the operator can be fined again for failure to apply measures and NEG can even suspend the activity. It is a criminal offence to continue a

suspended activity. NEG can close activities when operators do not implement measures, have the necessary licences and permits or complete construction. Nonetheless, NEG prefers to find a solution to cases of non-compliance and does not approach lightly the suspension or cancellation of a permit. With increasing numbers of lawyers specializing in environmental law, companies are well equipped to protect their interests.

The number of inspections carried out by NEG has dropped steadily since 2010–2011, when it averaged about 62,600 controls per year, to 39,841 in 2018, with a similar figure expected in 2019 (table 2.10). Fines in the period 2012–2018 have, on average, been close to 42.9 million lei a year, after a peak of 87.5 million lei in 2011. The frequency of imposing fines has dropped from 13.7 per cent in the period 2004–2006 to 9.2 per cent in 2010–2011 and 5.6 per cent in the period 2012–2018. The frequency of issuing a warning has also dropped, but the frequency with which inspected operations were suspended more than doubled from 0.19 per cent in 2010–2011 to 0.43 per cent in the period 2012–2018. However, the overall number of sanctions, including fines and warnings as well as more severe actions, dropped from 14.4 per cent in 2010 to 9.4 per cent on average in the period 2012–2018, though there was an increase in the first nine months of 2019 to 13.1 per cent.

#### **Photo 2.5: Environmental Guard in the field**



*Photo credit: NEG, MoEWF*

Major sources of water pollution are from agglomerations without wastewater treatment or adequate collections systems, and from abandoned mines. Many larger agglomerations do not comply

with EU legislation on urban wastewater treatment, but the greater challenge is the 1,600 agglomerations of 2,000–10,000 population for which the European Bank for Reconstruction and Development has estimated €23 billion is needed for compliant wastewater treatment and drinking water supplies. Romanian Waters therefore faces difficulties in applying non-compliance measures to these communities and lacks the power to oblige local authorities and utilities to treat wastewaters. The national legislation sets sanctions, such as a punitive tariff of 10 times the normal rate for exceeding licensed abstractions. Generally, fines are paid and are high enough to be effective. Romanian Waters can suspend water management licences for local impact pollution, but it gives priority to compliance and notes the economic importance of such water users.

In forestry, the Forest Guards can suspend operations for many different violations of the forest management plan, including for having inadequate staffing or equipment, for example. The Guards observed that an increase in fine levels a decade earlier led to a decrease in collection rates. They impose minimal fines for accidental infringements but otherwise apply dissuasive fines. The EU Timber Regulation has entered into force since the Second EPR of Romania. It requires that penalties for infringement of the Regulation be effective, proportionate and dissuasive, including “fines proportionate to the environmental damage, the value of the timber or timber products concerned and the tax losses and economic detriment resulting from the infringement”. Illegal logging varies greatly across the country, with smaller areas affected around Bucharest, for example, and much more damaging activities in mountainous areas. Public concerns about perceived high levels of illegal logging are not matched by enforcement actions (box 2.1).

In addition, illegal logging may be being encouraged by excess domestic wood-processing capacity.

The level of sanctions for fisheries infringements – fines and suspensions – is considered by the National Agency for Fishing and Aquaculture to be dissuasive, having been transposed from EU law.

**Photo 2.6: Giurnalău secular virgin forest, Suceava County, showing European spruce (*Picea abies*)**



Photo credit: MoEWF

**Table 2.10: Sanctions by NEG, 2010–2019**

	Controls/ inspections	Fines (number)	Fines (million lei)	Warning notices	Suspensions of activity or operation	Permanent closures of installation	Proposals to suspend authorization	Criminal cases drawn up
2010	59 614	5 592	77.3	2 810	118	8	9	42
2011	65 655	5 931	87.5	2 404	125	3	18	..
2012	64 726	2 693	38.4	1 488	122	1	18	53
2013	56 047	3 477	52.7	1 772	188	0	37	36
2014	45 070	2 321	38.5	1 215	183	0	44	48
2015	43 521	2 450	45.0	1 325	258	1	36	55
2016	41 721	2 795	47.4	1 644	236	0	43	103
2017	40 691	1 969	39.2	1 286	237	0	33	54
2018	39 841	2 606	39.1	1 570	140	1	53	25
2019*	29 383	2 535	40.4	1 149	117	..	26	30

Source: NEG annual activity reports, 2019.

Note: \* to 30 September 2019.

**Box 2.1: Illegal logging and the loss of old-growth forest**

NGOs allege that ancient forests are being logged illegally and the resulting timber is mixed in with timber logged legally in production forests for subsequent export. NGOs allege that timber is logged illegally without permits but also that it is logged with permits that should not have been issued as logging takes place in national parks and other protected areas. Timber from other countries is added to the mix. Much of the legally logged wood is transported directly from the production forest to the processing facilities, while some of the legally logged timber is mixed with illegally logged wood in log depots across the country and then forwarded to the processing sites; the latter portion may represent between 40 and 45 per cent of the total volume.

Up to two thirds of the old-growth forests in the Romanian sector of the Carpathian Mountains may have been lost in the past decade.

The NGOs recommend that the Government:

- Continue prosecution of the company at the centre of the allegations and expand prosecution to other bad actors, both foreign and domestic;
- Expand the Forest Inspector website to provide more key data to the public;
- Significantly strengthen law enforcement against illegal logging and corruption;
- Stop commercial logging in national parks;
- Inspect and investigate imports from non-EU countries into Romania for compliance with EU Timber Regulation due diligence and traceability requirements.

Source: Environmental Investigation Agency, 2018.

In the case of non-compliance with legal norms for hygiene and public health, generally a fine or warning is issued. If there is a risk for public health, or if any deficiencies are not corrected by a deadline, the authorities can impose a suspension of the activity. Fines for medical facilities were increased in 2019. The authorities issue many warnings but also take other measures (table 2.11). The number of sanctions has declined in line with the number of inspections. The health authorities have increasingly decided to apply the sanction of closing units in the period since 2012.

### Criminal measures

The environmental authorities prepare criminal cases and forward them to the prosecutor, with whom they then cooperate. Generally, prosecutors are not practised in environmental law. The exception is in Constanta, where a prosecutor is experienced in dealing with customs cases on waste transfer and the prosecutor's office sees many fisheries-related cases. For inland waters, criminal files on fisheries are handled well by the police.

For forestry cases, the Forest Guards seek a principal fine and, as appropriate, a compensation fine, which serve as a deterrent. Forestry cases are successfully prosecuted in over 80 per cent of the time, though the Guards would prefer that prosecutors seek more severe levels of sanctions. Sanctions vary from court to court and even from case to case for different operators for the same act in the same court, which is

harder to explain. Sometimes sanctions are not applied because of attenuating circumstances.

NEG saw an increase in the small number of cases that resulted from inspections: criminal cases were drawn up only 0.07 per cent of the time in 2010 but 0.12 per cent of the time in the period 2012–2018 (table 2.10). The Braşov County NEG, for example, enjoys a good relationship with prosecutors, always wins in court and considers sanctions to be adequate.

Since August 2018, a virtual group of Romanian prosecutors has been sharing statements and relevant case law on environmental crime, specifically waste-related cases. Romania has been participating in Europol work on environmental crime since 2018 and is an active member of IMPEL. Occasionally, events are held to raise awareness of inspection and control activities in the field of environmental crime, involving both environmental and judicial authorities. For example, an event was organized under the EU Working Party on General Matters including Evaluations on practical implementation and operation of European policies on preventing and combating environmental crime (November 2018). The event attracted representatives of the Ministry of Environment, Waters and Forests, Public Ministry (the Prosecutor's Office attached to the High Court of Cassation and Justice), Ministry of Internal Affairs, Ministry of Health, NEG, Romanian Police, General Inspectorate of Border Police and General Directorate of Customs. This event was part of an evaluation that led to a report to the EU Council that set out several useful recommendations (box 2.2).

**Table 2.11: Sanctions for non-compliance with sanitary and health norms, 2013, 2018**

Sanctions	2013	2018	Change (%)
Warnings	10 735	6 851	- 36
Fines (number)	5 537	4 920	- 11
Fines (million lei)	4	8	90
Suspensions of activity	198	149	- 25
Withdrawal of sanitary operating permits	53	50	- 6
Decisions to close units	1	15	1 400
<b>Total</b>	<b>16 524</b>	<b>11 985</b>	<b>- 27</b>

Source: Ministry of Health annual activity reports.

**Photo 2.7: Police and Forest Guard Joint action to counter illegal logging**

Photo credit: Forest Guard, MoEWF

**Box 2.2: Selected recommendations to Romania in the 2019 report on Romania on the practical implementation and operation of European policies on preventing and combating environmental crime**

- Consider prioritizing the fight against environmental crime (e.g. by establishing a national strategy defining the main goals and the roles of the respective authorities involved in the fight against environmental crime);
- Develop methods to collect statistics referring to waste crime in a comprehensive way in order to show the development/trends in waste crime in Romania;
- Implement a waste hierarchy, prioritizing waste prevention and recycling to reduce opportunities to dispose of waste illegally;
- Consider introducing landfill taxes to discourage the illegal import of household waste;
- Encouragement to set up a specialized unit within the police and designate prosecutors specialized in fighting waste crime at regional and/or national level;
- Encouragement to develop measures/tools to maintain specialized staff within NEG to fight against waste crime effectively;
- Consider vesting NEG with (limited) criminal investigative powers with regard to EU legislation on the illegal shipment of waste;
- Provide more training opportunities to practitioners involved in detecting and/or fighting environmental crime (e.g. the police, customs, prosecutors and judges);
- Encouragement to review of the level of financial penalties applicable to waste infringements committed by corporate bodies so that they are effective, proportionate and dissuasive;
- Encouragement to review national legislation on environmental crime in order to avoid inconsistencies and to allow practitioners to apply rules on environmental crime;
- Consider developing effective ways of collecting and sampling evidence so that it is more likely to be admissible in the court;
- Enhance detection capacity including physical controls of illegal waste shipment and inspections of company premises.

Source: Council of the European Union (2019), 8th Round of Mutual Evaluations – "The practical implementation and operation of European policies on preventing and combating Environmental Crime", Report on Romania.

## 2.5 Environmental liability, insurance and compensation

The law implementing Directive 2004/35/CE on environmental liability with regard to the prevention and remedying of environmental damage was passed in 2008 and the legal regime at the EU level has evolved little since then. The Directive – and the national legislation – covers damage to biodiversity (protected species and natural habitats), water and land. An amendment in 2013 extended the scope to include the marine environment. The polluter pays principle is embedded in Romania's environmental protection frameworks.

Numerous studies have shown the difficulty of implementing many elements of the Directive in a harmonized manner and in particular the financial security instruments. The EC found in 2019 that 26 of the 28 EU Member States, including Romania, should improve the application of the Directive in one or more of the following areas: financial security, guidance, and collection and publication of information on environmental damage. The last of these areas has been addressed by the latest amendment to the Directive.

Romania, like other countries, has struggled to establish financial security instruments. The Ministry of Environment, Waters and Forests has discussed insurance policies with insurance companies and invited proposals from banks and insurance brokers, but without a positive response because of the high risk involved. The Ministry is now considering other financial instruments besides insurance and studies are being undertaken at the EU level.

One exception is in relation to mining. The Ministry of Environment, Waters and Forests, Ministry of Economy and National Agency for Mineral Resources issued a joint order in 2013 on compulsory financial guarantees for mining operators to cover rehabilitation works after exploration or production, with portions retained for post-development monitoring and for works in the case of accident. The guarantee is deposited with the Ministry of Economy.

If an operator has an environmental permit, integrated environmental permit or environmental agreement, it is obliged to pay for preventive and remedial measures under the polluter pays principle. Any remediation payments imposed by the courts are made directly by the polluter to the company undertaking the remediation works. NEPA gathers statistics every six months on cases of environmental damage, though these are rare.

## 2.6 Voluntary compliance promotion instruments

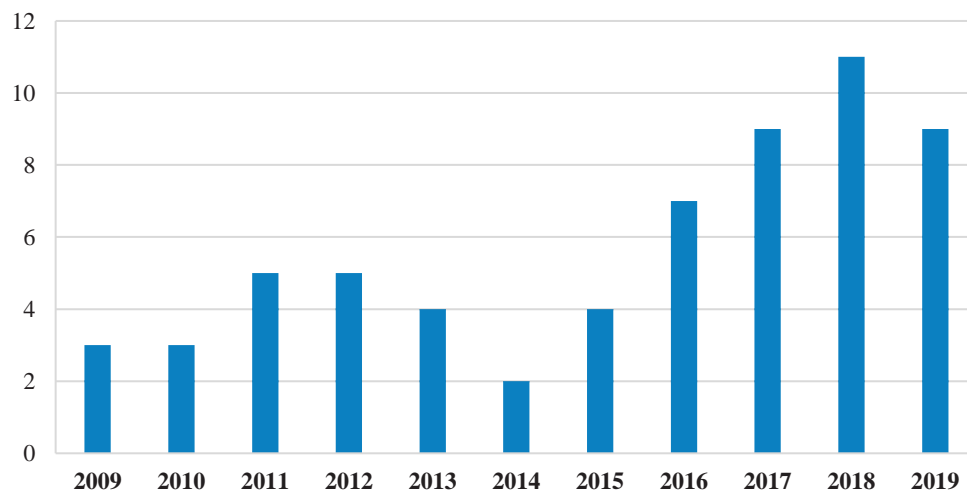
### *Environmental management systems*

SDS 2030 envisages the promotion of instruments that lead to improved environmental performance through information and awareness-raising campaigns on the advantages of obtaining EU Ecolabels for products and services, and the registration of public and private organizations in the EU Eco-Management and Audit Scheme (EMAS). NEPA services an EMAS Committee and the Ministry of Environment, Waters and Forests, wanting organizations to be open-minded about EMAS, does not charge the usual fee for registration. NEPA provides technical advice on EMAS to small organizations without charge. The Ministry has some funds from the Environment Fund Administration to promote EMAS until 2021. Past efforts have included attempts to engage members of the Chamber of Commerce and Industry and a competitiveness guide by the Ministry of Economy that spoke of EMAS and eco-labelling.

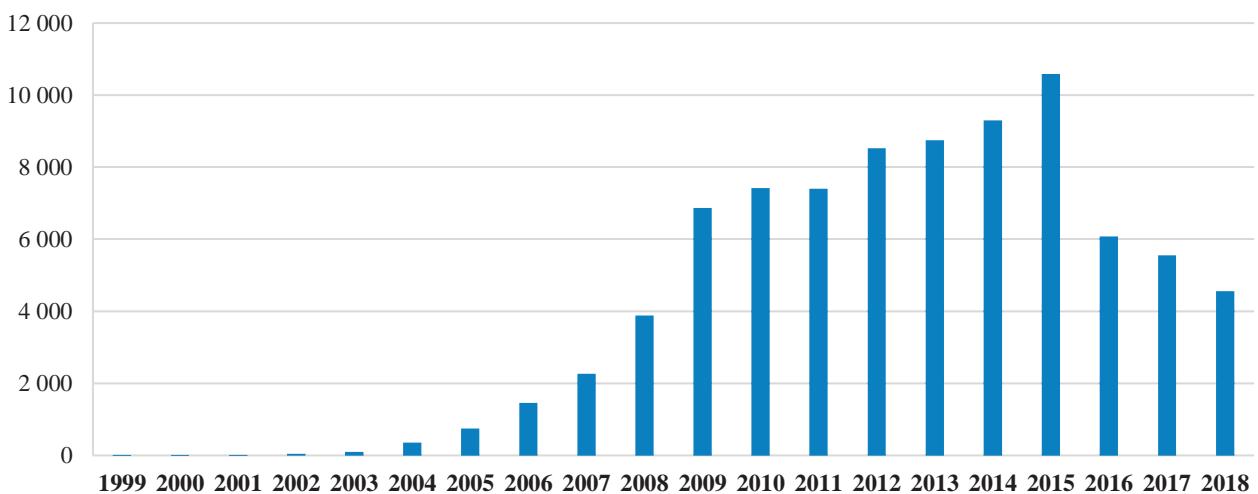
Compliance with EMAS or the ISO 14001 EMS standard benefits companies indirectly as well as directly. NEG takes into account such certification when classifying economic activities, possibly leading to less frequent inspection.

EMAS saw its first registration in Romania in 2007, even before the EU regulation entered into force in the country in 2010. However, the growth in numbers has been slow. The EC EMAS register lists only four registrations in Romania out of a total of 3,653, whereas the national register shows that there has been a steady growth in interest in EMAS since 2014, even if the numbers are very small. Only nine registrations were valid in 2019 (figure 2.11).

There is a clear preference among organizations for the ISO 14001 standard and for eco-labelling. With EMAS, an accredited verifier must check the environmental statement and EMS and the scheme demands more of the organization in terms of transparency and setting targets and objectives, for example. RENAR has accredited two companies for EMAS certification and 19 for ISO 14001. Despite the relative popularity of ISO 14001, the number of certificates in Romania has declined steeply recently, with 47 per cent fewer in 2018 than in 2014 (figure 2.12), though this decline is in part explained by a change in accounting.

**Figure 2.11: Valid EMAS registrations, 2011–2019, number**

Source: National EMAS register, 2019.

**Figure 2.12: ISO 14001 certificates, 1999–2018, number**

Source: ISO surveys 2017 and 2018, 2019.

### Labelling

The situation with regard to eco-labelling according to the EU regulations is rather similar to that for EMAS, with a slow uptake, despite promotion of eco-labelling by the Ministry of Environment, Waters and Forests according to its eco-labelling strategy and, as noted above, in SDS 2030. The Ministry plans a survey in 2020 to promote EMAS and eco-labelling, funded by the Environment Fund.

A company wishing to be awarded an EU Ecolabel for its products must first apply for a licence. The Ministry is responsible for granting EU Ecolabel licences, whereas NEPA provides a technical secretariat for a commission, which undertakes a site visit and inspection in response to an application. However, the Ministry has only one staff member working on this

topic, and NEPA has two. There have not been any legislative developments in this field since 2012.

As of September 2019, Romania had 22 labelled products (goods and services) out of 77,358 in the scheme, produced by 17 eco-label-licensed companies out of 1,623 in the scheme (rising to 18 in October 2019). The NEPA website provides only a list of products in 2014. The EC Environmental Implementation Review 2019 of Romania states that, as of September 2018, the country had 24 products and 19 licences registered in the EU Ecolabel scheme out of 71,707 products and 2,167 licences in the scheme in all countries. Romania has a poor uptake and has even seen a slight decline recently. Based on International Monetary Fund 2019 estimates of nominal GDP, Romania represents 1.3 per cent of the EU economy but it accounts for 1.0 per cent of eco-



label-licensed companies and only 0.02 per cent of eco-labelled products.

### *Corporate social responsibility*

In 2019, the Department of Sustainable Development began the implementation of the “Sustainable Romania – Development of the strategic and institutional framework for the implementation of the National Strategy for the Sustainable Development of Romania 2030” project, which includes as one of its main objectives the development of the Romanian Sustainability Code, part of the non-financial monitoring mechanism. The Code aims to promote competition among activities of all entities, in a sustainable way and favouring appropriate management and transparency. The Code is expected to facilitate the incorporation of information on environmental, social and governance issues into each entity's reporting.

### *Voluntary environmental reporting by companies*

SDG 12 (Ensure sustainable consumption and production patterns) includes target 12.6 (Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle). The indicator for this target (12.6.1) is the number of companies publishing sustainability reports.

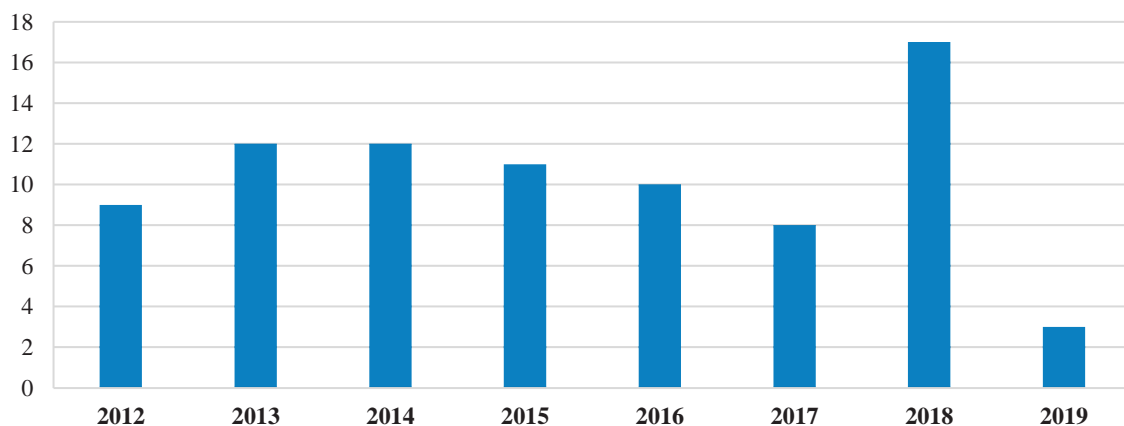
The target has two elements: sustainable practices and sustainability reporting. SDS 2030 encourages companies to act in line with the target and foresees the introduction of “a sustainability code for the complex reporting of the attitudes of companies vis-à-

vis the application of the principles of sustainable development”. The Chamber of Commerce and Industry confirmed that mainly the national branches of transnational companies carried out voluntary reporting.

In addition, since 2012, the EU brought in legislation regarding the disclosure of non-financial information by large companies (with more than 500 employees). The legislation requires production annually of a “a non-financial statement containing information to the extent necessary for an understanding of the undertaking's development, performance, position and impact of its activity, relating to, as a minimum, environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters”. The national implementation requires such reporting from 2017. However, the methodology adopted for measuring indicator 12.6.1 extends sustainability reporting to companies of more than 250 employees.

A first global report on indicator 12.6.1 is expected in 2020. Meanwhile, the Global Reporting Initiative's Sustainability Disclosure Database provides the largest global collection of sustainability reports, though only reports to 2018 are included in the database's search function. The database indicates whether reports comply with certain standards set by the Initiative. It therefore provides a useful basis for analysis, though the results are not encouraging (figure 2.13). Romania's Voluntary National Review 2018 states that 24 companies had submitted non-financial reports in accordance with the Directive, although there are 1,789 enterprises with 250 or more employees in Romania, according to the National Institute of Statistics. Other instruments are supportive of sustainability reporting, including environmental managements systems and especially EMAS.

**Figure 2.13: Sustainability reports issued, 2012–2019, number**



Source: Global Reporting Initiative's Sustainability Disclosure Database, 2020.

Note: Incomplete data in 2018–2019.

In a presentation to the ECE Committee on Environmental Policy in November 2017, the Government described a framework for target 12.6. It identified the responsible institutions as being the Ministries of Economy, of Environment and of Water and Forest (at that time separate), of Transport, and of Agriculture and Rural Development. EU policies were expected to be supportive, including those for EMAS, eco-labelling and the Environmental Technologies Action Plan. At the national level, the National Programme for Rural Development 2014–2020 did not provide direct support. Data on indicator 12.6.1 was to be provided by the National Institute of Statistics and the Ministry of Regional Development, Public Administration and European Funds.

However, the National Institute of Statistics does not include target 12.6 in its Database of Sustainable Development Indicators in Romania. The EU-wide indicators for SDG 12 focus on consumption, productivity and waste and resource volumes, rather than indirect measures such as global indicator 12.6.1.

## 2.7 Legal, policy and institutional framework

### *Legal framework*

Since 2012, the country's legislation has continued to develop rapidly and become more closely aligned with that of the EU. Much major legislation was passed and very many lesser revisions were introduced to fill gaps, clarify provisions and expand the scope. Many stakeholders – both governmental and non-governmental – complain about rushed changes in legislation, which sometimes leads to poor drafting, increased legal complexity and resulting greater workload. They also observe the lack of opportunity to engage in the drafting of legislation, especially when GEOs are used to enact legislation without consultation.

Key legislative changes include: the 2013 Law on Industrial Emissions, which revised the integrated environmental permit and transposed the IED, and which was itself revised to address deficiencies in the transposition; the 2015 Law on Standardization; the 2016 Law on the Control of Major Accident Hazards involving Dangerous Substances, transposing Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances (Seveso III Directive); the 2018 Law on the Evaluation of the Impact of Certain Public and Private Projects on the Environment, or EIA; the 2019 Law on the Management of Potentially Contaminated and Contaminated Sites; and the 2019 Law that amended earlier legislation on construction permits, and which

reduces the scope of construction activities to be notified to the LEPA.

Two contentious laws were enacted: the 2016 Law on Measures Necessary for the Implementation of Natural Gas Projects of National Importance, which provided exemptions from several other laws for such projects; and the 2019 Law for the Amendment of and Addition to Article 16 of GEO on Environmental Protection, which brought in the annual visa for environmental permits.

The legal framework for environmental permits remains largely unchanged since 2012, except for the introduction of the annual visa. The procedure for issuing the environmental authorization has been modified by two new MOs, to follow up on the abolition of the regional level of NEPA and to include forestry and logging as an activity subject to an environmental permit, instead of logging only. Additional sectoral laws apply; for example, both the Environmental Protection Law and the Water Law prohibit the introduction of polluting matter into waters, except when permitted by law.

EIA legislation was revised in 2018 in line with EU directives to bring about an integrated approach. EIA now includes matters dealt with under EU directives such as the Habitats Directive, the Water Framework Directive and Seveso Directive. Some methodological guidelines have been developed (covering the capture of groundwater and water supply systems, wastewater treatment plants and sewerage networks, flood prevention and protection works, integrated waste management systems, the construction of highways and roads, railway construction projects and flue gas desulfurization for LCPs) and seven more (general guides on the EIA procedure and transboundary EIA and five sectoral guidelines on municipal waste incineration, quarries and surface mining, installations for the intensive rearing of farm animals, hydroelectric power plants and afforestation or deforestation), prepared under an EU-funded project, were adopted at the beginning of 2020.

Completely new legislation on standardization was introduced in 2015. Noise regulations have been changed by orders of the Minister of Health, as well as an EU standard. Construction material standards have tracked EU changes. Numerous EIA guidelines have been approved by MO in 2016, addressing the main economic activities subject to EIA, with a draft order having been prepared in December 2019 to approve further guidelines. At the EU level, the General Data Protection Regulation was adopted in 2016, impacting the publication of information on economic actors and the work of NGOs. The 2014 amended Directive on

Non-financial and Diversity Information provides a strengthened basis for sustainability reporting. The EC continues to issue decisions establishing BAT conclusions for different economic activities.

Other legislation brought about institutional changes, such as: the 2012 GD on the Reorganization and Functioning of NEPA and of the Public Institutions Subordinated to it, which abolished the regional level from the structure of NEPA; and the 2015 GEO on the Establishment of the Forest Guard, in response to a public outcry about illegal logging. The following year, a GEO recognized that the extent of illegal logging represented a national security threat. NANPA was established in 2016.

Legislation in other areas has been revised, rather than being rewritten. Legislation on ODS has not changed. Emissions and ambient quality standards were altered by the integrated approach to industrial emissions and revisions to EU directives, for example, by the Priority Substances Directive and by changes to the Drinking Water Directive. Food and toy standards have continued to evolve. The main modern development of the waste legislation occurred prior to 2012, though a series of amendments followed.

#### *Policy framework*

SDS 2030 supports the country's implementation of the 2030 Agenda for Sustainable Development, while providing a practical framework for action on matters such as EMAS and eco-labelling.

Annual action plans or programmes, including on inspection, are used to define what the various bodies are to achieve and how they are to measure their performance, as described in the subsequent annual activity reports. Where these reports provide statistics rather than long lists of activities, they can serve the purpose of performance measurement.

In forestry, forest management plans provide a decade-long structure upon which short-term timber harvesting plans and, ultimately, logging permits are based. In fisheries, the EU Common Fisheries Policy provides the main framework, including for achieving SDG target 14.4. Nationally, a Multiannual National Strategic Plan for Aquaculture and an Operational Programme for Fisheries and Maritime Affairs 2014–2020 have been adopted. For freshwaters, the updated National Management Plan relating to the portion of the international hydrographic basin of the Danube River that is included in the territory of Romania for the period 2016–2021 (NMP), which responds to the Water Framework Directive, focuses on that part of

the Danube River Basin that is in Romania and provides a framework for SDG target 14.4 in the Danube River catchment.

Finally, authorities referred to the importance of the National Anti-corruption Strategy 2016–2020, given the pressures on inspectors in terms of low pay, high workload, limited budget and interactions with multiple economic actors. The Strategy is implemented, for example, by the 2015 and 2016 declarations by the ministry in charge of the environment on adherence to the fundamental values, principles, objectives and monitoring mechanism of the Strategy, which commits the ministry and its subordinated bodies to a number of actions to fight corruption.

#### *Institutional framework*

##### Ministry in charge of the environment

The ministry (or ministries) in charge of the environment, waters and forests is the key institution, acting through its subsidiary bodies, notably NEPA, NEG and the Forest Guard, bodies under its authority, notably Romanian Waters and Romsilva, and bodies under its coordination, such as the Environment Fund Administration.

The regional level of NEPA was removed in 2012 and the associated staff reassigned at the county level. Countrywide, 408 staff work in NEPA permitting departments, whereas 560 are needed, representing a shortfall of 27 per cent. In the Braşov LEPA in 2019, of the 36 staff (38 foreseen), 11 staff handled 250–300 environmental permits, 15 new integrated environmental permits and revisions and renewals of 54 valid integrated environmental permits, besides EIAs and SEAs; of the 11 staff, the four more senior staff handle EIAs of IED installations. Besides the general lack of staff, there is a concern that many of the experienced staff will soon retire and young recruits need a lot of training.

A local authority is obliged to notify the LEPA about a planned development, for example when an application is made for a building permit, in case it might have environmental implications. The Second EPR of Romania recommended that the then Ministry of Environment and Forests consider diminishing the regulatory load on NEPA by delegating some of its then current tasks, such as certain category screening of EIA, to local authorities (Recommendation 2.1(b)); this recommendation has not been implemented directly. However, two legislative changes are expected to affect the workload of LEPA staff. On the one hand, the 2019 law that revises the 1991 Law on

construction permits removes five types of construction from the notification process, such as individual houses, and this may reduce the workload slightly. The 1991 Law had very few exemptions, such as repairs to fencing or roofs, if the form and materials remain unchanged, or interior decoration. On the other hand, it is probable that the introduction of the annual visa on permits will lead to an increase in workload, at least in the first years of application.

Various actors may have jurisdiction over different geographical or administrative areas for EIA procedures. For example, a project subject to the Water Framework Directive would be examined by the relevant water basin administration under Romanian Waters, or under Romanian Waters at the national level if it crosses more than one basin; the EIA of a smaller project might only require checking by the county-level water administration. Similarly, the project would be considered by a LEPA if wholly within one county or, if not, by NEPA at the national level. The Ministry of Environment, Waters and Forests handles EIAs of NPPs, mining projects in excess of 25 ha and construction on forest land affecting between 1 ha and 10 ha, for example.

NEG, like NEPA, has a central office and 43 commissariats, in Romania's 41 counties, Bucharest municipality and DDBRA. NEG has 559 commissioners (inspectors) posted at the county level, with, for example, 14 in Bucharest, 14 in Ilfov County and, in Braşov County, the office has 13 staff of whom 12 are inspectors. The NEG General Commissariat has about 50 inspectors providing oversight of the counties. Nationally, there is a shortfall of about 16 per cent in the expected full complement of 662 commissioners. The salary is not attractive to experienced professionals and, though recent graduates are interested, they lack experience.

The main competent authorities with responsibility for different aspects of environmental damage are NEPA and NEG and their county branches. The county commissariats of NEG are responsible for the detection of environmental damage, the imminent threat of such damage and identification of the liable operator. The LEPA's are then responsible, in consultation with other authorities, for assessing the significance of the damage and establishing and taking preventive and remedial measures. A LEPA must itself take remedial measures if the operator cannot be identified, or is not obliged to support the costs, or has not taken the necessary measures. It can then reclaim the costs from the operator. Recommendation 2.2 in the Second EPR of Romania urging the then Ministry of Environment and Forests to improve information management and disclosure practices between NEPA

and NEG is partially implemented for point (a) as annual activity reports are not available on their respective websites. Points (b), (c) and (d) are not implemented. A nationwide, shared database with facility-specific regulatory and compliance assurance information, is not established. The results of facility-specific risk analysis information are not disclosed and the coherence of regulatory requirements and compliance assurance across the entire country is not checked. Reporting activities and performance, including by extending indicator comparison to longer time series and by adding a subnational perspective, were not improved.

Romanian Waters had 128–130 inspectors in 2018, working on permitting, licensing and EIA. It benefits from retaining the fees it collects to cover its operations. It administers many types of water permits and licences, including water management permits to construct water infrastructure, surface water and groundwater abstraction licences and wastewater discharge licences. Romanian Waters and the National Agency for Mineral Resources have joint responsibility for permitting exploitation of sand and gravel from the beds of minor rivers, while the latter has sole responsibility for administering mineral waters. The Romanian Commission for Safety of Dams and other Hydraulic Works handles the permitting and inspection of dams, including operating permits.

The National Agency for Mineral Resources is responsible for issuing exploration and production licences, both of which provide exclusive rights and are based on a bid system in response to a public call for tenders. Oil and gas permits and licences are handled by the central office of the National Agency.

The National Agency for Fishing and Aquaculture handles permits and licences for marine and freshwater fishing and for aquaculture. It has 129 posts, though only about 100 staff were on board in December 2019, representing a shortfall of about 22 per cent. Forty staff are located at headquarters, with five regional offices handling marine and inland fisheries and aquaculture. Most fisheries inspectors are 55–60 years old and soon to retire, the few younger ones being in Bucharest.

The Forest Guard was established in 2015. It, too, notes a difficulty in recruiting staff and a lack of forest engineers. The institution has 460 staff in 602 positions, representing a shortfall of about 24 per cent. Eight staff carry out inspections for the Bucharest region. The situation in forestry control and inspection was more difficult prior to 2015, when the Forest Guard was created and higher salaries were introduced

for those working in this area. Before that, the authorities could not compete with forest enterprises, whereas now Forest Guards enjoy comparable salaries. Romsilva, in the case of the state forest estate, or one of about 2,000 forest enterprises are themselves responsible for issuing logging permits.

#### Other actors

Other key actors include the Ministry of Internal Affairs, including through its General Inspectorate for Emergency Situations regarding industrial safety, as well as – regarding many aspects of environmental crime and justice – the national, transport and military police forces and the border police and its coast guard. The General Directorate of Customs, within the Ministry of Public Finance, also plays a role in enforcement. The Ministry of Health is a major actor in inspection and enforcement through its State Sanitary Inspectorate and the public health departments of local authorities. The Ministry of Economy is competent regarding toy standards and receives financial guarantees for mineral exploration and production licences.

Among other tasks, the State Inspectorate for Constructions (Ministry of Public Works, Development and Administration) verifies and ensures compliance with the legal requirements for the quality of construction materials, except with respect to fire safety. The National Authority for Consumer Protection, under the Government, is responsible for overseeing the market in consumer products, including toys and foodstuffs, and enforces legal provisions on consumer protection related to the safety of those products. That authority's activities are complemented by the work of the independent National Authority for Veterinary Health and Food Safety, which operates as a regulator in the field of veterinary and food safety.

Various bodies are responsible for the issuance of permits and licences and agreement on activities subject to EIA. An urbanization project, for example, will require endorsement by water and health authorities, utilities and road authorities, among others. An important part of permitting, licensing and EIA is therefore the convening of a Technical Review Committee, which brings together representatives of all institutions involved in the decision-making on a permit or environmental agreement so that a consensus decision can be taken.

At the central or national level, ministries and headquarters of agencies participate. Elsewhere, the responsible prefect orders the constitution of the

Technical Review Committee at the level of each county, Bucharest municipality and DDBRA.

The presence of representatives of the relevant authorities in the Technical Review Committee is compulsory at the request of the competent public authority for environmental protection, and this obligation is respected. The relevant authorities are the public administration, including the land-use planning department, health authorities, water management authorities, cultural heritage authorities, inspectorates of emergency situations, public authorities for inspection and control regarding environment protection, forest authorities, agriculture departments and other authorities, depending on the specific nature of the project. Health authorities, for example, confirm joining the Technical Review Committee meetings, expressing their points of view and generally having those views taken into account and recorded in the minutes of the meeting. Besides Technical Review Committees, county prefects organize river basin committees that include the local authority, Romanian Waters, industry and NGOs.

ASRO is separate from Government and largely dependent financially on individual ministries financing translations of EU and ISO standards into Romanian, among other tasks. For example, in 2019, the Ministry of Environment, Waters and Forests funded translation into Romanian of seven water, seven noise and three air standards that were referred to in national legislation. ASRO also attracts funding from the EC. ASRO involves various parts of Government in standards-setting committees. For example, the National Authority for Consumer Protection is a member of the ASRO Consumer Committee and participates in its meetings. Other agencies, such as the State Inspectorate for Construction, are invited to join such meetings but are often unable to do so because of a lack of staff.

The Ministry of Health notes in its 2018 activity report that the State Sanitary Inspection has great difficulty in carrying out its activities because of a large decrease in the number of personnel, including as a result of retirements. The Ministry's own norms specify that there should be four inspectors per 100,000 inhabitants, whereas, for example, the Public Health Department of Bucharest municipality has about half that rate. The activity report also notes inadequate funds for staff transport and a lack of accredited laboratories in some areas of competence.

Finally, the National Commission for Nuclear Activities Control issues permits in relation to the use of radioactive sources. It has two staff issuing permits, 11 issuing licences and 17 performing inspections and

controls. It, too, notes the difficulty of recruiting and retaining suitable staff.

## 2.8 Assessment, conclusions and recommendations

### *Assessment*

Since the Second EPR of Romania in 2012, changes have been introduced to permitting and licensing to align the national system with EU legislation. The competent authorities have been reorganized, notably with the removal of the regional level in NEPA in 2012. In 2013, new legislation was introduced for integrated environmental permits. Nonetheless, many of the more technical aspects of permitting and licensing persist from the early 2000s.

Integrated environmental permitting has been successfully revised, though transposition of the Directive was rushed. The regulated community has evolved greatly since 2012 but permitting of some major polluters continues to pose a challenge, notably in terms of urban wastewater and large coal combustion plants. In 2019, a requirement was introduced for an operator to apply for an annual visa on a permit, to be granted by the authority that issued the permit, which de facto reduces the validity to one year, renewable indefinitely. A similar change was attempted in 2018, but successfully challenged in the Constitutional Court. Implementing procedures for the annual visa were issued in May 2020.

The EC Environmental Implementation Review 2019 of Romania notes that implementation remains the main challenge, Romania being among the EU Member States with the highest number of environmental infringements, including for the authorization of projects without the necessary assessments and permits. However, all six infringement cases brought by the EC regarding impact assessment have since been closed.

EIA legislation has also been successfully revised to bring about a more integrated approach and the necessary guidelines continue to be issued. The introduction since 2012 of legislation that waives environmental protection laws for projects of national importance is of concern and may set a worrying precedent for regional infrastructure and other large projects. EIA practice, and permitting, in relation to mining and forestry projects is of greatest concern to civil society.

NGOs report that public participation in permitting and EIA is constrained, as is public access to relevant information in relation to permitting and inspection, EIA and forest management planning. This is partly

due to weak IT infrastructure. The Forest Inspector is an important initiative. Poor zoning by local authorities exacerbates conflicts between residential and industrial land uses, for example when residential areas are designated close to existing or already planned industrial or polluting activities and without respecting minimum distances between such zones. This inevitably leads to objections from residents to permitting of industrial activities and to complaints about noise, smell and waste. Appeals by the public have proven to be a vital check on maladministration. Emission, ambient quality and product standards are being strengthened by the continuing alignment with EU and ISO standards. The move away from national to international standards needs to be accompanied by the translation and availability of standards in Romanian.

The frequency of inspection has declined since 2012, but there is evidence of more severe sanctions being sought and applied in several areas. Numerous authorities cooperate and coordinate their compliance activities to increase effectiveness. The management of construction and demolition waste is weak, though action is being taken to fill legal gaps. A gap also exists in relation to the regulation of certain foodstuffs, notably supplements. The availability of legal expertise across the environmental authorities is uneven, as is the capacity of prosecutors and courts to address cases brought by the environmental authorities. Sanctions risk being blocked pending appeal, which allows damaging behaviour to continue. Sanctions, particularly fines imposed on legal entities, may also be too low to be dissuasive in some sectors. Illegal logging is a concern of the public and the true situation is disputed.

The environmental liability regime remains at an early stage of development. EMAS has failed to attract companies while ISO 14001 proved to be of interest but the number of certificates has recently declined. Ecolabelling has also failed to take off. The picture regarding sustainability reporting is unclear, with transnational corporations showing most interest. There has been rapid and deep development in key legislation since 2012, particularly to strengthen alignment with and transpose EU directives. Drafting would have benefited from a more inclusive process. The policy, programming and planning framework is generally adequate.

The Second EPR of Romania recommended the then Ministry of Environment and Forests review the regulatory acts that define activities subject to SEA in order to decrease the number of cases subject to it and streamline assessment procedures (Recommendation 2.1(a)). By repealing the act that listed plans and

programmes subject to SEA, Romania implemented the recommendation. The second part of this recommendation (Recommendation 2.1(b)) on diminishing the regulatory load on NEPA is partially implemented by GD No. 1000/2012. However, it is probable that the introduction of the annual visa on permits will lead to an increase in the workload of permitting staff. Recommendation 2.2 is partially implemented as annual activity reports are not always available on the NEPA and NEG websites.

According to the law, inspection reports are to be published, though personal data about operators are redacted in line with the EU General Data Protection Regulation. MO No. 256/2014 revised the procedures for carrying out environmental inspections, resulting in a decrease in the frequency of inspection for each class of installation. The risk methodology was also revised. Recommendation 2.3 was implemented. The Government has not implemented Recommendation 2.4. Environmental cases are tried in normal courts and there are no specialized judges and experts. Therefore, this recommendation remains valid.

Romania is on track towards the achievement of SDG target 12.6 by the adoption of SDS 2030. On the one hand, the Strategy introduces sustainable practices, encourages companies to act in line with the target and provides for companies' sustainability reporting by the introduction of "a sustainability code". On the other hand, the national legislation has required the disclosure of non-financial information by large companies (with more than 250 employees) since 2017, but only 24 of 1,789 enterprises of this category had submitted non-financial reports according to Romania's Voluntary National Review 2018. Moreover, the National Institute of Statistics does not include target 12.6 in its Database of Sustainable Development Indicators in Romania.

The changes in institutional arrangements have been beneficial, with the removal of the regional level in NEPA not having caused difficulties and the establishment of the Forest Guard having been an important addition. However, the Forest Guard needs strengthening to respond to public concern about illegal logging and wildlife crimes. NEG is a key, well-organized actor. Technical Review Committees provide a valuable mechanism for coordination.

Many authorities see a shortfall of about one fifth in their current staffing relative to their post structure. They also face difficulties with the retirement of experienced staff and recruiting and retaining adequately knowledgeable new staff. The future workload of LEPA staff, which is already heavy, is uncertain, given changes in the scope of construction

permits and in the annual visa on environmental permits.

Finally, an assessment of performance is dependent upon the availability of accessible, timely and adequate information. The main source of information on regulatory and compliance assurance mechanisms is the annual activity reports produced by the various responsible bodies. The availability and form of such reports is variable. Some reports are essentially long lists of activities, while others are scanned in a way that prevents their being searched automatically or data being extracted.

### *Conclusions and recommendations*

#### Permitting, environmental impact assessment and inspection

Recent legislative changes regarding annual visas on permits and a change in the scope of construction permits may alter the workload and effectiveness of the permitting regime. In addition, recent legislation waiving environmental protection laws in order to accelerate the implementation of nationally important projects sets a dangerous precedent. The current legislation on demolition and construction waste is inadequate. Local authorities sometimes pay insufficient attention to the ramifications of rezoning, including mixed residential/commercial zoning, and to the required minimum distances from certain land uses.

#### Recommendation 2.1:

*The Government should:*

- (a) *Review and amend, if necessary, all legislation on measures deemed necessary for the implementation of projects of national importance, ensure its compliance with EU and international law and verify that adequate safeguards for public participation are in place;*
- (b) *Develop, in consultation with relevant ministries, industry representatives and NGOs, legislation and procedures to control construction and demolition waste;*
- (c) *Issue instructions to local authorities to respect minimum distances between different land uses and seek the advice of the environmental authorities before rezoning, if such is likely to lead to conflict between users because of incompatibilities.*

Many of the bodies that are subsidiary to the Ministry of Environment, Waters and Forests, among others, have fewer staff on post than was foreseen to fulfil

responsibilities in relation to permitting, EIA and inspection.

Recommendation 2.2:

*The ministry or ministries in charge of the environment, waters and forests should review staffing levels to understand whether the number of staff is adequate to undertake the identified regulatory and compliance assurance tasks and, in the absence of additional budget, to adjust the tasks accordingly.*

Public participation and access to information

Arrangements for public participation in environment-related decision-making and access to environmental information are inadequate; access to justice in environmental matters has proven to be an important avenue for addressing failures. Public complaints are not routed efficiently. The Forest Inspector showed how the environmental authorities can provide effective tools.

Recommendation 2.3:

*The ministry or ministries in charge of the environment, waters and forests should:*

- (a) *Review and strengthen its IT systems to support regulatory and compliance assurance mechanisms;*
- (b) *Ensure that full documentation on permitting, environmental impact assessment, public participation arrangements, forest management plans and other matters is made available on its website or those of its subsidiary bodies;*
- (c) *Ensure that annual activity reports include performance statistics showing whether information is made available and in a timely manner, and that the reports be informative, concise and accompanied by statistical information;*
- (d) *Ensure that the Forest Inspector is fully operational and available to the public, including its functionality for the display of satellite imagery;*
- (e) *Review how public complaints are handled with a view to routing minor complaints to other local authorities and the police, which should in turn be provided with sufficient information to determine whether an infringement is taking place or has done so;*
- (f) *Commission the Romanian Forest Research and Management Institute, or other independent competent body, to assess illegal logging, such assessment to be carried out in full transparency, and follow up accordingly to respond to the public's concerns;*

- (g) *Publish in full how hunting quotas are determined, the methodology applied and the underlying data used.*

Compliance

Though more severe sanctions are being applied in some areas, they are insufficiently effective, proportionate and dissuasive in others and are sometimes suspended in key instances pending appeal, thus allowing damaging behaviour to continue. Despite some progress, few prosecutors are experienced in environmental law and the legal profession has insufficient expertise in environmental crime.

Recommendation 2.4:

*The Government should:*

- (a) *Amend, in consultation with relevant authorities and the public, the legal regime on contraventions to limit the use of injunctions to suspend sanctions, when such injunctions are likely to lead to continuing and possibly irreversible harm to the environment and/or human health;*
- (b) *Continue to collaborate with EU and international institutions in raising awareness of and providing training on inspection and control activities in the field of environmental crime, involving both environmental and judicial authorities;*
- (c) *Review and, as necessary, adjust fines so that they are effective, proportionate and dissuasive, in particular for legal entities.*

Voluntary instruments

Not enough efforts are made to encourage the uptake of EMAS, EMS and, especially, ecolabelling and sustainability reporting, including in support of SDG target 12.6. Sustainability reporting does not place sufficient emphasis on environmental and anti-corruption matters.

Recommendation 2.5:

*The ministry or ministries in charge of the environment, waters and forests and the Department of Sustainable Development should collaborate with commerce and industry in promoting voluntary instruments that foster sustainable practices in companies and in requiring that all large companies produce sustainability reports as part of compulsory non-financial reports.*



## Chapter 3

# GREENING THE ECONOMY AND FINANCING ENVIRONMENTAL PROTECTION

### 3.1 Greening the system of charges and taxes

#### Charges and fees related to pollutants

##### Air pollution

Air pollutant emissions are subject to a tax. Since the country participates in the EU emissions trading system (EU ETS) that limits the emissions of CO<sub>2</sub> and other greenhouses gases (GHGs) such as methane, nitrous oxides (N<sub>2</sub>O) and carbon monoxide (CO), these are excluded from the tax. In particular, the tax is due for emissions of NO<sub>x</sub>, persistent organic pollutants (POPs), SO<sub>x</sub>, dust and heavy metals such as cadmium, lead and mercury (table 3.1). The tax rates have not changed since 2012.

**Table 3.1: Air pollution taxes, 2019**

Pollutant	2011		2018 tax level in 2011 lei value
	Lei/ton	€/ton	Lei/ton
NO <sub>x</sub>	40	8.42	32.00
POPs	20 000	4 210.53	15 785.00
SO <sub>x</sub>	40	8.42	32.00
Dust	20	4.21	16.00
Cadmium	16 000	3 368.42	12 628.00
Lead	12 000	2 526.32	9 471.00
Mercury	20 000	4 210.53	15 785.00

Source: GEO No. 196/2005.

Note: Figures in euros calculated using the average annual exchange rate for 2019, 1€= 4.75 lei.

In addition to the air pollution tax, there are limits established on industrial emissions. The air pollutants covered by these limits are those subject to the tax as well as: asbestos (suspended particulates, fibres); chlorine and its compounds; fluorine and its compounds; arsenic and its compounds; cyanides; polychlorinated dibenzodioxins, polychlorinated dibenzofurans; and substances and mixtures that have been proved to possess carcinogenic or mutagenic properties or properties that may affect the reproduction system or fertility.

For the pollutants subject to tax, the tax is to be paid on total emissions, not only those above the established limit values. Emissions in excess of the set

limit are nevertheless subject to an additional fine for non-compliance.

Overall, the tax rates are relatively low, compared with other selected countries (table 3.2), which suggests that they provide low incentives for emissions reductions and are essentially used to levy revenues. As a result, air quality continues to be poor, as assessed in the EC Environmental Implementation Review 2019.

**Table 3.2: Comparison of air pollution taxes, €/ton**

	NO <sub>x</sub>	SO <sub>2</sub>	Heavy metals
Czechia*	30	37	730
Estonia	122	145	1 278
Hungary	385	160	
Poland	127	127	45 670
<b>Romania</b>	<b>5</b>	<b>5</b>	<b>2 700</b>
Slovakia	48	64	1 280

Source: OECD/EEA economic instrument database: <https://pinedatabase.oecd.org/>.

Revenues from air pollution taxes and fines are paid to the Environment Fund and used to finance several environment-related subsidies and programmes.

##### Water pollution

There are taxes levied on 28 categories of water pollutants divided into general, specific, highly toxic and bacteriological. The tax rates have remained the same as in 2011 (table 3.3). Similar to those on air pollutants, the tax rates remain relatively low compared with other EU countries (table 3.4).

The Second EPR of Romania, carried out in 2012, recommended (Recommendation 5.1) that the then Ministry of Environment and Forest review air and water pollution taxes with a view to ascertaining and strengthening their environmental effectiveness, and consider applying air pollution taxes to further major pollutants and submit relevant proposals to the Government for adoption. As at December 2019, the general framework for pollution taxation, as well as tax rates for air and water pollution, have remained the same. Hence, Recommendation 5.1 has not been implemented.

Table 3.3: Taxes for wastewater discharges

Pollutant	Unit	Lei	€
<b>General chemical indicators</b>			
Total suspended materials	Lei/ton	11.38	2.40
Chlorides, sulfates	Lei/ton	46.65	9.82
Sodium, potassium, calcium, magnesium	Lei/ton	46.65	9.82
Nitrates	Lei/ton	46.65	9.82
Free residual chlorine	Lei/ton	46.65	9.82
Ammonium, nitrogen	Lei/ton	186.10	39.18
Biochemical oxygen consumption (BOD5)	Lei/ton	46.53	9.80
Phosphates	Lei/ton	9.20	1.94
Phosphorus	Lei/ton	186.10	39.18
Manganese	Lei/ton	465.39	97.98
Aluminium, total ionic iron	Lei/ton	558.44	117.57
Extractable substances with petroleum ether, oil products	Lei/ton	348.94	73.46
Synthetic anionactive, biodegradable detergents	Lei/ton	186.10	39.18
Dry filterable residue at 105°C	Lei/ton	42.43	8.93
<b>Specific chemical indicators</b>			
Sulfites, fluorides, phenols that can be transported by vapour in the water	Lei/ton	186.10	39.18
Nickel, chrome	Lei/ton	11 637.40	2 449.98
Ammonia	Lei/ton	11 637.40	2 449.98
Barium, zinc, cobalt	Lei/ton	558.44	117.57
Sulfides, hydrogen sulfide	Lei/ton	581.83	122.49
<b>Toxic and very toxic chemical indicators</b>			
Arsenic	Lei/ton	36 196.13	7 620.24
Cyanides	Lei/ton	36 196.13	7 620.24
Mercury, cadmium	Lei/ton	46 549.74	9 799.95
Lead, silver, chrome, copper, molybdenum	Lei/ton	11 637.40	2 449.98
<b>Bacteriological indicators</b>			
Total coliform bacteria	10 <sup>9</sup> bacteria / 100 cm <sup>3</sup>	3.84	0.81
Faecal coliform bacteria	10 <sup>7</sup> bacteria / 100 cm <sup>3</sup>	67.35	14.18
Faecal sneezing	5 x 10 <sup>6</sup> streptococci / 100 cm <sup>3</sup>	173.31	36.49

Source: GEO No. 107/2002.

Table 3.4: Comparison of water pollution taxes, €/ton

	BOD	COD
Czechia	591.80	591.80
Estonia	1 435.00	1 435.00
Hungary		289.00
Poland	1 020.00	409.00
<b>Romania</b>	<b>9.84</b>	<b>9.84</b>

Source: OECD/EEA economic instrument database: <https://pinedatabase.oecd.org/>.

Note: BOD = biochemical oxygen demand; COD = chemical oxygen demand.

#### Excise duties and transport-related charges

##### Excise duties

Romania collects excise duties on energy products used as heating and transport fuel and for electricity production. The excise duties for diesel, leaded and unleaded petrol were above the minimum levels required by the EU (table 3.5). However, as of 31 December 2019, the Ministry of Finance announced that the legislation was amended and that the rates for these products in the period 2020–2022 are to be decreased and brought much closer to the minimum required levels (table 3.6). There is a “diesel differential” (difference in the price of diesel vs petrol) which results in diesel being about 7 per cent cheaper

than unleaded petrol and about 19 per cent cheaper than leaded petrol. This differential is slightly lower than that implied by the minimum rates set by the EC. Nevertheless, recent research suggests that, from an environmental perspective, diesel should be taxed as much as other motor fuels.<sup>12</sup>

#### Vehicle registration fee

The vehicle registration fee was abolished in 2012, as it was considered by the EC that it discriminated against vehicles purchased in other EU Member States.

In February 2013, GEO No. 9/2013 (and subsequent amendments) introduced a vehicle environmental stamp, as a replacement for the abolished vehicle registration fee. The stamp was to be paid only once, when the first owner in Romania recorded ownership

of a vehicle and obtained a certificate of registration and the registration number for the car. The amount to be paid depended on the grams of CO<sub>2</sub>/km emitted, type of vehicle, engine capacity, age of the vehicle, type of ignition engine (spark/compression), value of tachometer expressed in km/year and overall state of the vehicle. From 2013 to 2017, this stamp allowed the Environment Fund Administration to collect a little more than 2 billion lei (equivalent to €0.42 billion). In 2018, the revenues of the Environment Fund Administration were 1.12 billion lei (€0.24 billion).<sup>13</sup>

In 2017, however, following another infringement procedure initiated by the EU,<sup>14</sup> Romania issued GEO No. 52/2017 stipulating the conditions of reimbursement of the stamp to people who had paid it since its implementation. Since 2018, the stamp has not appeared in the budget of the Environment Fund Administration.

**Table 3.5: Excise duty rates on energy products, 2019**

Energy Product	Unit	Excise duty rate		Min. rate set by EU
		Lei	€	
Diesel	1 000 litres	1 895.94	399.15	330.00
Leaded petrol	1 000 litres	2 339.68	492.56	421.00
Unleaded petrol	1 000 litres	2 038.62	429.18	359.00
Natural gas as motor fuel	Gj	12.71	2.68	2.60
Kerosene as motor fuel	1 000 litres	2 179.28	458.80	330.00
Liquified gas as motor fuel	ton	626.84	131.97	125.00
Heavy fuel oil – heating, business	ton	73.31	15.43	15.00
Heavy fuel oil – heating, non-business	ton	73.31	15.43	15.00
Electricity – business	MWh	2.44	0.51	0.50
Electricity – non-business	MWh	4.89	1.03	1.00
Coal and coke – heating, business	Gj	0.73	0.15	0.15
Coal and coke – heating, non-business	Gj	1.46	0.31	0.15
Kerosene – heating	1 000 litres	1 837.17	386.77	0.00
Natural gas for heating – commercial purposes	Gj	0.84	0.18	0.15
Natural gas for heating – non-commercial purposes	Gj	1.57	0.33	0.30
Liquified gas – heating, business	ton	554.70	116.78	0.00
Liquified gas for heating – domestic consumption	ton	0.00	0.00	0.00

Source: Ministry of Finance, 2019.

Note: Average exchange rate 2019: 1€= 4.75 lei.

**Table 3.6: Excise duty rate, 2020–2021, 2020, 1,000 litres**

	2020		2021		2020		EU min. level
	Lei	€	Lei	€	Lei	€	
Diesel	1 625.37	342.18	1 518.04	319.59	1 518.04	319.59	330.00
Leaded petrol	2 085.97	439.15	1 948.23	410.15	1 948.23	410.15	421.00
Unleaded petrol	1 773.46	373.36	1 656.36	348.71	1 656.36	348.71	359.00

Source: Ministry of Finance, 2019.

<sup>12</sup> [www.oecd-ilibrary.org/taxation/the-diesel-differential\\_5jz14cd7hk6b-en](http://www.oecd-ilibrary.org/taxation/the-diesel-differential_5jz14cd7hk6b-en).

<sup>13</sup> [https://afm.ro/main/informatii\\_publice/bvc/2018/hg\\_717\\_2018\\_buget\\_rectificat\\_AFM.pdf](https://afm.ro/main/informatii_publice/bvc/2018/hg_717_2018_buget_rectificat_AFM.pdf).

<sup>14</sup> The stamp was abolished because it was also deemed illegal by CJEU (<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:62014CJ0586>).

### Road user tax

At the time of the annual vehicle registration, owners of motor vehicles must pay a “road tax” to local authorities. The tax rate depends on the engine capacity and type of vehicle and varies from 8 lei to 290 lei (approximately €1.68 to €61) per 200 m<sup>3</sup> increments of volume of engine cylinder capacity.

Some types of vehicles, such as buses or minibuses, registered tractors and other vehicles with mechanical traction weighing up to 12 tons, pay flat rates of 24, 18 and 30 lei per 200 m<sup>3</sup>, respectively (around €5, €3.79 and €6.3).

Several categories of owners, such as veterans and disabled people, are exempted from this tax. Also, county authorities can decide on exemptions or reductions of the tax for agricultural vehicles used in fields. Hybrid vehicles benefit from tax reductions of at least 50 per cent, the exact level of exemption being left to the discretion of county councils.

The Second EPR of Romania recommended the Government explore the scope for strengthening the role of fuel taxes and road user charges for dealing with road transport pollution (Recommendation 5.4). The road user charges were updated in 2018 and some values have been increased. Regarding fuel taxes, as explained above, they have been reduced from 31 December 2019 and brought closer to the EU minimum required levels. Nevertheless, no assessment on how these taxes contribute to decreasing road transport pollution was carried out. Recommendation 5.4 was therefore only partially implemented.

Concerning SDG target 9.1 (Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all), Romania does not measure the proportion of the rural population who live within 2 km of an all-season road (global indicator 9.1.1).

However, data show a sharp increase in total kilometres of roads, including modernized, light asphalt and stone-paved roads at both the county and communal levels. For instance, modernized roads<sup>15</sup> at the county and communal level have increased by almost 40 per cent in the period 2012–2018, according to the National Institute of Statistics.

This certainly indicates that the proportion of the rural population having access to all-season roads has increased.

In terms of freight volumes by mode of transport, as per global indicator 9.1.2, the available figures from United Nations Statistics Division are 19 billion ton-kms by rail and 53 billion ton-kms by road in 2017. For passenger volume, the corresponding figures were almost 515 million passenger-kms by rail and 199 billion passenger-kms by road in 2017.<sup>16</sup> Similarly, the National Institute of Statistics provides data on modal splits. The modal split of freight transport in 2017 was 30.2 per cent rail, 42.4 per cent road and 27.4 per cent inland waterways. These shares have been relatively stable since 2012. For passenger transport, the split in 2016 was 4.2 per cent rail, 80.1 per cent road and 15.5 per cent bus.

Also, the share of passenger transport by road has been continuously increasing and roads capture most of the investments in the transport network (around 71 per cent in 2017). The use of public transport (bus, metro, trolley and tramway) at the national level – measured in thousands of passengers per kilometre – has decreased since 2000, according to the National Institute of Statistics. This trend is to be associated with increased emissions from the transport sector. According to Eurostat, GHG emissions from fuel combustion in the transport sector in Romania increased from 15.25 million tons in 2012 to almost 18 million tons in 2017, with road transport accounting for around 96 per cent of these emissions. Development of the transport network supports economic development, but it is also causing a negative impact on the environment.

### Road tolls

The toll rates vary according to vehicle type and are specified in GO No. 8/2010. They range from €28 per year for a car to €1,210 per year for freight vehicles of 12 tons or more. MO No. 1836/2018 further specifies particular rates for the use of bridges across the Danube River. These range from 14 lei to 173 lei (approx. €3 to €36) per crossing in the direction Giurgiu to Ruse; from 11 lei to 64 lei (approx. €2 to €3) per crossing for the Giurgeni-Vadu Oii bridge, and from 13 lei to 91 lei (approx. €3 to €19) per crossing for the Fetesti-Cernavodă bridge.

<sup>15</sup> Modernized roads are defined as roads covered in concrete:

[http://colectaredate.insse.ro/metadata/search\\_indicator.htm? action=viewCardFromResearch&selection=I&indicator=1392](http://colectaredate.insse.ro/metadata/search_indicator.htm? action=viewCardFromResearch&selection=I&indicator=1392).

<sup>16</sup> <https://unstats.un.org/sdgs/indicators/database/>.

*Property and land tax*

Legal entities and natural persons that own real estate, namely, land (agricultural, construction, forests and pastures) and buildings (residential and non-residential) are required to pay an annual property tax.

For buildings, legal entities pay between 0.08 per cent and 0.2 per cent of the taxable value for residential buildings and between 0.2 per cent and 1.3 per cent of the taxable value for non-residential buildings. For mixed-use buildings, the tax rate is calculated as the sum of the tax for the area that is used for residential purposes and the tax for the area used for non-residential purposes. For buildings used in agriculture, the tax rate is 0.4 per cent of the taxable value. The taxable value is generally determined by valuation for tax purposes (carried out by an authorized valuer, at the owner's expense).

The land tax is a fixed amount per square metre, depending on factors such as type of settlement, location within the settlement (urban or rural areas) and use (e.g. for construction, agriculture, fields, orchards, forests). The proceeds from property and land taxes are allocated to municipal budgets.

*Fees for use of natural resources*Water abstraction charges

Water abstraction charges are paid by companies and households to Romanian Waters. The amounts are

defined by GD No. 1202/2010 (table 3.7). They have not been updated since 2010 but a revision of these rates is currently being prepared by the Ministry of Environment, Waters and Forests.

Recommendation 5.3 in the Second EPR of Romania was for the Government to review the system of water abstraction charges and water supply and sewage tariffs and adjust rates with the aim to ensure the implementation of the principle of full cost recovery.

The National Regulatory Authority for Municipal Services of Public Utilities (ANRSC) has a methodology to define tariffs that ensures cost recovery for operators. The methodology is elaborated in concordance with the principles laid out in Law No. 241/2006, which means that the tariffs must cover the justified economic cost of providing the service. Recommendation 5.3 relates to both the system of water charges and water supply and sewage tariffs. Although the methodology has not been revised since 2007, ANRSC is in the process of modifying this methodology. Hence, it can be concluded that, as at December 2019, the implementation of Recommendation 5.3 is ongoing.

Fees for use of forest products

Timber extraction is also regulated and subject to fees. Companies interested in timber extraction must obtain a permit and can participate in the annual auctions for timber.

**Table 3.7: Water abstraction charges, 1,000 lei/m<sup>3</sup>**

	Lei
<b>Surface water</b>	
Economic operators (including freight services), households, public institutions, cult establishments, agrozootechnical economic operators	50.00
Electricity and heat producers using thermo and nuclear power plants	24.00
Electricity and heat producers using hydropower plants, regardless of power installed	1.10
Irrigation	3.00
Aquaculture	0.50
<b>Groundwater</b>	
Industrial economic operators	57.52
Households, public institutions, cult establishments and others who use water for drinking purposes	57.52
Irrigation	57.52
Aquaculture	11.00
Agrozootechnical economic operators	57.52

Source: GD No. 1202/2010.

**Photo 3.1: Fisherman in Danube Delta**

*Photo credit: Daniel Petrescu, DDBRA, MoEWF*

#### Fees for hunting and fishing

The national hunting estate occupies about 22 million ha and is divided into 2,151 hunting grounds. Hunters pay a membership fee to adhere to a local hunting management association and therefore be able to hunt in the area managed by it. Administrative costs of a hunting area can reach tens of thousands of euros a year. Consequently, there is a temptation to report higher wildlife numbers in order to obtain higher harvesting quotas, which can be sold to trophy hunters.

The minimum tariff for recreational fishing in mountain areas is 20 lei/day (€4.20/day). This tariff is established and collected only by the fishing fund manager.

#### Charges for exploration and exploitation of mineral resources

The National Agency for Mineral Resources collects royalties from the exploitation of mining resources. These are mainly on oil, natural gas, bauxite and coal. The royalty varies depending on whether it concerns oil and gas or other mineral resources. The calculations of royalties for oil and gas exploitation are based on the following methodology:

- A percentage of the value of the gross output extracted, ranging from 3.5 per cent to 13.5 per

cent for crude oil and from 3.5 per cent to 13 per cent for gas;

- A percentage, ranging from 10 per cent to 13 per cent, of the value of the gross revenues realized from oil transport and transit operations through the national systems of transport, as well as from oil operations carried out through the oil terminals that are the public property of the State;
- A percentage, ranging from 4 per cent to 6 per cent, of the value of the gross income realized from the operations of underground storage of natural gas.

Agents involved in mining activities must also pay a mining royalty set by Law No. 85/2003 with subsequent amendments. Fees and royalties for the mining sector were increased in 2014 and again in 2019. The mining royalty is established at the conclusion of the licence or on issuance of the operating permit, and is calculated as follows:

- A percentage of 5 per cent of the value of the mining production for ferrous, non-ferrous, aluminium and aluminiferous, radioactive minerals, rare and dispersed soils, precious and semi-precious stones, mining residual products, bituminous rocks, therapeutic mineral waters, thermal waters, geothermal waters and their accompanying gases, non-combustible gases, therapeutic muds and peat;

- A percentage of 4 per cent of the value of coal mining production;
- A percentage of 6 per cent of the value of the mining production for noble metals;
- The equivalent in lei of €0.875 per unit of mining production, for non-metallic substances;
- The equivalent in lei of €0.4375 per unit of mining production, for magmatic rocks, metamorphic rocks, industrial and construction limestone, dolomite, sandstone and flowering shrubs;
- The equivalent in lei of €0.50 per unit of mining production, for clays, marls, loess, sand and gravel, sand and kaolin rocks;
- The equivalent in lei of €0.6875 per unit of mining production, for industrial alabaster, pumice stone, non-finite syenites, gypsum, chalk, silicon sand, bentonite, kaolin sand, slate and diatomite;
- The equivalent in lei of €2.5 per unit of mining production, for ornamental basalt, ornamental dacite, ornamental andesite, ornamental rhyolite, ornamental granite and ornamental granodiorite;
- The equivalent in lei of €3.125 per unit of mining production, for ornamental alabaster, ornamental aragonite and ornamental silicones;
- The equivalent in lei of €3.75 per unit of mining production, for marble, ornamental limestone, ornamental sandstone, travertine and flowering shrubs;
- The equivalent in lei of €1.0 per unit of mining production, for halosal salts.

Companies operating in the mining sector need to first obtain an exploration/prospecting permit and then an exploitation permit.

The annual tax rate for prospecting is 341 lei/km<sup>2</sup> (€72/km<sup>2</sup>); for exploration it is 1,367 lei/km<sup>2</sup> (€288/km<sup>2</sup>), which doubles after two years and becomes five times larger after four years; and for exploitation it is 34,180 lei/km<sup>2</sup> (€7,196/km<sup>2</sup>).<sup>17</sup>

Mineral water abstraction is subject to a fee established at the source, and equivalent to €4/1,000 litres. The payment is made in lei at the exchange rate of the National Bank of Romania at the date of payment.

On top of royalties and/or abstraction fees, operators must set aside funds in an environmental restoration budget, which must be approved by the National Agency for Mineral Resources. At the end of activities, the company restores the area where the activities took place. Then, a committee formed by

representatives of the National Agency for Mineral Resources, NEPA, Romanian Waters and the company itself analyses the restoration work undertaken. If the restoration work is not approved, the company might be subject to fines.

#### *Tariffs for utility services*

In the main, two tariff-collection methods are applied: operators collect directly from end users (households or companies) or municipalities set taxes/charges based on tariffs and use them to pay operators. Some municipalities use a mix of these two methods, in which the large economic agents have direct contracts with the operators, while others (citizens) pay via local taxes/charges.

#### Tariffs for municipal waste management

The tariffs for municipal waste management, on top of the cost recovery and profits constraint, include a payment for “contribution to the circular economy”. This contribution was set at 30 lei (€6) per ton in 2019 and increased to 80 lei (€17) per ton in 2020. However, this concerns only waste going to landfills.

Romania implements a packaging tax: all economic operators are responsible for all packaging waste generated. Therefore, they are responsible for recovering waste from the market, including recycling and/or other types of recovery such as energy recovery. MO No. 578/2006 has been amended several times, to improve the efficacy of the instrument and eliminate the incorrect interpretation of the law. As of March 2019, the tax rate for primary reusable packaging used for products intended for public consumption is 0.5 lei (€0.10) per package. Also, fines for non-compliance range from 1,000 lei (€210.5) to 2,000 lei (€421) for natural persons, and from 20,000 lei (€4,210) to 40,000 lei (€8,421) for legal entities. The proceeds from the contribution to the circular economy and from the packaging tax are paid to the Environment Fund.

Recommendation 5.2 in the Second EPR of Romania was for the Government to: (a) monitor and evaluate the impacts of the waste management taxes and other waste charges on waste generation; (b) ensure that municipal waste collection charges are applied systematically across the country and that there are adequate incentives for waste sorting, deposit-refunding schemes and waste recycling; and (c) set waste taxes and charges for manufacturing waste.

<sup>17</sup> Prospecting is the first stage of mineral exploration, usually consisting of soil and sediments analysis. Exploration is the second phase and is undertaken on “promising” prospected grounds. The most widely used exploration technique is the drilling of probe holes.

There is no evidence of systematic use of impact assessment methods to evaluate the welfare and/or environmental impact of the implemented waste management policies. Nevertheless, efforts have been made to decrease municipal waste by imposing waste charges and a new landfill tax. Also, more ambitious targets for recycling were set in the 2017 NWMP. The implementation of the NWMP is expected to ensure more homogeneous policy implementation across the country. Recommendation 5.2 has been only partially implemented.

#### Tariffs for water supply and sewerage services

Drinking water supply and wastewater collection and treatment is the responsibility of local councils and the water infrastructure is the property of these local authorities. Therefore, the water sector operators are publicly owned companies, with the shareholders being the different intercommunity development associations (IDAs). The two exceptions are Bucharest and Ploiesti, where two large local water utilities were created in 2000 as a result of an international public tender; they are thus commercial companies with mixed capital (public and private).

According to the National Institute of Statistics, the urban population connected to a public water supply system increased from 12.1 million in 2012 to 13.5 million in 2018. In 2018, the country has 284 licensed operators and, according to the National Romanian Regulator for Public Services, tariffs for drinking water supply as at November 2019 ranged from 2.6 lei (€0.55) per m<sup>3</sup> to 5.2 lei (€1.1) per m<sup>3</sup>, excluding VAT. Around 10 million people were connected to urban wastewater collection systems in 2018 (i.e. around 80 per cent of the urban population), up from 8.6 million in 2012. There remain areas where households are not connected to water supply and sewerage systems, mainly in the rural parts of the country. For instance, in the north-east region of the country, only around 30 per cent of the population had access to sewerage services in 2018.

Generally, water operators are also responsible for sewerage services. Municipal tariffs for sewage

ranged from 1.1 lei (€0.23) per m<sup>3</sup> to 4.4 lei (€0.93) per m<sup>3</sup>, excluding VAT, and 292 operators had valid licences as at December 2019. These tariffs include the taxes that operators have to pay for wastewater discharges.

#### Electricity and gas tariffs

According to the National Energy Regulatory Authority regulations, domestic customers have an unconditional right to universal service, i.e. they have the right to be provided with electricity under quality conditions and at reasonable, transparent and non-discriminatory rates. There are two types of electricity provider: providers of last resort (there are currently five of these), which are public operators having the obligation of supplying all consumers under the universal service rules, and competitive suppliers, which can freely negotiate their tariffs with customers. Only residential users and small and medium-sized enterprises (SMEs) can claim to be provided under the universal service rules.

The methodology for calculating gas tariffs is set by GO No. 41/2019. Similarly to the electricity tariffs, the rationale behind the determination of gas tariffs is cost recovery plus some margin of profit. There are no incentives for end users to decrease consumption. However, electricity consumers do pay an additional charge (0.0185 lei/kWh) to support power plants producing electricity in high-efficiency cogeneration. Average electricity and gas tariffs for households and enterprises remain lower in Romania than in the EU-28 zone (table 3.8).

Overall, the general principle guiding tariff-setting for public utilities is cost recovery plus profit, with profits being capped by affordability limits set by law. The main issue remains the fact that there are no (or only very low) economic incentives for municipal or household waste reduction or for the conservation of water and electricity.

For average-income urban households, expenditures on utilities are affordable; they spent 7.99 per cent of their income on housing, water, electricity and gas.

**Table 3.8: Electricity and gas prices, 2019,\* €/kWh**

	Residential (includes VAT)		Non-residential (excludes VAT)	
	Electricity	Gas	Electricity	Gas
EU-28 average	0.2159	0.0632	0.1251	0.0285
<b>Romania</b>	<b>0.1358</b>	<b>0.0347</b>	<b>0.0972</b>	<b>0.0310</b>

Source: Eurostat.

Note: \* first semester.



The average at the EU level (whether rural or urban) for the same category of expenditures was 28 per cent in 2018.<sup>18</sup> However, Romania has high income inequalities and the question of affordability of public utility services is central. For instance, in 2018, an estimated 9.6 per cent of the population in Romania could not keep their houses adequately warm during winter, compared with 7.6 per cent at the EU level.<sup>19</sup> To help vulnerable households, several measures are implemented, including financial assistance to households to pay their heating bills during winter (1 November–31 March) and a social tariff for electricity bills. In addition, Law No. 196/2016 establishes a minimum income for inclusion of poor households.

Recommendation 5.5 of the Second EPR of Romania was that the Government: (a) gradually raise gas prices to levels that correspond to effective unit supply costs; (b) phase out regulated electricity and gas prices; and (c) retain effective support of vulnerable consumers by means of well-targeted direct income support. According to Eurostat, the gas prices have increased since 2012, from €0.027/kWh to around €0.035/kWh in 2019 (including taxes). Romania applies excise duties on energy products and has set them at the minimal levels to comply with EU regulations. However, there is no plan to phase out regulated electricity and gas prices. Support to vulnerable households is maintained via utilities' social tariffs for vulnerable households as well as the minimum income for inclusion. Therefore, Recommendation 5.5 is partially implemented.

#### *Feed-in tariffs for renewable energy sources*

To support the emergence of new investments in the renewable energy sector, in 2004, the Romanian Parliament adopted a scheme consisting of mandatory quotas for electricity from renewable energy sources (RES), as well as the trading of renewable energy certificates (also called green certificates, or GCs). The scheme has been updated over the years to increase the incentives required to meet the national objectives set by the EC for 2020.

The scheme works as follows. On the one hand, GCs are granted to energy producers depending on the renewable source used for electricity production, i.e.

hydropower, wind, solar, biomass landfill gas, sewerage treatment plant gas and geothermal energy. On the other hand, the National Energy Regulatory Authority imposes annual RES quotas, expressed in GC/MWh, that “conventional” electricity suppliers must purchase, thus creating a demand for GCs. Quotas are calculated taking into consideration the estimated final energy consumption for the coming year and the average impact on the final price that consumers have to pay. For example, for 2019, the impact on the final price should not exceed €12.5/MWh.<sup>20</sup> If a supplier (or a producer) fails to meet the RES quota prescribed by the National Energy Regulatory Authority until 15 April for the previous year, he/she will be obliged to purchase the missing certificates at €10 per certificate. The penalty goes to the Environment Fund.<sup>21</sup>

The price of these certificates is both floored and capped, i.e. there is a set minimum and maximum price allowed, with limit price values revised annually to account for inflation. The minimum price (€9.4/MWh) guarantees a minimal revenue for RES electricity suppliers while the maximum price (€35/MWh) limits the impact on final users' bills.

This RES scheme certainly contributed to the increase of RES electricity share in total electricity production, from 27.1 per cent in 2011 to 39.4 per cent in 2017, according to the National Institute of Statistics. By the end of 2018, RES capacity was 4,785 MW, with 766 producers.<sup>22</sup>

Recommendation 5.6 of the Second EPR of Romania was for the Government to: (a) closely monitor and regularly evaluate the effectiveness and efficiency of the quota obligation and GC system in achieving the renewable energy targets as well as the interactions with the EU ETS; (b) consider phasing out support for RES once they become competitive with fossil fuels; and (c) establish a timetable for phasing out existing coal subsidies.

The GCs and the quota obligations are monitored by the energy regulation agency and revised periodically. However, there is no mention in the different environment-related plans and strategies of intention to phase out support for RES or of a concrete timetable

<sup>18</sup> [https://ec.europa.eu/eurostat/statistics-explained/index.php/Household\\_consumption\\_by\\_purpose](https://ec.europa.eu/eurostat/statistics-explained/index.php/Household_consumption_by_purpose).

<sup>19</sup> [www.energy-poverty.eu/indicator?primaryId=1461&type=bar&from=2018&to=2018&countries=EU,RO&disaggregation=none](http://www.energy-poverty.eu/indicator?primaryId=1461&type=bar&from=2018&to=2018&countries=EU,RO&disaggregation=none).

<sup>20</sup> The National Energy Regulatory Authority developed a methodology for defining the obligatory annual quota acquisition of GCs following the provision of Law No. 220/2008. The methodology entered into force on 1 August 2018 (Decree No. 147/2018).

<sup>21</sup> Given that the price of a GC is always between €9.4 and €35, having to buy a certificate at €10 represents a penalty of €75–€30.6.

<sup>22</sup> According to the former Ministry of Energy.

regarding coal subsidies. Hence, Recommendation 5.6 was only partially implemented.

#### *Participation in the EU emissions trading system*

Romania has participated in the EU ETS scheme since it became an EU Member State. The 2013 EU-wide cap on emissions from stationary installations was set at around 2.084 million allowances. This cap was meant to decrease each year by a linear reduction factor of 1.74 per cent of the average total quantity of allowances issued annually in the period 2008–2012, thus ensuring that the number of allowances that can be used by stationary installations will be 21 per cent lower in 2020 than in 2005. The aviation sector cap was originally set at around 210 million allowances per year, which is 5 per cent below the average annual level of aviation emissions in the period 2004–2006. It increased by 116,524 aviation allowances on 1 January 2014 to accommodate Croatia joining the EU ETS.

Although, in phase 3 of the EU ETS, the default allocation method is auctioning, a significant amount of allowances can be allocated for free and following EU-wide harmonized rules. Romania is one of the 10 EU Member States (Bulgaria, Czechia, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland and Romania) that benefit from this limited and temporary derogation from the rule of forbidding the distribution of free allowances to the electricity sector. In return, the countries benefiting from this exception had to draw up plans for investing in the modernization of their electricity sector. Thus,

electricity production partly received a free allocation of certificates. The free certificates were supposed to be eliminated by 2020. Nevertheless, the EU decided that transitional free allocation should also be available for some Member States during phase 4 (2021–2030). Romania, as well as Bulgaria and Hungary, has decided to make use of transitional free allocation in phase 4. For Romania, tables 3.9 and 3.10 show the total amount of free allowances as well as the amount distributed to electricity producers. Table 3.11 shows revenues collected from the auctioning of allowances for the period 2012–2018.

### 3.2 Greening the subsidies system

#### *Fossil fuel subsidies*

All EU Member States subsidize the use and/or production of fossil fuels to some extent, and the EC estimates that fossil fuel subsidies in the EU between 2008 and 2016 amounted to €5 billion.<sup>19F<sup>23</sup></sup> However, States do not openly communicate on their fossil fuel subsidies.

SDG target 12.c is: Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities.

**Table 3.9: Free allowances allocated for modernizing the electricity sector, 2013–2018, number**

2013	2014	2015	2016	2017	2018
15 748 011	8 591 461	9 210 797	7 189 961	622 255	3 778 439

Source: Report on the functioning of the European carbon market, 2020.

**Table 3.10: Maximum number of free allowances per year under the derogation from full auctioning for electricity and heat production, 2013–2019, number**

2013	2014	2015	2016	2017	2018	2019	Total
17 852 479	15 302 125	12 751 771	10 201 417	7 651 063	5 100 708	2 550 354	71 409 917

Source: Report on the functioning of the European carbon market, 2020.

**Table 3.11: Revenues from the auctioning of emission allowances, 2012–2018, €million**

	2012	2013	2014	2015	2016	2017	2018
General (early auctions)	39.71	122.74	97.57	193.62	193.56	260.29	717.64

Source: Report on the functioning of the European carbon market, 2020.

<sup>23</sup> [www.odi.org/sites/odi.org.uk/files/resource-documents/12895.pdf](http://www.odi.org/sites/odi.org.uk/files/resource-documents/12895.pdf).

No data are available on global indicator 12.c.1 (Amount of fossil-fuel subsidies as a percentage of GDP (production and consumption)).

Romania does not publish subsidies or tax breaks given to fossil fuels. Fossil fuels play an important role in Romania's energy mix. According to the former Ministry of Energy, in 2019, around 38.8 per cent of electricity in the country was produced using fossil fuels – of which 15.4 per cent were produced using oil and 23.4 per cent using coal. Also, an aid to decrease energy poverty, including a social tariff for electricity, was in place until 1 January 2018 (208 million lei in 2015) along with an aid for heating and subsidies for heat, applying directly to the energy price (900 million lei in 2015). The draft Integrated National Plan on Energy and Climate Change 2021–2030 states that current fossil fuel subsidies relate mainly to assistance to decrease energy poverty, i.e. to help households that otherwise could not afford electricity and heating services. The Plan mentions the need to phase out support for fossil fuels, but without any concrete timeline or further details. While Romania has reiterated its commitment to end fossil fuel subsidies or to undertake wider green fiscal policy reforms, no concrete steps (such as a timeline) are discussed in the document. Major challenges faced by Romania regarding this phasing out are inefficient energy infrastructure and energy poverty, as well as the willingness to maintain energy independence.

#### *Investment incentives*

Under the Fiscal Code (Law No. 227/2015 with subsequent amendments), expenses incurred for environmental protection and resource conservation are deductible from corporate taxable income. Companies can also deduct their research and development expenses from their taxable income. Moreover, accelerated depreciation may be applied for devices and equipment used in research and development activities.

Regarding investments in the energy sector, the draft Integrated National Plan on Energy and Climate Change 2021–2030 states that there is an initiative in Romania that envisages the development of a Contract for Difference (CfD) support mechanism to encourage

priority investments with low-carbon technologies that are needed in the Romanian energy sector.<sup>24</sup> These contracts would complement the GC scheme.

In its Strategy for Romania, adopted in 2015, the European Bank for Reconstruction and Development estimated that access to finance was still limited, particularly for SMEs, and the overall level of corporate investment in Romania remained low. The key factors limiting competitiveness and discouraging stronger investment included bureaucratic obstacles to doing business, the significant role of inefficient state-owned companies and the bottlenecks caused by Romania's poor national infrastructure.<sup>25</sup> As at November 2019, the Bank had a portfolio of projects worth €1,808 million, of which 38 per cent were projects related to sustainable infrastructure.

#### *Value added tax*

VAT reductions on certain goods and services act as implicit subsidies. In Romania, there is a reduced VAT rate of 9 per cent (compared with the standard rate of 19 per cent) for fertilizers and pesticides and for water supply for irrigation. Water supply and sewerage services for households also benefit from this reduced rate. Aircraft fuels are completely exempt from VAT. Given the potential negative environmental externalities associated with fertilizer and pesticide use, no assessment on the environmental impact of these VAT reductions was carried out.

### **3.3 Evaluation of the impact of the country's efforts in greening the tax, tariff and subsidies systems**

Overall, revenues from environmental taxes in Romania were about 20 billion lei in 2018, which amounted to about 2.09 per cent of the country's GDP for that year (table 3.12).<sup>26</sup> The main source of revenues are energy taxes, which accounted for almost 95 per cent of all environmental tax revenue. The levels of environmental tax revenues remain low, compared with other European countries: in 2018, Romania ranked 2nd of 28 on this aspect.<sup>27</sup> This remains true when comparing revenues collected as a percentage of countries' GDP. For instance, according to Eurostat, in 2018, environmental tax revenues

<sup>24</sup> According to the International Energy Agency, Contracts for Difference are concluded between the renewable generator and a government-owned company and are based on a difference between the market price and an agreed "strike price". If the "strike price" is higher than a market price, the Counterparty of the Contracts must pay the renewable generator the difference between the "strike price" and the market price. If the market price is higher than the agreed "strike price", the renewable generator must pay back the Counterparty the difference between the market price and the "strike price".

<sup>25</sup> [www.ebrd.com/where-we-are/romania/overview.html](http://www.ebrd.com/where-we-are/romania/overview.html).

<sup>26</sup> Romania's GDP in 2018 was estimated at 944.220 billion lei (World Bank).

<sup>27</sup> [https://ec.europa.eu/taxation\\_customs/sites/taxation/files/taxation\\_trends\\_2019\\_country\\_chapter\\_romania.pdf](https://ec.europa.eu/taxation_customs/sites/taxation/files/taxation_trends_2019_country_chapter_romania.pdf).

represented 3.52 per cent of Slovenia's GDP, 2.58 per cent of Portugal's and 2.35 per cent of Hungary's. The relatively low level of revenues for Romania is mainly due to low tax rates and low charges on environmental externalities and resource extraction.

SDGs 8 and 12 pertain to increasing resource efficiency, specifically through their targets 8.4 (Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead) and 12.2 (By 2030, achieve the sustainable management and efficient use of natural resources).

In 2018, Romania's resource productivity was €0.3784/kg, in 2010 constant prices, much lower than the EU average of €2.07/kg (Eurostat). Domestic material consumption per capita has increased over the years and was 23.098 tons in 2018 (Eurostat), much higher than in Hungary (15.742 tons) or Bulgaria (20.343 tons), which have, respectively, slightly higher and slightly lower levels of GDP per capita. According to the Global Material Flows Database of Environment Live, domestic material consumption (global indicators 8.4.2 and 12.2.2 (Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP)) in Romania increased by 11.3 per cent in the period 2010–2017 (table 3.13). No data are available on global indicators 8.4.1 and 12.2.1 (Material footprint, material footprint per capita, and material footprint per GDP).

**Table 3.12: Environmental tax revenues, 2012–2018, million lei**

Tax category	2012	2013	2014	2015	2016	2017	2018
Energy	10 268.80	11 262.30	14 148.50	15 740.10	16 498.30	15 407.10	17 420.20
Transport	1 567.70	1 757.30	1 748.70	1 791.50	1 799.70	1 179.80	1 307.30
Pollution	22.40	22.80	19.90	20.50	21.40	24.00	23.90
Resource	35.90	26.20	24.60	16.00	25.60	20.70	20.10
<b>Total</b>	<b>11 894.80</b>	<b>13 068.60</b>	<b>15 941.70</b>	<b>17 568.10</b>	<b>18 345.00</b>	<b>16 631.60</b>	<b>18 771.50</b>

Source: National Institute of Statistics; Eurostat, 2019.

**Photo 3.2: Retrofitting old lamp posts with modern remotely-dimmable LED**



Photo credit: MoEWF

Table 3.13: Domestic material consumption, by type of raw material, 2010–2017, 1,000 tons

	2010	2011	2012	2013	2014	2015	2016	2017
<b>Total</b>	<b>206 591</b>	<b>217 888</b>	<b>199 676</b>	<b>209 805</b>	<b>217 850</b>	<b>223 785</b>	<b>226 719</b>	<b>229 925</b>
Biomass, of which:	65 507	73 358	53 439	70 923	75 154	76 983	77 529	78 075
Crop residues	25 114	30 983	18 643	31 026	33 282	33 806	34 331	34 856
Crops	25 552	31 552	20 548	26 543	28 285	28 171	28 057	27 943
Grazed biomass and fodder crops	8 310	4 349	6 344	6 468	6 582	6 753	6 923	7 094
Wild catch and harvest	19	19	26	28	32	30	28	26
Wood	6 511	6 455	7 877	6 858	6 974	8 223	8 189	8 155
Fossil fuels, of which:	50 880	55 191	53 734	42 861	41 792	42 355	41 164	40 155
Coal	33 128	37 308	35 953	26 572	25 378	26 264	25 499	24 782
Petroleum	8 983	8 519	8 546	8 091	8 676	8 617	8 464	8 310
Natural gas	8 769	9 364	9 235	8 198	7 738	7 474	7 201	7 063
Metal ores, of which:	3 644	3 799	4 123	3 667	4 720	4 091	3 493	2 983
Non-ferrous ores	3 381	3 671	3 763	3 050	3 285	2 761	2 267	1 862
Ferrous ores	263	128	360	617	1 435	1 330	1 225	1 120
Non-metallic minerals, of which:	86 560	85 540	88 380	92 354	96 184	100 356	104 534	108 712
Non-metallic minerals – industrial or agricultural dominant	4 419	4 526	3 803	4 267	4 372	4 332	4 298	4 265
Non-metallic minerals – construction dominant	82 141	81 015	84 577	88 087	91 812	96 024	100 235	104 447
Domestic material consumption per capita, by type of raw material (tons)	10	11	10	10	11	11	11	12
Domestic material consumption per unit of GDP, by type of raw material (kg per constant 2010 US\$)	1	1	1	1	1	1	1	1

Source: Environment Live, Global Material Flows Database, <https://unstats.un.org/sdgs/indicators/database/> (accessed 24 January 2021).

### 3.4 Investing in environmental protection and green economy

#### *Implementation costs for environment-related strategies, programmes and plans*

In 2017, the then Ministry of Environment estimated that the overall implementation cost for the NWMP would be €1.15 million. This would represent a cost of around €60 per inhabitant and could be achieved by increasing the stringency of already existent economic incentive mechanisms. The estimated energy sector investments necessary to achieve the goals set in the Integrated National Plan on Energy and Climate Change 2021–2030 amount to €22 billion. The Plan envisages financing this through more stringent taxes and investments from the private sector and foreign resources.

#### *Green public procurement*

Romania has passed a law establishing the general principles of green public procurement (GPP), the Law No. 69/2016 on Green Public Procurement, which represents a step towards SDG target 12.7 (Promote public procurement practices that are sustainable, in accordance with national policies and priorities). However, implementation of the Law has been delayed by the lack of national guidelines that would help civil servants put these principles into practice when setting conditions for goods or service contracts.

The authority in charge of the environment had the obligation to elaborate a national plan for GPP, which had to be approved by a GD no later than October 2017. Such a plan was required to include mandatory multi-annual targets for GPP for all the categories of products, services and works and address the rules for contracting with (public) authorities. However, as at December 2019, such a plan was not finalized, which renders the Law on Green Public Procurement ineffective for the time being.

The then Ministry of Environment was a partner in GPPbest,<sup>28</sup> an EU LIFE-funded project that seeks to encourage the exchange of good practice and develop tools for GPP in Romania and Italy. The Ministry elaborated a guide, including the minimum requirements regarding environmental protection for certain groups of products and services. In 2018, the then Ministry of Environment and the National

Agency for Public Procurement adopted this guide (MO No. 1068/1652/2018).

As part of GPPbest, three pilot projects were implemented in 2017, in which Romanian public institutions imposed green criteria in public procurement contracts. First, NEG introduced specific requirements for environmentally friendly cleaning products, toilet paper and paper towels for its 35 offices. Green considerations were introduced as minimum technical specifications, derived from the EU Ecolabel. Among the bids received, only one was fully compliant with the tender requirements. The final contract price was 339,500 lei (approximately €72,840).<sup>29</sup> In the same vein, the Ministry of Environment, Waters and Forests purchased office material for one of its projects using criteria for office supplies and equipment derived from the EU GPP criteria, at a cost of 19,800 lei (€4,170). The National Meteorology Agency also applied GPP criteria for the purchase of organic cleaning products to the value of approximately 3,426 lei (€720).

The GPPbest project was finalized in 2018. Romania now participates in the follow-up project, GPP Stream (2018–2020), which focuses on the adoption and management of GPP in relation to EU funds, use of the tool by beneficiaries and the monitoring of GPP implementation, and thus the evaluation and mainstreaming of its benefits. As well as the former Ministry of Environment, the North-East Regional Development Agency participates. For the moment, Romanian actions revolve around discussing the draft of a national GPP action plan.<sup>30</sup>

Encouragement of the wider use of GPP is also one of the measures the Government plans to use to achieve the goals set out in its draft Integrated National Plan on Energy and Climate Change 2021–2030.

#### *Expenditures on environmental protection*

##### Government sector

Information on environmental protection expenditures for the aggregate government sector is published in the annual budgets based on the international Classification of Functions of Government (COFOG) (table 3.14). Environmental protection expenditures averaged 2 per cent of total central government expenditures during the period 2012–2018.

<sup>28</sup> [www.gppbest.eu/?lang=en](http://www.gppbest.eu/?lang=en).

<sup>29</sup> [https://ec.europa.eu/environment/gpp/pdf/news\\_alert/Issue79\\_Case\\_Study\\_156\\_Romania.pdf](https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue79_Case_Study_156_Romania.pdf).

<sup>30</sup> [www.interregeurope.eu/fileadmin/user\\_upload/tx\\_tevprojects/library/file\\_1582703304.pdf](http://www.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1582703304.pdf).

**Table 3.14: Government expenditures on environmental protection, 2012–2018, million lei**

	2012	2013	2014	2015	2016	2017	2018
<b>Total</b>	<b>3 571.2</b>	<b>2 905.4</b>	<b>3 132.5</b>	<b>4 507.5</b>	<b>5 520.7</b>	<b>4 310.4</b>	<b>7 180.5</b>
Air	176.5	138.6	106.0	226.1	610.7	685.2	1 181.4
Water	1 494.6	673.3	869.8	852.2	1 179.4	866.7	1 303.3
Waste	1 784.7	1 977.7	2 041.1	3 189.0	2 042.9	2 289.3	2 334.1
Soil and underground water	16.7	3.5	9.7	40.4	12.7	60.4	91.3
Noise and vibrations	1.3	0.9	0.3	0.9	6.4	56.3	82.1
Natural resources and biodiversity	5.5	4.5	27.3	111.0	26.6	1.6	2.1
Other domains	91.9	106.9	78.3	87.9	1 642.0	350.9	2 186.2

Source: National Institute of Statistics, 2020.

Most of the expenditures concern waste and wastewater management, as well as pollution abatement (98 per cent of total expenditures in 2018). The share of these categories also remained relatively stable during the period 2012–2018, while expenditures for research and development and biodiversity protection fluctuated more from one year to another. It should be noted that expenditures in research and development for environmental protection are particularly low and have decreased since 2015. This relates to the low eco-innovation scores that Romania obtains.

According to the National Institute of Statistics, total government expenditure on environmental protection in 2018 was 7,180.5 million lei (table 3.14), which corresponds to roughly €1,542 million. For comparison, table 3.15 presents 2018 values for a selection of other European countries based on Eurostat data.

**Table 3.15: Government expenditures on environmental protection for selected countries, 2018, million €**

Country	Expenditures	% of GDP
Czechia	1 796.2	0.9
Estonia	193.4	0.7
France	24 051.0	1.0
Germany	19 933.0	0.6
Hungary	590.5	0.4
Poland	2 441.8	0.5
<b>Romania</b>	<b>1 702.5</b>	<b>0.8</b>

Source: Eurostat.

#### *Public–private partnerships in support of a green economy*

Public–private partnerships (PPPs) are long-term contractual arrangements between a government body and a non-government partner (i.e. a private firm),

usually for public service building projects. The partner is responsible for building, operating and maintaining an asset, and in exchange the government body pays regular fees to the partner. Under Romanian law, a PPP contract can be used for the construction, rehabilitation or extension of an asset to be part of the property of the public administration, as well as for the operation of a public service. In particular, PPPs can be used for public utilities. Nevertheless, the role of PPPs in Romania is still relatively small, mainly because, in the public utilities sector, the main operators remain public entities.

Romania does not measure SDG global indicator 17.17.1 (Amount in United States dollars committed to public-private partnerships for infrastructure) of target 17.17 (Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships).

In 2018, the Government approved 16 PPP projects, mainly concerning transport infrastructure construction. Two exceptions are worth mentioning: the construction of the Tarnița-Lăpușești hydropower plant and a factory for electric means of transport.<sup>31</sup>

However, in the 2019 European Semester: Country Report, the EC found that, in Romania, a move towards using more PPP contracts without reforms to improve administrative capacity could result in a high future fiscal burden for the state budget.<sup>32</sup> Indeed, the successful implementation of these contracts requires: (i) strong public institutions; (ii) strong negotiation expertise; and (iii) the ability to keep overall costs under control.

Before 2018, the European Investment Bank counted only two PPP contracts ever to have been signed in Romania, which related to the transport sector and had a total value of €0.039 billion.<sup>33</sup> There is also room for

<sup>31</sup> [www.gov.ro/ro/guvernul/sedinte-guvern/noi-proiecte-strategice-in-parteneriat-public-privat](http://www.gov.ro/ro/guvernul/sedinte-guvern/noi-proiecte-strategice-in-parteneriat-public-privat).

<sup>32</sup> [https://ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-romania\\_en.pdf](https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-romania_en.pdf).

<sup>33</sup> <https://data.eib.org/epec>.

improvement in NGOs' and civil society participation. A 2019 report by the Conference of INGOs (international NGOs), following a visit to the country in 2018, strongly recommends the Government make further efforts to ensure public participation and consultation.

### *Environment Fund*

The main objective of the Environment Fund is to finance and implement several environmental programmes related to reducing GHG emissions in the atmosphere, increase the carbon dioxide storage capacity and reduce the effects of water, air and soil pollution (table 3.16). To achieve these objectives, the Fund benefits from a budget mainly financed through earmarked environmental taxes and the selling of GHG certificates as part of the EU ETS. The Fund also benefits from direct allocations from the state budget as well as European funds (table 3.17).<sup>34</sup> The sources of fiscal revenues as at 2019 include taxes on waste (in particular, the circular economy contribution and the penalties for non-compliance with waste recycling mandates), air pollution taxes, penalties for GHG emissions in excess of permits purchased and taxes on the import of electronic devices, batteries and accumulators, among others.<sup>35</sup> Note that, with the abolishment of the environmental stamp on used cars

in 2017, the Environment Fund Administration lost a significant source of fiscal revenues.

One of the main programmes implemented by the Environment Fund is the National Car Fleet Renewal or RABLA<sup>36</sup> Programme. It consists of a €1,500 subsidy given to people willing to buy a new, more energy efficient car. This scrappage programme is implemented at the national level. The initial subsidy can be coupled with two different eco-bonuses, based on the quantity of emissions of the new vehicle. The Programme has been constantly growing since 2005, when it was first launched. From 2012 to 2019, 265,464 used cars were scrapped, supporting the acquisition of 226,894 new, more efficient vehicles. The total amount of subsidies distributed during the period 2012–2018 was around €245 million and represented 42.6 per cent of all subsidies distributed by the Environment Fund.

An extension of the RABLA Programme, RABLA+ provides a €10,000 subsidy for the acquisition of electric or hybrid cars. From 2016 to December 2019, approximately 3,000 new electric or hybrid cars were purchased thanks to the programme. However, it should be noted that the electric vehicle charging network in the country is still underdeveloped.

**Table 3.16: Expenditures of the Environment Fund Administration, 2012–2018, 1,000 lei**

	2012	2013	2014	2015	2016	2017	2018
<b>Total expenditures (budgeted)</b>	<b>857 042</b>	<b>586 242</b>	<b>852 485</b>	<b>1 071</b>	<b>838 661</b>	<b>565 454</b>	<b>1 666 204</b>
EFA operating and capital costs (budgeted)	32 107	29 090	31 955	47 440	41 775	31 001	33 037
Environment Fund							
Budgeted	824 935	556 000	801 861	1 017	790 094	531 285	1 633 126
<b>Disbursed</b>	<b>420 629</b>	<b>268 668</b>	<b>408 709</b>	<b>375 098</b>	<b>373 104</b>	<b>431 433</b>	<b>438 172</b>
Water and Sanitation	33 047	89 022	170 023	155 248	161 246	174 454	91 947
Waste Management	2 335	0	0	0	0	0	0
Renewable Energy	56 259	3 197	20 546	..	..	8 746	5 539
RABLA	153 889	94 672	141 014	167 395	144 645	193 152	261 625

Source: Environment Fund Administration (EFA) annual budget reports; EFA annual activities reports.

**Table 3.17: Revenues of the Environment Fund, 2012–2018, million lei**

Revenues	2012	2013	2014	2015	2016	2017	2018
<b>Total revenues</b>	<b>668 935</b>	<b>586 242</b>	<b>852 485</b>	<b>1 071 000</b>	<b>836 461</b>	<b>565 454</b>	<b>1 120 978</b>
Fiscal revenues	618 353	570 242	795 468	1 005 000	831 261	555 337	400 992
Non-fiscal revenues	50 000	16 000	41 306	66 000	5 200	10 117	719 986
EU ETS certificates	..	..	19 000	55 000	..	..	714 736
Property and interest revenues	50 000	16 000	21 306	11 000	5 200	7 182	5 250
EU funds	..	1	15 711	..	..	2 935	..

Source: EFA annual budget reports; EFA annual activities reports.

<sup>34</sup> Other sources of revenue include revenues from property and revenues from interest earned.

<sup>35</sup> A detailed list of all taxes and charges due to the Environment Fund Administration is available at [https://afm.ro/taxe\\_contributii.php](https://afm.ro/taxe_contributii.php).

<sup>36</sup> "Rabla" means "wreck" in Romanian.



Another programme aims to incentivize the acquisition of new, more efficient appliances. Households can benefit from subsidies for investments in heating systems using RES. This programme, also known as “Casa Verde” offers up to €1,200 for a pressurized solar panel system and €1,600 for a heat pump. Over the period 2012–2018, payments via Casa Verde amounted to €42 million.

RABLA, RABLA+ and Casa Verde are also open to legal entities, whether public or private. Additionally, these entities can benefit from programmes providing funds for the closure of non-compliant municipal and industrial waste landfills, according to the provisions of the decision of the CJEU pronounced in Case C 301/17. To date, 13 applications have been submitted by municipalities, of which eight have been already granted €9.5 million in total. The Environment Fund also provides municipalities with grants for purchasing of electric and hybrid buses and trolleybuses,<sup>37</sup> for the construction of sewage treatment plants, sewerage networks, water treatment plants, water distribution networks (with 231 contracts funded from 2012 to December 2019, for approximately €202 million).

Moreover, municipalities, as well as enterprises, can also apply for subsidies for the installation of charging stations.

Finally, the Environment Fund has an Afforestation Programme, which finances afforestation of degraded land, ecological reconstruction and sustainable forest management, and programmes promoting environmental research and development and environmental education and awareness.

Recommendation 6.1 of the Second EPR of Romania urged the Government to evaluate the economic and environmental effects of the car-scrapping programme in order to decide whether it is really useful to continue with it. The car-scrapping programme continues to be

implemented, but no systematic analysis of its environmental performance was undertaken. Therefore, it can be concluded that Recommendation 6.1 is not implemented.

Similarly, Recommendation 6.2 in the Second EPR of Romania was that the then Ministry of Environment and Forests carry out periodic auditing of the activities of the Environment Fund, its administrative procedures and technical capacities in order to ensure the effective and efficient use of its financial resources and accelerated decision-making. There is no systematic impact assessment being done on the different programmes funded by the Environment Fund. Therefore, there is not much information on the contribution of these programmes to the reduction of pollution and the overall goal of greening the Romanian economy. Recommendation 6.2 is not implemented.

#### *Foreign direct investment*

According to the National Bank of Romania, net FDI flows have been constantly increasing since 2012 and amounted to €5,266 million in 2018. The main investor countries are Germany and the Netherlands. About 7.4 per cent of the total stock of FDI at the end of 2018 was channelled to the electricity, gas and water supply sector, and 3 per cent to the agriculture, fishery and forestry sector.<sup>38</sup> However, there is no mention of whether the investments were “green” in nature.

#### *Foreign assistance*

For the period 2014–2020, Romania benefits from ESIF of €30.8 billion, through eight national programmes. Overall, around €3 billion were allocated for areas that should help the country achieve its environmental objectives by reducing GHG emissions, improving water conservation and protecting biodiversity (table 3.18).

**Table 3.18: European structural and investment funds (planned) for Romania, 2014–2020, €million**

<b>Focus area</b>	<b>EU funds</b>	<b>National funds</b>
Priority 4 (shift towards a low carbon economy)	2 343 926	463 718
Water efficiency	385 665	76 476
Reducing GHGs and NH <sub>3</sub>	185 672	36 844
Carbon conservation and sequestration	105 695	21 117
Renewable energy	1 787	398

Source: European Commission – Cohesion Fund data.

<sup>37</sup> Currently, there are two ongoing contracts with the Municipality of Bucharest and the Municipality of Braşov, amounting to €4.6 million.

<sup>38</sup> [www.bnr.ro/Regular-publications-2504.aspx#ctl00\\_ctl00\\_CPH1\\_CPH1\\_14364\\_InkTitle](http://www.bnr.ro/Regular-publications-2504.aspx#ctl00_ctl00_CPH1_CPH1_14364_InkTitle).

**Photo 3.3: Charging parking lot for e-vehicles, funded by Rabla Plus Programme**

*Photo credit:* Environment Fund Administration, MoEWF

According to the EC, Romania has an investment absorption problem, i.e. the country is not able to use the monies available to it. As at 2019, only 31 per cent of the funds the EU allocated to Romania for the period 2014–2020 were spent. For example, of the 60 MW of planned renewable energy production capacity, none was built by the end of 2018.

According to the EC Environmental Implementation Review 2019, the low level of absorption is mainly caused by: (i) final beneficiaries' lack of capacity to prepare large investment projects; (ii) final beneficiaries' lack of capacity to implement large investment projects; (iii) a lack of buy-in/ownership; and (iv) the excessive length of tender procedures.

Recommendation 6.3 of the Second EPR of Romania urged the Government to: (a) revise national regulations regarding EU funds in order to: (i) review criteria for the selection of projects to be submitted for EU environmental funding; (ii) simplify the process of decision-making; (iii) ensure a targeted division of responsibilities between project proposal assessment, implementation and supervision in order to avoid duplication and overlapping; and (b) increase capacity, especially staff skills, for project proposal preparation at all levels.

Given the low level of absorption of EU funds, not much progress has been made in this area. The country does not seem to be able to mobilize and efficiently manage available EU funds and, therefore, it can be concluded that Recommendation 6.3 is not implemented.

Romania also received funds from Switzerland as part of Switzerland's contribution to EU enlargement (SwF 181 million received between 2009 and 2019). Several of the funded projects pertained to environmental protection, including the change to LED public lighting in several municipalities (e.g. Arad, Braşov and Suceava), capacity-building for forest owners, rehabilitation of public buildings and the promotion of electromobility.

#### *Development aid*

Romania does not report on SDG global indicator 17.2.1 (Net official development assistance, total and to least developed countries, as a proportion of the Organization for Economic Cooperation and Development (OECD) Development Assistance Committee donors' gross national income (GNI)) of target 17.2 (Developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of gross national income for official development assistance (ODA/GNI) to developing countries and 0.15 to 0.20 per cent of ODA/GNI to least developed countries; ODA providers are encouraged to consider setting a target to provide at least 0.20 per cent of ODA/GNI to least developed countries).

In regard to aid that Romania provides to other countries, data from the OECD show that, between 2012 and 2018, Romania spent between 0.09 and 0.11 per cent of its GNI in development aid.<sup>39</sup> Law No. 213/2016 provides the legal basis for the

<sup>39</sup> <https://data.oecd.org/oda/net-oda.htm>.

development cooperation and humanitarian aid activities financed from Romanian public funds. The Ministry of Foreign Affairs coordinates the country's development cooperation and humanitarian aid policy. In November 2016, the country's Agency for International Development Cooperation was created under the Ministry of Foreign Affairs.

Romania provides development aid to countries such as Georgia, the Republic of Moldova, Serbia, Syria, Turkey and Ukraine. The main sectors of bilateral development cooperation are governance and civil society, education, health and population, and humanitarian aid. Additionally, Romania imports goods from developing countries, to the value of about €15 billion in 2018, up from €8.7 billion in 2012.

### 3.5 Green markets

The Eco-Innovation Scoreboard is an indicator used by the EC to illustrate eco-innovation performance across the EU Member States.<sup>40</sup> It captures the different aspects of eco-innovation by applying 16 indicators grouped into five dimensions: eco-innovation inputs, eco-innovation activities, eco-innovation outputs, resource efficiency and socioeconomic outcomes. The eco-innovation score for Romania has declined since 2012 and was 66 in 2018, well below the EU average of 100. Explaining this low score is the fact that Romania has low resource productivity, which leads to an elevated use of raw materials, water and energy in production.

Challenges remain in waste management at both the municipal and industrial levels, with low waste recycling rates. Waste dumping is also very common.

A report from the Eco-Innovation Observatory<sup>41</sup> specifies that Romanian private companies are investing more in resource efficiency than in the past, and are planning to offer green products and services in the next two years. In 2019, about 31 per cent of companies in Romania were likely to take actions to decrease waste and only 33 per cent were taking actions to save energy.

In January 2020, the Ministry of Environment, Waters and Forests counted 21 economic operators that had obtained the EU Ecolabel, which is similar to the level of uptake in countries such as Portugal or Slovenia. There are also 24 other eco-labels used in the country, according to the Ecolabel Index. In addition, Green Revolution, a Romanian NGO, has developed a Green Business Index, which evaluates Romanian

companies' environmental responsibility according to the principles of ISO 14001 and ISO 1901. The demand of enterprises willing to adopt such a label shows that there is interest from the private sector in adopting more sustainable practices.

In the agricultural sector, the number of organic producers decreased from 15,280 in 2012 to 8,518 in 2018. However, according to Eurostat, over the same period, the land surface allocated to organic farming increased slightly, from 288,261 ha to 326,260 ha, as did the number of importers of organic products.

#### **Photo 3.4: Bucharest to host the 2023 edition of the inter-university Solar Decathlon Europe – an initiative supported by the ministries in charge of energy and of the environment**



Photo credit: MoEWF, courtesy EFdeN Technical University of Constructions Bucharest

#### *Circular economy*

While a major milestone was achieved with the adoption of the NWMP in 2017, no integrated strategy for the circular economy was drafted in Romania. In

<sup>40</sup> [https://ec.europa.eu/environment/ecoap/indicators/index\\_en](https://ec.europa.eu/environment/ecoap/indicators/index_en).

<sup>41</sup> [www.eco-innovation.eu/index.php](http://www.eco-innovation.eu/index.php).

2017, 36 per cent of Romanian companies mentioned that the complex administrative or legal procedures were a barrier to taking up resource efficiency. This was the most mentioned difficulty in Romania and was above the EU average of 33 per cent.<sup>42</sup>

Next to the complicated regulatory framework, a major problem continues to be the lack of adequate infrastructure for waste management. About 85 per cent of the population is covered by a proper waste collection system, and separate garbage collection is done only in exceptional cases. Industry-level waste collection systems have also been very inefficient, especially for packaging waste (chapter 10).

### 3.6 Green jobs

In 2018, Romania adopted a National Strategy for Green Jobs for the period 2018–2025. The Strategy has three main objectives: (i) to stimulate entrepreneurship and the creation of green jobs focusing on the highly competitive sectors identified in both the 2014–2020 National Competitiveness Strategy and 2014–2020 National Research, Development and Innovation Strategy; (ii) to develop skills in the workforce to meet labour demand in the sectors that can generate green jobs; and (iii) to strengthen the cooperation and dialogue with relevant actors and social partners in sectors with high potential for creating green jobs.

With regards to green job creation, the Action Plan for the implementation of the National Strategy for Green Jobs aims to promote employment in the economic sectors that actively contribute to a greener economy (e.g. renewable electricity production), which would support the achievement of SDG target 8.3 (Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services).

According to Eurostat, in 2017, the environmental goods and services sector in Romania employed 157,675 people (full-time equivalents), which is around 1.7 per cent of the Romanian employed population and at the average point of EU Member States. According to Eurostat, reporting against the SDG global indicators, employment rates in Romania have increased since 2013 and rates of long-term unemployment are currently below the EU average. However, the rate of “working poor”, while

decreasing, remains high, at around 15 per cent of the population aged 18 and over in 2018.

### 3.7 Legal, policy and institutional framework for greening the economy

#### *Legal framework*

#### Industrial emissions

Law No. 278/2013 stipulates measures for integrated pollution prevention and control (IPPC), waste incineration and management of industrial waste, and to limit volatile organic compound emissions, and sets the limits for air, water and soil emissions. Air pollution charges are set in GEO No. 196/2005, which also regulates other taxes to be paid to the Environment Fund Administration.

#### Water pollution charges

Law No. 241/2006 on Water Supply and Sanitation Services, with subsequent modifications, sets water pollution, groundwater and surface water abstraction charges.

#### Excise duties, motor vehicles and road use charges, and land and property taxes

Law No. 227/2015, with subsequent modifications and completions, regulates the level of excise duties, charges related to motor vehicles and the use of roads, and land and property taxes. The rates of the excise duties levied by Romania are revised annually to account for inflation, in accordance with the provisions of article 342 paragraphs (1) and (2) and article 442 paragraphs (1)–(3) of the Law. The duties are paid to the state budget and collected by the National Agency for Fiscal Administration. The implementation and collection of the charges for the use of roads is under the responsibility of the National Company for the Management of the Road Infrastructure.

Land and property taxes are considered local taxes and paid directly to municipalities.

#### Oil and other mineral resources exploitation

The Law No. 238/2004 on Oil, with subsequent modifications and completions, regulates oil and gas activities and royalties. Oil and gas royalties are paid by all legal entities involved in the extraction of these resources and are calculated based on the reference prices determined by the National Agency for Mineral

<sup>42</sup> Flash Eurobarometer 456, 2017.

Resources, as explained above. Other mineral resources activities and the payment of associated royalties fall within the scope of Law No. 85/2003 and are also supervised by the National Agency for Mineral Resources. The same is true for mineral water abstraction.

#### Electricity tariffs and feed-in tariffs for renewable energy sources

The promotion of electricity production from RES is regulated by the following laws:

- Law No. 220/2008 for establishing the system to promote the production of energy from renewable energy sources;
- Law No. 184/2018 approving GEO No. 24/2017 on the modification and completion of Law No. 220/2008 for establishing the system for promoting the production of energy from renewable energy sources and for modifying some normative acts. In particular, this law allows electricity producers and local authorities that own power plants using renewable sources – which benefit from the support scheme promoted by GCs or that have benefited from the support scheme and own GCs – with installed capacities of maximum 3 MW per producer, to directly conduct negotiated contracts with end consumers for sale of electricity and/or GCs;
- Law No. 122/2015 for the approval of measures in the field of promoting the production of electricity from renewable energy sources and regarding the modification and completion of normative acts. It sets the process for accreditation of economic operators with installed capacities between 125 and 250 MW and who did not benefit from the GC promotion system.

Several orders of the National Energy Regulatory Authority regulate the implementation of electricity production from RES, including Order No. 4/2015, which regulates the issuing of GCs, Order No. 157/2018 establishing the methodology for setting the mandatory annual quota for the acquisition of GCs, Order No. 77/2017 approving the Regulation of organization and functioning of the GCs market, with subsequent amendments, and Order No. 52/2016 defining the methodology for the monitoring of the renewables electricity support scheme promoted by GCs.

#### Public procurement

Law No. 98/2016 on Public Procurement, Law No. 99/2016 on Utilities Procurement and Law No. 100/2016 on Work and Services Concessions

transpose Directives 2014/23/EU, 2014/24/EU and 2014/25/EU that regulate public procurement. Additionally, Law No. 69/2016 imposes the creation of national guidelines for GPP, which has not been established.

#### Public–private partnerships

GEO No. 39/2018 regulates PPPs and repeals the provisions of Law No. 233/2016 as amended in December 2017. While GEO No. 39/2018 is yet to be approved through a law passed by Parliament, by mid-2019 only a number of amendments had been brought in through GEO No 43/2019. Implementation norms are also expected to be issued for the new PPP legislation to be fully functional.

#### *Institutional framework*

The Ministry of Environment, Waters and Forests is responsible for the general strategic planning regarding the environment and the green economy. According to the provisions of GD No. 579/2015 regarding the establishment of the specific responsibilities of the public authorities, the Ministry operates in all environmental areas (chapter 1). Additionally, according to GEO No. 196/2005, the Ministry coordinates activities of the Environment Fund Administration, sets priority environmental programmes to be subsidized by the Environment Fund and approves its budget. The Environment Fund provides financial support for the implementation of projects and programmes for environmental protection.

The National Romanian Regulator for Public Services regulates tariffs for utility services (waste management, water supply, public lighting and public transport), grants licences to operators, sets guidelines on operations, provides template contracts and sets the general methodology for setting the tariffs. Operators then set their tariffs based on this methodology. The tariffs are then checked and approved by local authorities (councils). Each revision is also approved by local councils.

The National Energy Regulatory Authority regulates electricity and heating tariffs based on Law No. 123/2012 on electricity and natural gas. It is also responsible for issuing, amending or withdrawing authorizations and licences, monitoring the electricity and natural gas markets and promoting energy production from RES and cogeneration.

The National Tax Administration Agency oversees the collection of excise duties.

No governmental authority is responsible for PPP in Romania. Hence, any public entity that is a contracting authority under Laws No. 98/2016, No. 99/2016 or No. 100/2016 may undertake PPP projects. However, GEO No 46/2018 established that the National Office for Centralized Procurement is responsible for finalizing (signing) the framework agreements and the administration of dynamic purchasing systems.

Romanian Waters manages water resources so that there is a full cost recovery water management (quantity and quality). Water end users and polluters (e.g. communally managed operators, industrial economic operators and economic operators producing electricity, irrigation or aquaculture/fish farming) pay charges (contributions and penalties) according to their usage and/or pollution levels.

### 3.8 Assessment, conclusions and recommendations

#### *Assessment*

Economic-incentive mechanisms for greening the economy are used in the main areas of concern such as air and water pollution and waste generation. The tax rates, however, are low and do not necessarily provide incentives for the reduction of negative externalities. In energy taxes, excise duties are applied to all energy products used for transport and heating, including electricity, coal and natural gas. Excise duty rates are at least at the EU minimum rates although a small “diesel differential” remains.

The country levies user charges for water abstraction and royalties for the extraction of minerals, oil and gas. In the area of municipal utility services, while tariffs are set in order to ensure cost recovery, waste and water companies still face operational difficulties: the infrastructure is obsolete and requires funds for maintenance and upgrading; and available funds are not easily mobilized and absorbed, which seems to reveal low capacity from responsible authorities. In the case of water, many public regional utilities still show weak operational and financial performance with high water losses and relatively low labour productivity. Although a national regulator has been in place for more than a decade, the regulatory framework does not include proper benchmarking and appropriate performance incentives. This applies also to waste management.

The potential benefits from PPPs in the provision of municipal utility services and the financing of the associated infrastructure are not yet fully explored. In the energy sector, electricity tariffs have approached

cost-reflective levels and cross-subsidies from business entities to households have been reduced.

Most of the electricity market is now liberalized. The role of RES in total electricity supply has been promoted with a system of feed-in tariffs. Efforts are ongoing to improve energy efficiency with government subsidies. Environmental expenditures are financed mainly from earmarked revenue from environmental taxes and charges on motor vehicles and from the sale of EU ETS certificates.

The country has benefited from significant foreign financial assistance, with the EU having a leading role since 2007. Still, low institutional capacity and infrastructure development have hindered the country’s fund absorption capacity.

While green jobs and green markets have increased since 2012, some challenges to their development remain. Companies consider that product market regulations are too cumbersome with administrative procedures being long and complicated. Also, Romania still has low (green) innovation and knowledge indicators. Romania lags behind the EU in research and development and a number of indices of innovation and connectedness.

Progress on the achievement of SDG target 8.3 is supported by the adoption of the Action Plan for the implementation of the National Strategy for Green Jobs aimed at promoting employment in the economic sectors that actively contribute to a greener economy. Performance regarding SDG 8 and SDG 12 through their targets 8.4 and 12.2 indicates that domestic material consumption has increased by 11.3 per cent in the period 2010–2017. However, no data are available on global indicators 8.4.1 and 12.2.1. Also, Romania does not measure the proportion of the rural population who live within 2 km of an all-season road, as required for global indicator 9.1.1. Concerning global indicator 9.1.2 (Passenger and freight volumes by mode of transport), the shares have been relatively stable in Romania since 2012. No data are available on global indicator 12.c.1 (Amount of fossil-fuel subsidies per unit of GDP (production and consumption)). Romania does not report on global indicators 17.2.1 and 17.17.1 (on development assistance) of targets 17.2 and 17.17.

The implementation of the recommendations in the Second EPR of Romania has slowly progressed. Recommendation 5.1 is not implemented as the general framework for pollution taxation, as well as tax rates for air and water pollution, have remained the same. This recommendation remains valid. Recommendation 5.2 is only partially implemented.

This is explained by the lack of evidence of systematic use of impact assessment methods to evaluate the welfare and/or environmental impact of the implemented waste management policies, although efforts have been made to decrease municipal waste (through waste charges and a new landfill tax). Also, more ambitious targets for recycling were set in the 2017 NWMP. Implementation of Recommendation 5.3 is in progress as ANRSC is in the process of modifying the methodology to define tariffs that ensures cost recovery for operators. The road user charges have been updated in 2018 and some values have been increased, while fuel taxes have been reduced. However, no assessment on how these taxes contribute to decreasing road transport pollution was carried out, which only partially satisfies Recommendation 5.4.

Recommendation 5.5 is partially implemented as Romania applies excise duties on energy products and has set them at the minimal levels to comply with EU regulations and support vulnerable households via utilities' social tariffs for vulnerable households as well as the minimum income for inclusion. Nevertheless, there is no plan to phase out regulated electricity and gas prices. Recommendation 5.6 is partially implemented. The GCs and quota obligations are monitored by the energy regulation agency and revised periodically, but there is no mention in the different environment-related plans and strategies of intentions to phase out support for RES or of a concrete timetable regarding coal subsidies. Recommendations 6.1, 6.2 and 6.3 are not implemented as there is no systematic monitoring of the implementation of different programmes, making it difficult to assess results, and the country does not efficiently manage available EU funds.

### *Conclusions and recommendations*

#### Reinforce pollution abatement and resource conservation

The economic incentive mechanisms already in place do not promote efficient use of natural resources. While economic incentive mechanisms, such as taxes, subsidies and tradable permits, are in place, Romania still faces challenges in achieving its environmental goals, in particular in water and waste management and air quality protection. Hence, further actions in the area of environmental taxation are justified due to the considerable potential for increasing revenue from environmental taxes.

Recommendation 3.1:  
*The Government should:*

- (a) *Revise the existing economic incentive mechanisms and adjust them to stimulate pollution abatement and resource conservation, by increasing taxes on air and water pollution, as well as waste generation, and consider using the additional revenues to increase environmental protection expenditures;*
- (b) *Regularly implement impact assessment analyses of the existing economic incentive mechanisms, including programmes subsidized via the Environment Fund, in order to adjust them accordingly.*

#### Green public procurement

GPP represents a potentially major instrument for environmental protection. Law No. 69/2016 requires GPP to be implemented. However, this is currently not done due to the lack of concrete guidelines for public administration agents to follow. Incentives for private sector participation in the green economy are not strong enough.

#### Recommendation 3.2:

*The Government should ensure that national guidelines for green public procurement and the National Plan for Green Public Procurement are developed and disseminated across all public authorities, and that their implementation is monitored.*

#### Increase private sector participation in efforts to green the economy

As at December 2019, the administrative or legal procedures were the most important barriers that companies perceive in adopting resource efficiency measures and generally investing in business development. Also, most Romanian companies are mainly driven by the need to comply with regulations in their environmental practices and by cost considerations in their choices. Incentives for private sector participation in the green economy are not strong enough.

#### Recommendation 3.3:

*The Government should take steps to favour the participation of the private sector in greening efforts and should:*

- (a) *Ensure fiscal and legislative stability in order to provide enterprises with a long-term vision of public policy and thus favour investments;*
- (b) *Increase the support and promotion of resource efficiency measures in enterprises, in*

- particular by investing further in education and training and facilitating access to credit;
- (c) Further promote public–private partnerships, including for the development of platforms that support a circular economy through a value chain approach;
- (d) Expand and diversify the means through which the Environment Fund supports environmental programmes to include other financial instruments in addition to grants.

Research and development for greening the economy

Policies favouring circular economy initiatives and better recycling and waste management practices, for instance, are useful in decreasing material consumption while increasing resource productivity. However, expenditures on research and development in environmental protection remain low, reaching 0.2 per cent in 2013 and only 0.004 per cent in 2018 of government expenditures in environmental protection. This necessary condition for green technological change is not met.

Recommendation 3.4:

*The Government should provide more incentives for research and development in green sectors and implement policies favouring employment in research and development on environmental protection in order to achieve SDG targets 8.4 and 12.2 and to decrease material consumption while increasing resource productivity, by:*

- (a) Increasing public expenditures in research and development for environmental protection (e.g. from the Environment Fund);
- (b) Fostering collaboration between research organizations and industry (e.g. funding innovation clusters from the Environment Fund).

Investments in institutional capacity

Romania's absorption rates for EU investment funds are very low. The country is at risk of forgoing significant amounts of money for the next funding period, which would lower its chances of achieving the environmental goals that it has set. The country has benefited from significant foreign financial assistance, with the EU having a leading role since 2007. Low institutional capacity and infrastructure development have hindered the country's fund absorption capacity. Also, government capacity in negotiation of and monitoring PPP contracts is limited.

Recommendation 3.5:

*The Government should enhance institutional coordination and administrative capacity to increase absorption rates for the EU funds and to better negotiate and monitor PPP contracts.*



## Chapter 4

# ENVIRONMENTAL MONITORING AND INFORMATION

### 4.1 Environmental monitoring networks

#### Air

#### National Air Quality Monitoring Network

The National Air Quality Monitoring Network was established in 2004 and last updated in 2018. As at 2019, the Network comprised 48 background monitoring stations. Since 2016, the number of automatic air quality monitoring stations measuring

pollutants according to EU directives related to air protection has increased from 142 to 148 fixed stations, while the number of background monitoring stations has reduced from 58 in 2011 to 48 in 2019. In 2019, the air quality monitoring network covered 13 agglomerations and 41 zones. Despite the increase in air quality monitoring equipment, this constitutes only a modest increase compared with the number of technically outdated and obsolete monitoring stations, with some of them older than 12 or 15 years.

Photo 4.1: Air quality monitoring network

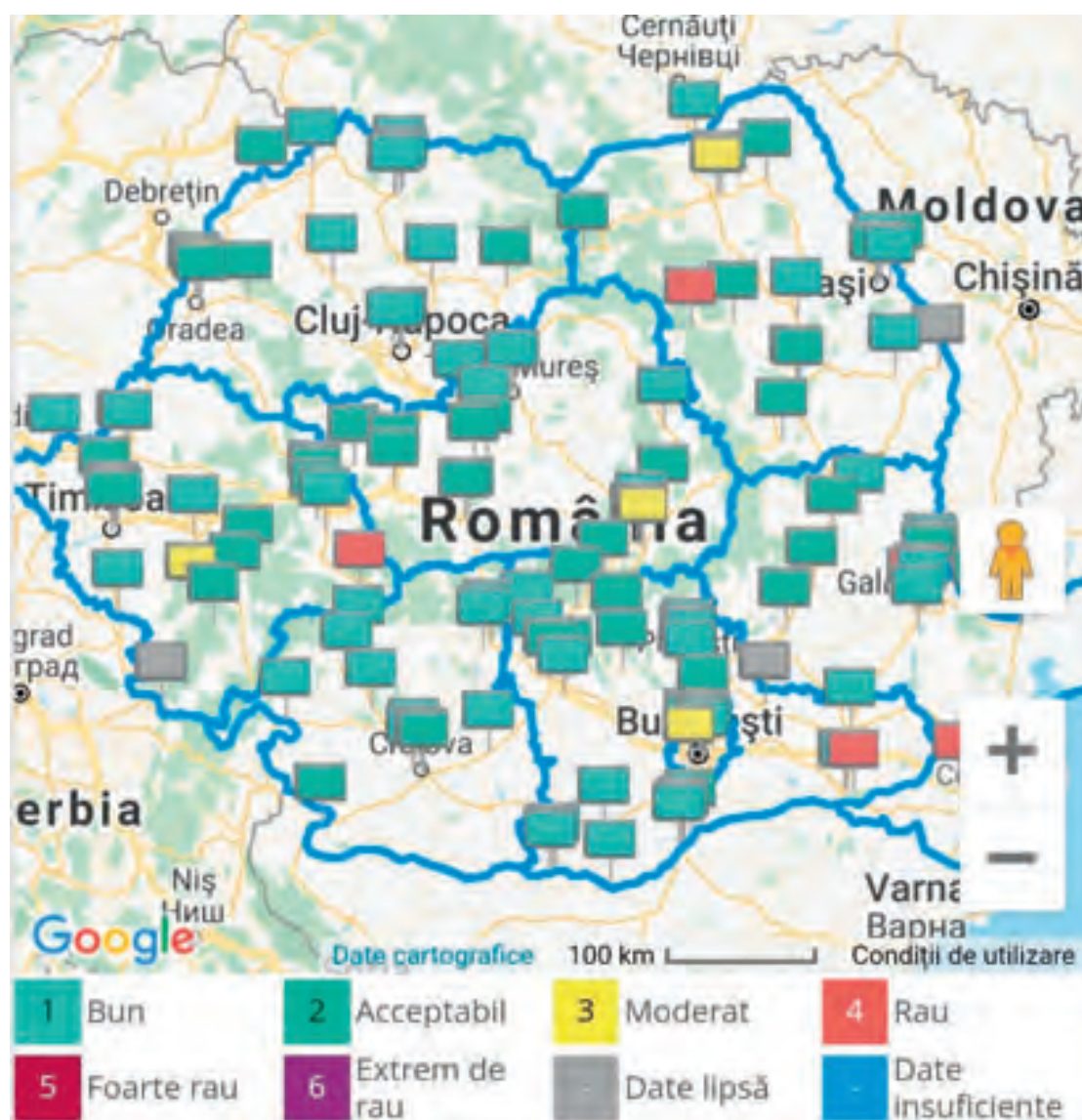


Photo credit: MoEWF

URL: [https://calitateer.ro/public/home-page/?\\_locale=ro](https://calitateer.ro/public/home-page/?_locale=ro)

Currently, the air quality monitored parameters include sulfur dioxide, nitrogen oxides, carbon monoxide, ozone, BTEX (benzene, toluene, ethyl benzene, xylene), particulate matter (PM), ammonia and lead, and meteorological parameters. Not all stations monitor all these parameters. The air quality directives require only specific parameters to be monitored, for each station type and sitting area. Since 2016, of seven new automatic air quality monitoring stations, only one, located in Râmnicu Sărat, has instruments to monitor BTEX. Since 2016, four new automatic air quality stations for monitoring PM<sub>2.5</sub> concentrations have been installed.

The monitoring stations collect data on air quality that are then sent to the local air quality database located in the LEPA, automatically via GSM transmission. At the same time, all data from the station are sent to the public website [www.calitateaer.ro](http://www.calitateaer.ro). Data are validated daily by the local agency and transmitted with a “flag” (indicator of status of the data) to the central database at the Air Quality Assessment Centre located in NEPA. Data are also certified annually by the Air Quality Assessment Centre. NEPA reports yearly air quality data to the EC.

In 2015, the Ministry of Environment, Waters and Forests began a multi-year programme covering activities for the development and optimization of the National Air Quality Monitoring Network. This programme provides maintenance activities for monitoring and calibration equipment and has been periodically implemented depending on the allocated budget. New equipment was provided to improve the Network, including the extension of sampling points for the continuous measurement of some parameters and the replacement of obsolete equipment. As the programme is still ongoing, more of the technically outdated equipment is still planned to be replaced, and new measuring points are planned to be implemented and their maintenance is expected to be continued.

Despite the introduction of the maintenance activities above, the EC has raised concerns that Romania does not have a functioning network for measuring air quality. On 25 July 2019, in a letter of formal notice to Romania, the Commission urged Romanian authorities to address a systemic failure to monitor air pollution as required by EU legislation on ambient air quality (Directive 2004/107/EC relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air and Air Quality Directive). According to the EC infringement package (2019), despite Romania’s efforts to improve its air quality monitoring network, many gaps remained concerning the appropriate number and type of air quality sampling points. These shortcomings amount

to a systemic failure to comply with obligations to monitor air quality.

It is difficult to estimate the true extent of the air pollution problem in Romania. According to the EC Environmental Implementation Review 2019 report, due to reporting and monitoring deficiencies, the compliance situation cannot be established with certainty. The Government’s attempts at effective implementation of the programme covering activities for the development and optimization of the National Air Quality Monitoring Network are severely impeded by the overall insufficient human, technical and financial capacity to ensure comprehensive monitoring of air quality. Any plans or activities aimed at addressing existing gaps and improving the current system depend on the availability of funds, mainly from international cooperation projects.

**Photo 4.2: Air quality measuring station at Mircurea Ciuc, part of air quality monitoring network**



*Photo credit: MoEWF*

There are 20 monitoring stations along Romania’s borders, located at Siret, Ungheni, Huși, Isaccea, Mangalia, Călărași (2), Modelu, Giurgiu (2), Braniștea, Turnu Măgurele (2), Zimnicea, Calafat,

Drobeta Turnu-Severin, Moldova Nouă, Moravița, Nădlac and Carei. The three European Monitoring and Evaluation Programme (EMEP) stations for long-range air pollutant transport monitoring are located at Fundata, Semenic and Poiana Stampei.

#### Other

In response to structural shortcomings that have been identified in the air quality data measured by the National Air Quality Monitoring Network, two independent air quality monitoring networks have been established, the first becoming operational on 1 October 2018, monitoring air quality in Bucharest and the nearby city of Ploiesti.

Fifteen air quality sensors record the level of pollutants in the air, the data being available at [Airly.eu/map/en/](http://Airly.eu/map/en/) or in the Airly mobile app. Of the 15 sensors, 14 are installed in the capital, reporting the PM<sub>10</sub> and PM<sub>2.5</sub> air quality indices. The sensors also register the temperature, air humidity and atmospheric pressure. Based on this information, the app can predict the times when the level of pollution is low, and walking, cycling or jogging is recommended. At the same time, the app also keeps a history of recorded values. Thus, users can avoid certain zones or hourly intervals when the level of pollution is usually high.

According to Romania Insider, a second private network that monitors air quality in Bucharest was launched on 12 December 2019. As at December 2019, the [airlive.ro](http://airlive.ro) platform measured air quality parameters in various locations in Bucharest through a network of 10 sensors and aims to reach a network of 50 sensors in 2020. As a result of the measurements made between 13 August and 3 December 2019, the network recorded 40 cases in which the average daily concentration of PM<sub>10</sub> exceeded the European daily limits imposed on air quality. The network is expected to also measure the concentration of PM<sub>2.5</sub>, carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), and sulfur dioxide (SO<sub>2</sub>), and the results would be transposed into an Air Quality Index in the future. The project was launched by the Centre for Sustainable Policies Ecopolis and the ETA2U Foundation, along with partner organizations OPTAR, 2Celsius and the Romanian Health Observatory, with the support of the IKEA Foundation for Urban Environment.

Data from these independent networks are not managed or reported by the Ministry of Environment, Waters and Forests or other authorities (i.e. NEPA) because no equivalence with the legal binding reference methods for monitoring has been established as at January 2021 and the sitting criteria for those

sensors were not documented as required by the air quality directives.

#### *Water*

In Romania, the monitoring of water status is established in accordance with the Water Framework Directive and is carried out by Romanian Waters through the 11 territorial units (water basin administrations).

Water monitoring networks cover surface water (rivers, lakes, transitional, coastal and marine waters and artificial water bodies), groundwater, protected areas and wastewater discharged by water users.

The National Integrated Water Monitoring System was established in 2006 and further developed in 2015 to comply with requirements of the EU water-related directives, implementation of international and bilateral agreements and European Environment Information and Observation Network (EIONET) reporting requirements. The System comprises six subsystems: rivers; lakes; transitional waters; coastal waters; groundwaters; and wastewater (monitoring the discharge of wastewater into natural receivers). The National Integrated Water Monitoring System was redesigned by updating the network and monitoring programmes.

A six-year planning cycle was introduced and considered as many water bodies as possible. It added water bodies for which it was not possible to apply the grouping principle and for which the assessment was made based on risk analysis, as well as the characterization of the ecological status and potential of the water bodies. Aspects related to representativeness of the monitoring sections, the number of monitoring sections or water body (related to the length of the water body), significant sources of pollution, hydrotechnical works and protected areas were considered.

The investigation media are represented by water, sediments and biota, quality elements, the parameters and the minimum frequency of monitoring.

#### Surface water

At the national level, approximately 935 surface water bodies (rivers (natural and heavily modified), natural lakes, reservoirs, artificial lakes, coastal (natural and heavily modified water bodies), transitional water bodies and territorial waters) are monitored annually. Surface water monitoring includes three monitoring programmes – surveillance, operational and

investigative – in conformity with the Water Framework Directive.

#### Surveillance monitoring programme

At national level, 1,403 monitoring sections have been established with a monitoring programme of the qualitative elements (biological and physico-chemical), of which 782 sections also monitor hydromorphological elements for surface water bodies:

- Rivers: 1,242 sections in which biological, physico-chemical and hydromorphological parameters are monitored;
- Lakes: 158 sections, in which biological, physico-chemical and hydromorphological parameters are monitored;
- Territorial waters: three sections, at various isobaths (20 m and 30 m) as well as at 12 nautical miles, for the purpose of assessing the chemical state.

#### Operational monitoring programme

At national level, 538 monitoring sections have been established, of which:

- Rivers: The network for operational monitoring of river water bodies (natural and heavily modified) is made up of 353 sections;
- Lakes: The network for operational monitoring of lake-like water bodies (natural, reservoirs and heavily modified natural lakes) consists of 149 sections;
- Transitional waters: The operational monitoring network for transitional water bodies is made up of eight sections, covering the two types of transitional waters: lacustrine and marine;
- Coastal waters: The operational monitoring network for natural and heavily modified coastal waters consists of 28 sections. Coastal water monitoring is carried out in sections/shore monitoring stations, as well as offshore sections at 5 m, 10 m, 20 m and 12 nautical miles.

#### Investigation monitoring programme

At a national level, 174 investigative monitoring sections have been established: 157 sections on river water bodies (natural, heavily modified and artificial rivers) and 17 sections on lake water bodies (natural lakes and reservoirs). Monitoring of the biological, chemical and physico-chemical elements and hydromorphological elements is performed at the following minimum frequencies, as defined in the surveillance and the operational monitoring

programme for rivers within Romanian Waters (according to annex V of the Water Framework Directive):

- For biological elements the monitoring frequency ranges from four times per year to once every three years, depending on the subsystem type;
- For hydromorphological elements the monitoring frequency is between daily and once every six years;
- For physico-chemical and chemical elements the monitoring frequency ranges from four times per year to 12 times per year.

In order to extend the national monitoring network, it has been proposed to include 194 new monitoring sections for 184 surface water bodies. Extension of the quality indicators and monitored substances took place with the implementation of the requirements of Directive 2013/39/EC amending the Water Framework Directive and Priority Substances Directive in the water policy area.

Romanian Waters has a monitoring and warning system set up across Romania. In the case of pollution, electronic notifications are sent upstream from the point of detection of pollution to help identify and locate sources of pollution and downstream to alert the occurrence of pollution. Monitoring stations on the Danube take samples at least once per day.

A monitoring ship carries out sampling work between two and four times per year in the delta and on the Danube.

#### Groundwater

At a national level, about 142 bodies of groundwater are monitored annually. Groundwater monitoring is carried out taking into account all the parameters required by the Water Framework Directive, including nutrients (nitrogen, ammonium, phosphates), with the frequency of once to twice per year (all wells and springs) for the surveillance programme and twice per year for the monitoring points included in the operational monitoring programme.

Monitoring programmes of groundwater include quantitative and physico-chemical monitoring (surveillance and operational) programmes:

- Quantitative monitoring: The measurement frequency of hydrostatic levels was 2, 3, 5 and 10 measurements per month. The recordings of these measurements are made by both observers and automatic stations. In the period 2011–2013, at a national level, the groundwater bodies were

quantitatively monitored through 2,838 wells and springs;

- Physico-chemical monitoring: At a national level, as at 2019, the number of sections monitored from a qualitative point of view was 1,601 (wells and springs), of which 1,101 provided surveillance programmes and 500 (wells and springs) were in the operational programme.

The frequency of monitoring of quantitative parameters ranges from 2 to 120 times per year for the groundwater level parameter and from 2 to 12 times per year for the spring flows parameter, for both surveillance and operational programmes. At the same time, the physico-chemical parameters of groundwater (oxygen, pH, conductivity, nitrates, ammonium, alkalinity, other nutrients (nitrites, orthophosphates), priority substances and priority hazardous substances, non-priority specific pollutants and other pollutants and parameters (including major ions) are monitored with a frequency ranging from one to two times per year (surveillance programme) and two times per year (operational programme).

According to the information received from the Ministry of Environment, Waters and Forests, an extension of the quantitative monitoring network with 95 wells and of the chemical monitoring network with 115 wells has been proposed. It has been established that, for the next planning cycle, all groundwater bodies should be included in the operational monitoring programme, given their vulnerability to pollution.

#### Drinking water

Romania has adopted the provisions laid down in the Drinking Water Directive and has developed detailed rules on audit monitoring and operational monitoring of drinking water. Water sampling and physico-chemical analysis of the water resources intended for human consumption are performed by Romanian Waters through its 11 river basin administration laboratories and water management system laboratories (at county level), which are subsidiaries of river basin administrations.

The monitoring of the quality of drinking water is carried out by the county public health departments and the Bucharest municipality (audit monitoring) and by the producers or distributors of drinking water (operational monitoring), according to the provisions of the Law No. 458/2002 on the Quality of Drinking Water and of GD No. 974/2004 for the approval of the norms of supervision, sanitary inspection and monitoring of the quality of drinking water and of the Procedure of sanitary authorization of the production

and distribution of drinking water, with subsequent modifications and completions.

Audit monitoring is carried out by the water laboratories of the Ministry of Health and the laboratories of the Public Health Institute. Operational monitoring is carried out by the drinking water laboratories of the producers or distributors of drinking water, the 43 regional operators and small operators. Since 2012, the number of analyses has increased due to improvement in the laboratory equipment. In 2018, the number of analyses completed in both audit and operational monitoring in all supply zones was 1,921,078.

The monitoring system is installed in both large water zones (supplying more than 5,000 consumers per day) and small water zones (supplying fewer than 5,000 consumers per day).

County public health departments, through their ionizing radiation hygiene laboratories, carry out ionizing radiation monitoring activities for drinking water and food (mixed diet and milk) according to Recommendation 473/2000 EURATOM and for mineral water for human consumption (bottled mineral water) based on methodologies developed by the National Institute of Public Health and approved by the Ministry of Health. They also carry out monitoring programmes for radioactive substances in drinking water in accordance with the provisions of Law No. 301/2015 laying down the requirements for the protection of the health of the population with regard to radioactive substances in drinking water (No. 904/2015), which transposes Council Directive 2013/51/EURATOM laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption.

The local public health authorities also monitor the quality of public wells in rural areas to determine whether their water quality meets the minimum drinking quality requirements, particularly in localities without centralized water supply systems where most of the drinking water is abstracted from shallow underground resources.

#### Bathing water

All nationwide identified bathing waters were monitored during a four-year period (2012–2015) based on requirements set out in GD No. 546/2008 on the management of bathing water quality. The GD transposes Directive 2006/7/CE concerning the management of bathing water quality and repealing the Bathing Water Directive. Several provisions have

since been modified by GD No. 389/2011. The measured parameters and measurement methods/standards applied are those required by the Directive and implemented by the Romanian legislation: intestinal *Enterococci* (ISO 7899-2:2002) and *E. coli* (ISO 9308-3:2004).

The 2018 World Bank report “Romania Water – Diagnostic Report” states that, in 2016, 38 bathing sites were registered, all located on inland waters, and although they are largely deemed unsatisfactory for water quality, they have not been formally rated due to lack of adequate monitoring.

The monitoring of bathing waters is carried out in 50 zones of the coastal region of the Black Sea and one zone in the district Tulcea County – Lake Ciuperca (interior water). Institutional capacities are stable and represented by the laboratories of the Public Health Department of Constanta County and Public Health Department of Tulcea County.

#### *Atmospheric precipitation and snow cover*

The atmospheric precipitation monitoring network was established in 1990 and is owned by NEPA and its LEPA. It has not been modified and currently comprises 135 monitoring stations.

The National Meteorological Administration operates a surface meteorological observation system based on a network of 166 national weather stations (all automatic, of which 23 are functioning autonomously) and the agrometeorological network. The measured parameters include: global radiation (at 109 weather stations); diffuse and net radiation (9 weather stations); effective sunshine duration (121 weather stations); and horizontal visibility and meteorological phenomena measured by a present weather detector (PWD) (15 weather stations). The observation system measures the following data:

- Synoptic and climatological observations and measurements at all 166 stations;
- Agrometeorological observations and measurements at 68 weather stations;
- Solar global radiation observations and measurements at 109 weather stations;
- Sea parameter measurements at 4 weather stations;
- Upper air observations and measurements at 1 weather station;
- Automatic snow cover observations and measurements at 4 weather stations and 11 stations for avalanche monitoring;
- Precipitation measurements at 64 rain gauges.

The national weather radar network provides information regarding cloud and precipitation systems (extent, vertical development, direction and speed, evolution) as well as related severe phenomena such as hail, heavy rain, wind gusts and tornadoes.

#### *Black Sea monitoring*

Romania is a party to the Bucharest Convention on the Protection of the Black Sea against Pollution and participates actively in monitoring programmes for observing, measuring, evaluating and analysing the risks or effects of pollution on the marine environment of the Black Sea. Under the Black Sea Commission, the countries have established the Black Sea Integrated Monitoring and Assessment Programme to facilitate monitoring, analysis and reporting. The Programme builds on established national monitoring programmes.

In the case of Romania, the National Institute for Marine Research and Development “Grigore Antipa” under the Ministry of Education and Research is located in Constanta; it has the responsibility of reporting annually to the Black Sea Commission. The Institute’s monitoring network is included in the regional Black Sea Integrated Monitoring and Assessment Programme. The Institute is the focal point and member of the Advisory Groups of the Black Sea Commission for: Biodiversity; Pollution Monitoring and Assessment; Land-based Sources of Pollution; Fishery and other marine living resources; and Integrated Coastal Zone Management. The Institute is the Regional Activity Centre for Fishery and other marine living resources. Each year, the Institute provides annual reports and monitoring data for the Advisory Groups of the Black Sea Commission, according to the country’s obligations under the Bucharest Convention.

In 2014, in the framework of the revision of the Marine Monitoring Programme in accordance with the requirements of Directive 2008/56/EC establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive), the national network of stations belonging to the National Institute for Marine Research and Development “Grigore Antipa” was expanded, covering the transitional, coastal and marine waters (territorial waters and a part of the Exclusive Economic Zones). As at December 2019, the network had 45 monitoring stations, with transects reaching up to 100 m deep and 65 nautical miles from the baseline, thus providing relevant information for the 2018 report on the ecological status of the Black Sea marine ecosystem. In addition to the national monitoring network of the Institute, there are the specific transects

for the investigations on pelagic and demersal fishery resources (under the National Fisheries Data Collection Programme) and on marine litter, as well as specific monitoring areas for macrophytobenthos (shallow area of the southern coastline) and coastal and marine habitats of community interest, and the permanent monitoring station Mamaia (daily observations).

Along with the expansion of the monitoring network (from 29 stations in 2009 to 45 stations in 2019), the gradual revision of the monitoring programme involved an increased number of monitored parameters, by introducing new elements into the monitoring programme to meet the advanced implementation requirements of the Marine Strategy Framework Directive. For example, initially the monitoring programme included physico-chemical parameters, contaminants (metals, total petroleum hydrocarbons) and some biological elements (phytoplankton, zoobenthos).

Gradually, additional elements were included in the monitoring programme: extending the range of contaminants investigated in water, sediments and organisms (organochlorinated pesticides, polychlorinated biphenyls (PCBs), polyaromatic hydrocarbons); total organic carbon; new biological elements (mesozooplankton, gelatinous macrozooplankton, microzooplankton, macrophyte algae, fish); and marine litter.

The National Institute for Marine Research and Development “Grigore Antipa” is responsible for managing, processing and collecting marine monitoring data for each parameter measured. Parameters monitored four times per year include nutrients ( $\text{NO}_3$ ,  $\text{NO}_2$ ,  $\text{NH}_4$ , N,  $\text{PO}_4$  and P), petroleum hydrocarbons, salinity, oxygen balance parameters (percentage, mg/l), suspended solids, chlorophyll-a, total suspended solids (TSS), sediment trace metals, oil and oil products, chlorinated pesticides and other physico-chemical parameters. Trace metals are monitored once a year.

The state of the marine ecosystem is evaluated on the basis of the parameters recommended by the Marine Strategy Framework Directive and the criteria in Commission Decision (EU) 2017/848 laying down criteria and methodological standards on good environmental status of marine waters and specifications and standardised methods for

monitoring and assessment, and repealing Decision 2010/477/EU:

- Physico-chemical, general and eutrophication, parameters;
- Synthetic and non-synthetic contaminants in water, sediment and biota (heavy metals, organochlorinated pesticides, PCBs, total petroleum hydrocarbons, polycyclic aromatic hydrocarbons);
- Bacterial indicators;
- Quality biological parameters (phytoplankton, zooplankton, macrozoobenthos, macroalgae, fish, mammals);
- Fishery resources;
- Marine litter;
- Change of shoreline, topography of emerged and submerged beach;
- Monitoring activities of noise that may affect the structure of the ecosystem.

The work of National Institute for Marine Research and Development “Grigore Antipa” is based on the Marine Strategy Framework Directive. Initial assessment of marine status was elaborated in 2012, following the 11 Quality Descriptors of the Marine Strategy Framework Directive, covering biodiversity – pelagic and benthic habitats, eutrophication, contaminants, marine litter and fishery resources. In its 2018 report, the Institute provided better coverage of the assessment areas and introduced new parameters into the monitoring programme.

Chemical analysis of water samples, sediments and organisms is carried out by reference methods in chemical oceanography and marine pollution, agreed at regional and international levels. In the laboratory of measurements and physico-chemical analyses, procedures comply with ISO 17025:2005 requirements for ensuring and controlling data quality, internal validation of methods and estimation of measurement uncertainty. Procedures for ensuring and controlling the quality of oceanographic data are applied, including through participation in European programmes for comparing analytical data, such as QUASIMEME<sup>43</sup> and IAEA-MEL.<sup>44</sup> Also, analysis of biological samples (plankton, benthos and fish) is done according to the methodological guidelines agreed in the Black Sea Region. The specialized laboratories of the National Institute for Marine Research and Development “Grigore Antipa” have all the necessary equipment to carry out processing procedures and analysis of samples collected in sampling campaigns.

<sup>43</sup> [www.quasimeme.org/](http://www.quasimeme.org/).

<sup>44</sup> [www.iaea.org/about/organizational-structure/department-of-nuclear-sciences-and-applications/division-of-iaea-environment-laboratories/marine-environmental-studies-laboratory](http://www.iaea.org/about/organizational-structure/department-of-nuclear-sciences-and-applications/division-of-iaea-environment-laboratories/marine-environmental-studies-laboratory).

### *Soil*

The status of soil monitoring has not changed since 2012. The National Research and Development Institute for Soil Science, Agrochemistry and Environment implements the National Monitoring System for Soil based on the classification and types of soil in Romania and analyses the physical and chemical parameters of soil (organic contents, pH, nitrite, nutrients, nitrogen) under the coordination of the Ministry of Agriculture and Rural Development and, in the event of accidental pollution, in cooperation with LEPAs.

### *Noise and vibration*

At the level of the environmental protection authorities, no noise monitoring system is developed. Noise is evaluated by measurements performed by the noise laboratories in order to report on the state of the environment.

No monitoring of vibrations is carried out, and neither are there available data on environmental exposure to vibrations.

### *Radioactivity*

The National Environmental Radioactivity Surveillance Network is subordinated to the central public authority for environmental protection, coordinated by NEPA and administered by environmental protection agencies. Monitoring of radioactivity on Romanian territory is carried out by NEPA and the LEPAs. NEPA operates the National Reference Radioactivity Laboratory, which provides radiation monitoring through the automatic early warning system and ensures the scientific and methodological coordination of the National Environmental Radioactivity Surveillance Network.

The status of the Network has remained unchanged since 2012. At December 2019, the Network had 38 laboratories covering the entire territory and automatic stations, i.e. the National Reference Radioactivity Laboratory, as coordinator of the Network, and 37 local laboratories, named environmental radioactivity surveillance stations). The National Reference Radioactivity Laboratory is responsible for daily collection, verifying, validating and reporting of environmental radioactivity monitoring data from the Network to the national competent authorities and to the EC through the European Radiological Data Exchange Platform managed by the Joint Research Centre of the EC. In addition, NEPA is responsible for

the country report on radioactivity to the EC in REM DB.<sup>45</sup> This database also contains data reported by the Ministry of Health. The local laboratories and automatic stations operate under the LEPAs. The 37 local laboratories perform gross beta analyses for air (atmospheric aerosols, total deposition (dry and wet, daily)), surface water, spontaneous vegetation and uncultivated soil. Daily precipitation and surface water samples are also measured by beta spectrometry, using the liquid scintillation counting method, following monthly cumulation. All samples are measured by gamma spectrometry, as monthly accumulated samples.

The automatic National Environmental Radioactivity Surveillance Network stations, monitoring the gamma dose rate all over the country and particularly at locations close to NPPs, are located as follows:

- 31 automatic gamma dose rate monitoring stations in the areas influenced by the NPP Cernavodă, covering Constanta County, Calarasi County and Ialomita County;
- 15 automatic gamma dose rate monitoring stations in the areas on Romanian territory influenced by the NPP Kozloduy, in Dolj County;
- 40 automatic gamma dose rate monitoring stations covering the rest of the national territory.

Since 2012, no automatic monitoring of water radioactivity has taken place, due to the destruction by natural disasters of the five automatic stations for monitoring radioactivity in water; instead, monitoring is carried out daily by laboratory methods.

Since 2012, the automatic gamma dose rate data have become available to the public in near real time, on NEPA's website.

### *Biodiversity*

The National Strategy and Action Plan for Biodiversity Conservation 2014–2020 (NBSAP) draws attention to the lack of a national system of monitoring the conservation state of the wild species and natural habitats of community interest. Such a system would serve as the basis for the reports Romania will submit to the EC on the implementation of community provisions in the field, as well as to biodiversity-related multilateral environmental agreements (MEAs).

A system for biodiversity monitoring has been established and some wild species and habitats are included in programmes and research projects

<sup>45</sup> <https://rem.jrc.ec.europa.eu/>.



undertaken by universities, museums, research institutes and NGOs. The ministry in charge of the environment has carried out monitoring of some flora and fauna and bird populations in known locations as a basis for understanding where challenges may occur. However, the ministry has already reported to the EC under article 12 of the Birds Directive and article 17 of the Habitats Directive. Most data reporting activities under biodiversity-related MEA obligations and under nationally designated areas are being carried out on a project basis and/or are dependent on international projects.

### *Forests*

The National Forest Inventory is carried out every five years and is based on a 4 x 4 m systematic grid covering the entire country. It is based on systematic sampling, combines repeated measurements in permanent sample areas with measurements in temporary sample areas, and is a two-stage process (forest assessments and measurements on orthophotoplans followed by those in the field). The National Forest Inventory website publishes the results. It is worth noting that the National Forest Inventory is a statistical tool that provides information

regarding the development, area and structure of the nation's forests. However, the National Forest Inventory is based on the processing of reported data and does not represent a census of all trees in Romania.

In November 2019, the Government pledged financial and logistical resources for the third cycle of the National Forest Inventory and a budget allocation for the purchase of satellite maps to further develop the work of the satellite traceability system.

### *Waste*

NEPA collects data on waste management annually. Data collection formats are specific to each type of activity, for example, waste generation, waste collection, municipal waste collection and waste treatment, and each waste stream (packaging waste, WEEE, waste batteries, end-of-life vehicles). The operators that ensure the collection and treatment of municipal waste report to the local public administration according to the specific contractual provisions. NEPA does not receive information from other entities that collect data on waste, such as NGOs and academia, who are assumed to carry out such activities occasionally, within certain projects.

**Photo 4.3: Informative tour, Balta Mică a Brăilei Natural Park**



*Photo credit: Romsilva, MoEWF*

The collected data are validated and subsequently processed both for the purpose of reporting to Eurostat (including according to Regulation 2150/2002 regarding waste statistics) and the Directorate-General for Environment, and to answer other enquiries. The information can also be found in the annual State of the Environment Report and in other materials published on the NEPA website in the Waste section.

#### *Seismic activity*

According to SDS 2030, Romania has networks of geophysical sensors for the monitoring of seismic activity that send real-time data back to the National Institute for Earth Physics, the National Data Centre in Măgurele, and the Data Acquisition Centre of the Seismic Observatory in Eforie Nord Dobrogea.

This network is comprised of the Network of Seismic Observatories and Seismic Stations, Global Navigation Satellite Systems (GNSS) stations, magnetic field sensors and an infrasound network. The data provided by the networks of geophysical sensors are constantly monitored by staff at the National Institute for Earth Physics. These data are used for the purposes of research, national security and civil defence.

## **4.2 Analytical laboratories**

#### *Air and environmental radioactivity*

There are 42 operational laboratories equipped with the necessary equipment for air quality analysis and 19 mobile monitoring laboratories. Of the 42 operational laboratories, 41 are in LEPAs. The National Reference Laboratory for Air Quality under NEPA received accreditation ISO 17025 on general requirements for the competences of testing and calibrating laboratories, by RENAR, in September 2011. The 41 laboratories located in LEPAs are not accredited by RENAR, but all of them had implemented the quality policy according to ISO 17025, which can be proved with the Quality Manual and Procedures (general, specific, operational).

The same management system is being implemented in the laboratories of NEPA and the LEPAs. In essence, the only difference between the laboratories of NEPA and the LEPAs are that local laboratories do not possess an accreditation certificate from RENAR as they are not obliged to do so by law, while the National Reference Laboratory for Air Quality is mandated by law to have RENAR accreditation for the analyses that it performs. Because accreditation is a voluntary act in Romania, LEPAs' laboratories do not apply for accreditation for financial reasons.

The National Reference Radioactivity Laboratory under NEPA and three mobile monitoring laboratories support the National Environmental Radioactivity Surveillance Network and are under NEPA, in Bucharest, and the Environmental Radioactivity Surveillance Station Cernavodă and Environmental Radioactivity Surveillance Station Bechet.

The two national reference laboratories under NEPA send specific laboratory procedures to the LEPAs' laboratories. These laboratories implement the same quality manual and follow general and specific procedures as in NEPA's laboratories, thus maintaining a uniform process of analysis. NEPA's national reference laboratories perform training courses for staff of LEPA laboratories, as well as proficiency tests, in order to ensure the quality of the results reported by LEPAs. Local experts apply internationally agreed methodology.

The air quality and environmental radioactivity networks, including the national reference laboratories and local laboratories, face challenges related to insufficient funding and staff for servicing, updating and calibrating monitoring and calibration equipment. In the past seven years, the equipment of NEPA's reference laboratories has not been changed, while the staff capacity has been reduced by at least 30 per cent. Furthermore, the lack of staff able to operate the equipment can affect prompt response to an emergency, as well as timely response to current activities.

#### *Water*

One national laboratory, five regional laboratories with high-performance analytical equipment located in Bucharest, Râmnicu Valcea, Bacau, Cluj and Constanta, and 41 local laboratories with equipment for analysis under general physico-chemical parameters operate under Romanian Waters. Two laboratories are involved in the monitoring of transitional, coastal and marine waters: Dobrogea-Litoral Water Basin Administration and the National Institute for Marine Research and Development "Grigore Antipa".

Public well waters are analysed in the laboratories of county public health departments once a year. Individual well water quality is analysed upon request from the consumer.

The Ministry of Health posts at [www.ms.ro](http://www.ms.ro) the list of laboratories conducting the official control of drinking water. All the laboratories that conduct drinking water analyses must be either in the national register of laboratories or have measurement methods accredited

by RENAR. However, since 2012, there has been concern regarding the condition of the equipment in the laboratories of the producers or distributors of drinking water and laboratories in the network of the Ministry of Health.

### 4.3 Availability of information on environment and sustainable development

#### *Data reporting by enterprises*

The Law No. 278/2013 on Industrial Emissions provides the general framework for the authorization, operation, monitoring and environmental inspection of installations and activities in important sectors of the economy. MO No. 818/2003 for the Approval of the Procedure for Issuing the Integrated Environmental Permit establishes the mandatory monitoring method for pollutant emissions, which includes the methodology of measurement, frequency and evaluation procedure and the obligation to provide the authorities with the results of self-monitoring at least once a year.

The basis for establishment of the conditions of the integrated environmental permit are the BAT conclusions approved by Implementing Decisions issued by the EC. These BAT conclusions also contain monitoring conditions for the relevant pollutants, in the fields of activity set out in annex 1 of the Law on Industrial Emissions. The 2018 JRC Reference Report on Monitoring of Emissions to Air and Water from IED Installations of the Joint Research Centre provides practical guidance for the application of the BAT conclusions on monitoring.

As at December 2019, 70 combustion plants and 31 incineration and co-incineration plants subject to Law No. 278/2013 carry out continuous monitoring of specific pollutants. The operators of the installations that carry out activities set out in annex 1 of that Law submit annual environmental reports containing data on their operations and annual emissions of pollutants to environmental authorities, the respective LEPA, Romanian Waters and, as applicable, the Environment Fund Administration. In the case of air quality monitoring, some operators are required to monitor their own air quality indicators, but there is no register of them held by NEPA.

The current level of environmental reporting by Romanian-registered companies is still very low. In fact, some enterprises do not submit information to LEPAs, even though they have the raw data available. As at December 2019, the information and data

reported in corporate environmental reports are generally incomplete and largely irrelevant to the public. This leads to the conclusion that Recommendation 3.1 in the Second EPR of Romania in 2012, urging the then Ministry of Environment and Forests to strengthen the compliance of enterprises, in particular registered companies, with their environmental self-monitoring and reporting obligations, and to link self-monitoring data submitted by enterprises with data collected by national monitoring programmes, has been partially implemented.

#### *Corporate social responsibility*

Romania's efforts regarding implementation of the corporate social responsibility (CSR) principles, including in support of achieving SDG target 12.6 (Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle), took an important step forward through the implementation of the National Strategy to Promote Social Responsibility 2011–2016. Furthermore, as of 2017, Romanian companies with more than 500 employees are required to elaborate sustainability reports each year to show the environmental impact of their actions upon the sustainable development of the community in which they are located.

As at December 2019, Romania had not established a national indicator enabling it to report on global indicator 12.6.1 (Number of companies publishing sustainability reports). Romania does not have a mechanism in place for data collection on the number of CSR or sustainability reports published by companies. Although SDS 2030 contains aspirations to “encourage companies, especially large and transnational companies, to adopt sustainable practices and integrate sustainability data into their reporting cycle”, it provides no information on the current status of CSR initiatives in the country.

By 2019, 28 companies with more than 500 employees had submitted non-financial reports on Directive 2014/95/EU amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups, to the Sustainability Disclosure Database,<sup>46</sup> covering the period 2015–2017. In total, there are 103 CSR reports published for the period 1999–2020. The top reporting sectors include energy, financial services, retail and telecommunications.

<sup>46</sup> <http://database.globalreporting.org/SDG-12-6/Country-Tracker/RO>.

Review of the content of the published reports suggests that Romanian companies provide only general information regarding their environmental impact, information which is often incomplete and irrelevant to the public. The numerous CSR initiatives at the country level still lack coordination, while a lack of investors' sophistication creates an impediment to CSR becoming a strategic tool for sustainable development.

#### *Environmental statistical data*

The National Institute of Statistics publishes annual publications as follows:

- Environment Economic Account containing related statistical data;
- Environment Statistics Series – Environmental Protection Expenditure, which comprises statistical data on total expenditure for environmental protection, investments, expenditure for environmental protection, subsidies and transfers;
- Environment Statistics – Water Distribution and Wastewater Disposal, which contains statistical data on the volume of water supplied to consumers, industrial wastewater and residual water volume generated and quantities of pollutants, and the population served by the public water supply and inhabitants of the dwellings connected to sewerage and wastewater treatment systems.

All environmental statistics produced by the Institute are made publicly available online on its website, in both English and Romanian. While online statistical data are easily accessible via links provided on the website, in some cases, data are outdated, and the Environmental Accounts Publication is not available free of charge. Both these factors hinder open access to environmental data.

#### *Databases*

##### Air pollutants emissions inventory

Romania prepares, maintains and reports on a yearly basis the national emissions inventory and the inventory time series, according to the reporting obligations under the Convention on Long-Range Transboundary Air Pollution and Directive 2016/2284, amending Directive 2003/35/EC and repealing Directive 2001/81/EC.

NEPA and the LEPAs collect data from the operators and other providers, for example, city halls or transport authorities, with a view to the compilation of the annual inventories of atmospheric emissions at the county and national levels. The inventory is delivered to the Ministry of Environment, Waters and Forests, which performs the final check and submits the files to the EC (Directorate-General Environment) and ECE by uploading to the EIONET/Central Data Repository.

The inventory is accompanied by the Informative Inventory Report (IIR),<sup>47</sup> describing the data and methods used for the compilation of the inventory and presenting the trends in air emissions and explanations of emissions sources. This reporting obligation is an EIONET core data flow and the delivery process is managed by EEA. Data and reports are available to both public authorities and the general public on the EEA/EIONET/Central Data Repository webpage and the NEPA webpage<sup>48</sup> as links to the main repository. Data for the period 1990–2018 were submitted on 13 March 2020.<sup>49</sup>

The compilation of the annual national inventory of air emissions requires various sources of data, including Eurostat, national statistics and data directly collected from operators and other stakeholders. The bottom-up collection of activity data and the calculation of the correspondent emissions is part of the Integrated Environmental Information System, one module of which is dedicated to this scope. The collection of data

<sup>47</sup> [https://cdr.eionet.europa.eu/ro/un/clrtap/iir/envxiu0cw/RO\\_IIR\\_2019.pdf](https://cdr.eionet.europa.eu/ro/un/clrtap/iir/envxiu0cw/RO_IIR_2019.pdf).

<sup>48</sup> [http://anpm.ro/inventare-emisii-poluanti-in-atmosfera/-/asset\\_publisher/m39YwLQRdfPW/content/inventar-national-de-emisii-de-poluanti-atmosferici?\\_101\\_INSTANCE\\_m39YwLQRdfPW\\_redirect=http%3A%2F%2Fwww.anpm.ro%2Finventare-emisii-poluanti-in-atmosfera%3Fp\\_p\\_id%3D101\\_INSTANCE\\_m39YwLQRdfPW%26p\\_p\\_lifecycle%3D0%26p\\_p\\_state%3Dnormal%26p\\_p\\_mode%3Dview%26p\\_p\\_col\\_id%3Dcolumn-2%26p\\_p\\_col\\_count%3D1](http://anpm.ro/inventare-emisii-poluanti-in-atmosfera/-/asset_publisher/m39YwLQRdfPW/content/inventar-national-de-emisii-de-poluanti-atmosferici?_101_INSTANCE_m39YwLQRdfPW_redirect=http%3A%2F%2Fwww.anpm.ro%2Finventare-emisii-poluanti-in-atmosfera%3Fp_p_id%3D101_INSTANCE_m39YwLQRdfPW%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26p_p_col_id%3Dcolumn-2%26p_p_col_count%3D1&redirect=http%3A%2F%2Fwww.anpm.ro%2Finventare-emisii-poluanti-in-atmosfera%3Fp_p_id%3D101_INSTANCE_m39YwLQRdfPW%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26p_p_col_id%3Dcolumn-2%26p_p_col_count%3D1).

<sup>49</sup> [https://cdr.eionet.europa.eu/ro/eu/nec\\_revised/inventories/envxmtkvw/](https://cdr.eionet.europa.eu/ro/eu/nec_revised/inventories/envxmtkvw/) and [https://cdr.eionet.europa.eu/ro/eu/nec\\_revised/inventories/envxiukwa/Annex\\_I\\_RO\\_1995\\_2017\\_NEC.xls/manage\\_document](https://cdr.eionet.europa.eu/ro/eu/nec_revised/inventories/envxiukwa/Annex_I_RO_1995_2017_NEC.xls/manage_document).

in this e-system started in 2013, with full capacity established in 2016. Data regarding production, fuel consumption, technologies and parameters are introduced to the database by users, validated by LEPA and verified by NEPA. Data are used by LEPA and NEPA for various reports, projects and estimations, including compilation of the national emissions inventory. Availability to the general public of input data is limited, due to confidentiality clauses related to the economic data of companies.

Air emissions values and trends are available to the general public in the annual emissions inventory reports and annual reports on the state of the environment.

#### National air quality monitoring system

There is one central database (with a Bucharest-based server) for air quality monitoring data. The air quality data from all 148 monitoring stations are transmitted to the central server and are available to the public in near-real time (hourly averages for the last hour) through the web page [www.calitate aer.ro](http://www.calitate aer.ro) and can be exported as Excel files with time series starting with 2007. In addition, data are available on public display panels located in major cities and information points located in the city halls.

The raw data are transmitted online by the sensors of the stations. These are validated practically automatically (by software). At the data centres of LEPA, specialist staff manually validate all these data according to an official data validation procedure. At NEPA, the validated data are certified, on a quarterly and yearly basis. There is also an internal procedure for data ratification. These data can be accessed by interested members of the public, specialists, and NEPA/AQ Assessment Centre in order to carry out Romania's reporting obligations to the EC Convention on Long-Range Transboundary Air Pollution and Directive 2016/2284. Available time series span from 2007 to the present.

#### Combustion plants inventory

From 2014, the operators of combustion plants use the Integrated Environmental Information System to report data requested under Law No. 278/2013. The Integrated Environmental Information System includes the online reporting system for economic operators (<https://raportare.anpm.ro>), as well as the validation of the reports by the persons responsible within the county agencies for environmental protection. To date, the combustion plants database contains information for the period 2014–2018. It has

no connections or data exchange protocols with international databases.

#### National greenhouse gas inventory

The database is structured around the Common Reporting Format (CRF) categories structure as it was defined and agreed as part of the United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines for annex I parties to the Convention on annual GHG inventories. The database comprises data and information on activity data, emission/removal factors, and emissions and removals and other associated data and information.

Data and information were collected from public and private institutions in the case of activity data, from methodologies associated with the guidelines (default values) or from national studies in the case of emission/removal factors, while the emissions/removals data are generated through estimation by NEPA and other partners with this responsibility.

Depending on specific legal provisions in relation to the inventory, data and information are, in general, available for the period baseline year (in the case of Romania, 1989) and year  $x-2$ ,  $x$  being the year in which the inventory is officially submitted (chapter 7). Data and information are fed into the database using the dedicated software CRF Reporter, which is used for the preparation and official submission of the inventory, as part of the inventory preparation cycle. The team involved in the preparation of the inventory has access in the first instance to the data and information in the database.

Data and information from the database are submitted by Romania to the UNFCCC Secretariat, EC and EEA.

#### Marine species and habitats database

Within the framework of the project “Monitoring of species and habitats of community interest based on article 17 of the Habitats Directive” at the level of the National Institute for Marine Research and Development “Grigore Antipa”, a spatial database of geodatabase type was created with the results of monitoring activity for marine species and coastal and marine habitats of community interest. The database has been integrated into the national monitoring system “SIMSHAB” for species and habitats. Information and spatial data on the monitoring of marine species and habitats form the basis of the national report as provided for in the Habitats Directive and the implementation of the Natura 2000 network at the national level.

### Biodiversity database

According to the Fifth National Report of Romania to the Convention on Biological Diversity (CBD) (2014), the first national assessment of conservation status of species and habitats of EU interest, which provides a comprehensive database of wild fauna and flora in Romania (including distribution and range maps and status of conservation), has been completed.<sup>50</sup>

Under the INSPIRE geoportal, a spatial data set<sup>51</sup> represents the most complete and detailed official data set of the boundaries of the protected natural areas in Romania reported by the ministry responsible for environmental protection. As at April 2020, the spatial data set contains all 1,550 protected natural areas currently designated on the national terrestrial and marine territory. The spatial data set contains the boundaries of the protected natural areas established through implementation of the project “Making spatial data sets according to the Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE Directive) technical specifications for the protected natural areas, including Natura 2000 sites, taking into account the optimization of their management facilities”. The project was carried out between March 2014 and November 2015. Furthermore, the spatial data set contains the boundaries of the sites of community importance listed in annexes No. 1 and 2 of the Order of the Minister of the Environment, Waters and Forests No. 46/2016 and realized within the project “Strengthening the Natura 2000 network”. The project was implemented between 2015 and February 2016 by the National Institute for Development Research of the Danube Delta and NIRDF.

According to the NBSAP (2014–2020),<sup>52</sup> despite there being existing databases for biodiversity, there is no coordination point for data integration and information management in Romania. The major difficulties are related to insufficient staff and reorganization of environmental agencies.

### Pollutant release and transfer register

The national pollutant release and transfer register (PRTR) is part of the Integrated Environmental

Information System. It complies with the European requirements and allows for the accountability of the economic agents that operate industrial installations and their awareness regarding their environmental obligations. The PRTR also features a website,<sup>53</sup> online reporting dedicated to operators,<sup>54</sup> validation tools and the granting of access to other institutions involved in validation.

### *Indicators and information for Sustainable Development Goals*

The National Institute of Statistics maintains a publicly available database “Sustainable Development Indicators in Romania (SDIR)”,<sup>55</sup> in Romanian and English. The database includes indicators pursuant to the objectives and actions established by the National Strategy for Sustainable Development for 2013, 2020 and 2030. The set of 103 indicators is organized hierarchically: level 1 – main indicators (19 indicators); level 2 – complementary indicators, used to monitor and review sustainable development programmes (37 indicators); and level 3 – progress indicators of the Strategy covering the range of policies it generates, including those not covered by the EU strategy (47 indicators). SDIR is harmonized and consistent with the indicators used in the EU. SDIR indicators, with data series, have been available in the national statistical system since 2000. The database will be updated and supplemented with other indicators as they are developed and made available.

Romania is also reporting on SDG global indicators to Eurostat, which regularly monitors progress towards the SDGs in an EU context.<sup>56</sup>

### *Implementation of Shared Environmental Information System principles*

Romania does not have a separate policy or a strategy for the implementation of Shared Environmental Information System (SEIS) principles. Instead, Romania has concentrated on: implementation of the INSPIRE Directive; development of the Integrated Environmental Information System; and the use of data from Copernicus for different projects, for example, on Bathing Water Quality Monitoring in the Black Sea.

<sup>50</sup> <http://biodiversitate.mmediu.ro/>.

<sup>51</sup> [https://inspire-geoportal.ec.europa.eu/download\\_details.html?view=downloadDetails&resourceId=%2FINSPIRE-7edbed58-ddbc-11e4-b469-52540004b857\\_20200416-082302%2Fservices%2F1%2FPullResults%2F21-40%2Fdatasets%2F1&expandedSection=metadata](https://inspire-geoportal.ec.europa.eu/download_details.html?view=downloadDetails&resourceId=%2FINSPIRE-7edbed58-ddbc-11e4-b469-52540004b857_20200416-082302%2Fservices%2F1%2FPullResults%2F21-40%2Fdatasets%2F1&expandedSection=metadata).

<sup>52</sup> [www.cbd.int/doc/world/ro/ro-nbsap-v3-en.pdf](http://www.cbd.int/doc/world/ro/ro-nbsap-v3-en.pdf).

<sup>53</sup> <http://prtr.anpm.ro/>.

<sup>54</sup> <https://raportare.anpm.ro>.

<sup>55</sup> [https://insse.ro/cms/files/Web\\_IDD\\_BD\\_en/index.htm](https://insse.ro/cms/files/Web_IDD_BD_en/index.htm).

<sup>56</sup> <https://ec.europa.eu/eurostat/web/sdi/overview>.

NEPA manages environmental data through the Integrated Environmental Information System. The System represents the single point of online interaction of the public with NEPA and LEPAs. The data sources also include online submissions based on the reporting obligations of physical and legal persons and the primary database related to the gamma dose rate automatic monitoring stations.

As at December 2019, some issues in connection with the hardware for the database had been reported as the current licence covers only software, which impedes the effective work of the Integrated Environmental Information System.

NEPA maintains a dedicated national environmental portal<sup>57</sup> that has a viewing service. This portal provides access to legal documentation but offers little in terms of monitoring data or historical datasets.

#### *Environmental reporting and publication of environmental data*

Reporting of the national air emissions inventories (annually), emissions projection (every two years) and gridded emissions data and large point sources (every five years) are requested under the Convention on Long-range Transboundary Air Pollution and Directive 2016/2284. Data and reports are available to both public authorities and the general public on the EEA/EIONET/Central Data Repository webpage and on the NEPA website as a link to the main repository.

The national emission projections, gridded emissions data and large point sources are developed by the Ministry of Environment, Waters and Forests by study performed through public procurement. Data and reports are available to both public authorities and the general public on the EEA/EIONET/Central Data Repository webpage.

The INSPIRE geoportal is the central European access point to the data provided by EU Member States and several European Free Trade Association (EFTA) countries under the INSPIRE Directive. There is no link between the INSPIRE geoportal and the environmental portal. According to the EC Country Fiches Report (2016), the necessary data-sharing policies allowing access to and use of spatial data by national administrations, other Member States' administrations and EU institutions without procedural obstacles are available but not yet fully implemented. The Fiches Report (2016) concludes

that monitoring reports issued by Romania and the spatial information that Romania has published on the INSPIRE geoportal indicate that not all spatial information needed for the evaluation and implementation of EU environmental law has been made available or is accessible. Although Romanian public authorities are obliged to share spatial data free of charge between public administrations, lack of resources, knowledge and collaboration has delayed implementation.

All air quality monitoring data are available on the website [www.calitateaer.ro](http://www.calitateaer.ro). Those data are used for local daily public information bulletins, which are published on LEPAs' websites, and for the national air quality bulletins, published on NEPA's website, [www.anpm.ro](http://www.anpm.ro). The entire series of air quality monitoring data are available on the website and complex and complete reports could be obtained using the website data selection and report generation functions.

Other reported information is included in the National PRTR<sup>58</sup> and available to the public two months after the deadline for reporting to the EU Member States is established, according to the provisions of the E-PRTR Regulation (Regulation EC No. 166/2006) (e.g. as at April 2020, data for 2017 were available). So far, both the European E-PRTR and the National PRTR contain information for the period 2007–2017.

The guidance document on reporting under the Drinking Water Directive forms the basis for reporting annual data from the 42 county public health departments, which publish annual reports on the status of drinking water quality on their respective websites. Data are collected from the stakeholders and from the drinking water laboratories in the Ministry of Health's network. The National Centre for Risk Monitoring in the Community Environment subordinated to the National Institute of Public Health compiles and publishes the national reports on drinking water quality.<sup>59</sup> Reports are sent to the EC every three years. The monitoring results are reported to the EC by using the EIONET portal. As at December 2019, the report with results for the period 2017–2019 is being prepared. The Centre also publishes an annual report on Health and Environment.

On a quarterly basis, the National Institute of Public Health collects and processes the results of monitoring activities of ionizing radiation for drinking water and

<sup>57</sup> <http://atlas.anpm.ro/atlas>.

<sup>58</sup> <http://prtr.anpm.ro>.

<sup>59</sup> [www.insp.gov.ro/cnmrmc](http://www.insp.gov.ro/cnmrmc).

food (mixed diet and milk) and of ionizing radiation for mineral water for human consumption (bottled mineral water) and reports annually to the EC through NEPA and also to the Ministry of Health. The Institute collects annually the results of monitoring activities of radioactive substances in drinking water, which are then included in the annual report published on its website.

The Ministry of Health posts on its website<sup>60</sup> a report on the quality of bathing water and the calendar for sampling and analysis of bathing waters before the beginning of the season. Detailed information on Romania's bathing waters is available from a national web portal and via an interactive map viewer designed and hosted by EEA.

#### State of the Environment Reports and environmental indicators

In Romania, State of the Environment Reports are drawn up annually at national and county level,<sup>61</sup> in Romanian and English, and are based on the EEA's core set of indicators. As at December 2019, the last report was for the year 2018 and available online in both Romanian<sup>62</sup> and English.<sup>63</sup> The reports at county level are posted on the respective LEPA's website. The reports are compiled by NEPA and approved by the Ministry of Environment, Waters and Forests. These reports present information to public authorities and the population on the evolution of the quality of environmental factors: the state of the atmosphere, the waters and soils, the state of forests, natural habitats, flora and fauna, the state of the environment in urban settlements, and the situation on noise pollution, radioactivity and waste.

Since 2016, the annual State of the Environment Reports focus on the environmental problems and offer assessments about the environment and scenarios for its evolution, as well as providing information on the actions that are being taken and what should or can be done to improve the environment. For this purpose, the annual reports use 37 core indicators established by EEA, supplemented by 34 other indicators, specified by the Order of the Ministry of Environment, Waters and Forests No. 618/2015 "concerning the elaboration of the Annual Report on the state of the environment". Hence, the reports follow, as closely as possible, the current EU approach in describing the development of Romanian environmental policies and the trends in this field.

#### State of the Marine and Coastal Environment

The National Institute for Marine Research and Development "Grigore Antipa" reports on the State of the Marine and Coastal Environment annually, including results of the monitoring programme and other scientific projects. The report is part of the annual national State of the Environment Report in Romania, elaborated by NEPA.

#### *Linkages of environmental monitoring systems with other monitoring systems*

Romania's national Integrated Environmental Information System aims to optimize environmental data flows between relevant institutions and integrate these into a single interconnected system of interoperable databases for improved access and accurate use of environmental information by all concerned stakeholders, including government agencies and the general public. As at April 2020, however, there is a lack of dataflow between different systems and therefore the Integrated Environmental Information System is not yet fully operational.

#### **4.4 Legal and institutional framework**

##### *Legal framework*

The main specific legislative acts regulating air quality monitoring are: (i) Emergency Ordinance No. 195/2005 on environmental protection, approved by Law No. 265/2006, with subsequent amendments and completions; (ii) Law No. 104/2011 on ambient air quality, with subsequent amendments; (iii) GD No. 257/2015 regarding the approval of the methodology for the development of air quality plans, short-term action plans and air quality management plans; (iv) Order of the Minister of Environment, Waters and Forests No. 598/2018 for the approval of the lists of administrative-territorial units established following the inclusion in the management regimes of the areas and agglomerations listed in annex No. 2 to Law No. 104/2011; and (v) Order of the Minister of Environment, Waters and Forests No. 36/2016 for the approval of the lists of administrative-territorial units drawn up following the classification in the zones for assessment of the areas and agglomerations listed in annex No. 2 to Law No. 104/2011.

The main specific legislative acts regulating environmental radioactivity and radioactive discharge

<sup>60</sup> [www.ms.ro](http://www.ms.ro).

<sup>61</sup> [www.anpm.ro/raport-de-mediu](http://www.anpm.ro/raport-de-mediu).

<sup>62</sup> [www.anpm.ro/documents/12220/2209838/RSM+2018.pdf/e24e1dd6-450e-46bf-86e4-cff9a3482610](http://www.anpm.ro/documents/12220/2209838/RSM+2018.pdf/e24e1dd6-450e-46bf-86e4-cff9a3482610).

<sup>63</sup> [www.anpm.ro/documents/12220/2209838/Indicatori+RSM+2018+-+EN.pdf/7875bbc5-b9e4-4e83-821c-f7a8fc9ac487](http://www.anpm.ro/documents/12220/2209838/Indicatori+RSM+2018+-+EN.pdf/7875bbc5-b9e4-4e83-821c-f7a8fc9ac487).



monitoring are: (i) Emergency Ordinance No. 195/2005 on environmental protection, approved by Law No. 265/2006, with subsequent modifications and completions; (ii) Order of the Minister of Environment No. 1978/2010 on regulation of the organization and functioning of the National Environmental Radioactivity Surveillance Network; (iii) Law No. 111/1996 on the safe deployment, regulation, licensing and control of nuclear activities, republished with subsequent modifications and completions; (iv) Order of the Minister of Health, the Minister of National Education and the President of the National Commission No. 517/2018 for the Control of Nuclear Activities, published in the Romanian Official Bulletin, No. 517 of 25/06/2018 for the approval of the Norms regarding the basic requirements of radiological security; and (v) Order of the Minister of Health No. 431/2004 regarding the organization and functioning of the Ministry of Health network of ionizing radiation hygiene laboratories and departments.

The Law No. 265/2006 on Environmental Protection stipulates that all operators must have self-monitoring and monitor their emissions into air. The legal basis for the collection of environmental information within the scope of air emissions inventories compilation is Law No. 293/2018 on Reduction of National Emissions of Certain Atmospheric Pollutants and Law No. 104/2011, with subsequent amendments.

MO No. 1072/2003 and Joint MO No. 242/197/2005 set up the National Integrated Water Monitoring System based on two interactive subsystems for water and soil. MO No. 31/2006 establishes the requirements for different needs and types of monitoring programmes (surveillance, operational and investigative, in special cases of accidental pollution and where the reason for any excrescences is unknown). Another key piece of legislation relevant to water monitoring is Council Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources (Nitrates Directive), which was transposed into Romanian law by GD No. 964/2000 on the Approval of the Action Plan for Protection of Waters against Pollution by Nitrates from Agricultural Sources.

#### *Institutional framework*

The Ministry of Environment, Waters and Forests operates the National Integrated Water Monitoring System through its technical specialized body, Romanian Waters. The Ministry is also responsible for the monitoring and surveillance of environmental radioactivity throughout the national territory. It develops and ensures the functioning of a national

system of environmental monitoring of air quality. It is also the responsible authority for coordination of the assessment and management of air quality at the national level and has the obligation to report to the EC and EEA the air quality data based on reports prepared by NEPA.

NEPA is responsible for the annual elaboration of the national State of the Environment Report, the National Inventory of Atmospheric Pollutants Emissions, and the national assessment reports of air quality for zones and agglomerations. It is also responsible for managing the information regarding yearly monitoring of large carnivore (bear, wolf and wild cat) populations and the management of inventory regarding derogations granted to the strictly protected species (bear, wolf). In addition, NEPA is responsible for coordination and monitoring of reporting processes in the National PRTR. Overall, NEPA ensures that data management from the national system of environmental monitoring of air quality promotes, develops and ensures the functioning of the environmental radioactivity monitoring system, as well as waste, ambient noise and vibration measurements, by coordinating the activities of local county laboratories.

NEPA coordinates the activity of the 42 LEPAs. LEPAs are in charge of environmental sampling and monitoring, mainly for air, radioactivity, noise and waste. Water physico-chemical parameters are determined by the water inspectorate. The inspectorate has its own monitoring plan for both announced and unannounced sampling, but NEPA can ask inspectors to take samples outside the monitoring plan schedule. LEPAs have their own mobile monitoring equipment and laboratories.

Romanian Waters is in charge of nationwide quantitative and qualitative monitoring of all water abstraction. It manages the infrastructure for monitoring of water quality, including monitoring of species and habitats associated with water.

The Ministry of Health is responsible for the monitoring of drinking water. The Ministry is also responsible, through the county public health departments, for the monitoring of bathing water, assessment of bathing water quality and alerting and informing the public. The National Institute of Public Health is responsible for collecting drinking and bathing water quality data, annual reporting and development of national programmes on the interface of water quality and human health.

The National Institute for Marine Research and Development “Grigore Antipa” is financed through

national and international research projects, various contracts and studies, including the monitoring programme that is financed by the Ministry of Environment, Waters and Forests, based on annual contracts following public tender procedures. The Institute collaborates with institutions under the Ministry of Environment, Waters and Forests. It collaborates with Water Administration “Dobrogea-Litoral” Constanta on monitoring data exchange, pollution sources and loads, and elaboration of the common bulletin on the state of bathing water and beaches. The National Institute has its laboratories: Ecology and Marine Biology, Marine Microbiology and Molecular Biology, Physico-Chemical Analyses (chemistry and pollutants), Ichti fauna and other marine living resources, and Operational Oceanography. Since 2012, the staff of the Institute has been reduced.

The National Meteorological Administration also monitors the atmospheric environment, with both ground measurements and remote sensing technologies.

#### **4.5 Assessment, conclusions and recommendations**

##### *Assessment*

The National Air Quality Monitoring Network was somewhat improved since 2012, with an increase in the number of stations and the replacement of instruments during periodic maintenance activities for monitoring and calibration equipment. Nonetheless, this represents a modest improvement since the number of technically outdated and obsolete monitoring stations remains substantial. Gaps remain concerning the appropriate number and type of air quality sampling points. These shortcomings amount to a systemic failure to comply with the EU obligations to monitor air quality. The Government attempts to have effective implementation of the programme covering activities for the development and optimization of the National Air Quality Monitoring Network are severely impeded by the overall insufficient human, technical and financial capacity to ensure comprehensive monitoring of air quality. At the same time, overdependence on funding from international projects has resulted in the fluctuating and declining of monitoring capacity and infrastructure overall.

Similarly, the environmental radioactivity network lacks financial and human resources to maintain and keep up to date the existing equipment. The wear on the equipment has become visible, for which permanent maintenance cannot be assured in an

adequate manner. Furthermore, the lack of sufficient personnel capable of operating the equipment can affect prompt response in an emergency situation, as well as timely response to current activities.

Since 2012, the equipment of NEPA’s National Reference Laboratory for Air Quality and National Reference Radioactivity Laboratory has not been changed, while the staff capacity has been reduced by at least 30 per cent.

The local environmental laboratories assess noise by measurements for the State of the Environment Report. A system for biodiversity monitoring has not yet been established; however, some wild species and habitats are included in programmes and research projects undertaken by universities, museums, research institutes and some NGOs. The relevant authorities have carried out some monitoring of flora and fauna and bird populations in known locations as a basis for understanding where challenges may occur.

Recommendation 3.1 in the Second EPR of Romania in 2012 is only partially implemented as information and data reported in corporate environmental reports are generally incomplete and largely irrelevant for users. Furthermore, the current level of environmental reporting by Romanian listed companies is low. In fact, some enterprises do not submit information to LEPA’s, although raw data are available. This recommendation therefore remains valid.

Romania has made progress towards achievement of SDG target 12.6 through the implementation of the National Strategy to Promote Social Responsibility 2011–2016. However, Romania has not established a national indicator to enable it to report on global indicator 12.6.1 (Number of companies publishing sustainability reports). Besides, the country does not have a mechanism in place for data collection on the number of CSR or sustainability reports published by companies and no information on the current status of CSR initiatives in the country is available. However, the Government, through the Department of Sustainable Development, is drafting the Sustainability Code to implement non-financial reporting legislation.

##### *Conclusion and recommendations*

##### Air quality monitoring

Many air quality monitoring stations are technically outdated and obsolete, and gaps exist concerning the appropriate number and type of air quality sampling points, leading to a systemic failure to comply with obligations to monitor air pollution. The optimization

of the National Air Quality Monitoring Network is severely impeded by the insufficient human, technical and financial capacity to ensure comprehensive monitoring of air quality.

Recommendation 4.1:

*The Government should:*

- (a) *Provide adequate and modern monitoring equipment, replacing outdated instruments and ensuring appropriate resources for regular maintenance and servicing of the National Air Quality Monitoring Network;*
- (b) *Ensure that operators and relevant governmental officials dealing with environmental monitoring and information are trained regularly, based on international best practices, to strengthen their expertise;*
- (c) *Work further with relevant civil society initiatives on monitoring PM<sub>10</sub> and PM<sub>2.5</sub> in cities towards improving national coordination of the air quality information made publicly available and complementing the official air quality monitoring results with informative data from these networks for the purpose of public information and awareness only.*

Forest inventory and biodiversity monitoring

The National Forest Inventory does not represent a census of all trees in Romania. In November 2019, the Government pledged financial and logistical resources for the third cycle of the National Forest Inventory and a budget allocation for the purchase of satellite maps to further develop the work of the satellite traceability system.

Romania started working on a biodiversity monitoring system through two projects run to support the country reporting under article 17 of the EU Habitats Directive and article 12 of the EU Birds Directive. A system for biodiversity monitoring has not yet been established in practice.

Recommendation 4.2:

*The Government should:*

- (a) *Ensure stable and adequate funding of forest monitoring activities and support the development of a third national forest inventory;*
- (b) *Set up and implement a monitoring system for biodiversity and the conservation status of natural habitats and wild species, and ensure stable and adequate funding for relevant activities.*

Noise monitoring

Although local environmental laboratories assess noise by measurements, no noise monitoring system is in place, and neither are there noise action plans and noise maps.

Recommendation 4.3:

*The Government should:*

- (a) *Develop a noise monitoring system;*
- (b) *Ensure adequate capacity to measure noise systematically;*
- (c) *Use adequate and modern noise measurement equipment and ensure appropriate resources and training for regular noise measurement.*

Laboratories

The National Reference Laboratory for Air Quality and the National Reference Radioactivity Laboratory operated by NEPA both face challenges related to insufficient funding and staff. Neither laboratory is provided with sufficient and stable financial and human resources for servicing, updating and calibrating monitoring and calibration equipment. In the past seven years, the equipment of laboratories has not been changed, while the staff capacity has been reduced.

Recommendation 4.4:

*The Government should ensure financial and human resources and capacity for the National Reference Laboratory for Air Quality and the National Reference Radioactivity Laboratory to adequately service, update and calibrate monitoring and laboratory equipment.*

Corporate social responsibility

Romania's efforts regarding the implementation of the corporate social responsibility (CSR) principles has seen some results. Nonetheless, Romania does not have a mechanism in place for data collection on the number of CSR or sustainability reports published by companies.

Recommendation 4.5:

*The Government should:*

- (a) *Encourage companies to adopt sustainable practices and integrate sustainability data into their reporting cycles;*
- (b) *Establish data collection and processing mechanisms on the status of corporate social responsibility in the country.*

### Self-monitoring by enterprises

The current level of environmental reporting by Romanian-listed companies is low. In fact, some enterprises do not submit information to LEPA. As at December 2019, the information and data reported in corporate environmental reports are generally incomplete and largely irrelevant for users. This leads to the conclusion that Recommendation 3.1 in the Second EPR of Romania in 2012 has been only partially implemented. The Recommendation urged the then Ministry of Environment and Forests to strengthen the compliance of enterprises, in particular listed companies, with their environmental self-monitoring and reporting obligations, and to link self-monitoring data submitted by enterprises with data collected by national monitoring programmes.

#### Recommendation 4.6:

*The Government should strengthen the compliance of enterprises with their environmental self-monitoring and reporting obligations, and link self-monitoring data submitted to by enterprises with data collected by national monitoring programmes.*

### Reporting on sustainability by companies

Romania's efforts regarding the implementation of SDG target 12.6 (Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle) has seen some results. Nevertheless, Romania did not develop a national indicator for SDG global indicator 12.6.1

(Number of companies publishing sustainability reports).

#### Recommendation 4.7:

*The Government should establish a relevant national indicator for reporting on SDG global indicator 12.6.1 to measure progress towards achievement of the 2030 Agenda for Sustainable Development.*

### Open access to online environmental data

All environmental statistics produced by the National Institute of Statistics are made publicly available online on the Institute's website in both English and Romanian. However, the Environmental Accounts Publication is not available free of charge and online statistical data are not easily accessible via links provided on the National Institute of Statistics website. These two impediments hinder open access to the environmental data. Moreover, time series data are not regularly updated.

Although Romanian public authorities must share spatial data free of charge between public administrations, the lack of resources, knowledge and collaboration have delayed implementation. Access to air quality data and the generation of air quality monitoring reports via a web interface are complicated and not user friendly.

#### Recommendation 4.8:

*The Government should ensure that environmental data are regularly updated and freely and easily accessible online to all.*

## Chapter 5

# ENVIRONMENTAL DEMOCRACY AND EDUCATION FOR SUSTAINABLE DEVELOPMENT

### 5.1 Access to environmental information

#### *Active access*

All public authorities have a special space on their website for making available information, including on environmental matters, considered of public interest, in line with the Law No. 544/2001 on Free Access to Information of Public Interest. This space is organized in a similar manner for most public authorities. Overall, governmental institutions provide on their website information on environmental matters considered of public interest, which mostly includes legislative documents regulating a given medium or area and an explanation about the topic or issue addressed therein. Often the interpretation of the scope of such information excludes actual data on the state of the environment, limiting it to more descriptive information that is mostly useful for awareness-raising and educational purposes. The Public Authorities Guide for Access to Environmental Information (2020) is expected to contribute to improving the process of timely and adequate provision of information on environmental matters to the public. The primary aim of the Guide is to inform and develop the capacity of civil servants involved in the procedure of responding to public requests for environmental information.

#### Public authorities in charge of the environment

The website ([www.mmediu.ro](http://www.mmediu.ro)) of the ministry in charge of the environment – the Ministry of Environment, Waters and Forests as at 14 October 2020 – which is the main public authority in charge of environmental matters, is the primary source of environmental information. The public has access to the following information provided on the website under the category of information of public interest: the Ministry’s annual activity reports since 2010; annual reports on implementation of the Law on Free Access to Information of Public Interest; the National Plan of Rural Development 2014–2020 (environmental and climate change activities); contact

information of staff in charge of providing information of public interest; forms and guidance for preparing petitions and for requesting information; announcements of public consultations (several per year before 2016, one in each of 2016, 2018 and 2019); a list of environmental NGOs last updated in 2016; a national registry of certified experts for environmental studies; corporate governance of public enterprises (one report for 2015); information on public procurement; the Ministry’s budget by financial sources (annual, since 2015) and accounting (balance sheet for 2018); ministry staff declarations of assets and interests (annual); post vacancies; and the procedure for obtaining an audience with the Minister or senior management.

In addition, the Ministry provides on its website access to information in terms of descriptions, legislative documents, reports, assessments, national strategies and plans, lists of members of various commissions and committees and announcements. This information is provided for all areas of the Ministry’s work, such as air, water, soil, noise, waste, chemicals, climate change, forests, nature protection, hunting, spatial information (INSPIRE), access to environmental information, EIA, EMS (eco-labelling, EMAS) and sustainable development. For example, under “waste management”, access is provided to a study published in 2020<sup>64</sup> evaluating the guarantee system as a component of the waste management system in Romania.

Under “access to environmental information”, a dedicated area of the website, the text and implementation guide of the Aarhus Convention, decisions of the Compliance Committee under the Aarhus Convention related to Romania’s compliance with the Convention and several other materials are provided, as well as GD No. 878/2005 on Public Access to Information on Environmental Matters and a Public Authorities Guide for Access to Environmental Information,<sup>65</sup> published in 2020 in response to a recommendation by the Compliance Committee.

<sup>64</sup> <http://mmediu.ro/articol/primul-studiu-romanesc-privind-implementarea-sistemului-garantie-depozit/3218>.

<sup>65</sup> [http://mmediu.ro/app/webroot/uploads/files/2020-09-14\\_ghid%20autorit%20pb%20pt%20acces%20pb%20la%20info%20med%202020.pdf](http://mmediu.ro/app/webroot/uploads/files/2020-09-14_ghid%20autorit%20pb%20pt%20acces%20pb%20la%20info%20med%202020.pdf).

**Photo 5.1: Natural materials for common objects, “Recycle Marathon” social media campaign of the ministry responsible for the environment**



Photo credit: MoEWF, by courtesy of canva.com

Also, a brochure<sup>66</sup> is available for the public on the procedure for accessing environmental information. An example of innovative provision of access to key forest information is the development of the online platform Forest Inspector (box 5.1).

The Ministry has a Facebook account (@Mediu.Romania) with 44,014 followers and 34,132 other users (liking the account) and a Twitter account (@Ro\_env) with 1,174 followers.<sup>67</sup> Furthermore, the Ministry organizes press conferences to present new environmental information of public interest.

The website ([www.anpm.ro/](http://www.anpm.ro/)) of NEPA is the second major source of environmental information. NEPA gives access to information on similar topics to those covered by the Ministry and several other issues, such as biodiversity, radioactivity, biosecurity and risk management. NEPA provides access to the national State of the Environment Reports (the latest being for 2018) and to an indicator-based report for 2018.

An important achievement is the development by NEPA since 2012 of the Integrated Environmental Information System (<https://raportare.anpm.ro/>) to cover various requests for information in line with the EU directives and regulations transposed into national laws, thereby simultaneously making available the

**Photo 5.2: Social media campaign “Zero Waste Marathon” of the ministry responsible for the environment**



Photo credit: MoEWF, by courtesy of canva.com

information accessible online for public use. At the same time, using the system requires a user to be registered, thereby limiting free online access to environmental information.

Importantly, NEPA maintains lists<sup>68</sup> of authorities (contact person and details) that are information holders on environmental matters at the central and county levels. For example, at the local level, the 2020 list indicates 14 authorities for Braşov County and six authorities for Bucharest. At the central level, such authorities include (as last updated in 2016): the Ministry of Economy, Trade and Business; the Ministry of Agriculture and Rural Development; the Ministry of Regional Development and Tourism; the Ministry of Transport; the Ministry of Interior; the National Directorate of Forests “Romsilva”; the National Meteorological Administration; the National Institute of Statistics; and DDBRA.

NEPA also maintains an updated list<sup>69</sup> on the type of environmental information available from the information holders in each county and in Bucharest, including title, description and conditions under which the information is made available to the public (online or upon request). An overview of requests for information received by NEPA and LEPAs in 2020 (as at August) is made available online.

<sup>66</sup> <http://mmediu.ro/app/webroot/uploads/files/Pliant%20pentru%20public%20-aces%20la%20informatia%20de%20mediu.pdf>.

<sup>67</sup> The number of followers here and in other section is as at 4 October 2020.

<sup>68</sup> [www.anpm.ro/lista-cu-autoritatile-publice-care-detin-informatii-privind-mediul](http://www.anpm.ro/lista-cu-autoritatile-publice-care-detin-informatii-privind-mediul).

<sup>69</sup> [www.anpm.ro/informatii-de-mediu-detinute-de-autoritatile-publice](http://www.anpm.ro/informatii-de-mediu-detinute-de-autoritatile-publice).

**Box 5.1: Engaging the public in fighting illegal logging**

In December 2016, the then Ministry of Environment launched a new online platform, Forest Inspector, a groundbreaking approach by the Government to involve the public in addressing illegal logging and to create a unique form of public access to key forest information. Forest Inspector allowed users to view ongoing and historical data about all timber transportation in Romania, including whether a logging truck is registered, the type and quantity of logs it is transporting and the exact GPS coordinates where the logs were loaded onto the truck. Previously, in 2014, the Government established a mandatory digital tracking system for trucks transporting wood (Integrated National Information System for Tracking Wood (SUMAL)) and set up a hotline that citizens could call to check whether logging trucks seen on Romania's roads were officially registered (resulting in some 25 per cent of all calls made since 2014 identifying illegal trucks). In July 2016, Forest Inspector (Inspectorul Pădurii), a mobile app based on a geographical information system, was created and linked to the digital tracking system SUMAL, increasing considerably the efficiency of identifying trucks transporting illegal logs, which also led to a 30 per cent increase in the number of trucks registering official transport documents.

The online platform and mobile app gained popularity, being accessed by approximately one million users. However, a year after the launch, the then Ministry of Water and Forests invoked some irregularities in the contract for the development of the app and in the timber tracking system SUMAL, resulting in the discontinuation of regular updating of the mobile app with information from SUMAL. In August 2019, the Bucharest Tribunal ruled that the then Ministry of Water and Forests had to pay 440,070 lei (almost €100,000 as per exchange rate in August 2019) to the developer of the app after it had been blocked. As at January 2020, the website was not accessible due to works to upgrade it, including to implement the originally planned feature of linking transport documents and harvesting permits, a critical element needed to prevent the laundering of illegally cut timber.

Source: <https://eia-global.org/press-releases/romania-creates-revolutionary-public-access-in-new-online-wood-tracking-system> ; [www.eurisy.org/good-practice-romania-turns-to-satellites-to-crackdown-on-illegal-deforestation\\_211](http://www.eurisy.org/good-practice-romania-turns-to-satellites-to-crackdown-on-illegal-deforestation_211) ; [www.romania-insider.com/state-damages-forest-inspector-not-final](http://www.romania-insider.com/state-damages-forest-inspector-not-final) ; [www.wwf.ro/ce-facem/paduri/radarul-pdurilor/inspectorul-pdurii/](http://www.wwf.ro/ce-facem/paduri/radarul-pdurilor/inspectorul-pdurii/) ; <https://lege5.ro/Gratuit/geztqobqgaza/norme-referitoare-la-provenienta-circulatia-si-comercializarea-materialelor-lemnoase-la-regimul-spatiilor-de-depozitare-a-materialelor-lemnoase-si-al-instalatiilor-de-prelucrat-lemn-rotund-precum-si>.

The National Environmental Guard (NEG) (<https://gnm.ro/>) makes available on its website information of public interest and has an active Facebook account (@GardaNationaladeMediu) with 19,906 followers and 18,748 other users.

The Environment Fund Administration (<https://afm.ro/>) provides environmental information, including of public interest, on its website.

The National Agency for Natural Protected Areas (NANPA) (<http://ananp.gov.ro/>) provides environmental information, including of public interest, on its website and also has a Facebook account.

The National Meteorological Administration ([www.meteoromania.ro](http://www.meteoromania.ro)) provides information related to weather and climate change and has a Facebook account (@anmromania) with 6,338 followers and 4,652 other users.

The Danube Delta Biosphere Reserve Authority (DDBRA) (<http://ddbra.ro/>) provides environmental information, including of public interest, on its website and has a Facebook account (@arbdd) with 9,835 followers and 9,088 other users.

Access to legislation on environmental matters

The public can access legislative and regulatory acts, including on environmental matters, on several websites, including the website of the ministry in charge of the environment and the legal portal (<http://legislatie.just.ro/>) developed within the project “Implementation of the N-Lex Portal”, implemented by the Ministry of Justice in the period 2012–2015. The versions posted on these websites are not always updated with consolidated versions to include the latest amendments to the legal acts. The private website (<https://lege5.ro/>) provides access to legal acts, judicial and other information. The original text can be accessed free of charge and the consolidated text including all amendments is accessible upon subscription for a monthly fee of 65 lei (approximately US\$15 as at 5 October 2020).

Access to statistical information on environmental matters

The National Institute of Statistics (<https://insse.ro/cms/ro>) has a space on its website for information of public interest and provides limited access to actual environmental data. Its publications are not provided free of charge. The database for the sustainable development indicators contains data on

several topics organized according to 13 objectives of the old National Strategy for Sustainable Development ([https://insse.ro/cms/files/Web\\_IDD\\_BD\\_ro/index.htm](https://insse.ro/cms/files/Web_IDD_BD_ro/index.htm)). However, the data are not always up to date, with datasets having timelines ranging from 2009 (for protected areas) to 2019 (for public health). The database for the sustainable development indicators works well online. The statistical database TEMPO (the main database) provides 17 data sets on environmental matters (chapter 4).

#### Mass-media sources of environmental information

Environmental information is provided in several mass-media sources (websites, magazines, newspapers), such as:

- Ecologic magazine – the oldest (since 2004) environmental publication in Romania with monthly editions provided on a website ([www.ecologic.rec.ro](http://www.ecologic.rec.ro)) and as a printed magazine;
- Infomediueuropa magazine – an environmental magazine published online ([www.infomediueu](http://www.infomediueu))

and in print since 2015 on 100 per cent recycled paper;

- Green Report – online information related to business, legislation and education for a cleaner environment ([www.green-report.ro](http://www.green-report.ro));
- EcoMagazin – the largest independent media project with a focus on environmental protection, provided online ([www.ecomagazin.ro/](http://www.ecomagazin.ro/));
- Green Tribune newspaper – a media project for education and information on local public authorities developed by the Ecopress Association in partnership with the ministry in charge of the environment, available in a printed version and on Facebook.<sup>70</sup>

In Romania, several radio shows focus on environmental issues, such as a one-hour “Eco Frequency (Eco Frecvența)” broadcast on National FM, running on Wednesdays at 13:00 and discussing emerging environmental concerns, and “Green Planet (Planeta Verde)” on RFI Radio, focused on action to protect the planet and reduce pollution.

**Photo 5.3: People’s House (the seat of the Parliament of Romania) in winter**



*Photo credit: Angela Sochirca*

<sup>70</sup> [www.facebook.com/pages/category/Media-News-Company/Tribuna-Verde-257734231589219/](https://www.facebook.com/pages/category/Media-News-Company/Tribuna-Verde-257734231589219/).



In addition, public announcements are made in online newspapers, national or local print newspapers, elsewhere online and sometimes on local radio during the procedures for EIA, SEA and environmental permitting.

#### *Passive access*

Passive access to environmental information is enabled through procedures established by public authorities in line with the Law No. 544/2001 on Free Access to Information of Public Interest, Law No. 52/2003 on Transparency of Decision-Making in Public Administration, Government Ordinance No. 27/2002 on the Regulation of the Activity of Addressing Petitions, GD No. 878/2005 on Public Access to Environmental Information and other relevant legislation. Public authorities are expected to make every reasonable effort to ensure the information in their possession can be readily reproduced and accessed electronically at the request of the public.

The ministry in charge of the environment receives (by post, email or direct letters brought to the ministry's registration unit) petitions and requests for environmental information, registers them and acknowledges their receipt to the requester. The response preparation is coordinated by the communication department, with the involvement of relevant technical units. The response is prepared within 10 days with a limit of 30 days for requests requiring more time to gather the information. Depending on the nature of the requested information, the response is either prepared by a unit in the ministry or is transmitted to a subordinate institution to respond directly to the requester. Requests that go beyond the mandate of the ministry are transmitted to the respective public authority, which then takes charge of responding to the request. The requester is kept informed in all cases.

In 2019,<sup>71</sup> the then Ministry of Environment received a total of 457 requests for information of public interest (222 requests from physical persons and 235 from legal entities). Of these, 149 requests were responded to within 10 days, 59 were responded to within 30 days, the deadline was exceeded in 9 cases, and 240 were transmitted within five days to other public authorities. Most requests (415) were handled in electronic format. Compared with 2018 (261 requests), 2017 (146 requests) and 2016 (209 requests), the number of requests for information in 2019 has more than doubled.

Before 2016, the evaluation reports on addressing requests for information of public interest had a more detailed template and were consolidated for all public authorities in charge of the environment at the central and local levels. For example, in 2015, a total of 2,627 requests were received by public environmental authorities at the central level (of which 2,059 were from physical persons) and 18,574 requests were received at the local level (of which 5,065 were from physical persons). At the central level, 2,616 requests were answered positively, including 48 transmitted to other authorities, and 11 were rejected, including one based on exempted information grounds. At the local level, 18,488 requests were answered positively, including 472 transmitted to other authorities, and 82 were rejected, including 29 based on exempted information grounds.

In the same year, a total of 39 administrative complaints were addressed to public institutions based on the 2001 Law on Free Access to Information of Public Interest (11 at the central level were rejected and 28 at the local level were resolved favourably for the applicant), and a total of 9 complaints were made in court against public institutions, all at the local level (5 were resolved favourably for the applicant, 3 were resolved in favour of the institution and 1 was outstanding). Also, in 2015 at the local level, the total operating costs of the department (or persons) in charge of information and public relations (consumables) amounted to 317,144 lei (US\$75,964 as at 31 December 2015). Costs at the central level are not available.

Petitions and requests for environmental information coming to NEPA or LEPA are registered by units in charge of public relations; in the case of NEPA it is a service that deals with issues related to sustainable development, projects and public relations. Requests for specific information are then forwarded to the respective technical unit dealing with that information. Requests for complex broad information are processed by staff handling public relations, who coordinate the collection of information from all technical units and respond to the request. NEPA transmits to the ministry in charge of the environment an annual evaluation report of requests processed. Accordingly, in 2020 (as at August 2020), NEPA received a total of 76 (27 from Bucharest and 49 from elsewhere) written requests for information from individuals (66) and legal entities (10) and responded positively to them; 2 other requests were rejected.

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<sup>71</sup> The annual reports are available on the ministry website [www.mmediu.ro/categorie/rapoarte-de-aplicare-a-legii-nr-544-2001/161](http://www.mmediu.ro/categorie/rapoarte-de-aplicare-a-legii-nr-544-2001/161).

At the local level, LEPA Braşov maintains a dedicated register for monitoring the petitions and requests received. In 2019, LEPA Braşov received 80 public petitions (from individuals and groups of people), of which 60 did not pertain to the competences of the LEPA and were forwarded to other public authorities. The remaining 20 were answered and, as at December 2019, LEPA Braşov did not have any administrative complaints. Also, as at December 2019, it did not have to use the clause “information restricted to internal use”, but it did use the clause “information still in the drafting process”. LEPA Braşov is reporting annually to NEPA on its implementation of access to information on environmental matters, while the 2005 GD on Public Access to Environmental Information requires monthly reporting.

NEG makes available online its annual reports on addressing requests for information of public interest. In 2019, it responded positively to 697 requests for information and negatively to 17 requests, including 7 citing the reason of non-existing information and 8 based on the legal provisions of confidential information. The majority (627) of responses were made within 10 days, while 42 were made within 30 days. With some fluctuation, a general increase in the number of requests for information is observed, from 407 in 2012 (380 in 2013, 477 in 2014, 614 in 2015, 516 in 2016, 616 in 2017, 585 in 2018) to 697 in 2019. NEG indicates that the lack of sufficient human resources to address the requests for information is a challenge.

### *Charges*

Generally, the provision of environmental information in electronic format is free of charge. Photocopying information can be charged against a reasonable fee to cover the paper and printing costs. However, in practice, the Ministry and NEPA do not charge for printed information. Most information is provided in electronic format.

Information published in the Official Monitor newsletter (of environmental legislation and regulations) is available online for only 10 days and thereafter on subscription. Also, certain data from the National Institute of Statistics is provided for a fee.

As at December 2019, the Ministry of Environment, Waters and Forests provides all the requested environmental information free of charge, including scanning or photocopying documents, and sending

them by email or post. Likewise, NEPA provides the environmental information requested by the public free of charge.

NGOs encounter situations in which they are asked for unreasonable sums of money for photocopying and scanning documents such as forest management plans for forest areas under the contract of administration, services and security of the Retezatul Clopotiva SRL Forest District.<sup>72</sup> Reportedly, the NGO that requested these forest management plans and won the court case it took to receive them, was asked to pay approximately €7,000 for making photocopies and scanning documents, an unaffordable amount for an NGO.

### *Limitations to access to information*

Some information of public interest on environmental matters is treated in a restrictive manner, with certain documents, data and information simply not made available online by the respective public authorities, including those beyond the environmental authorities that are in possession of information on environmental matters. For instance, public access to up-to-date open data on the environment (e.g. emissions into air, discharges into water, biodiversity, protected areas and forests) and data related to green and circular economy, is limited.

A challenge in ensuring full access to environmental information encountered by the environmental authorities is the lack of awareness among non-environmental authorities about the fact that the information in their possession might qualify as information on environmental matters. To address this challenge, in May 2018, the ministry in charge of the environment organized a roundtable discussion with national authorities in possession of environmental information, during which the definition of environmental information was explained to raise awareness among public non-environmental authorities that they may be in possession of information on environmental matters.

Environmental authorities recognize the challenge in identifying effective mechanisms to increase the public’s awareness of its right to participate in decision-making on environmental matters to achieve more proactive public participation. In addition, NEPA identified the need for adequate financial resources to modernize and maintain its integrated

<sup>72</sup> Forest district definition as per the Forest Code, No. 46/ 2008: the forest unit established for the purpose of administering or providing services for the national forest fund, having the minimum area to be established as follows: a) in the plain region – 3,000 ha of forest fund; b) in the hill region – 5,000 ha of forest fund; c) in the mountain region – 7,000 ha of forest fund.

environmental information system to support access to the information needed to enable public participation.

Public environmental authorities' websites (or parts of them), such as the website of NEPA and its county-based LEPAs, are repeatedly inaccessible for long periods of time due to technical issues, which hinders access to information, especially when it is needed to enable NGOs to organize timely participation in public hearings. This has been confirmed by several environmental NGOs.

In addition, frequent changes in the mandate and structure of the ministry in charge of the environment has resulted in two websites running in parallel, which is confusing. For example, annual reports on the state of forests in Romania (the latest is for 2017) are split across two websites: on one website (<http://apepaduri.gov.ro/paduri/>) are posted reports for 2016 and 2017 and on the other ([www.mmediu.ro/categorie/starea-padurilor/209](http://www.mmediu.ro/categorie/starea-padurilor/209)), reports from 2005 to 2015.

Frequently, environmental NGOs are not satisfied with the quality of responses provided by the public authorities, which commonly contain a polite response to the letter without providing the requested information in full, if at all. Information on how much water was used by hydropower plants and how much they are paying for water use is also not readily provided upon request from NGOs. Discharges into water is another area of information difficult to obtain from Romanian Waters and other water basin administrations. Refusal to provide such information is usually justified by clauses on confidentiality, intellectual property or commercial secrecy.

Some requests for information on environmental matters are rejected by the public authorities (ministry in charge of the environment, NEPA, LEPAs, water basin administrations, etc.) or businesses (energy enterprises) on the grounds of confidentiality, or rejection is justified on the grounds that the requested information is not of public interest. Information such as on emissions into the environment from power plants and the methodology for their calculation, amounts of priority substances discharged into rivers, and forest management plans of forest areas under administrative contract is often rejected, prompting court cases filed by the requesters, which are usually environmental NGOs (section 5.3 below). Even when the court cases are won by the environmental NGOs, the concerned public authority or business continues not to provide the information or provides it only

partially. Given that court cases on environmental matters can last some two to three years, certain information becomes obsolete and the process is costly.

Access to forest management plans and annual reports submitted to the Forest Guard is particularly limited, with public authorities refusing to provide the information upon request. The grounds for refusing to provide such information have included the reasoning that: forest management plans are not information of public interest and, to consult or copy them, prior consent from their owners and the developer is required; the owners have the right of ownership over the management plans and the elaborators of the plans have the right of intellectual property over the content of the works; and forest management plans contain confidential information (technical information and personal data), the disclosure of which may negatively affect the owner.

Furthermore, the environmental public authority has asked to receive from the requester written agreement from the owners and the elaborators of the forest management plans, allowing the publication of the information and data from these plans. Moreover, the ministry has insisted that such plans are not information of public interest and informed the requester that, in the event of a court decision that copies of these plans must be provided, they will have to be provided by their holders.<sup>73</sup>

Finally, while the minutes of public hearings are not made available on the websites of NEPA or the LEPAs, the public comments and proposals made during the public hearing for an EIA procedure are registered on a form, together with the answers given by the developer, which is posted on the website of the competent environmental authority.

## 5.2 Public participation in decision-making on environmental matters

### *Non-governmental organizations*

The ministry in charge of the environment has a database listing 119 environmental NGOs. Two environmental NGOs are recognized as NGOs of public utility – Foundation “Group for ecological and sustainable development initiative” (GD No. 580/2015) and Romanian Association for Environment (GD No. 447/2018). Coalitions of NGOs include Coalition Natura 2000.

<sup>73</sup> Based on the email response to the Association Agent Green to their request for information (No. 5341/24.06.2020), received on 24 July 2020 from the Ministry of Environment, Waters and Forests.

Further examples of environmental associations include the Văcărești Natural Park Association<sup>74</sup>, established in 2014 by a group of environmental protection experts and activists, whose work resulted in the creation of the first urban nature park in Romania, Văcărești Natural Park in the centre of Bucharest, in 2016 (GD No. 349/2016).

The ministry in charge of the environment is of the view that environmental NGOs are involved in current environmental matters and have good knowledge about environmental protection. There are some domains, such as energy and the nuclear sector, in which NGOs are very eager to become involved. An example of cooperation between NGOs and the General Department of Forests is elaborated in box 5.2.

During the procedures for EIA, SEA and environmental permitting, the ministry in charge of the environment established a practice of proactively informing the NGOs that declared themselves to be “public concerned” or that expressed their interest in the procedures, through letters or emails, about the start of the consultation period or the public hearing.

Environmental NGOs can cooperate with NEPA and LEPAs by engaging in the development of Local

Environmental Action Plans and participating in the meetings of the Technical Assessment Commission.

Cooperation between environmental NGOs and local environmental authorities is reportedly better than with the national governmental authorities.

One example of a partnership for sustainable development resulted from joint efforts by Bankwatch Romania and Greenpeace Romania that led to the signature in July 2019 of an MoU, “Jiu Valley Partnership for a Just Transition”, by the six mayors in the Jiu Valley (one of Romania’s main mining regions), aimed at facilitating a gradual, efficient and participatory transition from a coal-based economy to a more sustainable and diversified model.

The Jiu Valley Partnership for a Just Transition focuses on collaborative participation and the involvement of public and private institutions, trade unions and civil society. The mayors are expected to support projects in such a way that no group in society is left behind in the energy transition. The six local administrations committing to the partnership promised to take an active role in the development of a strategy for the transition and its implementation, including in identifying projects that will benefit their communities.<sup>75</sup>

#### Box 5.2: Cooperation between NGOs and the public authority in charge of forests

Cooperation between the public authority for forests (General Department for Forests of the former Ministry of Water and Forests and current Ministry of Environment, Waters and Forests) and NGOs has been focused mainly on environmental protection aspects, such as activities to enforce legislation on illegal logging and to identify and establish protection regimes for valuable forest ecosystems (e.g. those included in the National Catalogue of Virgin and Quasi-virgin forests and the sites included in the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage List).

Examples of written agreements for cooperation include two protocols for collaboration concluded in 2014. The first protocol, on protection of virgin and quasi-virgin forests in Romania and preventing and combating the trade in illegally harvested timber from Romania’s forests, was made between the then Ministry of Environment and Climate Change and the WWF Danube–Carpathian Programme Romania. As a result of that collaboration, a guide on good practices for national operators for implementing Regulation (EU) No 995/2010 laying down the obligations of operators who place timber and timber products on the market, and risk maps for illegal logging in Romania were developed.

The second protocol, on developing and completing the nomination process of candidate sites for the registration of virgin and ancient beech forests in Romania on the UNESCO World Heritage List, was between the then Department of Water, Forests and Fisheries, Romsilva, the Institute of Forest Research and Management Planning, the WWF Danube–Carpathian Programme Romania, and Greenpeace in Central and Eastern Europe (CEE) Romania.

In 2017, the work resulted in the inclusion of eight sites with 12 components covering 24,000 ha and 64,500 ha area of buffer zone as part of “Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe”.

<sup>74</sup> <https://parcnaturalvacaresti.ro/en/our-association>.

<sup>75</sup> [www.just-transition.info/mayors-from-jiu-valley-one-of-romania-s-main-mining-regions-agree-in-brussels-to-collaborate-for-a-just-transition](http://www.just-transition.info/mayors-from-jiu-valley-one-of-romania-s-main-mining-regions-agree-in-brussels-to-collaborate-for-a-just-transition) and [https://bankwatch.org/press\\_release/new-report-scenarios-for-a-just-transition-in-jiu-valley-romania](https://bankwatch.org/press_release/new-report-scenarios-for-a-just-transition-in-jiu-valley-romania).

### *Funding opportunities*

Since 2016, a decrease in funding opportunities was observed, according to the representatives of several environmental NGOs. Also, over the last three years, increased antagonism between NGOs and public authorities was felt by the representatives of several NGOs interviewed. An obstacle to NGO engagement in environmental projects was the short timeframe for application and implementation of such projects, which discouraged their applications in subsequent years. For instance, calls for applications for annual projects were sometimes made mid-year with a three-month timeframe for applying, leaving only two months for implementation. Often, such projects did not foresee salary costs, which is another challenge for the continuing involvement of NGOs.

### Environment Fund Administration

NGOs can apply to participate in relevant activities funded by the ministry in charge of the environment through the Environment Fund Administration. As at December 2019, three such activities were ongoing: the RABLA and RABLA+ Programmes (chapter 3) and various awareness-raising campaigns (chapter 10). The RABLA Programme is essentially a scrappage programme, aimed at renewing the national car fleet, and RABLA+ is meant to stimulate the purchase of plug-in hybrid electric vehicles. The procedures for NGO participation in the two programmes are set out in the texts calling for participation and are similar to the conditions pertaining to economic operators. Applicant NGOs are required to prove that they do not have any debts to the national and local budgets, nor to the budget of the Environment Fund Administration. Since 2012, 129 NGOs have been granted funding for the RABLA Programme (176 vehicles have been purchased) and, since 2016, three NGOs have each purchased one plug-in hybrid electric vehicle through the RABLA+ Programme (as at December 2019). In addition, NGOs can be part of, or contribute to, the awareness-raising campaign on the selective collection of garbage; even though NGOs are not eligible applicants, they can partner with local authorities in order to raise awareness in civil society about waste recycling and sorting.

Progress in the implementation of Recommendation 3.3 in the Second EPR of Romania is mixed as at December 2019 and it could be considered partially implemented. It remains relevant to be fully implemented. In 2012, the then Ministry of

Environment and Forests was recommended to: (a) create more opportunities to meet and discuss with NGOs to explore ways and means to jointly implement environmental projects; and (b) enhance information provided to the environmental NGO community about programmes and projects financed from the Environmental Fund and how such funds can be accessed.

Point (a) is implemented to a limited extent by the inclusion of one representative of an environmental NGO on the Advisory Committee, which is a decision-making body of the Environment Fund Administration established to approve by vote the projects proposed by the Steering Committee to be financed from the Environment Fund.<sup>76</sup> As at December 2019, the President of the Centre for Sustainable Policy Ecopolis is the environmental NGO representative on the 21-member Committee, having served as a member for the previous five years. While a representative of an environmental NGO is engaged in the process of approving a pre-selected list of project proposals, albeit being in the minority during the voting procedure, no NGO representative is involved in the process of preparing or revising the financing programmes and the financing guide for each programme. Draft financing guides are posted for public consultation on the website of the Ministry of Environment, Waters and Forests for 10 days, which is too short a time for organizing meaningful public consultations. The Law on Transparency in Decision-Making of Public Administration requires public authorities to post draft normative acts for public consultation for at least 10 days, which allows the Ministry to increase the period of public consultation on the financing guides to enable meaningful public participation in the decision-making on using the environmental funds. Moreover, as at December 2019, there are no Environment Fund Administration programmes for financing that specifically target environmental NGO participation.

Point (b) is implemented by the Environment Fund Administration having posted on its website information about the funding opportunities for NGOs (three opportunities as at December 2019). In addition, the 2015 Communication Strategy of the Environment Fund Administration aims to increase transparency and improve public communication on the Fund's activities. Regular press releases and other information are posted on the website of the Administration. Also, project selection irregularities have been alleged; in 2014, for instance, the Coalition for the Environment of Romania requested the

<sup>76</sup> According to the Emergency Ordinance on the Environmental Fund (No. 196/2005 as amended in 2017 (No. 48/2017)), a representative of an environmental NGO is included as member of the Advisory Committee.

resignation of the then President of the Environmental Fund Administration, citing irregularities in the selection process of projects to raise environmental public awareness. During the process, 121 projects were rejected on administrative grounds. The 28 approved projects included projects submitted by NGOs connected to politicians.<sup>77</sup> Based on the provisions of the financing guide, the applicants of rejected project applications can, within five days of rejection, contest the decision. In the case of a second rejection, the applicants can contest that decision within 30 days based on the 2004 Law on Administrative Litigation. The information on approved, rejected and contested applications is posted on the website of the Environment Fund Administration (e.g. for the RABLA+ Programme on [https://afm.ro/vehicule\\_electrice.php](https://afm.ro/vehicule_electrice.php)).

**Photos 5.4, 5.5 and 5.6: Posters to educate on types of waste and their separate collection**



Photo credit: Angela Sochirca

### Structural Funds

Environmental NGOs are part of the Structural Funds Committee. NGOs can apply for structural funds<sup>78</sup> to carry out activities in the environment field covering 19 subcategories.<sup>79</sup> However, some environmental NGOs were not aware of this opportunity and believed that they did not have access to structural funds, which often excludes their participation in environmental activities.

### Active Citizens Fund Romania

Active Citizens Fund Romania (<https://activecitizensfund.ro/>), with a total value of €46 million for the period of 2019–2024, was launched by the European Economic Area Grants in 2019 as a financing programme for NGOs. It is funded by Iceland, Liechtenstein and Norway, and by Norway Grants. The programme aims to develop the long-term sustainability and capacity of the civil society sector, intensifying its role in promoting democratic participation, active citizenship and human rights in several priority areas, including “Democracy, active citizenship, good governance and transparency” and “Environment and climate change”.

### *Public participation in decision-making on specific activities (projects)*

Public participation in decision-making on specific activities (projects) in various sectors, including on energy-related matters (e.g. power plants, electricity lines) is enabled during the EIA procedure, in line with the provisions of the Law No. 292/2018 on Assessing the Impact of Certain Public and Private Projects on the Environment (Law on EIA). The procedures and deadlines for the public authorities, the project beneficiary and the public are set out in annex V of the Law on EIA. Based on the established procedures, all decisions taken by the competent authorities are to be made available to the public and they become final only after members of the public have had the chance to express their opinion.

Accordingly, the public concerned (including environmental NGOs) has several opportunities to participate at all stages of EIA and can comment during the screening (within 10 days) and scoping (within 20 days) stages, including on the quality of the EIA report (within at least 30 days) and participate in

<sup>77</sup> [www.finantare.ro/coalitia-pentru-mediul-din-romania-solicita-demisia-presedintelui-afm.html](http://www.finantare.ro/coalitia-pentru-mediul-din-romania-solicita-demisia-presedintelui-afm.html).

<sup>78</sup> According to the information provided on the Romanian website of structural funds ([www.fonduri-structurale.ro](http://www.fonduri-structurale.ro)).

<sup>79</sup> Including biodiversity conservation and protection and rehabilitation of degraded ecosystems, sustainable management of natural resources, prevention and management of environmental accidents and disasters, education and environmental monitoring in the Black Sea basin, cooperation and exchange of experience for a low-carbon economy, enhancing resource efficiency, improving air quality and increasing the recycling rate.

public hearings (having been informed about the hearing at least 30 days in advance). NGOs are notifying the ministry in charge of the environment of being “public concerned” in order to be invited to join the EIA procedure (chapter 2).

**Photo 5.7: Environmental Assessment webinar, March 2021**

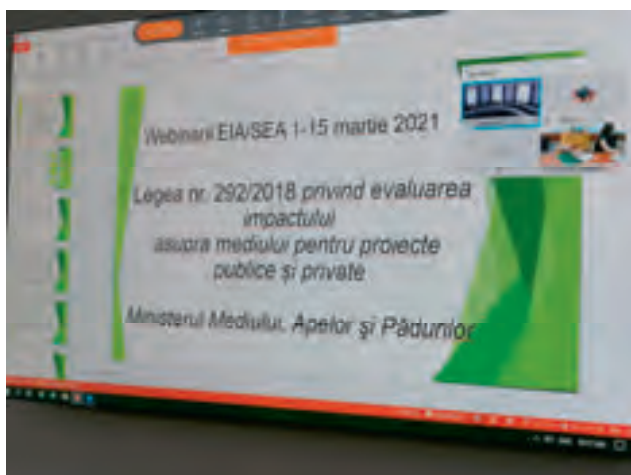


Photo credit: MoEWF

Concerning the confidentiality of information, a positive and novel development is the provision in the Law on EIA that requires competent authorities to take into account the need to protect the public interest when complying with the restrictions imposed by the legislation on commercial and industrial secrecy, including intellectual property. In addressing a request for information on environmental matters that is subject to restrictions, competent authorities are obliged to interpret the reasons for refusal in a restrictive sense, giving priority to the public interest by revealing and providing information that can be separated from those items or issues that are restricted. Moreover, in addressing a request for information on environmental matters that is subject to restrictions, the competent authorities are required to explain how they considered the public interest.

Also, in the case of insufficient reasoning in the request (from project beneficiaries) for confidentiality and of doubt regarding the confidentiality of information, the competent environmental authority can reject the request using the principle of satisfying the public interest. The request rejection allows the competent authority to make available to the public environmental information partially disclosed from

the general context of the information that is subject to confidentiality. Applying this novel provision in practice remains to be implemented by the public authorities.

The public concerned can challenge the decisions of the competent environmental authority related to EIA to the competent court for administrative litigation in accordance with the Law on Administrative Litigation (No. 554/2004). To develop the administrative capacity of the competent environmental authority and the professional capacity of public servants dealing with EIA and SEA, including public participation in EIA and SEA procedures, the ministry in charge of the environment commissioned the development of several guidance documents. As a result, seven guides on EIA were elaborated, of which two are general guides to provide guidance on all stages of EIA, including in a transboundary context, and five are specific guides for EIA of certain activities (municipal waste incineration, quarries and mining, intensive livestock farming, hydroelectric power plants, and afforestation and deforestation of land). The guides include recommendations on how to apply EIA in practice and are addressed primarily to the environmental authorities that carry out EIA procedures for major projects financed from EU funds, project holders and developers of EIA reports. The guides are also of interest to the other authorities that are consulted in the EIA procedures according to the legal provisions, as well as to the public, facilitating its better participation in the EIA procedure.<sup>80</sup>

Public participation in energy-related projects

According to the Law on EIA, the public can participate in decision-making on energy-related projects in several areas, including: thermal power plants (thermal power  $\geq 300$  MW); NPPs and nuclear reactors (except for research facilities for the production and processing of fissile and fertile materials, with maximum power  $\leq 1$  kW of continuous thermal power); dams (water capacity  $\geq 10$  million  $m^3$ ); construction of overhead power lines (voltage  $\geq 220$  kV, length  $\geq 15$  km); combustion of fuels in installations (thermal input  $\geq 50$  MW); oil and gas refining; coke production; and gasification or liquefaction of coal and of other fuels in installations (thermal input  $\geq 20$  MW). An example of public participation is given in box 5.3.

<sup>80</sup> [www.mmediu.ro/app/webroot/uploads/files/2019-12-16\\_referat%20de%20aprobare.pdf](http://www.mmediu.ro/app/webroot/uploads/files/2019-12-16_referat%20de%20aprobare.pdf).

**Box 5.3: Public participation puts on hold the construction of hydropower plant in the Jiu Gorge National Park**

Public participation by gathering more than 30,000 signatures on a public petition initiated by the environmentalist Calin Dejeu, with follow-up actions by WWF Romania, Bankwatch Romania and Neuer Weg, resulted in the withdrawal by the Bucharest Court of Appeal in December 2017 of building permits for a large hydropower plant. The plant would have had a large negative impact on the Jiu River by using (together with a few other hydropower plants) 85 per cent of the Jiu's flow, in the heart of the Jiu Gorge National Park.

WWF publicly requested the urgent intervention of the then Ministry of Environment and NEG. In 2016, NEG asked Hidroelectrica state company to re-evaluate the environmental impact of the Jiu power plant project in accordance with relevant legislation in force at that time. The state company decided instead to appeal NEG's decision in court to allow the work to continue unhindered for nearly two years, but the court rejected its action definitively in October 2017.

The hydropower project received environmental approval in 2003 and, in 2005, the area became a national park and a Natura 2000 Site of Community Importance. It remains to be seen how the court decision to annul the construction and to rehabilitate the site will be implemented in practice, given that the power plant is 90 per cent complete and action is being taken by the company to carry out an EIA and SEA in accordance with the legislation now in force.

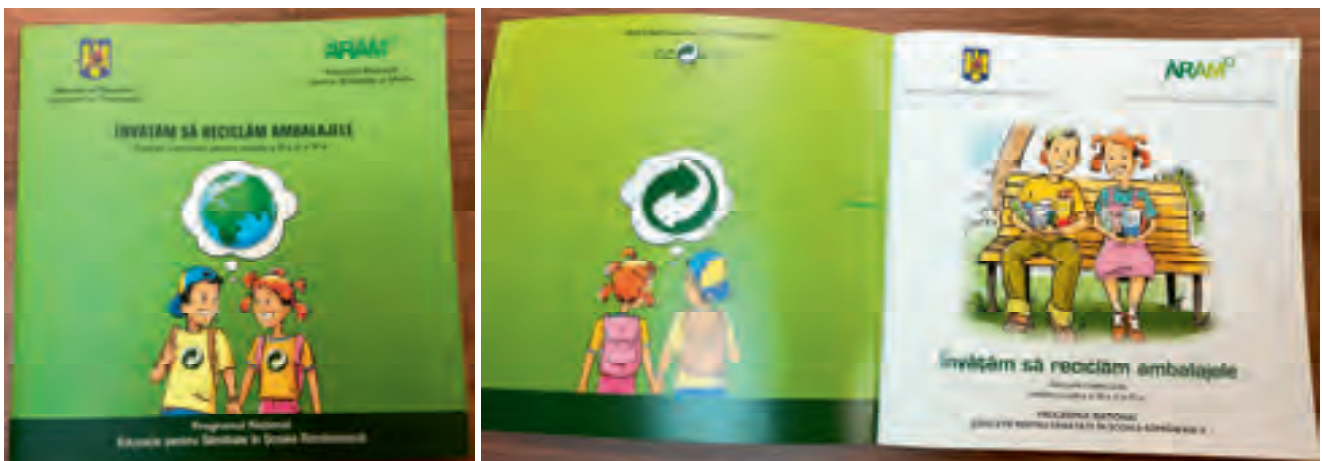
**Photos 5.8 and 5.9: Manual “learning to recycle packaging” for grades III and IV**

Photo credit: Angela Sochirca

*Public participation in decision-making on permitting*

Public participation in decision-making is possible for all permitting procedures (simple and integrated permitting). The public is informed at the beginning of a procedure, by making announcements about the procedure and the environmental documents on the webpage of the public environmental authority responsible for the procedure, whether at national or local level. The beneficiary, developer or operator also makes mass-media announcements, albeit sometimes only in local newspapers with narrow dissemination. The public is given the opportunity to send comments at various steps of the procedure. Usually, a public hearing is also organized, during which the public can make comments. All motivated comments are to be considered by the environmental authority when making its decision.

The procedures for issuing environmental permits and integrated environmental permits, allowing for public participation in the decision-making, are organized by NEPA and LEPA in line with the Law No. 278/2013

on Industrial Emissions and the provisions of MO No. 1798/2007 for the Approval of the Procedure for Issuing Environmental Permits (annex 3 on procedure for public hearings) and of MO No. 818/2003 for the Approval of the Procedure for Issuing Integrated Environmental Permits.

Accordingly, the public can participate in the procedures for: (a) issuing integrated environmental permits for new installations; (b) issuing integrated environmental permits for any substantial modifications in an installation; (c) issuing or updating an integrated environmental permit for an installation for which less stringent emission limit values are set on an exceptional basis; and (d) updating an integrated environmental permit or the authorization conditions for an installation. NEPA is guided by GD No. 878/2005 on Public Access to Environmental Information in organizing public access to the information necessary for participation in decision-making.

The public can also participate in the decision-making related to NEPA's elaboration or revision and



implementation of BAT, whereby NEPA posts on its website any new or updated BAT conclusions and makes available relevant information to the interested public.

#### Waste incineration

Concerning the issuance of an environmental permit for waste incineration plants, waste co-incineration plants and installations and activities using organic solvents, special procedures for public participation and related access to information are stipulated in the Law on Industrial Emissions. In particular, the application for a new environmental permit for waste incineration plants and waste co-incineration plants is to be made available to the public, sufficiently in advance and in one or more places, so that the public may comment on these application documents before the competent authority responsible for issuing the environmental permit makes a decision. That decision, accompanied by at least one copy of the environmental permit and any subsequent updates, is also to be made available to the public.

#### Mining, manufacturing and other sectors

No particularities or exceptions are provided for public participation in decision-making related to licensing or permitting procedures for coal exploration and extraction, mining, manufacturing and other major sectors. The authorization of these activities allows for public participation in decision-making in a similar way to the procedure for issuing environmental permits. The beneficiary of the activity applying for an environmental permit is obliged to include in the application documentary proof of having informed the public through an announcement about the application for an environmental permit. Also, the environmental assessment, prepared following a request by NEPA or a LEPA, is subject to public debate organized in accordance with the public debate procedure.

#### Pesticides and hazardous wastes

Regarding public participation in decision-making processes for the import or export of hazardous wastes, the transboundary transport of hazardous waste is carried out in line with Regulation (EC) No 1013/2006 on shipments of waste, which does not include any procedure for public participation.

For the registration of pesticides, the process of issuing an authorization for placing on the market and use is carried out according to the provisions of Regulation (EC) No 1107/2009 concerning the placing of plant protection products on the market and applies only to those products that contain active substances approved by the EC. According to that Regulation, the European Food Safety Authority, to which the application dossier is submitted, is required without delay to make the summary dossier available to the public, excluding any information in respect of which confidential treatment has been requested and justified, unless there is an overriding public interest in its disclosure. In addition, the public is entitled to have access to several other documents during the authorization procedure, such as the draft assessment report, assessing whether the active substance can be expected to meet the approval criteria,<sup>81</sup> the list of active substances already approved, information about parallel trade permits, and information on plant protection products authorized or withdrawn. Certificates are prepared by the Secretariat of the National Commission for Homologation of Plant Protection Products that operates in line with MO No. 60/2013,<sup>82</sup> which includes provisions on making certain information accessible to the public.

#### *Public participation in decision-making on strategic planning and legislation*

The public and NGOs can participate in the development of legislation and normative acts by providing comments on draft acts in accordance with the provisions of the Law on Transparency of Decision-Making in Public Administration. Accordingly, 30 days before finalizing the legal act, the initiating authority makes a public announcement about the draft act on its website and in local or national mass media. Such announcements include a justification note, a presentation of the reasons, an approval note regarding the need to adopt the proposed act, an impact study, the draft act and an explanatory note on the way the public can make comments. Members of the public have a minimum of 10 days to submit comments. In practice, the authorities seldom give more than 10 days for public commenting. A public hearing to discuss the draft act can be organized at the request of the public. The act can be submitted for adoption only after the public has been given the opportunity of expressing its opinion on the draft act. Since March 2019, a dedicated online platform, “E-

<sup>81</sup> After giving the applicant two weeks to request that certain parts of the draft assessment report be kept confidential.

<sup>82</sup> MO No. 60/512/1.258/2013 of the Ministry of Agriculture and Rural Development for the approval of the Regulation on the organization and functioning of the National Commission for Approval of Plant Protection Products and the approval of the Procedures for approval, parallel trade and approval of the second trade name for a plant protection product approved on the territory of Romania.

Consulting” (<http://e-consultare.gov.ro/w/>), was established by the Government to facilitate broad consultation and public participation.

#### Public participation in strategic environmental assessment

For policy documents (strategies, programmes, plans) that are likely to have significant impact on the environment, including on public health, an SEA is carried out in line with GD No. 1076/2004 on Establishing the Procedure for Carrying out the Environmental Assessment for Plans and Programmes. Programmes and plans are subject to SEA in many sectors,<sup>83</sup> thereby enabling public participation in the decision-making on their development. Responsibility for involving the public is shared between the beneficiary and the public environmental authority. The public can get involved in the decision-making process during the screening and scoping phases of the SEA procedure (chapter 1).

During the screening phase of the SEA procedure, the beneficiary is required to inform the public about the first draft of the plan or programme, by repeatedly announcing it in mass media (two public announcements three days apart) and by publishing the draft on its web page. The first announcement for the public is made simultaneously with the notification of the environmental authority. The public can send

written comments and proposals to the competent environmental authority within 15 days of the last announcement. After the environmental authorities make the screening phase decision, they make it available to the public for 10 days and the comments and opinions expressed by the public are considered during review of the screening decision. The announcement about the screening decision is also published in mass media by the beneficiary.

During the scoping phase, the beneficiary of the plan or programme makes public announcements in mass media and posts on its web page information on the availability of the plan or programme and environmental assessment report (two public announcements three days apart). These announcements are required to be made 45 days before the public hearing (60 days for plans and programmes with transboundary effects). A public hearing is also organized for discussing the plan or programme and the environmental assessment report. The public can express its opinion by submitting written comments to the beneficiary or to the competent environmental authority before the public hearing and at the public hearing. These comments are considered and can lead to amendment of the plan or programme and the environmental assessment report. The final decision is also announced in mass media by the beneficiary and on the environmental authority’s web page.

**Photo 5.10: Forest strategy meeting for the next 10 years, Transilvania University of Braşov, September 2020**



*Photo credit: MoEWF*

<sup>83</sup> Agriculture; forestry; fishing and aquaculture; energy; industry, including mineral extraction; transport; waste management; water management; telecommunications; tourism; regional development; land-use planning and urbanism and land use.

The ministry in charge of the environment posts drafts of normative acts on its website<sup>84</sup> and collects comments from the public. According to the website, as at 5 October 2020, draft GDs are being posted several times per week allowing comments by the public within 10 days, which is the minimum deadline prescribed by the Law on Transparency of Decision-Making in Public Administration. The continuation of the public consultation process during the COVID-19 pandemic is a positive development, although 10 days might be too short a period for coordinating and organizing comments from the public, especially when there are several draft GDs to be consulted in parallel. For instance, in the period from the beginning of September to 5 October 2020 there were 22 draft GDs posted, all allowing public consultation within 10 days. A deadline of 10 days is insufficient for some draft GDs such as the “draft Government Decision approving the definitive removal from the national forest fund, with compensation, by the Arefu Commune Town Hall, of 3.0730 ha for the “Construction of the A1 Ghițu - Molivișu ski slope””<sup>85</sup> posted on 23 September 2020 or the “draft Government Decision approving the final removal from the national forest fund, without compensation, by Energy Complex Oltenia SA, of 17.0357 ha, for “Continuation of mining works within the licence perimeter to UMC Tismana–Tismana I””<sup>86</sup> posted on 1 October 2020.

As an example of a public hearing, the public debate on the draft Energy Strategy organized on 15 October 2019 was moderated by the former Ministry of Environment. While the minutes of the public hearing are not made available on the website of the ministry in charge of the environment, the response to each question asked by a member of the public before and during the hearing is made available online.<sup>87</sup> Comments made by approximately 80 participants were considered by the consultant in revising the environmental assessment of the Strategy.

### Environmental NGOs’ engagement

Positive examples of NGO engagement in the development of legislation include participation in working groups established for preparation of a draft

law, such as the working group established in 2017 by the Ministry of Agriculture to revise the 2016 Law on Food Waste (which came into force on 1 February 2019), the work of which was recorded and the draft minutes were shared for comments with the participants – reportedly a rare practice.

There are examples of environmental NGOs having sought actively to be involved in commenting on draft policies and contacting national governmental authorities in the lead, but with little or no result. For instance, despite recurrent requests from the NGO Bankwatch, the draft Integrated National Plan on Energy and Climate Change 2021–2030 was still not available on the website of the Ministry of Energy as at 6 December 2019, less than 30 days before the deadline of 31 December 2019 for environmental NGOs to consult on it and participate in a public hearing discussing the draft plan. Such a situation was in breach of the process established by the EC for the development of such plans, according to which EU Member States must give the public early and effective opportunities to participate, including by setting reasonable timeframes, to allow the public to be informed, participate and express its views, which should be attached to the plans.<sup>88</sup> The revised (in the light of the EC recommendations) draft plan was made available for public consultation on the website of the Ministry of Economy, Energy and Climate Change from 31 January until 28 February 2020. Thereafter, the document and a summary of comments made on earlier drafts was posted on the Ministry website and E-Consulting platform<sup>89</sup> for the SEA screening phase, contributing to decision-making on whether the plan is subject to an environmental assessment procedure, which would involve public consultation from 23 April to 23 May 2020, including 18 days for comments from the public, who would have to consider a document of 215 pages during the exceptional situation related to COVID-19, including confinement at home. On 29 April 2020, the draft plan was also posted on the website of the ministry in charge of the environment. As at October 2020, the draft plan is still under the SEA procedure.

Environmental NGOs were actively engaged in the commenting process on SDS 2030 that was adopted

<sup>84</sup> [www.mmediu.ro/categorie/proiecte-de-acte-normative/41](http://www.mmediu.ro/categorie/proiecte-de-acte-normative/41).

<sup>85</sup> [www.mmediu.ro/articol/proiect-de-hotarare-de-guvern-pentru-aprobarea-scoaterii-definitive-din-fondul-forestier-national-cu-compensare-de-catre-primaria-comunei-arefu-a-terenului-in-suprafata-de-3-0730-ha-in-vederea-realizarii-obiectivului-construire-partie-de-schi-a1-ghitu-moli/3624](http://www.mmediu.ro/articol/proiect-de-hotarare-de-guvern-pentru-aprobarea-scoaterii-definitive-din-fondul-forestier-national-cu-compensare-de-catre-primaria-comunei-arefu-a-terenului-in-suprafata-de-3-0730-ha-in-vederea-realizarii-obiectivului-construire-partie-de-schi-a1-ghitu-moli/3624).

<sup>86</sup> [www.mmediu.ro/articol/mmap-supune-dezbaterii-publice-proiectul-de-hotarare-a-guvernului-privind-aprobarea-scoaterii-definitive-din-fondul-forestier-national-fara-compensare-de-catre-societatea-complexul-energetic-oltenia-sa-a-terenului-in-suprafata-de-17-0357-ha-in-vederea-real/3643](http://www.mmediu.ro/articol/mmap-supune-dezbaterii-publice-proiectul-de-hotarare-a-guvernului-privind-aprobarea-scoaterii-definitive-din-fondul-forestier-national-fara-compensare-de-catre-societatea-complexul-energetic-oltenia-sa-a-terenului-in-suprafata-de-17-0357-ha-in-vederea-real/3643).

<sup>87</sup> [www.mmediu.ro/articol/strategia-energetica-a-romaniei-2018-2030-cu-perspectiva-anului-2050/2143](http://www.mmediu.ro/articol/strategia-energetica-a-romaniei-2018-2030-cu-perspectiva-anului-2050/2143).

<sup>88</sup> <https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/national-energy-climate-plans>.

<sup>89</sup> <http://e-consultare.gov.ro/w/planul-national-integrat-in-domeniul-energiei-si-schimbarelor-climatice-2021-2030/>.

on 9 November 2018 (GD No. 877/2018); however, their view is that their comments were not considered in the final version of the Strategy. Generally, many environmental NGOs assess the organization of public consultations, with few exceptions, as having been carried out in a manner that does not enable meaningful, effective and inclusive public participation. This results in NGOs being reluctant to participate at all, especially because the minutes of these consultations are published (if they are published at all) without engaging the participants in commenting on their draft, thereby misleading the reader that participating NGOs subscribe to the results of these consultations, even when none of their comments are taken on board.

Another form of participation in the development of environmental policy was provided through the project Public Policies for Sustainable Development (June 2018–November 2019) financed through the Operational Capacity Administrative Programme (POCA). Several environmental NGOs (Ecopolis, Best Associations, BioSilva, 2Celsius and ECOTECA) from Bucharest, Iasi and Suceava submitted to the Ministry of Environment, Waters and Forests proposals for six alternative public policies, normative acts or amendments to the existing legal framework in the areas of waste management, air quality, access to water, food waste, infrastructure for electric vehicles and issues related to forests. The policies have been developed by six working groups with more than 100 representatives of civil society participating as members. These policies include, for instance, a policy to improve air quality by amending the legislation regarding the environmental stamp for cars registered in Romania, a normative act on the management of waste from pharmaceutical and parapharmaceutical products from outside the sanitary-medical circuit and amendments to the Law No. 217/2016 on Food Waste Reduction. The Ministry was invited to consider these policies for prospective approval and implementation.

In the forestry domain, examples of public participation include public consultation on the “National forestry accounting plan of Romania (for the first compliance period 2021–2025)” organized by the Ministry of Environment, Waters and Forests in the period 6–16 December 2019;<sup>90</sup> this resulted in a 90-page report with no information on the comments

received and whether and how they were taken into account.

Another public consultation was organized from 25 September to 15 November 2019 on two documents<sup>91</sup> – the Action Programme for Water Protection against Nitrate Pollution from Agricultural Sources (113 pages) and the new Code of Agricultural Practices (204 pages), with no online comments received from the public.<sup>92</sup>

WWF Romania is the only NGO invited by the General Department for Forests of the ministry in charge of the environment to participate in the working groups on the revision of forest legislation.

The rapid and frequent changes in the environmental legislation, especially since 2016, represent a challenge for ensuring meaningful participation by environmental NGOs in commenting on the many drafts within the established timeframes. In addition, even if a public participation opportunity is offered during the process of drafting environmental laws, the frequent adoption of many emergency ordinances containing various derogations from the adopted laws, in which public participation is not foreseen, diminishes the impact of public participation in the first place. Since 2016, this practice is especially felt by the environmental NGOs.

#### *Public participation in decision-making on GMOs*

Public participation in decision-making on genetically modified organisms (GMOs) is organized in line with the GEO on the Deliberate Introduction into the Environment of Genetically Modified Organisms (No. 43/2007). NEPA, in its capacity as competent authority, consults and informs the public as part of the decision-making process for issuing authorizations and permits for the deliberate release of GMOs, in compliance with the legislation in force on public access to information and on confidentiality. NEPA also informs the public about the review, suspension or withdrawal of authorizations or permits, and about possible accidents or the unintentional transboundary movement of GMOs. Public consultation on GMOs lasts 30 days, starting on the sixth day from the beginning of the procedure for application for an GMO authorization and ending on the 36th day.

<sup>90</sup> [www.mmediu.ro/articol/consultare-publica-planul-national-de-contabilizare-a-padurilor-pentru-romania/3115](http://www.mmediu.ro/articol/consultare-publica-planul-national-de-contabilizare-a-padurilor-pentru-romania/3115).

<sup>91</sup> <http://apepaduri.gov.ro/consultare-publica-program-de-actiune-pentru-protectia-apelor-impotriva-poluarii-cu-nitrati-din-surse-agricole-si-codul-de-bune-practici-agricole/>.

<sup>92</sup> [www.nitrati.ro/forum\\_discussions?p\\_p\\_id=forumdiscussions\\_WAR\\_Nitratiportlet&p\\_p\\_lifecycle=0&p\\_p\\_state=normal&p\\_p\\_mode=view&p\\_p\\_col\\_id=column-1&p\\_p\\_col\\_count=1&forumdiscussions\\_WAR\\_Nitratiportlet\\_mvcPath=%2Fhtml%2Fforumdiscussions%2Fview\\_theme.jsp&forumdiscussions\\_WAR\\_Nitratiportlet\\_themeId=2](http://www.nitrati.ro/forum_discussions?p_p_id=forumdiscussions_WAR_Nitratiportlet&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&p_p_col_id=column-1&p_p_col_count=1&forumdiscussions_WAR_Nitratiportlet_mvcPath=%2Fhtml%2Fforumdiscussions%2Fview_theme.jsp&forumdiscussions_WAR_Nitratiportlet_themeId=2).

NEPA and the LEPA or the town/city hall (in the locality where the deliberate introduction into the environment is to take place) make available on their website relevant information for the public, except the information considered confidential, and must acknowledge receipt of any public comments received during the consultation period. Within 10 days of the public consultation, a synthesis of comments received is transmitted to the ministry in charge of the environment and the Biosafety Commission. Following consultation with the ministry in charge of the environment, NEPA is required to establish and implement measures to ensure public participation according to the national legislation.

In addition, the public can participate in decision-making in the permitting procedure for activities using genetically modified microorganisms under isolation conditions, by making comments and proposals within 30 days of the notification being posted online. For certain types of GMOs, NEPA, as the competent authority, is required to organize public debates that are supported by the notifier.

NEPA also makes available to the public information on decisions taken or reviewed, by posting them on its website, along with other public information such as permits, GMO registers, GMO sites, various reports of the Biosafety Commission and public information about notifications. The last notification posted on the NEPA website was in 2019, about the introduction for the deliberate release of genetically modified plum (for testing purposes).

#### *Public participation in international forums*

Representatives of environmental NGOs are not included in national delegations to international meetings and events. Information, materials and the position of Romanian Government on key topics of discussion at international meetings are not made available on the relevant website to provide the public with an opportunity to comment on them.

#### *Public participation in decision-making in times of pandemic*

Based on the information posted on the websites of the ministry in charge of the environment and NEPA, public consultations continue to be carried out during the COVID-19 pandemic with a deadline of 10 days

for commenting on draft legal, normative and policy acts and decisions. Additional information is not readily available online to determine whether any public hearing, whether in person (respecting safety requirements) or by virtual or other means, has been organized by the ministry since March 2020.

NEPA has posted on its website information on special measures in place during the COVID-19 pandemic, informing the public that all public relations activities usually taking place at the premises of NEPA have been suspended during the special pandemic period. The submission and collection of documents by both individuals and legal entities is conducted only by mail, email or fax. For additional information, NEPA recommends the public contact the specialized departments by phone or email.

Furthermore, during the COVID-19 state of alert decreed in the country, NEPA has adapted the procedure for public participation in decision-making on issuing environmental agreements for project activities. One example is its announcement for the interested public of the submission of the application for the issuance of the environmental agreement for the investment project “Autostrada Ploiești - Buzău” by the National Company for Road Infrastructure Management.

The relevant information can be consulted only online on the NEPA website.<sup>93</sup> The public’s comments are received by email. The “Statement on the application of the Aarhus Convention during the COVID-19 pandemic and the economic recovery phase”, adopted on 2 September 2020 by the Compliance Committee under the Aarhus Convention, provides guidance on holding public hearings.<sup>94</sup>

As at 7 October 2020, the latest announcement by NEPA about a public hearing on issuing an environmental permit is dated 16 July 2020.<sup>95</sup> According to the announcement, two in-person public hearings were organized on 18 August in Suceava County and 19 August 2020 in Botosani County. The public concerned was invited to submit comments to NEPA by 18 August 2020. No other information regarding the outcome of these public hearings is accessible on the NEPA website due to a technical issue with the server (as per disclaimer on the website).

<sup>93</sup> In the section Regulations/Environmental agreement/Documentation EIA and EIA procedure.

<sup>94</sup> ECE/MP.PP/C.1/2020/5/Add.1 ([www.unece.org/fileadmin/DAM/env/pp/compliance/CC-67/ece.mp.pp.c.1.2020.5.add.1\\_advance\\_unedited.pdf](http://www.unece.org/fileadmin/DAM/env/pp/compliance/CC-67/ece.mp.pp.c.1.2020.5.add.1_advance_unedited.pdf)).

<sup>95</sup> [www.anpm.ro/documents/12220/47209762/anunt+ANPM+Varfu+Campului.pdf/d43a492f-0892-42a3-8719-8ee721ebac5d](http://www.anpm.ro/documents/12220/47209762/anunt+ANPM+Varfu+Campului.pdf/d43a492f-0892-42a3-8719-8ee721ebac5d).

### 5.3 Access to justice in environmental matters

Any person who considers themselves harmed in a right or in a legitimate interest, including environment related, has the right to go to the competent court, in line with two main laws, the Law No. 134/2010 on the Code of Civil Procedure and the Law on Administrative Litigation. The public (individuals and NGOs) has the right to sue the actions or inactions of public authorities that contravene the provisions of the national environmental legislation, on procedural and substantive grounds. In the case of a dispute in the field of environmental protection, victims can apply individually to the courts or be represented by NGOs.

In addition, in line with the Law on EIA, the public can challenge in court the decision or an omission during the screening stage, the issue of an environmental agreement or the rejection of an application for one, and the acceptance or rejection of an application for development approval. Before going to court the public has the obligation to request, within 30 days of the decision being made available to the public, that the concerned public authority revoke in whole or in part the respective decision. Consequently, public authorities concerned have the obligation to address the preliminary complaint within 30 days of receiving it, free of charge and in a fair, prompt and correct manner. Furthermore, all documents and decisions made are to include concrete information about the public access to the related procedures. For example, in the period 2011–2019, NEPA was involved in 17 litigations (some still ongoing) before the civil law courts.

Summary information about court cases, including on environmental matters, is available on the Ministry of Justice Court Portal (<http://portal.just.ro/>). For example, two court cases taken by environmental NGOs (Association Green Agent challenging the decision of the Ministry of Environment, Waters and Forests, and Association Bankwatch Romania challenging the decision of the Jiu River Water Basin Administration) are available on that portal.<sup>96</sup>

There are no environmental courts. Cases related to environmental matters are handled by various courts depending on the case subject. The legal oversight of decisions of public authorities that concern environmental protection is performed by the administrative litigation courts. An environmental judicial case lasts for some two to three years on average.

Courts do not have judges specialized in environmental cases or experts specialized in environmental law; they maintain lists of judicial experts in various fields, including a list of judicial experts specializing in environmental protection.

During university study of law, students can choose to take a course on environmental law, which is part of the optional curriculum. However, reportedly, environmental law is not a popular optional course among students. For instance, the University Babeș-Bolyai Cluj-Napoca is providing its law students with the opportunity to study environmental law (three credits) as an elective course during the second, third and fourth years of a bachelor's degree, and EU environmental law and policy (six credits) as a mandatory course during the master's degree with specialization in EU private law.

Recommendation 2.4 made in the Second EPR urging the Government to increase the capacity to address environmental cases within existing judicial authorities and by organizational adjustments, such as the creation of dedicated environmental courts or environmental divisions within existing courts, is not implemented as at December 2019 (chapter 2).

Achievement of the environmental dimension of SDG target 16.3 (Promote the rule of law at the national and international levels and ensure equal access to justice for all) is progressed by ensuring access to justice in environmental matters. The premises necessary for the public, including environmental NGOs, to challenge a decision or omission on environmental matters by the public authorities are established in Romania. At the same time, several challenges remain to be addressed, such as the lack of legal personnel specialized in environmental law, the lack of regular training for judicial authorities on the provisions of the Aarhus Convention, environmental legal cases lasting several years, costs related to environmental court cases not allowing all NGOs to have access to justice in environmental matters, and compliance with court decisions requiring enforcement.

#### *Legal aid*

Romania maintains a state-sponsored (funded by the Ministry of Justice) legal aid system for eligible persons, including indigent persons.<sup>97</sup> In order to exercise their rights in court, the public may request the granting of public legal aid, based on the provisions of the Law on the Code of Civil Procedure

<sup>96</sup> [http://portal.just.ro/3/SitePages/dosar.aspx?id\\_inst=3&id\\_dosar=300000000907217](http://portal.just.ro/3/SitePages/dosar.aspx?id_inst=3&id_dosar=300000000907217) and [http://portal.just.ro/3/SitePages/Dosar.aspx?id\\_dosar=300000000931183&id\\_inst=3](http://portal.just.ro/3/SitePages/Dosar.aspx?id_dosar=300000000931183&id_inst=3).

<sup>97</sup> [www.lw.com/admin/Upload/Documents/Global%20Pro%20Bono%20Survey/pro-bono-in-romania.pdf](http://www.lw.com/admin/Upload/Documents/Global%20Pro%20Bono%20Survey/pro-bono-in-romania.pdf).

and the GEO No. 51/2008 on Public Legal Aid in Civil Matters. A considerable number of practising lawyers are registered as legal aid lawyers (5,354 of 11,025 as at 29 May 2019).

NGOs are not eligible for legal aid provided by the State. Pro-bono legal aid in the environmental area is mostly received from national and international NGOs, associations and foundations. One example of supporting pro bono legal aid for NGOs, including those working on the rehabilitation of Romanian forests, was the project “Pro Bono legal services for NGOs”, launched in 2012 by the Foundation for the Development of Civil Society with 11 law firms affiliated to the pro bono network.<sup>98</sup>

There is an increasing interest and demand in pro bono legal aid in the environmental area. However, the absence of a specific legal framework to support and encourage pro bono legal aid, including for NGOs working in the environmental area, is a bottleneck in the development of such aid.<sup>99</sup>

In 2013–2014, the Association “Save Bucharest”,<sup>100</sup> together with several other partner organizations, implemented a project with financial support (€67,390) from NGO Fund in Romania<sup>101</sup> called “Tools for access to justice for NGOs”. The project offered free legal counselling to NGOs and citizens interested in urban planning, construction, heritage protection and environmental protection, including by means of a call centre.<sup>102</sup> In 2012, the Association issued a legal practice publication, “Protection of the heritage and access to justice for NGOs”, to support the development of NGO capacity in the area of administrative litigation and environmental law.

### *Ombudsperson*

The public can address the office of the Ombudsperson, in Romania known as the People’s Advocate (<https://avp.ro/>), or the Mediation Council ([www.cmediere.ro/](http://www.cmediere.ro/)) with requests regarding environmental protection, including through petitions. A petition must be submitted in writing and is free of stamp tax. For those petitions upheld by the Ombudsperson after investigation, he or she issues recommendations to the relevant public authorities for subsequent implementation.

In the period 2012–2019, the Ombudsperson’s activity in the field of protecting the right to a healthy environment (provided by article 35 of Romania’s Constitution) increased from two to 30 petitions solved with a specific investigation procedure. The number of petitions submitted that were beyond the competence of the Ombudsperson also increased in the same period, from five to 69. The most common issues covered by the petitions pertain to illegal dumping, water pollution, pollution generated from livestock farms and non-compliant measures in protected areas. Since 2017, several petitions have addressed the security of the local population (especially in mountainous regions) from the increasing number of brown bears (*Ursus arctos*), predominantly females with cubs, descending from the mountains to human settlements in search for food. The considerable increase in the total number of petitions submitted regarding the right to a healthy environment, reaching nearly 100 in 2019 (up from seven in 2012), could be a sign of increased trust and awareness about the work of the Ombudsperson in this area, as well as of stronger engagement by the public.

In addition to acting on the petitions received from the public, the Ombudsperson’s office carries out ex officio enquiries initiated on the basis of information published by international and national mass media, scientific studies and reports.<sup>103</sup> One such case was undertaken each year in the period 2012–2018. In 2019, eight cases had been concluded or were in progress, including on illegal deforestation in national protected areas, pollution of the Black Sea, air pollution from landfills, construction in protected areas, obsolete water supply infrastructure and compliance with regulations for drinking water and wastewater treatment.

Implementation of the recommendations on the right to a healthy environment issued by the Ombudsperson are monitored on an ad hoc basis by sending a formal enquiry letter to the respective authority(ies). In some cases, the authorities inform the Ombudsperson on their own initiative about progress made in implementing the recommendations. A special report on the protection of forest areas in Romania was prepared by the office of the Ombudsperson, identifying key actions needed in order to address illegal logging (box 5.4).

<sup>98</sup> [www.fdsc.ro/servicii-juridice-pro-bono-pentru-onguri](http://www.fdsc.ro/servicii-juridice-pro-bono-pentru-onguri).

<sup>99</sup> Romanian legislation does not regulate pro bono legal work; it regulates the right to benefit from state-sponsored legal aid and how the legal aid is financed and organized ([www.unbr.ro/wp-content/uploads/2019/05/01\\_RAPORTUL-CONSILIULUI-UNBR-Congresul-avocailor-2019\\_v8\\_CLEAN.pdf](http://www.unbr.ro/wp-content/uploads/2019/05/01_RAPORTUL-CONSILIULUI-UNBR-Congresul-avocailor-2019_v8_CLEAN.pdf)).

<sup>100</sup> [www.salvatibucurestiul.ro/index.php/proiecte/](http://www.salvatibucurestiul.ro/index.php/proiecte/).

<sup>101</sup> <http://fondong.fdsc.ro>.

<sup>102</sup> As at 15 January 2020 the project website ([www.juristurban.ro](http://www.juristurban.ro)) was not working.

<sup>103</sup> E.g., EEA, IUCN, EuroNatur, BBC and Environment Investigation Agency.

#### Box 5.4: Ombudsperson's proactive work to ensure effective protection of forests in Romania

Following multiple national and international alarm signals regarding the need to improve management of forests in Romania, in 2019–2020, the Ombudsperson proceeded ex officio to address widespread illegal logging. Based on the results of the investigation into the notified irregularities, including forestry statistics and registered crimes, as well as consultation with specialists in forestry, the Ombudsperson issued a recommendation to the Minister of Environment, Waters and Forests (No. 145 of 20 August 2020: [https://avp.ro/wp-content/uploads/2020/08/recomandare145\\_2020.pdf](https://avp.ro/wp-content/uploads/2020/08/recomandare145_2020.pdf)) containing a set of concrete actions and measures required to improve the management of forests and compliance with related international treaties and regulations to which Romania is a party. The Ombudsperson asked to be informed within reasonable time of the identified solutions to implement the recommendation.

In addition, the Ombudsperson prepared a Special Report on Protection of Forest Areas in Romania ([https://avp.ro/wp-content/uploads/2020/09/raport\\_special\\_2020\\_1-1.pdf](https://avp.ro/wp-content/uploads/2020/09/raport_special_2020_1-1.pdf)) containing an assessment and detailed measures proposed for action by all competent authorities to combat illegal logging and improve the management and sustainable development of forests and protected areas in the country.

Proposed measures include improving the Integrated National Information System for Tracking Wood (SUMAL) and identifying technical solutions to improve forest protection, adequately delimitating protected natural areas, reducing significantly or banning the quasi-total logging in forests, implementing UNESCO recommendations on the strict protection of buffer zones of protected sites, establishing “zero intervention areas” in protected areas, Natura 2000 and UNESCO sites, developing a national strategy to combat floods through afforestation and a programme to combat desertification and ensure firewood for local communities, and completing the catalogue of virgin and quasi-virgin forests.

Source: Office of the Ombudsperson, <https://avp.ro/index.php/2020/08/20/recomandare-si-raport-special-ale-avocatului-poporului-privind-dreptul-la-mediul-sanatos-in-domeniul-forestier/>.

#### *Environmental NGOs seeking justice in environmental matters*

One of the most active national NGOs is the Association Bankwatch Romania, which has been operating since July 2012 as a driving force for access to justice in environmental matters. Bankwatch Romania has won several court cases on environmental matters, including when challenging the non-provision of environmental information.

The NGO recently (24 May 2019) won an appeal to the Bucharest Court of Appeal from Oltenia Energy Complex Joint Stock Company against a ruling made on 16 November 2018 by the Bucharest Tribunal (Section on Administrative and Fiscal Litigation) concerning the non-provision of information requested by Bankwatch on emissions into the environment from its power plants and the methodology for their calculations. Oltenia Energy alleged that the Bucharest Tribunal misinterpreted the request for information of daily emission values, 24-hour concentrations for 2017 and the first quarter of 2018, which was not, in the company's view, information of public interest to be provided in line with the Law on Free Access to Information of Public Interest, but was classified information, asserting that the publication of this information would infringe the principle of fair competition.

The Court of Appeal ruled in favour of Bankwatch, citing GD No. 878/2005 on Public Access to

Information on Environmental Matters, which stipulates the criteria for classified information, which do not correspond to the criteria invoked by Oltenia Energy. The case, including the ruling on the appeal by Oltenia Energy, lasted one and a half years. According to the Law on Free Access to Information of Public Interest, the decision of the Court of Appeal is final and irrevocable; thus, Oltenia Energy is expected to provide the information on daily emission values from its power plants and the methodology for their calculations to Bankwatch Romania. As at 30 September 2020, Oltenia Energy had provided emission limit values but not in their entirety. For Turceni Power Plant, it only mentioned that the legal limits were respected.

Bankwatch Romania could start a forced execution procedure but the information is already old. It is preparing to request the emission limit values for 2019 with the expectation of receiving them in a complete and timely manner. Problems with access to information led Bankwatch Romania to file a new case in court challenging the non-provision of information on emission values for the priority substances in the Jiu River (court case No. 19334/3/2020<sup>104</sup>) by the Jiu Water Basin Administration. The court hearing was scheduled for 26 November 2020.

As a result of public participation following a complaint filed by Association Agent Green, logging permits issued by Romsilva in 2018 in the natural beech forest in Domogled–Valea Cernei National

<sup>104</sup> [http://portal.just.ro/3/SitePages/Dosar.aspx?id\\_dosar=300000000931183&id\\_inst=3](http://portal.just.ro/3/SitePages/Dosar.aspx?id_dosar=300000000931183&id_inst=3).



Park/UNESCO World Heritage buffer zone and Mehedinti Natural Park were suspended by the court in November 2019.<sup>105</sup>

Furthermore, Agent Green filed and won several court cases<sup>106</sup> regarding the refusal to provide the requested forest management plans. Another case (489/3/2020) awaits the court decision, as the hearing was postponed due to the COVID-19 emergency in the country and took place on 17 June 2020. The environmental public authorities concerned refuse to execute the court decision and are avoiding providing the requested information. The ministry in charge of the environment has filed appeals (for case No. 20292/3/2018), thereby extending even further the period of non-provision of information and using up the financial resources of environmental NGOs. Agent Green continues to ask for other forest management plans without success and, with many court cases under way, its financial resources have been exhausted and it cannot afford to continue challenging the decision in court.

#### 5.4 Environmental education and education for sustainable development

##### *Integration of environmental education and education for sustainable development into curricula*

Environmental education (EE) is integrated into the formal education system mainly through the optional curriculum, civic education and extra-curricular activities. In addition, EE and, to some extent, education for sustainable development (ESD), is mainstreamed into several subjects of the compulsory

curriculum (e.g. “mathematics and environmental exploration” in primary education and secondary education subjects related to “mathematics and natural science”) and, at the initiative of individual teachers, into other subjects of the compulsory curriculum.

According to the teachers interviewed in three secondary schools (two in Bucharest and one in Braşov), students at all levels of education are eager to discuss environment-related themes, especially as they relate to climate change, plastic pollution, waste recycling, air and water pollution and nature conservation, and naturally influence the school’s and teacher’s choice of such themes for both curricular and extra-curricular activities. For example, since 2007, EE is approved by the ministry in charge of education (Ministry of Education and Research, as at October 2020) as an optional subject called Ecological and Environmental Protection Education, at the initiative of each educational institution, for its annual optional curriculum for preschool, primary and lower secondary (gymnasium) education in grades 5 to 7.

The knowledge and skills acquired from EE are built gradually, starting in preschool where children discover the main components of the natural environment, learn to identify sources of pollution and options for their elimination, understand the concepts of reuse and recycling by learning how to save, produce products from natural materials, observe the beauty of nature, show concern for the environment, express thoughts and feelings towards the environment, and apply, in real life contexts, the appropriate rules and norms regarding environmental protection.

**Photo 5.11: "Picurici's superheroes" online contest to promote clean waters, over 900 students from 170 schools took part**

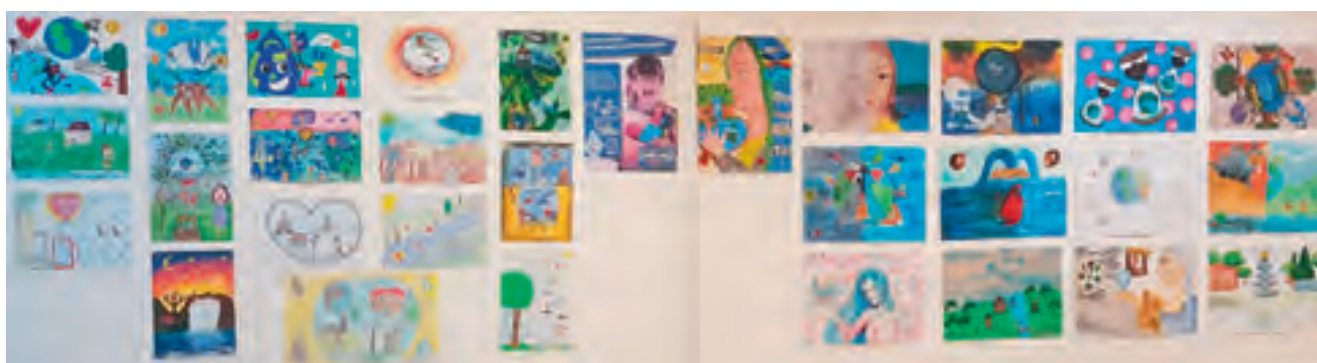


Photo credit: MoEWF, MoER

<sup>105</sup> [www.saveparadiseforests.eu/en/romania-justice-suspends-logging-permits-in-natural-forest-in-domogled-valea-ternei-national-park/](http://www.saveparadiseforests.eu/en/romania-justice-suspends-logging-permits-in-natural-forest-in-domogled-valea-ternei-national-park/).

<sup>106</sup> Since 2018, 12 court cases: Nos. 20292/3/2018; 20294/3/2018; 20295/3/2018; 22987/3/2018; 23099/3/2018; 24600/3/2018; 24602/3/2018; 24603/3/2018; 24604/3/2018; 24606/3/2018; 26413/3/2018; and winning an appeal by the defendant in case No. 24600/3/2018.

In primary school, pupils learn to understand and use the basic notions of environmental protection, developing and practising environmental exploration and investigation and developing a responsible attitude towards maintaining and improving the quality of the environment.

In lower secondary school (grades 5 to 7), pupils learn to use notions, concepts and principles specific to environmental protection, develop the capacity to investigate the real world, and assume and implement responsible behaviour towards the environment.

### Early education

Early education, consisting of pre-preschool (0–3-year-olds) and preschool (3–6-year-olds) levels, is optional in Romania. The new curriculum for early education, adopted in August 2019<sup>107</sup> stipulates that EE activities are free-choice activities and can be integrated into several other activities, such as in personal development activities and experiential field activities, depending on the type and theme of these activities and how well they correlate with the theme of the project or with the weekly theme. The field of cognitive development and knowledge of the world – one of five development fields in the curriculum structure – can integrate EE and ESD naturally.

The early education curriculum encompasses six major themes, including “How is it, was it and will it be here on Earth?” (mandatory for the 5–6-year-old children in the last grade of preschool education) that covers an exploration of the evolution of life on Earth, with the identification of life-sustaining factors, problems of the contemporary world (e.g. pollution, global warming, overpopulation) and an exploration of orientation in space and time, personal histories, history and geography from a local and global perspective, homes and travel, discoveries, and the contribution of humans and civilizations to evolution in time and space. While environmental and sustainable development themes are included in the new curriculum to some extent, and EE is mentioned in one instance, the ESD approach is not mentioned.

In the previous, 2008, curriculum for preschool education (3–6/7-year-olds), ESD was suggested as an approach for teaching the general theme of “What and how do I want to be”, including subjects such as Science and Man and Society.

### Primary education

Primary education is mandatory in Romania and takes place for five years starting with the preparatory grade and ending with grade 4 (for 6/7–10-year-olds). Primary school education integrates environmental and sustainable-development-related themes in several subjects, such as natural sciences taught during the five years of primary school (one hour per week for preparatory grade to grade 4), geography (one hour per week for grade 4), civic education (one hour per week for grades 3 and 4), visual arts and practical abilities (two hours per week for preparatory grade to grade 3; one hour per week for grade 4), and personal development (two hours per week for preparatory grade; one hour per week for grades 1 and 2).

The optional curriculum includes the subject “Ecological and Environmental Protection Education” and integrates EE in other subjects such as “Prepared for Life. Education for Life and Community”, which was developed in 2017 for every year of the five-year primary school education.<sup>108</sup>

EE is integrated into the primary school curriculum (the optional and, to some extent, mandatory curriculum). ESD as such is not included in any curriculum, albeit themes related to sustainable development (mostly the social dimension) are mainstreamed into subjects and discussions during classes.

### Lower secondary education (gymnasium)

Lower secondary education is mandatory in Romania and lasts five years from grades 5 to 8 (for 11–14-year-olds). EE is integrated into various subjects of the mandatory curriculum and is included among subjects in the optional curriculum chosen by the school (in consultation with parents through a Parents’ Committee).

Subjects related to natural science, “Man” and society, technology and counselling and guidance are predominantly used for EE. The curriculum includes environmental and sustainable-development-related themes in natural sciences subjects such as biology, chemistry, geography and physics. Under the Social Education subject (one hour per week), critical thinking and children’s rights are taught to fifth-graders, intercultural education to sixth-graders, education for democratic citizenship to seventh-graders and economic-financial education to eighth-graders.

<sup>107</sup> [www.edu.ro/sites/default/files/Curriculum%20ET\\_2019\\_aug.pdf](http://www.edu.ro/sites/default/files/Curriculum%20ET_2019_aug.pdf).

<sup>108</sup> [http://programe.ise.ro/Portals/1/Curriculum/2018-progr/PRIM/Pregatiti%20pentru%20viata\\_Clasele%200-IV\\_opt.pdf](http://programe.ise.ro/Portals/1/Curriculum/2018-progr/PRIM/Pregatiti%20pentru%20viata_Clasele%200-IV_opt.pdf).

During four years of gymnasium, pupils in grades 5–8 study technology and a practical application subject (one hour per week) that includes environmental protection and sustainable development, aiming to develop the competence to promote a technological environment favourable for sustainable development.

For instance, those in grade 5 learn to select products and technologies that preserve the environment and health, those in grade 6 identify ways to save resources and reuse waste, those in grade 7 do a critical analysis of the consequences of technological development on the health and well-being of individuals, communities and the environment, and those in grade 8 implement initiatives for a healthy environment at the school and community levels.

Teaching methods for the subject include an investigative, case-based learning approach, debates, role-playing, brainstorming, case studies, modelling, simulation, problem-solving and interviews.

**Photo 5.12: Classroom in Eco-School, Bucharest secondary school named after Titu Maiorescu**



Photo credit: Angela Sochirca

Environmental and sustainable development themes are also integrated into subjects related to language and communication and arts, to an extent according to the individual choice of the teacher. Given that environmental protection, climate change and sustainable development are gaining prominence on the political agenda both globally and nationally in Romania, teachers are incentivized to address such themes during their classes, in response to the growing demand from pupils.

In addition, schools (following a decision of the Parents' Committee) can choose subjects for the school's annual optional curriculum, including "Eco-

education for Green Schools", which is being promoted by WWF with financial support from Norway (box 5.5).

The choice of learning manuals rests with the school and includes the option of using manuals with enhanced content on environmental and sustainable development themes. Mass media and social platforms play an important role in raising the awareness of children, parents and teachers.

Upper secondary education (lyceum)

The first two years (grades 9 and 10) of upper secondary education are mandatory in Romania. Upper secondary education includes options for several paths: the general (theoretical) education path (science and humanities); technical vocational education path (technical, services, and natural resources and environmental protection); and vocational education path (military, theological, sports, artistic and pedagogical).

The general education path does not offer separate courses on ecology or sustainable development. EE is typically included in science subjects such as biology, chemistry and physics. ESD is mainstreamed to an extent into the optional curriculum, through which lyceums can choose the subject "Education for democracy", which includes environmental activities such as student engagement in projects on public participation in decision-making on environmental matters, and the subject "Human rights". These subjects are part of the environmental and social dimensions of ESD.

"Emil Racoviță" College of Natural Sciences located in Braşov is an example of an EE institution that includes themes related to environmental protection in its compulsory curriculum. Another example of promoting EE and ESD are activities carried out by the International School of Bucharest (box 5.6).

Examples of approaches to promote EE include organizing dedicated Olympic competitions in the education system at the national and local levels, such as the Olympiad on "Natural Resources and Environmental Protection" organized annually since 2008 for subjects from the curriculum area "Technologies" for pupils from grade 2 (primary education) to grade 12 (upper secondary education).

Since 2016, students from the general education path are familiarized with the SDGs, sometimes during classes, but mostly during tutoring hours and extra-curricular activities.

### Box 5.5: Eco-education for Green Schools

Bucharest secondary school named after Titu Maiorescu has participated in the eco-school network since 2007 and, since 2016, offers “Eco-education for Green Schools” as an optional course for pupils in grades 5–8. EE and ESD are also integrated into subjects other than the natural sciences, such as English language, for which the schoolbooks chosen (the “Enterprise” manual) include many environmental and sustainable-development-related themes. Since 2015–2016, environmental protection has obtained prominence, pushing teachers to include more environmental themes in their teaching (the individual teacher can adapt up to 25 per cent of the content of the curriculum). The school’s eco-club has 40 members (one or two members from each class) who promote environmental protection on the school campus.

The school administration estimates that issues related to environmental protection and sustainable development constitute at least 50 per cent of the school curriculum (both mandatory and optional subjects) and extracurricular activities. The school is of the view that the theoretical knowledge of environmental and sustainable development themes is well covered by the current curricula, but would wish to enhance its practical activities, in which pupils engage with great enthusiasm but which can be a challenging task for a school located in the centre of the city. In the absence a green schoolyard, the school is organizing excursions to nature sites outside the city for undertaking practical activities and is considering partnering with the local authorities with a view to using the nearby park for green activities. The school also promoted EE and environmental protection in the framework of the National Programme “School in a different way (Scoala altfel)” as part of its informal education activities.

The main challenges faced by the school in enhancing the integration of EE and ESD are the already very full curriculum and the lack of green areas on school premises. Assessing and identifying positive experiences in applying EE and ESD in practice by schools and exchanging such experience and peer learning were needed, as were the production of more practical schoolbooks.

### Box 5.6: International School of Bucharest engaging in environmental protection and sustainable development

The International School of Bucharest ([www.isb.ro/](http://www.isb.ro/)) promotes EE and ESD in its curriculum and in extra-curricular activities. In 2016, the school introduced a course on Environmental System and Societies which has become very popular with students and was followed by 57 students in the 2019–2020 school year, constituting approximately half of all students in years 12 and 13. In addition, the school has a compulsory course for students of its upper secondary levels on human rights, offered by Amnesty International.<sup>109</sup> Students learn through ESD learning approaches such as critical thinking, research-based studies, open discussion and project-based activities.

Furthermore, in 2017–2018, the school successfully launched a campaign, “ISB Go Green”, which continued in 2019–2020, promoting ESD for students. In 2019–2020, the campaign focused on a range of issues, from agriculture to zero emissions in transport. Students engage in projects to plant trees, develop greener options for the canteen and analyse their own footprint. These issues are addressed during the standard lessons of the school’s curriculum, tutoring time, school assemblies and other extra-curricular activities.

The school has been part of the Eco-schools network since 2015 and has an ECO Committee, with whose help it regularly organizes various EE and ESD activities, including students’ human rights projects, arts from waste (e.g. a mosaic made of bottle caps during art lessons), the Global Perspective research assignments, a paperless day in school, the collection of plastic, and donations of books and presents to less fortunate communities. Moreover, the school initiated an online petition, “Stop dumping waste around our school”, that garnered 24,550 signatures and resulted in the involvement of local authorities and police officers who fined the landowners neighbouring the school, which is located in the outskirts of Bucharest.

### Photos 5.13, 5.14 and 5.15: Children’s artwork to raise awareness on environmental protection, Eco-School, Bucharest secondary school named after Titu Maiorescu



Photo credit: Angela Sochirca

<sup>109</sup> [www.amnesty.org/en/latest/education/2018/11/human-rights-friendly-schools-course/](http://www.amnesty.org/en/latest/education/2018/11/human-rights-friendly-schools-course/).

### Vocational education and training

Vocational education and training include several options. One option is to follow the vocational education paths as part of upper secondary education, which begins after completing lower secondary education (grade 8) and lasts for a minimum of three years. Another option is to take apprenticeship training courses (720 hours) after grade 10 of lyceum (second year of upper secondary education), the completion of which is mandatory in Romania. Post-secondary education is also available for professional development and is provided in lyceums, colleges and “foremen” schools for one to three years, depending on the specialization.

As part of the technical vocational education path of upper secondary education, the natural resources and environmental protection education programmes aim to develop competences in agriculture, silviculture, environmental protection and the food industry, and include specialities such as environmental and environmental protection technician, hydrometeorology technician, forestry and logging technician and organic farming technician. The curriculum for grade 9<sup>110</sup> of the four-year vocational education and training in environmental protection, adopted in 2016, consists of five modules with a total of 414 hours per year, of which 324 hours are made up of theoretical (216), technological laboratory (36) and practical training (72), and 90 hours are in an apprenticeship. Grade 10 studies consist of five modules (440 hours), including on environmental legislation. Grade 11 has seven modules (513 hours) and grade 12 has eight modules (428 hours), including on waste management and air, and soil and water quality monitoring and control.

Environmental protection themes are included on a mandatory basis in the formal curriculum only in lyceums and colleges with environmental specializations, such as the Braşov colleges “Mircea Cristea” Technical College, which offers a degree in “environmental technician and environmental quality protection”, and “Grigore Antipa” College of Science, which offers a degree to become a “certified environmental technician”.

### Higher education

Higher education is provided by universities, academies of studies, institutes and schools of higher education. Romania has a total of 101 higher education institutions (47 civil institutions, 7 military

institutions, 38 private universities and 9 institutions operating temporarily), including an ecological university, which is a private institution. Environmental protection and sustainable development themes are integrated to varying degrees into the studies (both compulsory and optional curricula), depending on the specialization. As at December 2019, more than 240 undergraduate and master’s study programmes included topics such as climate change, social and economic change management, environmental economics, public policy and environmental management, alternative energies, and wastewater and green technologies. In addition to bachelor’s degree programmes, universities have introduced master’s programmes related to sustainable development themes. None of these institutions has a compulsory discipline on EE or ESD. EE and ESD are offered as optional courses at the Faculty of Psychology and Education Sciences of Transilvania University of Braşov.

In addition, there are several university specializations in the area of environmental protection and related to sustainable development, such as ecology and environmental protection, environmental management and audit, installations and equipment for environmental protection, energy and environmental technologies, renewable energy systems engineering, industrial biotechnology, biotechnical and ecological systems engineering, engineering and environmental protection in agriculture, sustainable rural development engineering, environmental engineering, waste recovery engineering, environmental economics, and ecology (GD No. 158/2018).

### Ecological University of Bucharest

The Ecological University of Bucharest ([www.ueb.ro/en/](http://www.ueb.ro/en/)) has seven faculties, including the Faculty of Ecology and Environmental Protection ([www.ueb.ro/ecologie/](http://www.ueb.ro/ecologie/)), the graduates of which have the potential for employment by environmental public authorities at the national and local levels, national and international environmental consultancies and projects, and environmental NGOs. Since its establishment in 1990, it has had 45,000 graduates with bachelor’s and master’s degrees in science.

Students studying for three years for a bachelor’s degree in environmental science, to become future teachers and environmental specialists, take courses such as waste management, nature conservation, environmental agriculture, pollution and environmental protection, and EIA methodology.

<sup>110</sup> [www.edu.ro/sites/default/files/fi%C8%99iere/Invatamant-Preuniversitar/2016/liceal/curriculum/CRR\\_cl\\_IX\\_liceu\\_Protectia\\_mediului.pdf](http://www.edu.ro/sites/default/files/fi%C8%99iere/Invatamant-Preuniversitar/2016/liceal/curriculum/CRR_cl_IX_liceu_Protectia_mediului.pdf).

Two-year master's degree studies are offered in the following three programmes, in the framework of which students study courses relevant for environmental protection and sustainable development:

- Management of natural resources, including non-renewable resources, biodiversity conservation, EIA, Romanian mineral resources, and rehabilitation of natural areas;
- Managing the effects of climate change, including climate change policies, infrastructure and urban climate, energy resources and alternatives, environmental risks, agriculture, and global warming;
- Environmental impact assessment, including methodology, environmental impact of electromagnetic radiation and agricultural policies, managing natural resources, energy and the environment, monitoring environmental quality, national environmental strategies, sustainable forest management, impact on human health, environmentally friendly exploitation of zootechnical resources, and public communication and information in the EIA context.

Master's degree students carry out specialized internships organized based on cooperation agreements with institutions working on environmental protection and with economic operators. Since 2013, as part of its scientific environmental activities, the University has organized annual international conferences under the overarching theme "Ecology of the Twenty-first Century" ([www.ueb.ro/ecologie/conferinte.php](http://www.ueb.ro/ecologie/conferinte.php)). The University promotes the integration of EE into other specialities in accordance with the provisions of its Charter, setting an objective to prepare future specialists in the spirit of knowledge and understanding of the role of ecology and environmental protection in all fields of activity.

#### *Training of teachers*

In Romania, continuous training is mandatory for teachers. Training is offered by the Teachers' Training Houses accredited by the ministry in charge of education, or by the universities or other providers. Training offered by Teachers' Training Houses, approved annually by the ministry, consist of courses, seminars and workshops. The accredited training courses related to the environment and sustainable development include: ESD: developing life abilities; ESD: school-family-community partnership;

environmental protection: the main criterion for a sustainable lifestyle; integrating critical thinking in the curriculum; sustainability in the protection of the environment: integral part of the educational process; developing the life skills of pupils in the context of sustainable development; education for democracy; methods of critical thinking; learning strategies for critical thinking; volunteering for the environment: present and perspectives; education for gender equality: strategies for prevention and active intervention in the school environment; and education for the environment: ways of doing it. These training courses are optional. As at December 2019, there is no compulsory training on EE or ESD for teachers and educational personnel. Often, due to budgetary constraints, teachers improve their knowledge on environmental protection and sustainable development themes as well as EE and ESD through self-directed study or through national or international projects.

#### *Training and retraining of civil servants*

In-service training of civil servants is regulated by the Administrative Code (GEO No. 57/2019), which stipulates that public authorities have the obligation to ensure for each civil servant their participation in at least one training or professional development programme every two years, organized by the National Institute of Administration or other professional training providers, and to provide the necessary resources in the budget. Furthermore, public authorities have the obligation to elaborate annually the plan of professional development of civil servants. In practice, for the last several years, the staff of the ministry in charge of the environment did not have any in-service training due to budgetary constraints.

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**Photos 5.16, 5.17, 5.18 and 5.19: International School of Bucharest engaging in environmental protection and sustainable development**



Photo credit: Angela Sochirca

At the same time, in 2019, the ministry provided training on the new Law on EIA and the EIA guides for staff of NEPA and the LEPAs, Romania Waters, NANPA, waste management authorities and large infrastructure project authorities. The training, organized within the project “The professional training of the personnel of the competent authorities for environmental protection regarding EIA and environmental assessment for the period 2014–2020”, consisted of five one-day sessions to disseminate EIA guidelines (held in Constanta, Bucharest, Timisoara and Poiana Braşov for 406 participants) and five four-day training sessions for environmental authorities on methodological guidelines (held in Tulcea, Bucharest, Oradea and Poiana Braşov for 144 beneficiaries). The trainees were staff from NEPA, LEPAs, the Technical Analysis Commission and other staff who develop EIA reports, and representatives of investment

directorates within the county councils and municipalities. The ministry plans to continue such training for the next two to three years with funding from the EU, co-funded 15 per cent from the Romanian state budget.

NEPA has a low budget for training, workshops or seminars to deliver specialized information to LEPAs and does not conduct them regularly.

LEPA Braşov conducts annual in-service training for its personnel (36 staff on the payroll), mostly because of the constant changes in the environmental legislation. The last two training courses took place in November 2018 and February 2019 (on legislation). Depending on the training programme, courses can last from two to five days. To keep up with the frequent legislative changes, the LEPA was

considering increasing the number of such in-service training sessions.

NEG is competent for about 1,000 legislative acts, so training is important. However, due to the lack of funds, the last course was two years ago. Due to the insufficient budget, no financial resources are allocated to the professional training of the staff. Instead, the centre uses videoconferencing to consult counties' staff and, at least annually, all chief commissioners gather for two to three days for an updating meeting. In the Environmental Guard Braşov, training is provided by the headquarters, with staff being invited one by one to seminars. In addition, one or two meetings are held locally each year and staff have established a WhatsApp group for consulting counties on planning and laws.

The National Administration "Romanian Waters" organizes non-formal training for technicians on legislation and guidelines, carried out by headquarters staff. Also, working groups from river basin authorities pass experience back up to headquarters.

Since 2017, the National Agency for Fishing and Aquaculture has organized three training events per year with EU funds (dropping to two in 2019) to update skills, with the participation of most staff.

In 2018, the Ministry of Health organized three training courses for the State Sanitary Inspection staff (256 state health inspectors and assistant health inspectors participated) within the public health control structures of the county public health departments and Bucharest municipality. Training topics included health inspection in the field of hospital health care, nutrition and health claims permitted to be declared on food products, and sanitary inspection in the field of biocidal products and cosmetics.

The National Agency for Mineral Resources ensures for every civil servant an annual training event of about five days. The training programme in 2019 did not include any environmental topics.

Since the academic year 2012–2013, the Ecological University of Bucharest offers one-year post-university studies in the framework of continuous professional training and development on the following three specializations: management of Natura 2000 sites; research methodology in environmental protection; and methods of investigating the quality of environmental factors.

In 2018, employees of the ministry in charge of education underwent training on reducing food waste to raise their awareness about the global impact on food waste and its environmental impact, linked to SDG 12 (Ensure sustainable consumption and production patterns). The training was delivered by the National Association for Consumer Protection and Promotion of Programmes and Strategies in Romania (InfoCons), which is a member of Consumers International.

#### *Non-formal and informal education*

Non-formal and informal education promoted by the ministry in charge of education are focused on developing competences such as interpersonal skills and ability to work in a team, to support active participation in society and the labour market, complementing the competences acquired through formal education. Action learning, peer learning and volunteering are used as principal teaching methods in non-formal and informal education. Romania's non-formal and informal education is conducted by means of extracurricular activities, the Erasmus+ Programme, National Programme "School in a different way (Scoala altfel)", projects and partnerships, national extracurricular competitions, and children's palaces (Palatul Copilului) and clubs. EE and ESD (mostly the environmental and social dimensions) are integrated into non-formal and informal education to an extent, depending on the type of educational activity. The most common challenge is the lack of adequate resources allocation for better integration of EE and ESD in theoretical and, especially, practical activities. No national budget is specifically allocated for ESD. The manuals, national projects and various school competitions are financed from the budget of the ministry in charge of education. The National Programme "School in a different way (Scoala altfel)" promotes non-formal and informal education for preschool and secondary school students, including in the area of EE and environmental protection, by developing the ability to take decisions in a responsible way (personal choices and social interaction) and assessing the consequences of the impact of various actions on the environment.

The programme lasts five days and can be carried out based on plans decided upon by each kindergarten or school, based on their annual curriculum.

The programme methodology is approved by MO No. 5034/2016 of the Minister of National Education and Scientific Research.<sup>111</sup>

<sup>111</sup> [www.edu.ro/sites/default/files/OMENCS%20Scoala%20altfel.pdf](http://www.edu.ro/sites/default/files/OMENCS%20Scoala%20altfel.pdf)



Since 2017, an awareness campaign on separate waste collection, “Waste Olympiad”, is held annually with the support of the ministry in charge of education and county school inspectorates. At the end of the collection campaign, prizes are awarded to groups of children who collected the most batteries and the largest amounts of WEEE. The ministry in charge of education has a dedicated space on ESD and the SDGs on its website, containing awareness-raising information and national and international documents and resources on ESD and sustainable development, including links to the UNESCO ESD manual, ECE Strategy for ESD, Quality Criteria of a Sustainable Development School, and the 2030 Agenda for Sustainable Development.<sup>112</sup> In addition, the ministry makes available information materials in support of ESD integration into teaching.<sup>113</sup> Forest Month is organized in March/April every year as a result of cooperation between the General Department for Forests of the ministry in charge of the environment and the ministry in charge of education. National parks are also contributing to promoting EE and ESD (box 5.7).

The Eco-schools programme in Romania, coordinated by the Carpathian-Danubian Centre of Geoecology ([www.ccdg.ro/](http://www.ccdg.ro/)) since 1999, has been a real success, with nearly 300 enrolled educational institutions as at December 2019. However, the trends in the number of eco-schools show that, following an increase from five pilot eco-schools in 1999 to 424 in 2009, there is a considerable decrease to 295 schools in 2019. In Braşov County there are eight eco-schools, including Braşov school No. 25 (box 5.8). According to the Braşov school inspectorate, there is a noticeable improvement in the environmental awareness of children in schools in the county, which is largely due to increasing extracurricular and social activities related to environmental protection. Also, LEPA Braşov organizes public debates on emerging environmental issues through its website platform. Adult education centres include environmental protection themes in their activities. An Advisory Committee for social dialogue with the elderly is operating in Braşov, including addressing various environmental issues at almost every meeting.

#### Box 5.7: Piatra Craiului National Park promoting EE and ESD<sup>114</sup>

Piatra Craiului National Park ([www.pcr.ai.ro](http://www.pcr.ai.ro)), including through its Visitor Centre established in 2016, is engaged in non-formal EE and ESD through its activities on raising environmental awareness, preserving local knowledge, traditions and communities, and promoting sustainable mobility (cycling) and waste recycling. Such activities are carried out under the themes of Education and Awareness and Conservation of Traditions of the Park’s Management Plan ([www.pcr.ai.ro/files/pdf/Plan\\_site.pdf](http://www.pcr.ai.ro/files/pdf/Plan_site.pdf)) both on the Park premises and in educational institutions of local and nearby settlements.

The primary aim is to educate children to be environmentally responsible, and they will also influence the behaviours of their parents and local communities, including preserving the National Park. Raising the environmental awareness of tourists and visitors is another focus of the Park’s activities. In 2019, the Visitor Centre had 8,000 visitors, including 2,000 children, predominantly from the lower secondary level (grades 5–8).

In addition, the EE schoolbook “Piatra Craiului” is used in all 11 general (primary and secondary level) schools located in local communities and in 25 general schools of Braşov and Argeş counties. The children are included in a programme of practical educational activities (excursions, competitions, camps). Also, local children are engaged in monitoring activities (e.g. on species of butterflies and bats). These activities resulted in continuous dialogue with members of local communities, increasing participation of children in greening activities in the Park, receiving requests from school inspectorates to expand the educational programme in other communities further away from the Park, reducing quantities of waste improperly stored by local communities in the Park and improving the Park’s image in local communities.

The Administration of the National Park established partnerships with NGOs and schools and participates in joint projects. For instance, the Park is participating as one of the four pilot areas in implementing the project “Restoring and managing ecological corridors in mountains as the green infrastructure in the Danube basin (ConnectGREEN)” (2018–2021), financed by Interreg-Danube Transnational Programme. WWF Romania is the Lead Partner. Project activities includes raising public awareness and education for nature conservation ([www.pcr.ai.ro/proiect-connectgreen](http://www.pcr.ai.ro/proiect-connectgreen)).

Project and tourist activities constitute the main funding source of the National Park.

<sup>112</sup> [www.edu.ro/educa%C8%9Bie-pentru-dezvoltare-durabil%C4%83](http://www.edu.ro/educa%C8%9Bie-pentru-dezvoltare-durabil%C4%83).

<sup>113</sup> [www.edu.ro/planuri-de-lec%C8%9Bii-edd](http://www.edu.ro/planuri-de-lec%C8%9Bii-edd).

<sup>114</sup> Annual Report on Activity in 2017 by Piatra Craiului National Park Administration: [www.pcr.ai.ro/files/pdf/Raport%20anual%202017.pdf](http://www.pcr.ai.ro/files/pdf/Raport%20anual%202017.pdf).

### Box 5.8: Braşov school No. 25 – ten years of eco-school experience

Braşov school No. 25 (primary school and gymnasium) has maintained its “green flag” as an eco-school since 2011, originally inspired by the “Let’s Do It, Romania!” campaign. Environmental activities are carried out in partnership with various actors, such as the Parents’ Committee, LEPA Braşov, Local Environmental Guard, Local Public Administration of Forests and NGOs. Parents jointly contribute to pay the annual eco-school tax of €150.

The school estimates that its compulsory and optional curricula include some 25 per cent of EE in its primary education and 20 per cent in its lower secondary education. Given the school location in a mountain forest area, attention is paid to educating pupils in respectful behaviour in forests.

The 25 members (each appointed for one year following submission of a motivation letter) of the school’s eco-club meet on a monthly basis. An eco-patrol operates on school grounds and an environmental magazine is produced by pupils.

Ongoing environmental actions include: saving paper (25 per cent reduction) and, since 2015, water; sustainable mobility; planting trees (more than 100 trees); and celebrating various environment-related international days and weeks (e.g. International Environment Day, International Day for the Preservation of the Ozone Layer, Earth Day, Mobility Week, Healthy and Sustainable Food Week). Since 2019, the school has implemented waste management through an initiative to reduce, recover and recycle, including through organizing a separate waste collection space on the school’s premises and partnering with the local waste collecting company “BRAI-CATA”. Recycled materials are used to make costumes and ornaments (e.g. for the Carnival in 2017). Children are selling such ornaments and collecting funds to support socially disadvantaged persons.

### NGOs promoting non-formal and informal environmental education

According to several environmental NGOs, public awareness on environmental matters is estimated to be at a good level, especially regarding forests and illegal logging and, to a lesser degree, biodiversity conservation, climate change and sustainable energy. However, behavioural patterns towards sustainable choices were still lagging behind awareness, the improvement of which requires enhanced implementation of EE and ESD. NGOs active in environment and sustainable development areas at the national and local levels contribute extensively to promoting non-formal and informal EE and ESD. For instance, in Braşov County, NGOs such as Let’s Do It, Romania (<https://letsdoitromania.ro/>) and Ecotic ([www.ecotic.ro/](http://www.ecotic.ro/)) and associations Millions of Friends (<https://millionsoffriends.org/>) and Schools for a Green Future (<https://spuvv.ro/>), engage children and often parents in their activities. Other examples of NGOs’ engagement in EE and ESD include their involvement in promoting green tourism (<https://turismverde.ro/>), green arts ([www.greenarts.ro/](http://www.greenarts.ro/)), green schools ([www.scoliverzi.ro/](http://www.scoliverzi.ro/)) and the activities of the Education Coalition (<http://coalitiaedu.ro/>). Various initiatives are implemented at the national and local levels, such as the Campaign “28 September 2019, SOS – Ambrosia”, a civic movement for the environment and health to combat the invasive plant ragweed (*Ambrosia Artemisiifolia*), which causes allergies.

### *Research and development*

The research, development and innovation system in Romania includes 263 public research, development and innovation organizations and about 600 enterprises. Of the public organizations, 56 are authorized public universities, 46 are national research and development institutes (of which 43 are coordinated by the Ministry of Education and Research) and 65 are research institutions and centres of the Romanian Academy. The National Network for Innovation and Technology Transfer (ReNITT) comprises 50 specialized organizations: technology transfer centres, technology information centres, technology and business incubators, and four science and technology parks.

### **Photo 5.23: Eco-Schools awards for ESD given to Brasov Secondary School No. 25**



Photo credit: Angela Sochirca

**Photos 5.20, 5.21 and 5.22: Children's art at Eco-School Brasov Secondary School No. 25**

Photo credit: Angela Sochirca

Preserving the environment is a priority of all current policies in the context of massive investments to be made in depollution and recycling techniques, in the management of water resources and wetlands. The “smart city” concept offers integrated infrastructure solutions for the needs of the population in urban agglomerations.

The field of bioeconomy benefits from the huge potential of Romanian agriculture, in the context of an increasingly active and growing local food industry, of successful applied research in the field and in the pharmaceutical industry, as well as in the context of global trends such as high food demand. Food safety and optimization, the development of the horticultural, forestry, animal husbandry and fisheries sectors or the capitalization of biomass and biofuels are domains with obvious potential. Research in the field of energy supports the reduction of Romania’s energy dependence, through the superior capitalization of fossil fuels, diversification of national sources (nuclear, renewable, clean), multifunctional transport (“smart grids”) and increase in consumer efficiency. Research and development specifically on EE and ESD are not included as separate themes in the national research programmes. Such research takes place through national and international projects,

activities of the ministries in charge of education and of the environment, and as a result of NGOs’ work.

## 5.5 Legal, policy and institutional framework

### *Legal framework*

The GEO No. 195/2005 on Environmental Protection approved by Law No. 265/2006, contains provisions for: access to environmental information (taking into account the confidentiality criteria in force); the right of association in environmental protection organizations; the right to be consulted in the decision-making process regarding the development of environmental policy and legislation, the issuance of regulatory acts in the field, and the elaboration of plans and programmes; the right to address, directly or through environmental protection organizations, administrative and/or judicial authorities, as appropriate, on environmental issues, regardless of whether or not damage has occurred; and the right to compensation for damage incurred.

### Access to information on environmental matters

Two main legal acts regulate access to information on environmental matters: Law No. 544/2001 on Free

Access to Information of Public Interest, and GD No. 878/2005 on Public Access to Environmental Information. The 2016 amendment to the Law established the deadline for written provision of information of public interest upon its request. Authorities have up to five days to send a justified refusal to provide the requested information.

**Photos 5.24, 5.25 and 5.26: Artwork made from recycled materials, International School of Bucharest**



*Photo credit: Angela Sochirca*

GD No. 878/2005 sets the conditions, basic terms and modalities for both active and passive access to information on environmental matters as well as access to justice for the unjustified non-provision or partial provision of the requested information, which is in line with the provisions of the Aarhus Convention. The GD establishes a deadline of up to 15 days for redirecting the request to another public authority, as appropriate, and notifying the requester of this. Article 12 establishes the grounds for refusing the provision of information upon request; however, it stipulates that the reasons for refusal shall be interpreted in a restrictive sense, considering, for each case, the satisfaction of the public interest by disclosing the information. For each case, the satisfaction of the public interest by disclosure is

compared with the interest satisfied by maintaining confidentiality. Furthermore, the public authorities may not refuse a request for information regarding emissions into the environment.

Petitions are handled in accordance with the Government Ordinance on the Regulation of the Activity of Addressing Petitions (No. 27/2002), including the requirement for public authorities to establish a dedicated unit for public relations that will register and oversee the timely response to petitions. The public authority has up to 30 days to respond to a petition (regardless of whether by a positive or negative response) and, in the case of a complex response, may extend this by another 15 days (30 days for the energy sector), informing the petitioner of such an extension.

The environmental dimension of SDG target 16.10 (Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements) is addressed well in Romania through the adoption of national legal acts enabling free access to information of public interest and public access to environmental information, including the ratification in 2000 of the Aarhus Convention (Law No. 86/2000). Thus, the legal guarantees to public access to environmental information are in place. Pursuant to these legal provisions, all public authorities have on their websites a dedicated space for information of public interest. In addition, environmental public authorities post environmental information on their websites for active public access. Furthermore, the country has established procedures to respond to public requests for environmental information, including reasonable timeframes. Moreover, the ministry in charge of the environment developed the Public Authorities Guide for Access to Environmental Information and disseminated it widely across all public authorities, as part of its efforts to improve access to information. Overall, the environmental public authorities make reasonable efforts to promote publicly the right to information and to abide by the established procedures and timeframes to make available environmental information. Nonetheless, the trend in recent years shows an increase in public requests for environmental information and some public authorities are struggling with handling the increased demand within the mandatory timeframes. The Romanian public, including environmental NGOs, is aware of its right to environmental information and is using that awareness. The remaining big challenge is the effective utilization by the public of its right to environmental information, as evidenced by the increasing number of court cases won by NGOs

challenging the non-provision of environmental information.

#### Public participation in decision-making on environmental matters

Two main legal acts regulate public participation in decision-making on environmental matters: Law No. 52/2003 on Transparency of Decision-Making in Public Administration and GD No. 564/2006 on the Framework for Implementing Public Participation in the Development of Certain Plans and Programmes related to the Environment.

The Law regulates public participation in decision-making by public authorities at all levels, including on environmental matters. The Law sets out the rules and procedures for public consultation and active participation in public debates organized by the public authorities, as well as in drafting normative acts. Accordingly, public authorities are obliged to inform the public, by means of mass media and on their websites, about a draft normative act 30 days in advance of its expected approval and set a minimum of 10 days for public comment (by individuals and NGOs). In the case of a request from an NGO, public authorities are obliged to organize a public debate on the draft normative act within 10 days of announcing such public debate. Within another 10 days following the public debate, the authority is obliged to provide public access to the minutes of the public debate, written recommendations collected, improved versions of the draft normative act in various stages of development and approval reports, as well as the final adopted version of the normative act. The Law also foresees adoption by emergency procedures provided by the regulation in force in the case of exceptional circumstances, in order to avoid serious harm to the public interest. This clause appears to be overused by public authorities in issuing an increasing number of emergency ordinances on various issues, the development of which does not require public consultations.

GD No. 564/2006 was made in order to comply with article 7 of the Aarhus Convention setting the framework for public participation in environmental decision-making. The Decision regulates public participation in making or revising plans and programmes in the areas of waste, including packaging and electronic waste, water protection against nitrate pollution from agricultural sources, and air quality. Public participation includes at least the possibility of submitting comments (within 30 days) and participating in a public debate (organized within 45 days from the end of the commenting period and by announcement at least 30 days before the debate).

The authority is obliged to inform the public about the manner in which the results of public participation were taken into account, and of the possibility to contest the decision in the competent court. The Decision defines the “public” as natural and legal persons (one or more) and associations, organizations or groups of these persons, regardless of their citizenship, nationality or residence (for natural persons), and regardless of the place where they are registered or where the effective centre of their activities is located (for legal persons).

In addition, public participation in decision-making on environmental matters is regulated in other laws, such as the Law on Industrial Emissions (No. 278/2013), which has specific provisions on public participation in decision-making in annex 4, including the obligation of environmental protection by the competent authority, which is responsible for issuing the integrated environmental permit or environmental permit, to keep the public informed about issuing new, renewing or revising integrated environmental permits and to ensure effective participation of the public concerned in commenting and in public hearings. Furthermore, MO No. 1798/2007 for the Approval of the Procedure for Issuing Environmental Permits contains the procedure for organizing public hearings (annex 3).

Certain aspects of public access to information, participation in decision-making and access to justice in environmental matters are also regulated by legislation related to EIA, SEA and environmental permitting. For instance, the Law on EIA contains an entire section establishing the modalities for public information and participation in the EIA procedure, and another section with provisions related to access to justice. According to the Law, NGOs promoting environmental protection and meeting the conditions laid down in relevant legislation are deemed to be concerned. Importantly, the Law introduced for the first time the provisions for when a request for information might affect the intellectual property rights or the confidentiality of commercial and industrial information, in which case the competent authority must interpret the reason to refuse in a restrictive manner, giving priority to satisfying the public interest by sharing the part of the information that can be made public. Also, the authorities must explain the way in which the public interest was taken into consideration.

GEO No. 43/2007 on the Deliberate Release into the Environment of Genetically Modified Organisms contains provisions on public participation and access to information, in its articles 6 and 17. GEO No. 44/2007 on the Contained Use of Genetically

Modified Microorganisms guarantees public information and consultation in the authorization procedure for activities using genetically modified microorganisms on contained use (article 20). Romania has accepted the GMO amendment of the Aarhus Convention by the adoption of Law No. 24/2008.

The environmental dimension of SDG target 16.7 (Ensure responsive, inclusive, participatory and representative decision-making at all levels) is looked at from the perspective of the public participation in decision-making on environmental matters, for which the legislative framework and the procedure for public participation are well established in Romania. In particular, the Law on EIA, requiring the public authorities to put the public interest above a request for confidentiality, is expected to facilitate access to information necessary for meaningful public participation. However, several challenges remain for effectively implementing the legal provisions for public participation on the ground, including adapting the procedures for ensuring meaningful public participation in times of pandemic. To support addressing the challenges, in 2019, the ministry in charge of the environment developed a strategy for improving country compliance with the provisions of the Aarhus Convention, which is expected to help the country's efforts in improving public participation in decision-making on environmental matters. Additional concrete practical actions are yet to be developed, implemented and monitored.

#### Access to justice in environmental matters

Two laws that regulate access to justice, including on environmental matters, are the Law No. 134/2010 on the Code of Civil Procedure and the Law No. 554/2004 on Administrative Litigation). In addition, the Law on EIA contains special provisions regarding access to justice during all stages of an EIA procedure. Also, the GD on Public Access to Environmental Information regulates access to justice for the unjustified non-provision or partial provision of the requested information, in line with the Aarhus Convention.

Directive 2003/35/EC providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending them with regard to public participation and access to justice is another legal act guiding Romanian activities in the areas of public participation and access to justice.

#### Environmental education and education for sustainable development

There is no legal or regulatory act specifically addressing the implementation of EE and ESD in formal, non-formal and informal education systems in Romania. The main law regulating education in the country – the Law No. 1/2011 on National Education – stipulates the main aims of lifelong learning, which are the full development of the person and the sustainable development of society. The Law does not include any specific provisions on EE or ESD.

Programmes for optional activity (e.g. “School after school”) or extracurricular activities (e.g. “School in a different way”) that can include EE and optional subjects (e.g. Ecological and environmental protection education for preschool, primary and lower-secondary levels of education) are regulated through orders of the ministry in charge of education.

The GEO on Environment Protection contains provisions requiring the ministry in charge of education to ensure that curricula at all levels be adapted in order to acquire the notions and principles of environmental protection, and for environmental protection awareness, training and education, and that educational programmes be elaborated in order to form responsible behaviour towards the environment. The implementation of these provisions has been put into practice by the ministry in charge of education through optional subjects and extracurricular activities.

#### *Policy framework*

#### Environmental democracy

To implement the decisions on compliance by Romania with the provisions of the Aarhus Convention, in July 2019, the ministry in charge of the environment prepared an implementation strategy (Strategy for the implementation of the provisions of Decision VI/8h regarding Romania's compliance with the requirements of the Aarhus Convention), the draft<sup>115</sup> of which underwent public consultation. The Strategy aims to guide normative activities identifying measures needed to improve the existing legislation to ensure meaningful and effective public participation in the process of issuing agreements, permits, licences or authorizations, and the development of new normative acts. Improving the understanding of civil servants and staff at the national and local levels on the importance of compliance with the provisions of the Aarhus

<sup>115</sup> [www.mmediu.ro/articol/strategia-pentru-implemterea-deciziei-vi-8h-privind-conformarea-romaniei-cu-cerintele-conventiei-aarhus/3043](http://www.mmediu.ro/articol/strategia-pentru-implemterea-deciziei-vi-8h-privind-conformarea-romaniei-cu-cerintele-conventiei-aarhus/3043).

Convention is another objective of the Strategy. In addition, the Strategy aims to collect and monitor the requests received regarding access to information on environmental matters. Plans to monitor and report on progress in implementing the Strategy are yet to be developed.

In addition to the Strategy, a Public Authorities Guide for Access to Environmental Information was developed in 2019 and published in 2020. The primary aim of the Guide is to inform and develop the capacity of civil servants involved in the procedure of responding to public requests for environmental information. As at October 2020, the electronic version of the Guide was disseminated through the website of the ministry in charge of the environment. The ministry contacted other public authorities at central and local levels, encouraging them to make the Guide available on their websites. Printed copies are disseminated at the premises of the ministry and by sending them to other public authorities for distribution to their constituencies.

There is no other policy document related to access to information, public participation in decision-making and access to justice in environmental matters. These issues are implemented mostly through laws and regulations (see section above).

#### Environmental education and education for sustainable development

As at October 2020, there is no national strategy or action plan on EE and/or ESD in formal, non-formal and informal education in Romania.

A first step towards ESD strategic vision has been made through the National Strategy for the Sustainable Development of Romania 2030 (GD No. 877/2018), which includes a dedicated section on ESD as a form of education that should become an integral part of all quality education and inherent to the concept of lifelong learning. The Strategy also contains several national targets related to ESD, such as: “Ensure that all pupils acquire the necessary skills and knowledge to be able to promote sustainable development, including through education for sustainable development and sustainable lifestyles, human rights and gender equality, to promote a culture of peace and non-violence, and to appreciate cultural diversity and the contribution of culture to sustainable development”, “Expand the concept of sustainable development in formal university education as a principle and a specialization, and highlight the role of interdisciplinary research in the development of a sustainable society”, “Popularize and promote sustainable models of production and consumption

through information campaigns aimed at a broad public and introduce these good practices into school and out-of-school educational curricula” and “Transition from the current economic model based on production and consumption to a circular economy by changing mentalities through education, changing consumer behaviour and developing financial mechanisms to facilitate the transition period”. An action plan to implement the Strategy, still under development as at October 2020, would be expected to include concrete actions to achieve these targets and would support a process of planning concrete actions for developing and implementing ESD in the education system of Romania.

The 2018–2020 Governing Programme mentions EE and ESD explicitly as part of its activities to increase participation in quality education, including by supporting extra-curricular educational policies that complement the approved school curricula and ensure the implementation of health education, civic education, cultural artistic and scientific education, ecological education, sports education, road education and education for sustainable development.

The National Strategy for Research, Development and Innovation 2014–2020 (GD No. 929/2014) identifies strategic areas of activities in the fields of energy, environment and climate change, bioeconomy and eco-nano-technologies. For instance, in the area of “bioeconomy”, activities are to benefit from the potential of Romanian agriculture. “Energy, environment and climate change” activities are to look into diversification of national energy sources and increasing consumer efficiency, prioritizing environment protection in all policies and forthcoming large investments in depollution and recycling techniques and the management of water resources and wetlands, and developing smart cities. The area of “eco-nano-technologies and advanced materials” includes activities to invest in research for fuels, new and/or recycled materials and activities on ecotechnologies protecting water, air and soil. The National Plan for Research, Development and Innovation Strategy 2015–2020 (GD No. 583/5015) and the Operational Programme “Competitiveness” are the two main tools operationalizing the implementation of the Strategy, including through project-based activity financed from European funds. For example, subprogramme 5.4. Research, development and innovation programme for rivers, deltas, seas “DANUBIUS” of Programme 5 “Research in areas of strategic interest” under the National Plan for Research, Development and Innovation 2015–

2020 served as a framework for management support projects from May 2018 until June 2019.<sup>116</sup>

The National Strategy for Competitiveness 2014–2020 (GD No. 775/2015) identifies 10 economic sectors with potential for smart specialization, including “tourism and ecotourism”, “energy and environmental management” and “bioeconomy (agriculture, forestry, fisheries and aquaculture), biopharmaceuticals and biotechnologies”.

Several other strategies, programmes and plans (e.g. Romanian Vocational Education and Training Strategy for the period 2016–2020, Strategy on reducing early school leaving in Romania, National Strategy for Tertiary Education 2015–2020 and National Lifelong Learning Strategy 2015–2020) contain, to various extents, issues related to sustainable development themes; however, none explicitly includes concrete plans or activities regarding EE or ESD. A systematic approach to developing, promoting and implementing EE and/or ESD in the national education system is lacking.

Recommendation 3.2 in the Second EPR of Romania is not implemented, as at October 2020. It advised the Government to: (a) adopt a national strategy on education for sustainable development and its national implementation plan, as recommended by the ECE Strategy for Education for Sustainable Development; and (b) ensure that adequate funding is made available for its implementation.

Achieving SDG target 4.7 (By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development) and target 12.8 (By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature) is measured through the same global indicator, 4.7.1 and 12.8.1 (Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in: (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment). In Romania, some subjects of the compulsory curricula of primary and secondary education include themes related to environmental protection and sustainable development. Also, at the initiative of individual

teachers, topics related to environmental protection and sustainable development are integrated in other subjects in the compulsory curricula. However, as at October 2020, Romania is integrating EE and, to some extent, ESD (mostly the environmental and social dimensions) mainly in the optional curriculum and in non-formal and informal education, and mostly as a result of project-based activities. As such, neither EE nor ESD is mainstreamed into national educational policies. Likewise, EE and ESD are not integrated as compulsory courses in the education of future teachers or the in-service training of teachers. At the same time, the ministry in charge of education is promoting the integration of sustainable development themes and SDGs in schools’ activities and has developed a dedicated space on its website with information related to ESD and the SDGs. The Department for Sustainable Development plans to introduce a new occupation in the Romanian Classification of Occupations – expert in sustainable development – with support from the ministry in charge of labour. The ministry in charge of the environment provides information on environmental protection on its website. The mass media resources focused on environmental protection contribute to promoting EE and ESD through informal education (section 5.1).

#### *Institutional framework*

#### Environmental democracy

There have been no significant changes since 2012 in governance, institutions and bodies that relate to public access to information, participation in decision-making and access to justice in environmental matters.

The main environmental authorities with responsibilities in enabling public access to information on environmental matters are: the ministry in charge of the environment (Ministry of Environment, Waters and Forests as at October 2020), NEG, NEPA and its 42 LEPAs, the National Meteorological Administration, NANPA, DDBRA and the Environment Fund Administration.

In addition, except for bodies or institutions acting in a judicial or legislative capacity, all other authorities in possession of environmental information of public interest are required to grant access to the public. Each public authority is expected to establish within its structure a unit of public relations in charge of handling requests for environmental information from the public, including keeping a dedicated register of such requests. Monthly reporting of requests received and responded to is required, up the administrative

<sup>116</sup> [www.research.gov.ro/ro/articol/4787/programe-nationale-p5-cercetare-in-domenii-de-interes-strategic](http://www.research.gov.ro/ro/articol/4787/programe-nationale-p5-cercetare-in-domenii-de-interes-strategic).



hierarchy until the level of the main central authority. For example, NEPA keeps national statistics based on reports from all LEPA and publishes them on its website.

NEPA's legal office takes care of requests related to legal issues, including comments made on draft legal acts. NEPA's development of the Integrated Environmental Information System, which ensures the collection and processing of environmental data in a standardized format from areas under the responsibility of NEPA and LEPA in order to report to various international and European bodies, contributes to the institutional framework enabling online access to such information. In addition, the system serves as an interface for online submission of requests for information.

The current resources allocated in both the ministry in charge of the environment and in NEPA and the 42 LEPA are insufficient to ensure good implementation of access to information, public participation in decision-making and access to justice in environmental matters, especially concerning complex technical issues. Staff are often overworked dealing with multiple issues and requests in parallel, which sometimes delays the provision of comprehensive and timely responses to requests for complex information.

Also, within LEPA there are only minimal units that cover the field of public relations, and the activity in the field of sustainable development (developing, implementing and monitoring of local or regional environmental action plans) is provided by a single staff member, who has many other duties in their job description, such as being part of a monitoring department or laboratory. Another challenge to maintaining staff with a high level of expertise in NEPA and LEPA are the salary conditions, which are inferior to other structures in the public administration, and therefore discourage entry into the system and maintaining experienced staff. High staff mobility affects the maintenance of adequate levels of expertise and performance.

Since its establishment in 2016, NANPA (<http://anap.gov.ro/>) aims to better unify the administration of protected natural areas.

The National Emergency Preparedness Platform (<https://fiipregatit.ro/>) provides first aid guidelines and general education regarding emergency situations such as natural disasters (heatwaves, floods, earthquakes, fires, tornadoes). It is the official source of information for the public about safety measures and emergency response.

Ombudsperson work on protecting the right to a healthy environment is carried out by the Department on Human Rights, Equality of Opportunity between Men and Women, Religious Cults and National Minorities, which has six staff (State Secretary, counsellors and experts) including one counsellor working on the environment in addition to other tasks. The Ombudsperson's 14 territorial offices have only legal experts with general competences.

LEPA Braşov's unit on public relations and mass media communications oversees the handling of public petitions and complaints. The LEPA is conducting information and awareness-raising campaigns, such as the Forest Month that takes place annually from 15 March to 15 April and serves as an interface by helping the Environment Fund Administration disseminate information, for instance about the RABLA Programme. In addition, LEPA Braşov is cooperating with universities, schools and NGOs through partnerships, such as certifying graduates of the two Braşov colleges with environmental specializations and participating in 2016–2018 in a multi-stakeholder project "Green Path towards Sustainable Development" in cooperation with LEPA Sibiu.

#### Environmental education and education for sustainable development

Since 2012, no significant changes occurred in the institutional framework related to EE and ESD. Dedicated institutional structures or bodies specifically working on EE and ESD (e.g. departments, divisions, units) within public authorities in charge of education or of the environment are still lacking. The Ministry of Education and Research and subordinated institutions at the national and local levels ([www.edu.ro/structuri-subordonate](http://www.edu.ro/structuri-subordonate)) are the main public authorities in charge of education. The Ministry is the main authority to report on ESD and is among those designated public authorities to implement the ECE Strategy for ESD. In addition, the Ministry organizes and leads the national system of scientific research, technological development and innovation, consisting of all units and institutions of public and private law with legal personality that have research and development in their activities. EE and ESD are integrated into the Ministry's relevant activities to various extents, mostly in the area of optional and extra-curricular activities and non-formal and information education. The funding of schools' activities, including those on EE and ESD, comes from the state budget (based on per capita financing), the budgets of local authorities, programmes with national or EU funding and sponsorships. In addition, other financial sources include ESIF, European Economic

Area Grants, ERASMUS+, the Swiss–Romanian Cooperation Programme and other donors.

The Ministry of Environment, Waters and Forests and subordinated institutions at the national and local levels are the key institutions promoting EE and ESD and working in partnership with the ministry in charge of education. The Department for Sustainable Development (<http://dezvoltaredurabila.gov.ro/>), established in 2017 under the Prime Minister's Office, has the role of liaison institution, including for promoting ESD.

Environmental NGOs are involved in promoting EE and ESD and in carrying out practical activities for environmental protection and sustainable development. One such example is the Carpathian-Danubian Centre of Geoecology ([www.ccdg.ro/](http://www.ccdg.ro/)), established in 1996 and since 2016 a full member of the Foundation for Environmental Education, which promotes sustainable development and focuses on EE. The Centre coordinates the implementation of five international programmes in Romania (Eco-schools, Learning about Forests (LeAF), Young Reporters for the Environment (YPE), Blue Flag and Green Key), two national projects (Eco Photography of the Year, and Partnership in environmental education), one national initiative (Green Day of Eco-schools in Romania) and three national competitions ("Valorizing waste, we save our environment and health", "Friends of the Forest" and "National Eco-site Contest").

## 5.6 Assessment, conclusions and recommendations

### *Assessment*

#### Environmental democracy

#### Access to information on environmental matters

Since 2012, the main achievements in access to information on environmental matters have included the development by NEPA of the Integrated Environmental Information System as a tool to enhance the availability and accessibility of information online. Using the system requires registration, which does not support open access to environmental information. Also, NEPA encounters difficulties in adequately maintaining the technical infrastructure of the system, which requires continuous high maintenance in order to function smoothly.

Another key achievement by the ministry in charge of the environment is the publication in 2020 of the Public Authorities Guide for Access to Environmental Information with the aim to inform and develop the capacity of civil servants involved in the procedure of responding to public requests for environmental information, and its wide dissemination to public authorities at the central and local levels. The planned training events for the public authorities would help them to better understand the provisions of the Guide. Considering the shortage in the public budget for in-service training activities, an online self-paced training module mandatory for all staff and civil servants dealing with requests for environmental information from the public, which would improve effective access to information, is suggested but is yet to be developed.

Access to environmental legislation is well provided on the government legal portal <http://legislatie.just.ro/>, as well as on the website of the ministry in charge of the environment and subsidiary institutions, albeit not always in the latest consolidated version, which is a challenge to be addressed.

The provisions of the Law on EIA, enabling the public authorities to provide more information to the public by putting public interest above any requests for confidentiality from project beneficiaries, is an important development in access to information and remains to be implemented in practice.

The biggest challenge in access to information is the discrepancy between the large amount of information provided on the website of the ministry in charge of the environment and the actual need of the public for specific environmental data on emissions into air and discharges into water, and the forest management plans of the state and private operators, which are not readily available.

Thus, on the one hand, the websites of the environmental public authorities provide a lot of information, even though the information is often of an awareness-raising or educational nature, frequently not up to date and not easy to find from the home page. The development of the Public Authorities Guide for Access to Environmental Information is a clear indication that the environmental public authorities are trying to improve public access to information.

On the other hand, the increasing number of court cases filed by environmental NGOs challenging the decisions of environmental public authorities and state enterprises not to provide requested environmental information (many of which have succeeded) is clear evidence that the currently established practice in the

area of access to environmental information is not working adequately.

#### Public participation in decision-making on environmental matters

Since the Second EPR in 2012, there has been no major change in the organization of public participation in decision-making on environmental matters. The exception since 2018, with the adoption of the new Law on EIA, is the requirement for public authorities to make publicly available on their website all relevant information related to a request for an environmental agreement, as well as the requirement to consider public interest above any request for confidentiality from a project beneficiary, by revealing and providing information that can be separated from those items or issues that are legitimately restricted. In addition, the continuing development of the Integrated Environmental Information System by NEPA contributed to better online access to the environmental information necessary for public participation, though the technical equipment for the system needs upgrading to address the frequent unavailability of the website.

Overall, the procedures for public participation in decision-making on strategic planning and legislation are well established with public authorities making draft documents available on their websites (mostly for 10 days only, which is the minimum prescribed by law), enabling the public to submit comments. The E-Consulting platform (<http://e-consultare.gov.ro/>), established in March 2019, is a useful platform that is expected to facilitate public access to information across all public authorities for public consultation. Nonetheless, some NGO representatives believed that their comments were not properly considered, if at all, in the final version of documents.

In other areas of public participation (projects, permitting) environmental public authorities are making efforts to comply with the legal provisions in force and enable public participation. From the NGOs' point of view, more proactive measures and efforts by the authorities at all stages of public participation in decision-making on environmental matters are necessary if public participation is to be organized in a meaningful and effective way. Also, proceedings from the public hearings are not made available online.

In 2020, during the COVID-19 pandemic, the ministry in charge of the environment and its subsidiary institutions advised that members of the public should submit all requests and comments via electronic means. NEPA continued to organize several public

hearings in person. No information is available on whether any public hearings took place in different formats, including by virtual means, by telephone or in a hybrid format.

A positive development is the elaboration by the ministry in charge of the environment of a Strategy for the implementation of the provisions of Decision VI/8h regarding Romania's compliance with the requirements of the Aarhus Convention, the implementation of which is expected to address normative, strategic and organizational issues. In addition to implementing the strategy, a process to monitor and report annually on progress achieved on each component of the strategy is not yet established.

The Environment Fund Administration is running two programmes under which environmental NGOs can benefit from financial support for upgrading their vehicles to less polluting types. Environmental NGOs can also partner with public authorities to participate in awareness-raising activities in the area of separate waste collection and recycling. At the same time, programmes for financing environmental protection, specifically targeting environmental NGO participation, are lacking. Also, environmental NGOs (except one representative of an NGO serving on the Advisory Board) are not involved in the decision-making on priority actions for spending environmental funds.

#### Access to justice in environmental matters

In the area of access to justice in environmental matters, no major changes have been made since the Second EPR in 2012. Access to justice increased its visibility in the Law on EIA, which has specific provisions in a separate chapter on access to justice. Accordingly, the public concerned (including environmental NGOs) can challenge on procedural or substantive grounds a decision or an omission of the competent public authority that is subject to public participation, including an approval for development, in line with the provisions of the Law on Administrative Litigation.

Many court cases in environmental matters are filed by NGOs, mostly challenging the non-provision of requested environmental information by public authorities and state enterprises, many of which have been decided in favour of NGOs. Environmental cases in the courts, which usually last two to three years, drain the financial and time resources of NGOs that could be spent otherwise for environmental protection activities. Enforcing compliance with a court decision remains a challenge. Also, the environmental information originally requested becomes obsolete

during such a long period and no longer serves the original purpose.

Courts do not have judges specialized in environmental cases or experts specialized in environmental law. Some universities provide optional courses on environmental law for students of the legal faculty; however, reportedly, such courses are not of high priority for students.

#### Environmental education and education for sustainable development

EE and, to some extent, ESD are integrated into the formal education system mainly through the optional curriculum, civic education and extra-curricular activities, as well as in several subjects of the compulsory curriculum, including at the initiative of individual teachers and responding to rising interest among students in issues such as climate change, plastic pollution, human rights, global warming, overpopulation and renewable energies. However, a systematic approach to developing, promoting and implementing EE and/or ESD in the national education system is lacking.

Public authorities in charge of education and of the environment are carrying out many activities to promote environmental protection and sustainable development, and, to some extent, EE and ESD. Environmental NGOs are leading in non-formal and informal EE and ESD. Many of these activities are conducted through national and international projects. Several national strategies and programmes mention issues related to environmental protection and sustainable development, and, in a few cases, refer explicitly to EE and ESD.

At the same time, a comprehensive strategy dedicated entirely to EE and/or ESD, providing a strategic framework for all ongoing and future activities and accompanied by a plan of concrete actions that includes deadlines, funds required and budgetary sources, as well as a monitoring mechanism to regularly measure progress in implementation, are still lacking.

#### Relevant Sustainable Development Goals targets

Romania is progressing well towards achieving the SDG targets relevant to environmental democracy: targets 16.3 (Promote the rule of law at the national and international levels and ensure equal access to justice for all), 16.7 (Ensure responsive, inclusive, participatory and representative decision-making at all levels) and 16.10 (Ensure public access to information

and protect fundamental freedoms, in accordance with national legislation and international agreements). There are several challenges to be addressed by Romania to achieve a good performance by 2030. The country carries out activities towards achieving the SDG targets relevant to ESD (targets 4.7 and 12.8); however, they are mostly based on optional approaches and the country lacks a coherent strategic and policy framework and a mechanism to monitor, report and assess progress in embracing ESD in the education system.

#### Relevant recommendations from the Second Environmental Performance Review

Romania demonstrates mixed progress in implementing recommendations from the Second EPR conducted in 2012 with Recommendations 2.4 and 3.2 not implemented and Recommendation 3.3 partially implemented. The full implementation of all three recommendations remains pertinent for the current EPR.

#### *Conclusions and recommendations*

#### Public access to information on environmental matters

The more environmental information is provided free online (active access), the fewer requests for information will be received (passive access). Enhancing active access to environmental information would be expected to decrease the pressure and address challenges related to passive access to such information. Making available more environmental information freely accessible online would be expected to decrease the number of incoming requests for information and release staff time for other activities. Increasing active access would also solve the challenge of timely accessibility of information, thereby supporting public participation. To that end, expanding, modernizing and further developing the Integrated Environmental Information System, and making all information therein accessible online free of charge to the public, would help improve timely access to pertinent environmental information, on both the state of the environment and environment-related matters. The development of similar systems by other public authorities is a priority for the next several years. Romania's expertise in information technologies is world renowned and could be used to support upgrading and further developing the Integrated Environmental Information System in the most innovative and user-friendly way, including by engaging Romanian universities in preparing IT specialists, or launching countrywide contests for the best information system IT infrastructure.

The Strategy for the implementation of the provisions of Decision VI/8h regarding Romania's compliance with the requirements of the Aarhus Convention, developed by the ministry in charge of the environment, is expected to address normative, strategic and organizational issues. A mechanism to monitor and report regularly on progress achieved is lacking.

The Public Authorities Guide for Access to Environmental Information, developed by the ministry in charge of the environment and disseminated widely in 2020 across all public authorities, is expected to improve public access to information, provided it will be applied effectively by all relevant authorities.

The Law on EIA, enabling public authorities to provide more information to the public by putting public interest above requests for confidentiality from project beneficiaries, is an important achievement but remains to be implemented effectively in practice.

Access to environmental legislative acts is hindered sometimes by the lack of availability of the latest consolidated version.

Certain information on environmental matters (e.g. the amount of water used by hydropower plants and how much they are paying for water use, discharges into water, daily emissions into air from power plants, forest management plans) is not readily provided upon request from NGOs. Refusal to provide such information is usually justified by clauses concerning confidentiality, intellectual property or commercial secrecy, or justified on the grounds that the requested information is not of public interest. Enforcing compliance with the court decision regarding the non-provision of requested environmental information by public authorities and state enterprises, ruled in favour of NGOs, remains a challenge to be addressed.

Training and capacity-development of staff is needed. However, during the last several years, no resources were allocated for in-service training of staff in the ministry in charge of the environment and NEPA. Training on access to information on environmental matters is also needed for public authorities in charge of various economic and other sectors. Recognizing the urgency to improve effective access to information, and taking into account the shortfall in the public budget for training activities, efficient solutions are required, such as developing an online, self-paced training module and making its use mandatory for all staff and civil servants dealing with requests for environmental information from the public.

Romania is on a good path towards achieving SDG target 16.10 and promptly addressing the remaining challenges would support the country's efforts to reach the target by the established deadline of 2030.

*Recommendation 5.1:*

*The Government should:*

- (a) *Take the necessary administrative and practical measures to ensure that public officials:
 
  - i. *Respond to the public's requests for information on environmental matters within the established deadlines and, in the case of refusal, state the reasons for the refusal and monitor that these reasons are in line with the legislation in force;*
  - ii. *Interpret the grounds for refusing access to information on environmental matters in a restrictive way, considering the public interest served by disclosure, and, in stating the reasons for a refusal, specify how the public interest served by disclosure was considered, including applying in practice the related provisions of the Law on Assessing the Impact of Certain Public and Private Projects on the Environment (No. 292/2018);**
- (b) *Provide adequate financial resources to ensure training and capacity-development activities for enhancing the knowledge and practical application of access to information on environmental matters;*
- (c) *Promote and support the establishment of integrated systems of information on environmental matters in all areas of activity, linking them into a portal of information and making that portal accessible for the public online and free of charge;*
- (d) *Establish a penalty for the repeated non-provision of information on environmental matters on the same issues, especially when there are court decisions in favour of the public challenging the non-provision of information.*

*Recommendation 5.2:*

*Public authorities in charge of the environment should:*

- (a) *Continue to implement the "Strategy for the implementation of the provisions of Decision VI/8h regarding Romania's compliance with the requirements of the Aarhus Convention",*

and set up a mechanism to monitor its implementation and prepare annual reports on progress achieved, making them available online;

- (b) Develop a guide on interpreting the provisions of various national legal acts regarding confidentiality, intellectual property and commercial secrecy of information in line with the definition and scope of information on environmental matters set out by the Aarhus Convention;
- (c) Upgrade, further develop and maintain the Integrated Environmental Information System, including allocating adequate financial support for modernizing the System's infrastructure and exploring the possibility of involving universities in the development of an innovative system;
- (d) Develop and promote an online training module for access to information on environmental matters and make its use mandatory for all civil servants and staff involved in public communication and relations;
- (e) Support other public authorities in possession of information on environmental matters to adapt the training module for their areas of activity;
- (f) Improve the online provision of up-to-date consolidated versions of legal, regulatory and normative acts to include all amendments made since their original adoption.

#### Engaging environmental NGOs in projects on environmental protection

Including one member of an environmental NGO on the Advisory Committee of the Environment Fund Administration is a positive development. At the same time, representatives of environmental NGOs are not consulted and engaged in establishing and running programmes for financing activities in various areas of environmental protection, especially those of emerging concern.

The Environment Fund Administration can do much more to support the engagement of environmental NGOs in environmental protection activities. For instance, special programmes could be set up to support running small and medium-sized projects in various areas of environmental protection and awareness-raising. In addition, a special programme to work with eco-schools (enabling them to apply for small grants), supporting their activities to develop and maintain eco-friendly approaches and "green" the school premises, could be initiated.

#### Recommendation 5.3:

*The ministry in charge of the environment should:*

- (a) Consider establishing effective mechanisms for the involvement of environmental stakeholders in decision-making on the use of funds of the Environment Fund;
- (b) Ensure the Environment Fund Administration considers schools as potential applicants for support, when drafting new environmental awareness programmes.

#### Public participation in decision-making on environmental matters

Public authorities are generally complying with legal provisions related to public participation in decision-making on environmental matters, although mostly setting the minimum prescribed deadlines. Regular training courses on meaningful public participation in decision-making on environmental matters for civil servants of public authorities at the central and local levels are yet to be established.

The Law on EIA, requiring the public authorities to put the public interest above any request for confidentiality, is expected to facilitate access to the information necessary for meaningful public participation. provided that the legal provisions for public participation are implemented effectively.

Application on the ground of the Strategy for implementation of the provisions of Decision VI/8h regarding Romania's compliance with the requirements of the Aarhus Convention lacks a process to monitor and report annually on progress achieved on each component of the Strategy (normative, strategic and organizational). The increasing number of emergency ordinances, especially since 2016, the adoption of which does not foresee public participation, is a worrying trend in development.

Given that Romania is party to the Aarhus Convention, the COVID-19 special measures and adaptations in the national procedures for access to information, public participation in decision-making and access to justice would need to be implemented and further developed in line with the "Statement on the application of the Aarhus Convention during the COVID-19 pandemic and the economic recovery phase" adopted on 2 September 2020 by the Compliance Committee under the Aarhus Convention. In particular, the Compliance Committee recommendations on the holding of public hearings on decision-making under the Convention during the COVID-19 pandemic, through videoconferencing or

other virtual means, would require additional implementation efforts to result in effective public participation.

Furthermore, in times of pandemic, such as the COVID-19 pandemic, organizing public hearings would require adaptation to ensure that conditions are safe for the public to participate in hearings. In such times, continuing to organize public hearings in person, as usual, might result in the public concerned not attending for safety reasons. It will be necessary to explore feasible formats in line with the recommendations of the Aarhus Convention Compliance Committee. Depending on the specificity of the region where the public hearing takes place, different approaches, or a combination of approaches, can be applied. Most importantly, public hearings do not need to be organized just for the sake of meeting the legal requirements and providing documentary evidence that they took place as part of a portfolio of documents; rather they are to actively engage the public and seriously consider comments made, to the benefit of all. All parties would gain from such an approach, but, most importantly, a healthy environment and nature will be preserved for future generations.

The public is not provided with an opportunity to comment on the position of the Romanian Government on key topics of discussion at international meetings. Representatives of environmental NGOs are not included in national delegations to international meetings.

Romania committed to achieving the SDGs, including target 16.7 (Ensure responsive, inclusive, participatory and representative decision-making at all levels), by 2030 and is progressing well, although several issues require to be improved. Timely action to address remaining challenges would help the country towards successful implementation of SDG target 16.7 by 2030.

Recommendation 5.4:

*The Government should:*

- (a) *Ensure in practice that public officials provide reasonable time frames, commensurate with the nature and complexity of the document undergoing consultation, for the public to become acquainted with draft strategic documents on environmental matters and to submit their comments;*
- (b) *Enable the provision of adequate information and training on meaningful public participation in decision-making on environmental matters to civil servants of*

*public authorities at the central and local levels;*

- (c) *Develop a guide to interpret the legal provision for emergency ordinances in a restrictive manner, with a view to diminishing their elaboration to an absolute minimum, in order to ensure the participation of the public and other stakeholders in the development of legal, regulatory and normative acts on environmental matters.*

Recommendation 5.5:

*The ministry or ministries in charge of the environment, waters and forests should:*

- (a) *Revise and adapt the existing procedures for public participation in decision-making to ensure effective public participation in times of pandemic;*
- (b) *Ensure effective participation of the public and NGOs in decision-making on environmental agreements and international processes and commitments, and in the preparation of national reports and other substantive inputs on their implementation;*
- (c) *Consider including representatives of relevant environmental NGOs in national delegations participating in international environmental processes.*

Public access to justice on environmental matters

Courts do not have judges specialized in environmental cases or enough experts specialized in environmental law.

Regular training for public authorities and judicial institutions to develop their capacity on access to justice in environmental matters in line with the Aarhus Convention is not carried out.

NGOs are not eligible for legal aid provided by the State. Pro bono legal aid in the environmental area is mostly received from national and international NGOs, associations and foundations.

The enforcement of court rulings in environmental matters, in cases won by NGOs, is lagging behind. The duration of court cases in environmental matters is two to three years, on average, which is too long for a meaningful outcome that would still be relevant for the NGOs involved, as information requested becomes obsolete, projects go ahead, and laws and policies are adopted. Often, environmental NGOs cannot afford financially to file cases in court or to continue

challenging the decision in court following an appeal, as their financial resources become exhausted.

Achieving the environmental dimension of SDG target 16.3 (Promote the rule of law at the national and international levels and ensure equal access to justice for all) by 2030 would depend on a timely response to tackle remaining challenges in that area.

*Recommendation 5.6:*

*The Government should:*

- (a) *Increase the capacity to address environmental cases within existing judicial authorities and by organizational adjustments, such as the creation of dedicated environmental courts or environmental divisions within existing courts;*
- (b) *Enable and conduct training courses for public authorities and judicial institutions to develop their capacity on access to justice in environmental matters in line with the Aarhus Convention;*
- (c) *Explore options to decrease the duration of legal cases in environmental matters;*
- (d) *Consider enabling the provision of legal aid for environmental NGOs;*
- (e) *Exempt from court fees NGOs challenging decisions, acts or omissions by public authorities and state enterprises regarding environmental matters;*
- (f) *Establish procedures to rapidly enforce the implementation of court decisions in environmental matters.*

Environmental education and education for sustainable development

Despite all efforts made by the ministries in charge of education and of the environment, a comprehensive strategy dedicated entirely to EE and/or ESD, providing a strategic framework to all ongoing and future activities, accompanied by a plan of concrete actions with deadlines, funds required and budgetary sources, as well as a monitoring mechanism to measure progress in implementation, is still lacking in the country. The National Strategy for the Sustainable Development of Romania 2030 (SDS 2030) includes a dedicated section on ESD and several related national targets, the achievement of which require taking practical action on ESD.

EE and, to some extent, ESD are integrated into the formal education system mainly through the optional curriculum, civic education and extra-curricular activities, as well as in the compulsory curriculum in natural science subjects and at the initiative of

individual teachers in other subjects. A systematic approach to developing and applying EE and/or ESD in the national education system is lacking. Units dealing with EE and/or ESD are yet to be established in relevant public authorities at all levels. EE and/or ESD is not integrated into the compulsory education of future teachers or in-service training of working teachers. Targeted research to advance the development of EE and/or ESD best adapted to Romania's education system needs is not yet being conducted.

Development and implementing EE and ESD in formal, non-formal and information education at all levels requires adequate financial resources allocated systematically to relevant public authorities and research and education institutions. The Eco-schools programme in Romania has nearly 300 enrolled educational institutions as at December 2019 and is a good approach to promoting EE and ESD.

Romania's timely action to address concerns in making ESD mandatory in the country's education system, including integrating ESD in the compulsory curriculum, would support its efforts towards achievement of SDG targets 4.7 (By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development) and 12.8 (By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature).

*Recommendation 5.7:*

*In support of achieving by 2030 the global SDG targets 4.7 and 12.8, the Government and the ministry in charge of education should:*

- (a) *Develop, in cooperation with stakeholders, including academia and environmental NGOs, a national action plan with short-, medium- and long-term actions to support the implementation of national and international strategies related to ESD (until the end of 2022), and implement, monitor and report annually the progress achieved in the country;*
- (b) *Establish units in charge of EE and/or ESD in relevant public authorities in charge of education at the central level and designate persons responsible for EE and ESD at the local level;*



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- (c) *Establish compulsory subjects on environmental protection in lower secondary education and introduce a compulsory course on ecology for upper secondary students;*
  - (d) *Make mandatory the integration of ESD and sustainable development themes across curricula;*
  - (e) *Include courses with compulsory EE and ESD themes in the study programmes of future teachers and in in-service training of working teachers;*
  - (f) *Establish a new speciality on EE and ESD with a view to educating national specialists in these areas, who would work in education departments;*
  - (g) *Encourage pedagogical institutions and universities to establish departments on EE and ESD with a view to conducting research and developing EE and ESD in the country and attracting students;*
  - (h) *Make available adequate financial resources for enabling EE and ESD at all levels;*
  - (i) *Promote and support eco-schools.*



***PART II: DOMESTIC – INTERNATIONAL INTERFACE***



## Chapter 6

# IMPLEMENTATION OF INTERNATIONAL AGREEMENTS AND COMMITMENTS

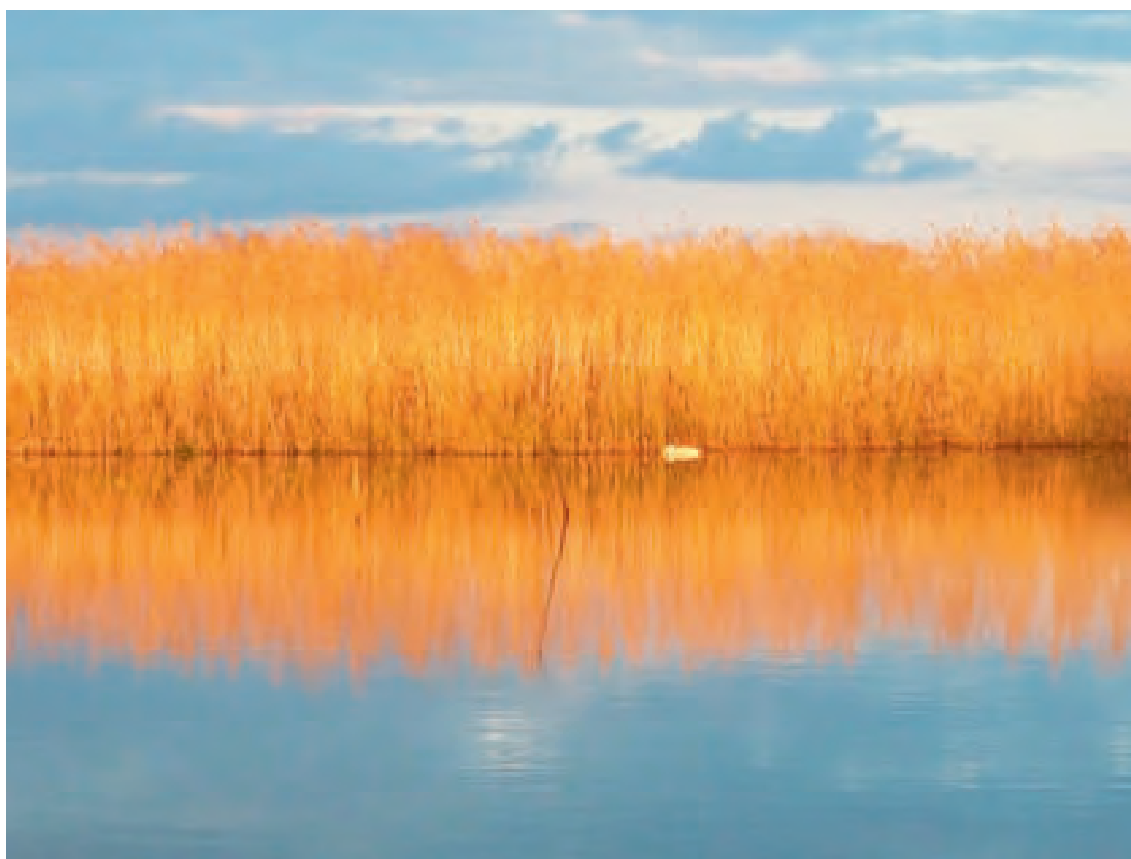
### 6.1 General priorities for international cooperation related to the environment and sustainable development

The main priorities of international cooperation on the environment are: (i) enhancing the collaboration with the EC and with EU Member States; (ii) maintaining and strengthening the cooperation with neighbouring countries, the Western Balkans countries and countries in the wider Black Sea Region; (iii) enhancing Romania's profile in the negotiations of global and regional agreements to which Romania is party; and (iv) demonstrating good performance in the attainment of goals and targets set by the 2030 Agenda for Sustainable Development and global activities on climate change.

Recommendation 4.1 in the Second EPR of Romania urged the Government to develop a strategy for international cooperation based on national environmental priorities, clear objectives and a realistic time schedule for their achievement. The recommendation is not implemented and no strategy containing those elements was drafted. However, areas that are of higher priority than others can be extracted from the main strategic documents adopted by the Government, such as the National Sustainable Development Strategy of Romania (SDS 2030).

Romania is fully committed to the implementation of the 2030 Agenda. In 2018, a third "edition" of SDS 2030 was approved, establishing the framework for implementing the 2030 Agenda and providing a roadmap for achieving the 17 SDGs.

**Photo 6.1: Romanian Danube Delta Biosphere Reserve**



*Photo credit: Sarangoo Radnaaragchaa*

The Romanian Presidency of the Council of the EU, exercised during the first semester of 2019, defined four main strategic areas, including “Europe of Convergence” with priority goal “fighting climate change and promoting sustainability”, which testifies to the relevance attributed by the country to these two subjects.

The OECD accession objective is also influencing considerably the international agenda in Romania, including on the environment, because one of the main vectors of this candidacy is the gains in reputation and credibility in the international scene accession represents.

## 6.2 Global and regional agreements

Full transposition and implementation of the *Acquis Communautaire* have been at the forefront of Romania’s purposes and concerns after the accession and even more so in the last two years, as transition periods granted to the country at the time of accession have ended. The EU has been the main driver behind Romania’s rapid lead in substantially improving and strengthening its political, legislative and regulatory framework in response to international obligations.

### *Participation and reporting*

Romania became party to the main global and regional MEAs prior to its accession to the EU in 2007 and has rapidly ratified the most recent MEAs, such as the Minamata Convention, the Paris Agreement and the Nagoya Protocol (annex I). It has implemented almost all the protocols of the Framework Convention on the Protection and Sustainable Development of the Carpathians and ratified the Protocol on Sustainable Agriculture and Rural Development in July 2020.

Efforts have been made by Romania to comply with its international reporting obligations; in some cases, however, the deadline for sending the report has not been met (e.g. submission of the Sixth National Report to the CBD has been pending since December 2018). When reporting to MEAs or non-binding processes implies the collection of data, often requiring complex and expensive software, the country faces problems, due to the maintenance costs of the hardware and software and the need for trained personnel, which it is difficult to retain.

Romania is usually represented at the most relevant meetings of MEA decision-making bodies, although participation is not completely regular, mainly due to financial constraints and turnover of personnel. When more than one competent authority or focal point have been identified for a given MEA or process,

attendance at meetings depends on the topic discussed and on resources available.

However, the implementation of Recommendation 4.2 in the Second EPR of Romania, that the Government provide an appropriate number of qualified staff to ensure the implementation of obligations under MEAs by increasing absorption of relevant EU funds devoted to strengthening capacity-building and to supporting the training of professionals, is in progress. Significant investment was made with the support of the European Cohesion Fund in the training of civil servants during the 2014–2020 programming cycle. Strengthening the training and qualifications of civil servants requires continuity in training and an adequate assessment of the needs of public entities and their resources.

Romania implements the Shared Environmental Information System (SEIS) and Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE Directive).

The country is not participating in the activities of the European Environment and Health Process.

Romania had taken on leading responsibilities in governance bodies in several international processes, such as serving as Chair of the nineteenth session of the United Nations Commission for Sustainable Development (2011) and Vice-President of the Governing Council of the United Nations Environment Programme (UNEP) (2012) and of the United Nations Environment Assembly (2014–2016). Romania was Vice-Chair to the Bureau of the Implementation and Compliance Committee of the Minamata Convention (2017–2019) and Chair in the subsequent mandate.

In addition, in 2019, Romania chaired the Joint Expert Group on Water and Industrial Accidents of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes and the Convention on the Transboundary Effects of Industrial Accidents.

Representatives of NGOs are never included in the Romanian delegations to MEAs’ meetings of parties or conferences of the parties; neither are they involved in the preparation of the country’s position for international meetings. NGOs are sometimes involved in the preparation of national reports on implementation of MEAs (e.g. the Carpathians Convention at the invitation of the Convention Secretariat).

*Conservation and sustainable use of biodiversity and nature*

Convention on Wetlands of International Importance Especially as Waterfowl Habitat

Romania has been party to the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention) since 1991. As at August 2020, 20 sites are designated as Wetlands of International Importance (Ramsar sites), with a surface area of 1,176 million ha, 11 of which have been designated in 2012 and 2013.

Following a request by Romania and Bulgaria expressing their wish to cooperatively manage the three wetlands that are part of the Lower Danube Green Corridor, located on both sides of their borders (Lake Calarasi/Srebarna, Suhaia/Belene Islands Complex and Bistret Ibisha Island), the three Ramsar sites were recognized as Transboundary Ramsar sites in 2013.

Since 2012, other main achievements of the Convention's implementation in the country are: (i) development of an integrated management plan and ecosystem services assessment for the Danube Delta Biosphere Reserve; (ii) strong engagement in the Carpathian Wetland Ramsar Regional Initiative "Ramsar Culture Network Development in the Carpathian Region" through the project "Conservation of the Natural and Cultural Heritage in Wetlands"; (iii) participation in the Ramsar Regional Initiative on Black and Azov Seas Coastal Wetlands (BlackSeaWet); (iv) continuity and increasing care in organizing World Wetlands Day annually; (v) increasing national awareness of the importance of wetlands; and (vi) a greater concern for conservation of wetlands as key components of the global life support systems that maintain quality of life and sustain societies and economy.

In 2015, Romania celebrated 25 years of professional management of the Danube Delta, marked by three different distinctions: its designation as a Biosphere Reserve – under the Man and the Biosphere (MAB) Programme of UNESCO – in 1990; its designation as a Ramsar site in 1991; and Romania being granted the European Diploma for exemplary management of a protected area (the Romanian part of the Delta) by the Council of Europe in 2000.

In the absence of a specific policy framework for wetlands, the National Strategy and Action Plan for Biodiversity Conservation (NBSAP), prioritizing the protection and restoration of wetlands and sustainable use of their resources, serves as a policy tool.

The National Management Plan relating to the portion of the international hydrographic basin of the Danube River that is included in the territory of Romania for the period 2016–2021 (NMP), containing objectives and quality standards for the protection and conservation of aquatic species, is another valuable policy tool for wetlands management.

Fifteen Ramsar sites have a management plan but not all are being implemented and an assessment of their effectiveness was never carried out, although some conclusions can be drawn from the monitoring of Natura 2000 sites given that all Romanian Ramsar sites overlap with the Natura 2000 network by at least 90 per cent.

Romania is facing several challenges in the implementation of the Ramsar Convention, which derive from: increasing pressure on all types of wetlands from economic activities; insufficiency of funds to support conservation activities; increasing environmental pressure because of climate change; insufficiency of human resources; the lack of public awareness on the importance of wetlands; and, in particular, the extreme difficulty of concerned users accepting any kind of restrictive measures.

The main priorities for the implementation of the Ramsar Convention are finalizing the extension of an existing site (Dumbravita Fish Pond); developing the missing site-specific management plans; continuing to support regional initiatives; and cooperating, coordinating and harmonizing implementation activities with other MEAs.

Convention on International Trade in Endangered Species of Wild Fauna and Flora

Romania became a party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1994. Romania has reported relatively constant or steady increases in permit issuance over the last five years, after a significant increase in 2009 and 2010. Export quotas were established by Romania in accordance with the procedure laid down by the Conference of the Parties, for the grey wolf (*Canis lupus*), wildcat (*Felis silvestris*), European lynx (*Lynx lynx*), brown bear (*Ursus arctos*) and medicinal leech (*Hirudo medicinalis*), on a yearly basis between 2012 and 2017. However, no export quotas were established for 2018 and 2019. CITES is implemented in the EU through a set of regulations known as the EU Wildlife Trade Regulations, which include Council Regulation EC No 338/97 on the protection of species of wild fauna and flora by regulating trade therein.

Processing and accessibility of information and enforcement levels are weak points of the existing CITES trade control system. Although an assessment of the effectiveness of CITES-related enforcement measures was never conducted, the weaknesses in terms of information – an example being that access to the CITES permits database has not yet been given to the National Customs Authority – harm the efficiency of the whole system. Since 2012, annual and biannual reports in Word and Excel formats have been prepared for transmission to the CITES Secretariat and EC as a duty under provisions of CITES and EU regulations. These reports are expected to be published on the Ministry of Environment, Waters and Forests website for consultation.

Strengthening the enforcement of existing legislation and acting collectively to ensure a coherent and unified national approach to CITES implementation are the main challenges ahead.

Romania's effort to achieve SDG target 15.7 (Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products) and target 15.c (Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities), both of which are measured by the same global indicator, 15.7.1 and 15.c.1 (Proportion of traded wildlife that was poached or illicitly trafficked), is difficult to assess in the absence of data on the value of legal and illegal trade.

No significant seizures, confiscations or forfeitures of specimens under CITES have been reported; neither have there been any criminal prosecutions of significant CITES-related violations in Romania.

Romania increasingly participates in joint international law enforcement operations related to wildlife trafficking promoted by INTERPOL and the World Customs Organization, which led to more cooperation by CITES-relevant national authorities in Romania in recent years. This is especially so regarding the tasks of detecting, analysing and monitoring illegal activities related to trade in fauna and flora.

#### Convention on the Conservation of Migratory Species of Wild Animals

In 1998, Romania became a party to the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and is also a party to several agreements – the African-Eurasian Migratory

Waterbird Agreement (AEWA), Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic Area (ACCOBAMS) and Agreement on the Conservation of Populations of European Bats (EUROBATS) – and MoUs developed under the CMS umbrella, such as those on the Conservation of Migratory Sharks, on the Conservation and Management of the Middle-European Population of the Great Bustard (*Otis tarda*) and on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors).

CMS implementation benefits from legal provisions adopted in Romania on nature conservation and biodiversity protection, in particular GEO No. 57/2007 on the regime of natural protected areas, conservation of natural habitats and wild flora and fauna as amended by Law No. 49/2011. The NBSAP for the period 2014–2020 incorporates considerations on migratory species, although there are direct references to the goals and targets of the Strategic Plan for Migratory Species 2015–2023. Some special protection areas (SPAs) include species listed in appendix I of the CMS. The national action plans for the conservation of the Ferruginous duck (*Aythya nyroca*), Dalmatian pelican (*Pelecanus crispus*), Pygmy cormorant (*Microcarbo pygmaeus*) and Lesser Spotted Eagle (*Clanga pomarina*) were adopted through MOs and are being implemented in relevant SPAs. All the existing Ramsar sites' management plans include conservation measures for migratory species.

Awareness-raising and educational activities, presentations and training courses for fishers were carried out with respect to the impact of overexploitation of sturgeon.

The Apuseni National Park Administration, together with the Bird and Nature Protection Association Milvus Group, has undertaken cross-border conservation measures with Körös-Maros National Park Directorate (Hungary) through a Joint Intergovernmental Expert Group on Conservation of Biodiversity. The monitoring activities that followed are being financially supported by the Hungary–Romania Cross-Border Co-operation Programme 2007–2013.

Romania is committed to furthering the implementation of the Convention through the following measures:

- Updating and completing the Black Sea Cetacean Conservation Action Plan approved by MO No. 374/2004;



- Approving the Memorandum of Understanding on the Conservation and Management of the Middle-European Population of the Great Bustard (*Otis tarda*);
- Integrating the ecosystem approach into decision-making and policy development.

The main bottlenecks in the implementation of the CMS are the insufficient consideration of migratory species in the relevant sectoral policies, such as agriculture and forestry, and the lack of effective measures to prevent cetacean losses in the Black Sea.

#### Convention on Biological Diversity

Romania ratified the Convention on Biological Diversity (CBD) in 1994. Country efforts to comply with the Birds Directive and the Habitats Directive contributed to the Convention's implementation.

The NBSAP for the period 2014–2020 (GD No.1081/2013), elaborated with support from UNDP/GEF, sets the general strategic framework for biodiversity and nature protection in the country, identifying strategic objectives and corresponding actions to be implemented by 2020 and constitutes the strategic framework for implementation of the Strategic Plan 2013–2020 and the Aichi Biodiversity Targets of the Convention.

The responsibility for coordinating NBSAP implementation, at the central and local levels, was entrusted to the ministry in charge of the environment, while many of the activities foreseen were committed to management of natural protected areas, managers of natural resources, and representatives of local communities, scientific and business communities and civil society. Responsibility for monitoring the implementation of the Convention lay with the Interministerial Committee for the Coordination of the Integration of Environmental Protection into Sectoral Policies and Strategies at the National Level.

A new, revised NBSAP was elaborated in 2017 and posted on the Ministry's website for public consultation. Since then and until December 2019 there has been no further development.

#### Cartagena Protocol on Biosafety

In 2003, Romania ratified the Cartagena Protocol on Biosafety. The Nagoya–Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol was ratified in 2013. The legal framework regulates decision-making processes regarding domestic use, including placing on the market and imports, of GMOs, transboundary

movements of GMOs, and handling and use of GMOs, and establishes an institutional framework to pursue the enforcement of all those provisions. In addition, Romania furthered the implementation of Protocol provisions on advanced informed agreement procedure, aiming to ensure safety in the development, use and transfer of GMOs, through transposing the EU legislation on GMOs, which is consistent with the provisions of the Protocol.

NEPA is the competent authority regarding the deliberate release of GMOs into the environment and contained use of genetically modified microorganisms. The Romanian Biosafety Commission is an interdisciplinary scientific body, without legal personality, with an advisory role in the decision-making process by NEPA. The Commission is independent in carrying out its scientific activity and serves as a national scientific advisory technical body.

Romania has in place a system of risk assessment. Notifications for experimental purposes or placing on the market must contain a risk assessment in order to enable identification and evaluation, on a case-by-case basis, of the potential adverse effects of the GMO. This assessment is first carried out by the notifier and then evaluated by the Romanian Biosafety Commission. For the first transboundary movement, the importer is obliged to obtain import consent from the competent authority. Subsequent imports, during the field trials period, must be notified to NEPA annually. Currently, only MON 810 maize may be cultivated in Romania, but as of 2015 it was no longer cultivated.

#### Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization

Romania ratified the Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (Nagoya Protocol) in 2019.

NEPA is the competent authority for genetic resources. The implementation of the Nagoya Protocol has begun. Information on the measures undertaken to fulfil the Nagoya Protocol obligations, including measures related to monitoring genetic resources and compliance measures for users or the level of implementation of any of the operational objectives contained in the NBSAP is not available.

Assurance of correct and fair distribution of benefits resulting from the use of genetic resources is one of the main NBSAP goals, which includes other elements relevant to Access and Benefit Sharing, such as the

protection of plant genetic resources for food and agriculture or protection of forest genetic diversity. In addition, the NBSAP establishes the following operational objectives:

- Developing the legal and institutional framework appropriate to the consistent implementation of the Access and Benefit Sharing international regime;
- Adopting and implementing the Bonn Guidelines;
- Developing the legal framework and the tax mechanisms required for the recognition of intellectual property rights concerning access to genetic resources and the traditions of using genetic resources;
- Establishing the indicators that provide the monitoring of implementation of Access and Benefit Sharing.

Adequate institutional capacity and comprehensive legal measures for establishing a national system on Access and Benefit Sharing is still lacking.

#### Convention concerning the Protection of the World Cultural and Natural Heritage

The Convention concerning the Protection of the World Cultural and Natural Heritage was accepted by Romania in 1990. The Romanian National Commission for UNESCO operates under the ministry in charge of education. Under the Natural site category, Romania has two properties inscribed in the World Heritage List: Danube Delta (1991) and “Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe” (2017). In July 2017, the World Heritage Committee approved the transboundary extension of the World Heritage Site of the Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Europe (in 2007 it was inscribed with properties in Slovakia and Ukraine; in 2011 the site was extended to Germany). This site now stretches over 12 countries, including Romania. Of the 92,023.24 ha of the property, 23,982.77 ha are located in Romania. In the same category, four properties were included by Romania in 1991 in the World Heritage Sites tentative list – Massif du Retezat, Pietrosul Rodnei, Codrul secular Slatiora, and Sinpetru – but there has not been any subsequent progress made on them.

However, taking into consideration that these sites do not fulfil the current criteria of the Convention (Operational Guidelines, annex 2A), at the beginning of October 2020, the Ministry of Environment, Waters and Forests sent to the Ministry of Culture, which is the national focal point of the Convention, an updated

list to be notified to UNESCO. The new list includes the site Movile Cave and the thermal sulfurous aquifer of South Dobrogea, with the annex 2A form filled in for this latter site. For the sites listed in the previous tentative list, the requirements have to be removed until the forms are filled in. Codrul secular Slatiora is already protected under the Convention, as one of the components of “Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe”, Retezat and Pietrosul Rodnei are both biosphere reserves under the UNESCO MAB Programme, and Sinpetru is one of the core areas of “Țara Hațegului” Geopark.

On 12 November 2018, the World Heritage Centre questioned Romania regarding third-party information about logging operations in old-growth forests in the buffer zones of the Romanian components of “Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe”. In 2019, Romania clarified that logging was undertaken in the buffer zones of the respective components and had no impact on their Outstanding Universal Value and that forest interventions were undertaken in accordance with the national legislation and the relevant management plans. Moreover, Romania provided information on the location, the amount of harvested wood and the size of forest area affected by the operations in question.

Despite the information provided, the World Heritage Centre considered that a joint World Heritage Centre/International Union for Conservation of Nature (IUCN) Reactive Monitoring mission to the property should take place, to assess whether past, ongoing or planned legal and/or illegal logging operations in the buffer zones had or might have negative impacts on the property’s Outstanding Universal Value. As at November 2020, the Reactive Monitoring mission report is expected to be presented for approval at the next session of the World Heritage Committee, which is postponed due to recent developments related to the COVID-19 pandemic. In 2018, the 12 countries that have components within the UNESCO World Heritage Site “Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe” agreed to develop a unitary approach for sound management and administration of the site components.

Challenges that affected natural and cultural heritage include insufficient regulations and penalties for offences concerning zoning, urban planning and protection of natural and cultural heritage. Two operational objectives were set in the NBSAP to overcome those challenges; however, information on their implementation is lacking.

**Photo 6.2: Starry sturgeon (*Acipenser stellatus*), Sturgeon population renewal project**



Photo credit: DDBRA, MoEWF

**Photo 6.3: Safeguarding Sturgeons in the Danube River Basin project meeting, January 2021**

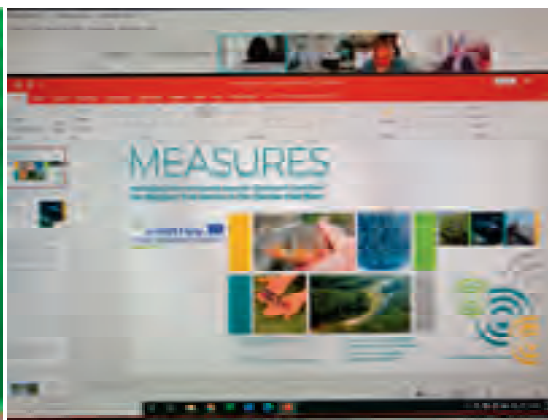


Photo credit: MoEWF, Interreg

No data are available to allow assessment of progress towards the achievement of SDG target 11.4 (Strengthen efforts to protect and safeguard the world's cultural and natural heritage), measured by global indicator 11.4.1 (Total per capita expenditure on the preservation, protection and conservation of all cultural and natural heritage, by source of funding (public, private), type of heritage (cultural, natural) and level of government (national, regional, and local/municipal)).

However, several measures taken by Romania are expected to contribute to achieving it. Efforts were made to elaborate a strategic framework for culture, with an action plan and an allocated budget. Two draft strategic frameworks were prepared – a sectoral strategy for culture and national heritage for the period 2014–2020, followed by a national strategy for culture and national heritage 2016–2022; however, neither was approved by a GD. According to these strategies, there were 30,108 historical monuments, of which 75 per cent were endangered and 35 per cent had a high degree of degradation.

A new strategy to serve as a framework for the financial programming cycle 2021–2027 was expected to be developed with EU funding by the end of 2020. In the definition of the domestic indicator and its corresponding target concerning the world's natural and cultural heritage, the Government considers only the current agreed global indicator and no other relevant indicators such as the number of natural heritage sites with a management plan being implemented effectively.

Despite Romania's efforts in seeking to safeguard its world cultural and natural heritage, challenges remain in terms of the sites' management and physical conditions.

#### UNESCO Man and the Biosphere Programme

Romania has three biosphere reserves established by UNESCO's International Coordinating Council of the Man and the Biosphere (MAB) Programme, occupying an area of 132,647 ha on the national territory. These are Pietrosul Mare (1979), Retezat (1979) and the Danube Delta (1991), which, in 1998, became a transboundary biosphere reserve following a joint effort by Romania and Ukraine.

There are dedicated annual budgets at the national level for both cultural and natural heritage objects. The Danube Delta Biosphere Reserve has its own administrative structure (DDBRA) and dedicated state budget funding. There is no dedicated budget for Pietrosul Mare and Retezat UNESCO biosphere reserves, which fully overlap with Rodnei Mountains National Park and Retezat National Park, both administrated by Romsilva. However, there is further information on this issue in the current reports (periodic review) sent to UNESCO in September 2020. The National Institute for Heritage and the Ministry of Culture manage budgets for cultural heritage objects, and Romsilva and NANPA manage those for natural heritage objects.

#### Convention on the Conservation of European Wildlife and Natural Habitats

Romania ratified the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) in 1993 and is committed to furthering the implementation of the Convention through the following measures:

- Elaborate, approve and implement the national action plans for the conservation of protected

species, in cooperation with universities, the national research institutes and NGOs;

- Consider the potential impact of other policies on the natural heritage;
- Elaborate, approve and implement a national action plan for the conservation of sturgeon that takes into consideration the provisions of the Pan-European Action Plan for sturgeon adopted by the Standing Committee of the Bern Convention;
- Implement a monitoring system for assessment of the sturgeon populations in the Danube River and Danube Delta.

#### United Nations Convention to Combat Desertification

Romania acceded to the Convention to Combat Desertification in 1998. The land area exposed to water erosion and landslides comprises 7 million ha, mainly in the central zone of Transylvania, the area of the Bending Subcarpathians and the Plateau of Bârlad. The most affected areas subject to desertification are located in Dobrogea, Moldova, the south of the Romanian Plain and the Western Plain.

The 2000 National Action Plan to Combat Desertification with a timeframe up to 2025 includes measures aimed at preventing and combating the effects of drought, degradation of land and desertification, namely:

- Diversifying agricultural production and implementing drought-resistant varieties;
- Settling 5,000 km of water courses, of which 500 km will be in areas affected by desertification;
- Afforesting eroded soil on an area of 700,000 ha, of which 115,000 ha will be in areas affected by desertification; creating forest curtains and afforesting an area of 15,000 ha;
- Planting grass on strongly polluted land (about 15,000 ha);
- Granting incentives of an economic nature to prevent desertification;
- Promoting a set of rules in respect to grazing land at risk of desertification and erosion;
- Completing the legislation with special rules relating to the management of water in areas at risk of desertification;
- Enforcement with respect to the granting of facilities for the use of irrigation water;
- Promoting a special insurance system for areas at risk of desertification.

An assessment of implementation of the Plan was not carried out. Reports submitted to the Convention's Secretariat do not provide sufficient information on what has been accomplished. Based on some scattered

information available as at December 2019, the area of degraded land being afforested increased from 100 ha in 2000 to around 1,500 ha in 2019 through the implementation of a programme for afforestation of degraded land. Since 2007, changing forest land to other purposes is prohibited, although several exceptions were foreseen, and since 2014, changing pastureland to other uses is forbidden.

Romania has implemented economic incentives with the support of ESIF, in particular the European Agricultural Fund for Rural Development. The Rural Development Programme 2014–2020 contains an agri-environmental incentive package aimed specifically at addressing desertification issues. The package is open to farmers in selected areas at high risk of desertification. The amount of the aid is €125/ha. To receive it, farmers must commit to planting drought-resistant crops, to practise crop rotation and to keep tillage to a minimum. Only farmers with less than 10 ha of arable land are eligible. This measure did not capture the interest of farmers. There was no demand and no payments were made.

As of December 2019, although being increasingly affected by desertification, Romania did not and does not plan to set land degradation neutrality targets.

#### Framework Convention on the Protection and Sustainable Development of the Carpathians

The ministry in charge of the environment is the main competent authority to coordinate the work under the Framework Convention on the Protection and Sustainable Development of the Carpathians (Carpathian Convention), which deals with biodiversity, forestry, tourism, transport and agriculture. As at December 2019, Romania was in the process of ratifying article 12bis on Climate Change of the Convention. Since 2003, the five protocols developed under the Convention have been ratified by Romania and an amendment on climate change was accepted by the country. The implementation activities of each protocol require developing various assessments and action plans and are not commensurate with the resources allocated as at October 2020.

Since July 2020, Romania has been party to the Sustainable Agriculture and Rural Development Protocol to the Convention. The National Mountain Area Agency within the ministry in charge of agriculture and rural development is responsible for the implementation of the Protocol. The strategic action plan to implement the Transport Protocol, which is under the responsibility of the ministry in charge of transport, is yet to be completed.

**Photo 6.4: Bucegi Natural Park, eastern view, Brasov County**

*Photo credit: Mircea Vergheș*

Romania participates in different projects under the Convention. Some of them, such as the Integrated Transport and Green Infrastructure Planning in the Danube-Carpathian Region for the Benefit of People and Nature<sup>117</sup> and Restoring and managing ecological corridors in mountains as the green infrastructure in the Danube basin<sup>118</sup> are financed through EU funds. The WWF Danube Carpathian Programme Romania is the lead partner of the latter.

Only one staff member is assigned to coordinate the work under the Convention and its protocols, follow up and keep up to date with all the activities under the Convention. Effectively coordinating Romania's role and policies in the region is also challenging, even if ad hoc meetings are held among national focal points under the Convention and its protocols.

NGOs also implement projects or activities under the Convention. An example is the work on preparation of an "International action plan for the conservation and sustainable management for the Carpathian populations of large carnivores", which is supported by the Convention's Working Group on Biodiversity and WWF Romania. Even when implemented by NGOs, projects implemented under the Convention need to have an assigned strategic action partner in the ministry in charge of the projects to promote the final

results and ensure they are consistent with the national legislation and can be further used.

#### Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

In 2016, Romania became the 126th member of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). This is an independent intergovernmental body with the aim to strengthen the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development. Since 2017, Romania has played an active role in the platform, through participation in Pan-European stakeholder consultation (PESC) and plenaries.

#### *Air protection, ozone layer protection and climate change*

#### Convention for the Protection of the Ozone Layer

Romania has been party to the 1985 Vienna Convention for the Protection of the Ozone Layer and the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer since 1993. It is party to all

<sup>117</sup> [www.interreg-danube.eu/approved-projects/transgreen/outputs?page=1](http://www.interreg-danube.eu/approved-projects/transgreen/outputs?page=1).

<sup>118</sup> [www.interreg-danube.eu/approved-projects/connectgreen](http://www.interreg-danube.eu/approved-projects/connectgreen).

amendments to the Montreal Protocol. Since Romania joined the EU, data on the quantities of ODS imported and exported by the country have been reported by the EU.

Romania has fully complied with its core obligations under the Montreal Protocol; in particular, the country has met its obligations on ODS consumption phase-out in the period 2010–2017. Romania also complied with the annual limit of production of hydrochlorofluorocarbons. A licensing system is in place.

#### United Nations Framework Convention on Climate Change

Romania has been party to the United Nations Framework Convention on Climate Change (UNFCCC) since 1994 and ratified the Kyoto Protocol in 2001 and the Paris Agreement in 2017. In 2019, Romania presented its Fourth Biennial Report under the UNFCCC and the 27th version of the National Inventory Report covering the national inventories of GHG emissions and removals for the period 1989–2017.

Romania committed to reduce emissions by 8 per cent compared with 1989 (base year) levels in the first commitment period of 2008–2012. In the context of Decision No. 1/CMP. 8, for the second commitment period, 2013–2020, Romania committed to a GHG emissions reduction of 20 per cent compared with the reference year, 1990, as part of a joint fulfilment with the other EU Member States.

Romania achieved ahead of time the EU targets for 2020 in terms of the contribution of energy policies to reducing the impact of climate change. As part of its commitment to reduce emissions of GHGs by 20 per cent relative to 1990 levels, in 2012 Romania had achieved a reduction of 47.96 per cent, compared with an EU average of 82.14 per cent. The general trend of GHG emissions in Romania shows a strong decrease compared with the base year (chapter 7).

Since 2012, there have been many developments, including the adoption of the National Strategy on Climate Change in 2013, which was further updated and operationalized (becoming the National Strategy on Climate Change and Economic Growth Based on Low Emissions), and complemented in 2016 with a national action plan for its implementation. It also encompassed the preparation of the National Energy Efficiency Action Plan, approved in 2015, which played an important role in support of the attainment of the climate change goals.

The National Commission on Climate Change is the body responsible for interministerial coordination in the domain of climate change. It was reorganized in 2014 with the view to strengthening and improving its role and functioning. Since 2014, the activity of National Commission has, however, been at very low levels.

Romania intends to revise the 2016 National Strategy and Action Plan and to use this exercise to thoroughly consider the technical and financial needs. Other priorities for the near future are the preparation of contingency plans to prevent and limit the foreseeable effects of climate change; the integration of measures to adapt to climate change in sectoral strategies and development plans; and the raising of awareness of the imminent threat of climate change, both at the political level of institutions of state and among citizens.

#### Convention on Long-range Transboundary Air Pollution

Romania has been party to the Convention on Long-range Transboundary Air Pollution since 1991 and since 2003 to four protocols: the 1999 Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone; the 1998 Aarhus Protocol on Persistent Organic Pollutants (POPs); the 1998 Aarhus Protocol on Heavy Metals; and the Protocol on Long-term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP). In 2012, the country accepted the 2009 amendments to the Protocol on POPs and, in 2018, the 2012 amendments to the Gothenburg Protocol and the Protocol on Heavy Metals.

The ministry in charge of the environment is the competent authority for the Convention and NEPA has a supporting role. NEPA is the authority responsible for the activities for the implementation of the three protocols. In particular, in reporting on emissions, the ministry coordinates the realization of the National Inventory regarding the emission of pollutants into the atmosphere in accordance with the provisions of the Convention.

In 2015, Romania amended GEO No. 195/2005 including provisions to allow financial contributions to EMEP. Since then, Romania has been complying with EMEP requirements. Thus, Recommendation 4.4 in the Second EPR of Romania, urging the then Ministry of Environment and Forests to clearly identify budget sources that will be devoted to complying with the financial obligations under the EMEP Protocol to the Convention was implemented.

In line with reporting obligations, Romania uploads reports to the EEA/EIONET network and informs the Convention's Secretariat of the submission. Due to the limited number of personnel in NEPA and the various monitoring systems requiring specialized software to collect and report on data, it is challenging for the country to continuously ensure the financial resources necessary to keep the hardware and software up to date and to train the personnel to use them.

The existing commitments for emissions reduction by 2020 under the 2012 amended version of the Gothenburg Protocol are ambitious and require efforts for their implementation, including: increasing the financing of preventive measures and monitoring the measures; improving the residential heating sector, which, in turn, might put a financial burden on the population; and improving the transport sector and the management of transport in the main cities. Should subsidies be adopted to support these measures, costs on the Government would increase. Based on these considerations and projections on future national emissions, Romania anticipates that reaching its commitments on emissions reduction by 2020 might not be possible.

#### *Waste and chemicals management*

##### Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

In 1991, Romania acceded to the Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. The Ban Amendment to the Convention was accepted in 2002. Romania is not party to the 1999 Basel Protocol on Liability and Compensation.

Regarding the control of transboundary movements of hazardous waste and other waste, Romania applies provisions of the Convention, including the Ban Amendment, as well as Regulation (EC) 1013/2006 on shipments of waste. It is forbidden to import into Romania waste for disposal (by landfilling or by incineration), or to export from the country hazardous waste destined for the operations presented in annex IV, section A of the Convention to the States that are not included in annex VII to the Convention (Ban Amendment). In addition to waste listed in annexes I, II and VIII of the Convention, the domestic definition of hazardous waste also covers the European List of Waste. Hazardous waste is, for the most part, exported to other countries (since 2012 to Bulgaria, France, Germany, Hungary and Poland).

Showing a pattern of increasing hazardous waste generation since 2012, with some oscillations in 2014

and 2016, associated with a growing hazardous waste intensity and an equally progressive increase in the amounts of hazardous waste exported, Romania faces challenges related to the management of hazardous waste; in particular, the country does not have adequate and sufficient means of processing it. Romania has few and limited facilities dedicated for treatment and disposal of hazardous waste. Generally, hazardous waste generators dispose of their waste at their own premises – either within factory sites or on company-owned land near their factories. The exception to the above and the principal types of hazardous waste currently collected and transported are health-care wastes, used oils and batteries.

According to the Romanian legislation, all types of waste (hazardous or not) transiting through Romania are not subject to control and do not require an authorization from the ministry in charge of the environment (Regulation No. 1013/2006).

The implementation of the 2017 NWMP and Regional Waste Management Plans is expected to reduce the amount of hazardous waste and other waste generated and their respective exports (chapter 10).

##### Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade

Romania ratified the Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade in 2003. Since the adoption of the Commission Implementing Decision (EU) 2016/770 establishing a common format for the submission of information concerning the operation of the procedures pursuant to Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals, the EU has been in charge of preparation and submission of export notifications and import responses. Romania reports trade activities and submits data about exports and imports of annex I chemicals.

Romania has submitted to the Convention eight decisions of no consent for importing chemicals and six decisions of consent for importing chemicals subject to specified conditions listed in annex III of the Convention and subject to the Prior Informed Consent (PIC) Procedure.

In 2018, the chemicals legal framework was complemented with MO No. 1214/2018 on the modalities of carrying out the control of exports and imports of chemicals that present risk, as well as the modalities of collaboration between the authorities, according to GD No. 770/2016 regarding some

measures for the application of Regulation (EU) No 649/2012.

Romania participated with 12 other EU Member States in a pilot project on the control of PIC (EU Regulation) duties conducted and developed in 2017 and 2018 by the European Chemicals Agency. NEG and the Romanian PIC enforcement authority conducted inspections between January and June 2018 using the manual and questionnaire prepared by the Working Group of the Forum for Exchange of Information on Enforcement, which conducted a pilot project on the control of PIC duties.

The more recent trajectory of implementing the obligations of the Convention and related EU legislation resulted in increased cooperation between customs and NEG and in the harmonization of PIC enforcement practices, which was a challenge and resulted in a one-year postponement of the application of MO No. 1214/2018 regarding the control procedures on the export and import of hazardous chemicals, which became fully operational only in 2019.

#### Convention on Persistent Organic Pollutants

Romania ratified the Convention on Persistent Organic Pollutants (POPs) in 2004. The National Implementation Plan (NIP) for the management of POPs 2008–2029 was first adopted in 2008 and further amended in 2013. Several measures contained in the Plan have been implemented, namely:

- Approving regulations regarding integrated pollution prevention and control (IPPC/IED);
- Applying rational and environmentally friendly management of POP waste stocks, and collection, storage and decontamination and/or disposal of equipment containing PCBs;
- Establishing a legislative framework for the management and control of PCBs, for the implementation of the National Strategy for Waste Management and of the NWMP;
- Introducing fiscal incentives for the use of organic products, by promoting GPP and developing a programme to increase the competitiveness of industrial products, in order to award the eco-label, for which financial support has been allocated from the state budget;
- Encouraging the use of cleaner vehicles by implementing measures to renew the national car fleet, as well as that of agricultural vehicles (chapters 3 and 8);
- Differentiating taxation of fuels and, starting from 2005, using unleaded petrol.

Romanian authorities with competency regarding PCBs (identified as the second priority in the POPs National Action Plan) received support from the United Nations Industrial Development Organization for awareness-building campaigns at the national level for POPs-related issues and the implementation of a project on PCB waste disposal.

There has been progress in reducing emissions of PCBs in the last decade. Since 2011, equipment containing PCBs, and used or waste PCBs, have been reduced. An inventory of equipment containing PCBs, and PCB waste, was prepared in 2005 and is updated annually. Based on this inventory, a specific national plan for elimination/disposal of equipment containing PCBs was adopted and is updated annually, based on the individual elimination plans established by owners. A list of potentially contaminated sites was also prepared. Among recent achievements are:

- Development of BAT and best environmental practices (BEP) guidelines, in order to prevent and reduce emissions from waste incinerators and LCPs;
- Gradual modernization of LCPs applying BAT and BEP, by implementing modern air pollution control systems and setting standard emission limit values for incineration and co-incineration of waste;
- Improvement of environmental performance in the energy sector by implementing and certifying the EMS, by allocating financial support from the state budget;
- Increasing energy efficiency, an essential component of the national energy policy, through the approval of the National Strategy on Energy Efficiency and the implementation of adequate programmes for increasing energy efficiency.

Difficulties encountered by Romania in the implementation of the Convention obligations are related to three factors: financial constraints, unsatisfactory provision of technical capacity and lack of commitment by stakeholders to the process.

#### Minamata Convention on Mercury

Romania ratified the Minamata Convention on Mercury in 2017. The country served as Vice-Chair to the Bureau of the Implementation and Compliance Committee from 2017 to 2019 and has been Chair since 2019. Mercury has been among the hazardous wastes exported by Romania to Germany. There are no vinyl chloride monomer installations currently in operation in Romania, although there are some quantities of mercury still present from a facility that is no longer in operation. No inventory of historic



industrial hotspots contaminated by mercury has been carried out. As at December 2019, Romania was finalizing its first report to the Convention.

#### Strategic Approach to International Chemicals Management

Romania is committed to the Strategic Approach to International Chemicals Management (SAICM) and is actively pursuing it through the implementation of EU policy and the EU regulatory system for dealing with chemical substances, in particular the provisions relating to knowledge and information on chemicals and chemicals management.

#### Convention on the Transboundary Effects of Industrial Accidents

Romania has been party to the Convention on the Transboundary Effects of Industrial Accidents since 2003. In 2016, the country ratified Directive 2012/18/EU on the Control of Major-Accident Hazards Involving Dangerous Substances (Seveso III), the provisions of which are more stringent than those under the Convention (Law No. 59/2016 on control of major-accident hazards involving dangerous substances).

The law of ratification No. 92/2003 of the Convention was amended following the amendment of annex I to the Convention, which specifies the hazard substances

falling under the Convention, aligning it with the Globally Harmonized System of Classification and Labelling of Chemicals.

The competent authorities are the ministry in charge of the environment, NEPA, NEG and the ministry in charge of internal affairs through the General Inspectorate for Emergency Situations and its local branches. They cooperate and are responsible for industrial safety, such as civil and environmental protection, risk assessment, land-use planning and disaster risk reduction at the national and local levels.

Romania participated in the project on hazard and crisis management in the Danube Delta (2010–2015) that aimed to improve cooperation with the Republic of Moldova and Ukraine in the Danube Delta region (box 6.1).

#### European agreements concerning the international carriage of dangerous goods

Romania is party to the European Agreement concerning the International Carriage of Dangerous Goods by Road, including the 2019 amendment (Order of the Ministry of Transport No. 1010/2019), and to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

#### **Box 6.1: Cooperation on prevention of industrial accidents in the Danube Delta**

The project on hazard and crisis management in the Danube Delta\* was developed under the Convention on the Transboundary Effects of Industrial Accidents, involving the Republic of Moldova, Romania and Ukraine. The project was carried out between 2010 and 2015 within the Assistance Programme of the Convention and funded, inter alia, by the Advisory Assistance Programme of the German Federal Ministry for the Environment\*\*. Its main objective was to enhance and, if possible, harmonize the countries' mechanisms for hazard and crisis management through improved cooperation. The countries received expertise from Czechia, Germany and the Netherlands. During the implementation of the project, Romania started as a beneficiary country and then also provided technical assistance to the other two countries. The outputs of the project were: A hazard map for the Danube Delta; A comparative analysis for the Republic of Moldova, Romania and Ukraine; Safety Guidelines and Good Industry Practices for Oil Terminals; Draft Joint Contingency Plan for the Danube Delta region for the Republic of Moldova, Romania and Ukraine.

The project included inspections in a simulated risk environment of the oil terminals of the three countries. Representatives of Romania involved in the project reported that the visits to the ports of Galați (Romania), Giurgiu (Republic of Moldova) and Odessa (Ukraine) allowed experts to use specific checklists for inspecting plants handling hazardous substances and to improve them. Furthermore, the site visits provided the possibility for technical experts from the three countries to work together on an inspection in a simulated risk environment. Working together allowed experts from the three countries to highlight differences in good practices, share information and experience and create working relations between different authorities and operators. In addition, the project was useful for raising public awareness of prevention, preparedness and response measures for hazardous activities among the local population. The Safety Guidelines and Good Practices for Oil Terminals developed within the project were recommended for use by all ECE member States by the Convention's Conference of the Parties in 2014. Another aspect of the project was the signature of a trilateral declaration of intention. Romania and the Republic of Moldova have completed internal procedures towards the signature.

\* [www.unece.org/env/teia/ap/ddp.html](http://www.unece.org/env/teia/ap/ddp.html).

\*\* [www.umweltbundesamt.de/en/topics/sustainability-strategies-international/cooperation-eecca-centraleastern-european-states/project-database-advisory-assistance-programme/accident-prevention-crisis-management-in-the-danube](http://www.umweltbundesamt.de/en/topics/sustainability-strategies-international/cooperation-eecca-centraleastern-european-states/project-database-advisory-assistance-programme/accident-prevention-crisis-management-in-the-danube).

For both instruments, the competent authority is the ministry in charge of transport. The country implements the agreements and its representatives regularly attend meetings. In 2017, Romania established the Operational Centre for emergency situations with permanent activity within the then Ministry of Transport (Order of the Minister of Transport No. 1352/2017). The environmental authorities are not involved in the activities related to these agreements.

#### *Public participation*

Romania has been party to the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters since 2000 and to its Protocol on Pollutant Release and Transfer Registers since 2009. The ministry in charge of the environment is the authority responsible for the implementation of both the Convention and the Protocol.

Since 2005, Romania has been under formal scrutiny concerning its compliance with the Convention. As at December 2019, Romania was subject to a specific decision on compliance, Decision VI/8, taken in September 2017. This Decision derives from the findings and recommendations of the Compliance Committee on communications ACCC/C/2010/51 and ACCC/C/2012/69. The issues of non-compliance concern: the failure to respond to requests for environmental information in accordance with the Convention; the failure to provide for public participation with respect to a procedure for issuing an archaeological discharge certificate; the failure to provide the public with sufficient time frames to become acquainted with strategic documents subject to the Convention and submit their comments thereon; and a lack of timely court procedures that provide adequate and effective remedies with respect to access to environmental information.

The issues identified in Decision VI/8 also showed that the environmental authorities need the support of other national ministries and authorities to implement international agreements, when the non-compliance occurs in an authority or authorities other than the environmental one, as in the case of failure to respond to requests for environmental information, mentioned above, when a member of the public requested information from another ministry.

Romania has been working to implement Decision VI/8h and has submitted the required

progress reports due in October 2018, October 2019 and 1 October 2020. In keeping with its stated aim to implement the Decision, the ministry in charge of the environment made available on its website the strategy for the implementation of Decision VI/8h<sup>119</sup> and other related documents, including the Public Authorities Guide for Access to Environmental Information and a brochure for public consumption. The ministry in charge of the environment disseminated the guide widely to other public authorities, as part of its efforts to improve access to information. Also, the trend in recent years shows an increase in public requests for environmental information.

#### *Environmental assessment*

The country has been party to the Convention on Environmental Impact Assessment in a Transboundary Context since 2001 and to the Protocol on Strategic Environmental Assessment since 2009. The first and second amendments to the Convention were accepted by the country in 2006 and 2016, respectively. Romania approved EIA guidelines (MO No. 1825/2016). Also, a new set of EIA guides was approved by MO No. 269/2020 (chapters 2 and 5).

The competent authority for both treaties is the ministry in charge of the environment. The ministry is responsible to make available to the public information regarding the environmental assessment for plans, programmes or projects in accordance with GD No. 43/2020.

#### *Water*

##### Convention on the Law of the Non-Navigational Uses of International Watercourses

Romania is not a party to the Convention on the Law of the Non-Navigational Uses of International Watercourses and there is no indication of it having any intention to accede to that instrument.

##### Convention on the Protection and Use of Transboundary Watercourses and International Lakes

Romania has been party to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes since 1995. The country became party to the Protocol on Water and Health under the Convention in 2000. The authority responsible for the Convention is the ministry in charge of water management.

<sup>119</sup> [www.mmediu.ro/articol/strategia-pentru-implemterea-deciziei-vi-8h-privind-conformarea-romaniei-cu-cerintele-conventiei-aarhus/3043](http://www.mmediu.ro/articol/strategia-pentru-implemterea-deciziei-vi-8h-privind-conformarea-romaniei-cu-cerintele-conventiei-aarhus/3043).

Romania, as one of the countries whose territory includes the Danube River basin, has been participating in activities carried out by the Convention on water adaptation to climate change.

The ministry in charge of water management reported to the Convention Secretariat and UNESCO on developments in achieving SDG target 6.5 (By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate), which is measured by global indicator 6.5.2 (Proportion of transboundary basin area with an operational arrangement for water cooperation).

According to the joint ECE-UNESCO report on progress on transboundary water cooperation, published in 2018, the value of indicator 6.5.2 for Romania was 100 per cent (chapter 9).

#### Protocol on Water and Health

The ministry in charge of water management leads the implementation of the Protocol on Water and Health, in cooperation with the Ministry of Health, though the health focal point is provided by the National Institute of Public Health, subordinated to the Ministry of Health. Representatives of the ministry in charge of the environment and of water management attended meetings under the Convention. When expert level is required, for example, for workshops, documents and reports, other authorities are represented, such as Romanian Waters.

Since 2010, Romania has been complying with the Protocol's reporting requirements for the last four cycles. The country established an intersectoral working group to elaborate target setting. The workshop on collecting good practices on target setting, organized by the Protocol's secretariat in Geneva in March 2016, helped Romanian experts develop a baseline analysis for identification and prioritization of targets, setting short-, medium- and long-term target dates and submitting them to the secretariat.<sup>120</sup> Romania revised the national targets in 2019 through the fourth reporting exercise and submitted them to the secretariat.

The Protocol on Water and Health was recognized in SDS 2030 as a means to implement SDG 6 (Ensure

availability and sustainable management of water and sanitation for all) in the country.

#### Danube River Protection Convention

Romania has been party to the Danube River Protection Convention (Danube Convention) since 1995. The ministry in charge of water management and Romanian Waters are the two competent authorities for the Convention.

#### Black Sea Convention

Romania has been party to the Black Sea Convention since 1992 and attends meetings of the Black Sea Commission and of technical advisory groups. The ministry in charge of water management, Romanian Waters and the National Institute for Marine Research are the national competent authorities.

Romania provided input to the Black Sea State of Environment Report 2009–2014/5, issued in 2019. This Report aims to identify gaps in knowledge and serve as the basis for (i) assessing the effectiveness and adequacy of environmental protection measures proposed in the 2009 Strategic Action Plan for the Environmental Protection and Rehabilitation of the Black Sea, and (ii) making any necessary adjustments in national environmental policies and the elaboration of scenarios for tackling the environmental consequences of human activities in the Black Sea basin.

Romania participates in projects financed by the EC related to marine and coastal environmental monitoring.

#### Protection of the marine environment

In 1996, Romania both ratified the United Nations Convention on the Law of the Sea and acceded to the Agreement relating to the implementation of part XI of the Convention. In 2007, the country acceded to the Agreement for the Implementation of the Provisions of the Convention relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and, in 2018, to the Protocol on the Privileges and Immunities of the International Seabed Authority.

<sup>120</sup> [www.unece.org/fileadmin/DAM/env/water/Protocol\\_on\\_W\\_H/Target\\_set\\_by\\_parties/Annex\\_Joint\\_Romanian\\_Note\\_2016.pdf](http://www.unece.org/fileadmin/DAM/env/water/Protocol_on_W_H/Target_set_by_parties/Annex_Joint_Romanian_Note_2016.pdf).

**Photo 6.5: Danube Boilers, Iron Gates Natural Park**

*Photo credit: Mircea Verghelț*

Romania has, since 1993, been party to the 1937 International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto and by the Protocol of 1997 (MARPOL) with all annexes. Romania is not party to the Convention for the Control and Management of Ships Ballast Water and Sediments, nor to the 2009 Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships.

#### Other water-related agreements

Romania shares the Danube River basin with 19 other countries, and has the largest share (about 29 per cent) of the Danube River basin within its boundaries. The country is also part of bilateral commissions established for the protection and management of resources in the Danube River basin. The International Commission on the Protection of the Danube River (ICPDR) is also involved in planning in the sub-basins, such as that of the Tisza River. Under ICPDR, a Tisza group was established to ensure the harmonization and effectiveness of the many bilateral agreements that Romania has with its neighbouring countries.

In 2016, following the adoption of the updated Danube River Basin District Management Plan by ICPDR, the country adopted the updated National Management

Plan relating to the portion of the international hydrographic basin of the Danube River that is included in the territory of Romania for the period 2016–2021 (GD No. 859/2016). The ministry in charge of water management and Romanian Waters posted on their websites the drafts of the National Management Plan and river basin management plans (RBMPs) for public consultation and the final documents. EU funds are to cover more than 40 per cent of the costs of implementing the Plan.

Romania is working on flood management (chapter 6) and participates in projects on flood management coordinated by ICPDR.

In 2016, Romania adopted the ICPDR Danube Declaration, which included the support of parties to Romania and Bulgaria to promote coordination in the Black Sea Region to implement the Marine Strategy Framework Directive and the Water Framework Directive.

Transboundary management of sub-basins, such as the Somes/Szamos, Crișuri/Koros and Mures/Maros, including joint monitoring, data collection and data management, is carried out through the Romanian–Hungarian Hydrotechnical Commission. In addition, agreements between the Republic of Moldova and Romania for the Prut sub-basin have led to a Joint

Subcommission for Operation of the Hydrotechnical Knot “Stanca-Costesti”.

### 6.3 Bilateral cooperation on the environment and sustainable development

The main priorities for bilateral cooperation on the environment are very much the same as for regional cooperation: strengthening cooperation in the Black Sea Region, building cohesion (in all its dimensions) in the Danube Region and managing transboundary watercourses.

Although limited information on the activities undertaken for implementing many bilateral agreements, and especially on the results of expected outcomes, prevents a sound analysis of their effectiveness, a tendency to decrease the number of bilateral agreements and institutional mechanisms for their operationalization is observed in the last decade.

Following the accession of Romania to the EU, bilateral cooperation was reconfigured and relocated to the European territorial cooperation framework. During the EU 2014–2020 financial programming period, Romania participated in several European territorial cooperation programmes with each of its neighbouring countries and in the transnational programmes on the Danube and Central Europe. Increasingly, since 2007, the cross-border and transnational programmes have become the main platform for cooperative efforts between Romania and its neighbouring countries.

The Convention between Romania and Bulgaria on cooperation concerning protection of the environment, which entered into force in 1992, continues to serve as the bilateral cooperation framework between the two countries.

The Agreement between Romania and Hungary on cooperation regarding protection of the environment dates to 2000. The Joint Commission established to steer the Agreement has met only once since 2012. Within the framework of this Agreement, expert groups were created on nature conservation, international projects and programmes, environmental protection and environmental hotspots (Rosia Montana, Certej). Since 2012, the cooperation among experts has led to the following concrete results: a cross-border cooperation system shared by the Directorate of Criş-Mureş National Park and the Administration of Apuseni Natural Park, focusing on the management of Cefa Natural Park; implementation

of the project “Development of the cross-border protected area in the territory of Criş-Mureş National Park and Cefa Natural Park”; and cooperative efforts to jointly implement and monitor LIFE projects on the conservation of the Red-footed Falcon (*Falco vespertinus*) in the Pannonian Region and the Saker Falcon (*Falco cherrug*).

Cross-border cooperation between the Republic of Moldova, Romania and Ukraine on nature preservation is supported by the 2000 Declaration for the creation of the Lower Danube Green Corridor, based on which the three countries agreed to set up a functional network of wet areas along the Lower Danube. The follow-up to the tripartite agreement was the subject of the three meetings of the Joint Commission established under its umbrella between 2011 and 2015. A network was then established.

An agreement on cooperation on environmental protection between Romania and Germany has been in place since 1993. Technical assistance on several environmental issues has been provided within the Advisory Assistance Programme of the German Federal Ministry for the Environment. Between 2011 and 2015, 17 projects with Romanian participation were implemented. Since 2015, three bilateral and six multilateral projects were carried out, inter alia, on the implementation of energy saving measures in schools, the preservation of biodiversity in the Carpathians and the remediation of petrochemical sites. A project focusing on conservation of the endangered Danube Clouded Yellow butterfly (*Colias myrmidone*) in Natura 2000 sites in Romania is still ongoing.<sup>121</sup> A Joint Commission serves as the steering body under the Agreement.

In 2010, an agreement between Romania and the Republic of Moldova on the cooperative and sustainable use of the waters of the Danube and Prut Rivers entered into force. In 2012, the two ministries in charge of the environment signed a joint statement regarding the allocation of €15 million of the total budget to projects on climate change. A third Additional Protocol to the Agreement was signed in 2013, establishing modalities for the use of the Technical and Financial Assistance Programme, which are the core activities established under the Agreement, including the €100 million grant allocated by Romania to the Republic of Moldova.

In 2013 an MoU was signed between Romania and Montenegro on cooperation regarding protection of the environment and sustainable development, which

<sup>121</sup> [www.umweltbundesamt.de/en/topics/sustainability-strategies-international/cooperation-eeca-centraleastern-european-states/project-database-advisory-assistance-programme](http://www.umweltbundesamt.de/en/topics/sustainability-strategies-international/cooperation-eeca-centraleastern-european-states/project-database-advisory-assistance-programme).

is a successor agreement to the one initially signed in 1992 and amended in 2003. Within this framework, the governments committed to cooperate in the following areas: harmonization of environmental protection policies with the specific EU requirements; climate change; reduction, control and monitoring of air pollution; waste and chemicals management; water management; biological diversity conservation, natural protected areas management; sustainable development policies and indicators; EIA and public participation; use of economic instruments for the implementation of environmental strategy objectives at the national and local levels; and setting up the legal and institutional framework for implementation of the environmental legislation. As at December 2019, in line with the MoU, the preparation of project proposals aimed at supporting Montenegro to fulfil closing benchmarks in chapter 27 is ongoing.

Several agreements have been signed between Romania and Turkey. The first, a framework agreement for cooperation on environmental protection, was signed in 2001 but its timeframe was not subsequently extended and therefore it ceased to be in force in 2013. In 2015, three new agreements were signed: on meteorology and hydrology, which entered into force in 2018; on water management, which has not entered into force due to the lack of compliance of both parties with the legal procedures required; and on forestry, which entered into force in 2019.

In 2016, Romania and the United States signed a memorandum of initiation of negotiations on cooperation on management of protected natural areas between the Romanian ministry in charge of the environment and the National Park Service within the United States Department of the Interior, but no developments have occurred since then.

In 2019, an agreement on cooperation on environmental protection, sustainable development and green economy was approved between Romania and Ecuador. A Joint Commission was established to oversee and coordinate the implementation of the Agreement.

#### **6.4 Participation in non-binding processes related to the environment and sustainable development**

##### *Environment for Europe process*

##### Batumi Initiative on Green Economy

Romania made two voluntary commitments to the Batumi Initiative on Green Economy (BIG-E): (i) to

establish and/or strengthen interministerial and multi-stakeholder working groups/task forces on green economy; and (ii) to establish national sustainable consumption and production strategies and plans or include them in green economy policies.

At the end of 2018, Romania reported that the implementation of both commitments was in progress. The implementation of the first BIG-E commitment was at the stage of developing a matrix to include policies and strategies of all relevant authorities by the Interministerial Committee for the Coordination of the Integration of Environmental Protection into National Sectoral Policies and Strategies. As at December 2019, the activity was on standby, which could be due to the uncertainty of the role on greening the economy of the Committee and of the ministry in charge of the environment after the creation of the Department for Sustainable Development.

Delivery on the second BIG-E commitment foresaw the inclusion of a sustainable consumption and production strategy in the revised National Strategy for Sustainable Development (SDS 2030), with its implementation to be monitored by the Department for Sustainable Development. Law No. 69/2016 on green public procurement designates the ministry in charge of the environment as the main authority responsible for the elaboration of the national policy on GPP and requires the preparation of guidelines containing the minimum criteria for environmental protection for product and services. As at December 2019, the national guidelines are lacking (chapters 1 and 3).

As at December 2019, steps in implementing the two BIG-E commitments were on hold, awaiting the final institutional framework following the establishment of the Department for Sustainable Development. This situation was also captured by a 2015 study of the World Bank, which noted, among other matters, that interministerial cooperation (e.g. cooperation between interministerial committees) was weak, mentioning in particular that meetings of the interministerial committees on climate change and sustainable development were not held regularly and had weak follow-up mechanisms.

##### Batumi Action for Cleaner Air

Romania committed to three actions under the Batumi Action for Cleaner Air (BACA): (i) establishing a national programme to control air pollution; (ii) improving inventories and information on levels of emissions; and (iii) developing and upgrading the National Air Quality Monitoring Network.

The ministry in charge of the environment is responsible for monitoring the implementation of BACA commitments. The implementation of the first commitment is ongoing. Following the adoption of Law No. 293/2018 on Reduction of National Emissions of Certain Atmospheric Pollutants, Romania identified the national authorities responsible for development and implementation of the national programme to control air pollution.

In December 2020, the Ministry of Environment, Waters and Forests signed the financing contract for the project “Development of the capacity of the Ministry of Environment, Waters and Forests on the elaboration of national policies and measures necessary to comply with national commitments to reduce emissions of certain air pollutants by 2030” financed by Administrative Capacity Operational Programme. The project would support the implementation of the first BACA commitment.<sup>122</sup>

To meet the second commitment, the country prepared the emissions inventory for the period 2005–2015 and completed emissions time series for the period 2000–2004 based on the EMEP/EEA air pollutant emissions inventory guidebook. To meet the third commitment, the country extended the number of sampling points for continuous measurement, which were integrated into the National Air Quality Monitoring Network.

#### *10-Year Framework of Programmes on Sustainable Consumption and Production Patterns*

Romania is progressing at the policy level towards achieving SDG target 12.1 (Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries), measured by global indicator 12.1.1 (Number of countries developing, adopting or implementing policy instruments aimed at supporting the shift to sustainable consumption and production).

Romania does not have a specific action plan on sustainable production and consumption (SCP) patterns. However, SDS 2030 includes a set of ambitious objectives for 2020 and 2030 that, if achieved, would allow the country to make a giant leap in terms of performance in SCP. For 2020, the national objective is to decouple economic growth from environmental degradation by reversing the ratio between resource consumption and creation of value added, to move closer to the average SCP performance

levels in the EU; for 2030, the national objective is to come close to the average level of SCP attained at that time by the other EU Member States.

According to the United Nations Statistics Division, Romania’s domestic per capita material consumption is still increasing, but at a diminished rate since 2015. Decoupling of this measure from GDP took place in 2011. Domestic material consumption per capita, by type of raw material in tons, increased by 15.53 per cent between 2010 and 2017 (table 3.13) while domestic material consumption per unit of GDP, by type of raw material (kg per constant 2010 US\$) decreased by 13.39 per cent during the same period. Romania’s GDP increased by 29.96 per cent from 2010 to 2017 and, while the absolute level of material consumption is still rising, the country’s economy is able to create more value out of the raw materials used.

The path to reach 2030 fulfilling all the objectives and targets will, however, be very demanding, because Romania is a long way from the scenario envisaged for 2030.

There is low uptake of measures such as the EU Ecolabel and EMAS. Ecolabelling was obtained for the following categories of products and services: interior paint, exterior paint, enamel, primer, lubricants, mattresses, printed paper, tissue paper, textiles, detergents, soaps, shower gel, computers, laptops, and tourist accommodation services. Between 2008 and 2017, 41 licences were assigned. In total, 246 products and services were awarded an EU Ecolabel. The main reasons given for the low number of companies certified under the EU Ecolabel were that the scheme is voluntary and considerable costs were implied. In terms of organizations’ voluntary participation in EMAS, Romania registered 11 EMAS organizations in 2018 (figure 2.11) and nine as at October 2019.

Resource productivity in Romania continues to be low and has even fallen compared with the EU average. The Law No. 69/2016 on Green Public Procurement cannot be implemented due to the lack of national guidelines on GPP (chapters 1 and 3). The packaging waste tax is an instrument that fits the EPR scheme (chapter 10).

Taking into account the set of measures already adopted, the experience gained from implementing them and the framework of objectives and goals defined for the next 10 years, Romania could reach 2030 with a different SCP pattern than it currently has, provided that Romanian authorities focus on

<sup>122</sup> [www.poca.ro/solicitare-finantare/cererea-de-proiecte-nr-ip17-2019-mysmis-poca-627-1-1/](http://www.poca.ro/solicitare-finantare/cererea-de-proiecte-nr-ip17-2019-mysmis-poca-627-1-1/).

implementation, including overcoming the weaknesses of the measures already implemented.

#### *Other regional processes*

Romania implements the INSPIRE Directive. GD No. 579/2015 appointed the authorities responsible for implementing the Directive. The national focal point for the INSPIRE Directive is the Romanian National Cadastral Agency. Romania is establishing an SEIS. NEPA has the responsibility to manage the environmental information system through the electronic atlas. The model of governance used to implement the INSPIRE Directive is expected to be used for the SEIS. GD No. 43/2020 refers to ensuring a network of spatial data in the fields of competence of the authority in charge of the environment.

According to the World Bank study “Romania: Toward a Low Carbon and Climate Resilient Economy: Transport Sector Analysis”,<sup>119F</sup><sup>123</sup> Romania’s transport emissions could rise by 34 per cent in the period 2015–2050. The study highlighted that, from 1990 to 2012, the transport sector’s share in total emissions increased by 78 per cent in Romania and only 10 per cent in the EU; furthermore, transport emissions are falling in the EU and this trend is expected to continue, while Romania’s emissions are set to grow with rising incomes and EU convergence. One of the conclusions of the study is that institutional arrangements and coordination among the different authorities is critical to the country’s ability to implement the 2016 Romania General Transport Master Plan and other policies aimed at reducing GHG emissions. The study also provided Romania with selected green interventions to decrease GHG emissions from transport. Romania does not participate in activities under the Transport, Health and Environment Pan-European Programme (THE PEP) and therefore does not benefit from THE PEP experience.

### **6.5 International technical assistance on the environment**

#### *European funds*

The development of environmental policy and its implementation and enforcement in Romania has been very prominently supported by the EU. The main source of financial support to Romania for environmental protection is the EU funds, especially ESIF. Most of the technical assistance that public

authorities benefit from is directly associated with ESIF. There was a drastic paradigm shift regarding the nature of the technical assistance and the country’s role in it when Romania became an EU Member State. Public authorities acquire consultancy services, the charges for which are co-financed by ESIF.

Through eight national and regional programmes, Romania has been allocated €30.84 billion from ESIF over the period 2014–2020, of which around 30 per cent is devoted to supporting the shift towards a low-carbon economy in all sectors, promoting climate change adaptation, risk prevention and management, and preserving and protecting the environment and promoting resource efficiency. As at 31 December 2019, the rate of payments (transfers) from the EC to Romania was 36 per cent, which is worrying as there are four years left to close the current programming cycle and the money that is not executed will be returned to the EC.

Two national operational programmes, the Administrative Capacity Operational Programme and the Large Infrastructure Operational Programme, assume the lion’s share in supporting environmental projects.

#### Administrative Capacity Operational Programme

Under the Administrative Capacity Operational Programme 2014–2020,<sup>120F</sup><sup>124</sup> five capacity-development projects were approved to a total value of almost 54.3 million lei:

- Drafting guidelines necessary to improve the administrative capacity of the environmental protection authorities in order to carry out the EIA procedure;
- Developing the administrative capacity of the ministry in charge of the environment to implement policy on management of waste and contaminated sites;
- Developing the administrative capacity of the ministry in charge of the environment to implement the biodiversity policy;
- Developing and implementing common systems and standards for optimizing environmental decision-making processes;
- Applying an evidence-based policy system in the ministry in charge of the environment for the systematization and simplification of waste legislation and implementing simplified

<sup>123</sup> <http://documents1.worldbank.org/curated/en/742581468197633659/pdf/103906-WP-P145943-PUBLIC-Dissemination-Note-Transport-Sector-Analysis.pdf>.

<sup>124</sup> [www.fonduri-ue.ro/poim-2014#implementare-guides-beneficiari](http://www.fonduri-ue.ro/poim-2014#implementare-guides-beneficiari).



procedures for reducing the administrative burden for the business environment relating to climate change.

For the first three projects, results obtained so far are: (i) the increased analytical and decision-making capacity of environmental authorities that carry out EIA procedures and development of general methodological guides applicable to all types of projects under annexes I and II of the EIA Directive 2014/52/EU and of specific guides (for certain types of projects in areas of economic interest) in order to implement the EIA procedure at national level in a coherent and uniform manner; (ii) preparation of the NWMP, which includes the National Plan for the Prevention of Waste Production; (iii) development of a study to define, classify, prepare an inventory and prioritize investments in restoration of degraded ecosystems; (iv) elaboration of a GIS database of degraded ecosystems, its monitoring procedure and updating; (v) revision of the NSBAP for 2014–2020 and of the Action Plan, and elaboration of a monitoring system; (vi) preparation of a methodology for evaluating protected natural areas management plans and of a guide for the elaboration of management plans; and (vii) evaluation and approval of protected natural areas management plans.

In the framework of the last two projects, it is expected that a waste code and a simplified procedure for reducing the administrative burden for economic agents relating to climate change will be drafted and that the ministry in charge of the environment will become better capacitated to implement measures and actions that reduce the administrative burden for the business environment in respect of climate change and waste.

#### Large Infrastructure Operational Programme

Three projects devoted to biodiversity and nature conservation were approved within the Large Infrastructure Operational Programme 2014–2020 to a total value of almost 137.8 million lei:

- Increasing the level of knowledge of biodiversity by implementing the system of monitoring the state of conservation of bird species of community interest and reporting on the basis of article 12 of the Birds Directive;
- Adequate management of invasive species in Romania, in accordance with EU Regulation No. 1143/2014 regarding the prevention and management of the introduction and spread of invasive alien species;
- Increasing the level of knowledge of biodiversity by implementing the system of monitoring the

state of conservation of the species of birds of community interest in Romania and reporting under article 17 of the Habitats Directive.

There are some delays in implementation. Therefore, the three projects are expected to attain the following results: (i) updating, completing and improving the methodology for monitoring and evaluating the conservation status of the bird species of community interest; (ii) estimating population numbers, distribution and short- and long-term trends of bird species of community interest; (iii) drafting the country report based on the Birds Directive; (iv) developing guides with monitoring protocols and unitary methodologies for monitoring the conservation status of species and habitats of community interest; (v) reconfiguration and updating of the national system of monitoring of species and habitats of community interest, compatible and technically correlated according to the new reporting format; (vi) inventory and mapping of the invasive allogeneic species and elaboration of the related national list; (vii) identification of the priority routes of introduction and prioritization of invasive allogeneic species; and (viii) participatory development of the action plan for addressing the priority introduction routes of invasive allogeneic species to Romania.

#### Other

Support from ESIF is not limited to national operational programmes. In the cycle 2014–2020, Romania is also involved in the following cooperation programmes:

- Seven programmes belonging to the cohesion policy: two cross-border cooperation programmes, between Romania and Bulgaria and between Romania and Hungary, a transnational cooperation programme (Danube), and four interregional cooperation programmes (Interreg Europe, URBACT III, INTERACT III, ESPON 2020);
- One cross-border cooperation programme between Romania and Serbia under the Instrument for Pre-Accession Assistance (IPA);
- Four cross-border cooperation programmes belonging to the European Neighbourhood Policy: Romania and the Republic of Moldova; Romania and Ukraine; at the border between Hungary, Slovakia, Romania and Ukraine; and the Black Sea basin programme.

Other projects are co-financed by the cooperation programmes focused on environmental protection and, in some cases, the Romanian environmental public

authorities are their beneficiaries. This was already the case in the 2007–2013 cycle. Within Interreg Europe, 121F<sup>125</sup> two projects with a total cost of €2.8 million are ongoing with the Romanian ministry in charge of the environment as beneficiary (partner):

- “GPP STREAM – Green public procurement and sustainability tools in favour of resource efficiency”, aimed at developing specific measures and tools to better address existing and potential beneficiaries of environmental products and services (June 2018–May 2020);
- “Smart Edge – Sustainable Metropolitan Areas and the Role of the Edge City”, aimed at assessing the role of cities in metropolitan areas or regions in reducing carbon emissions, within a platform for knowledge and exchange of best practices and experience (June 2018–November 2022).

Besides funding through ESIF, since 2009, Romania has also benefited from the support of European Economic Area Grants, in the amount of €93 million in the field of environment.

#### *Development cooperation*

Romania became an ODA donor country upon joining EU in 2007. In 2016, Romania’s net ODA amounted to US\$269 million, representing an increase of 71 per cent in real terms over 2015. The ODA: gross national income (GNI) ratio rose from 0.09 per cent in 2015 to 0.15 per cent in 2016. Law No. 213/2016 provides the legal basis for the development cooperation and humanitarian aid activities financed from Romanian public funds. Priorities on development cooperation are defined with a four-year time frame in the strategic multiannual development cooperation programme, while the annual development cooperation plans specify the activities to be undertaken on a yearly basis.

The Ministry of Foreign Affairs is the national coordinator of Romania’s development cooperation and humanitarian aid policy. An Advisory Committee, composed of representatives from line ministries, public institutions, civil society, academia and the private sector, is responsible for ensuring the coordination and unity of strategic planning and priorities on development cooperation. Law No. 213/2016 also established the Agency for International Development Cooperation, which is responsible for implementing development cooperation and humanitarian-aid-related activities.

As of 2013, Romania became the principal donor of aid to the Republic of Moldova. As of 2018, projects were supported in the areas of sustainable energy and climate. Since 2018, Romania has been a participant in the OECD Development Assistance Committee.

## **6.6 Policy and institutional framework**

### *Policy framework*

SDS 2030 is the most comprehensive strategic document and presents an integrated vision, including for the environment, that can guide and serve as a beacon for the development of environmental policy (which can be more than a mirror of EU policy and legislation), both nationally and, to a lesser extent, externally.

### *Institutional framework*

From 2012 until early 2020, the two main national authorities dealing with environmental issues – a ministry in charge of the environment and a ministry in charge of waters and forests – have existed during different periods as either one or two governmental authorities (chapter 1). According to GD No. 43/2020, the Ministry of Environment, Waters and Forests ensures the implementation of international treaties, conventions, agreements, memoranda and protocols on environment to which Romania is a party. The Ministry of Foreign affairs has a unit dealing with MEAs.

Before 2020, the structure of the two ministries was governed by GD No. 19/2017 (for the then Ministry of Environment, also establishing the competences to follow given international agreements or processes) and GO No. 495/2018 (for the then Ministry of Waters and Forests). Both ministries had an international relations department, which was generally not involved in substantive work. Staff in other departments, when identified as focal points or responsible for a specific agreement or process, dealt directly with the relevant secretariats. Often, the units responsible for substantial work were understaffed and had to work on an issue both nationally and at the international interface. This aspect was also recorded in a 2015 report by the World Bank,<sup>122F</sup><sup>126</sup> which stated that “... one of Romania’s biggest challenges relates to human resources capacity and the enabling environment ... for implementation”.

<sup>125</sup> [www.interregeurope.eu/](http://www.interregeurope.eu/).

<sup>126</sup> Romania Climate Change and Low Carbon Green Growth Program, Output A2.3, Building Institutional Capacity for Implementing the National Climate Change Strategy in Romania.

In the current institutional structure, responsibilities regarding international environmental cooperation are mostly concentrated in a trilogy composed of the Ministry of Environment, Waters and Forests, NEPA and NEG. Nearly all focal points for global and regional environmental agreements are staff responsible for relevant clusters, for example, nature conservation and biodiversity, climate change, air pollution or chemicals, within one of these entities.

Romania introduced a mechanism to coordinate environmental protection at the national level, through different ministries and policies – the Interministerial Committee for the Coordination of the Integration of Environmental Protection into Sectoral Policies and Strategies at the National Level, which was only active until 2007. With GD No. 741/2011, the country reorganized the Interministerial Committee with the task of coordinating environmental protection.

With the creation of the Department for Sustainable Development within the Prime Minister's Office (GD No. 313/2017), some of the competences and functioning of the Interministerial Committee, such as sustainable development, were shifted to the new structure. This created a situation that required a review of the competence of the Interministerial Committee and the individual ministries. In fact, the Department for Sustainable Development within the Prime Minister's Office is responsible for coordinating and monitoring implementation of the SDGs at the national level. The Department is coordinated by a State Councillor under the Prime Minister. The need for revising the structure was also highlighted by the Department for Sustainable Development stating that the current institutional structure is not appropriate for the implementation and monitoring of SDGs. Moreover, as of 2011, the Interministerial Committee entered a hibernation phase on its main original task of coordinating environmental protection.

In terms of international, regional and bilateral environmental cooperation, the Ministry of Foreign Affairs plays an important role, assessing the political pertinence of acceding to international agreements and assessing their conformity with the Constitution, the international obligations of Romania and the Romanian legislation in force.

Recommendation 4.3 in the Second EPR of Romania, which urged the then Ministry of Environment and Forests to (a) develop a mechanism to promote dialogue with the private sector on national and international environmental issues; and (b) facilitate the active participation of the private sector in

international cooperation on the environment and the green economy, has not been implemented.

## 6.7 Assessment, conclusions and recommendations

### *Assessment*

Since 2012, Romania has ratified the most recent MEAs, such as the Minamata Convention, the Paris Agreement and the Nagoya Protocol. Despite Romania's accelerated alignment to EU requirements and international environmental obligations, the level of implementation of MEAs remains low and enforcement assessments are not a common practice. Information about the implementation of policies related to MEAs, their results and their achievements and impacts is very scarce.

NGOs are never included in the Romanian delegations to MEAs' meetings of the parties or conferences of the parties; neither are they involved in the preparation of the country's position for international meetings. However, NGOs are sometimes involved in the preparation of national reports or in projects related to the implementation of MEAs.

Romania has made an effort to achieve the SDG targets 15.7 and 15.c, which are measured by the same global indicator, 15.7.1 and 15.c.1 (Proportion of traded wildlife that was poached or illicitly trafficked), but data of value on legal and illegal trade are still lacking. Besides, no data are available to assess the achievement of SDG target 11.4 measured by global indicator 11.4.1 (Total per capita expenditure on the preservation, protection and conservation of all cultural and natural heritage, by source of funding (public, private), type of heritage (cultural, natural) and level of government (national, regional, and local/municipal)). However, several measures taken by Romania are expected to contribute to its achievement. An attempt to elaborate a strategic framework for culture, with an action plan and an allocated budget, resulted in two draft strategic documents that are not yet approved by a GD (a sectoral strategy for culture and national heritage for the period 2014–2020 and a national strategy for culture and national heritage for the period 2016–2022). There were also developments in achieving SDG target 6.5 as the value of global indicator 6.5.2 (Proportion of transboundary basin area with an operational arrangement for water cooperation) was 100 per cent in 2018. The implementation of SDG target 12.1, measured by global indicator 12.1.1 (Number of countries developing, adopting or implementing policy instruments aimed at supporting

the shift to sustainable consumption and production), is under way.

Recommendation 4.1 in the Second EPR of Romania is not implemented as the draft of a strategy for international cooperation was not prepared. The implementation of Recommendation 4.2 concerning the provision of an appropriate number of qualified staff to ensure the implementation of obligations under MEAs by increasing absorption of relevant EU funds devoted to strengthening capacity-building and to supporting the training of professionals, is in progress. Significant investment was made with the support of the European Cohesion Fund in the training of civil servants during the 2014–2020 programming cycle. Recommendation 4.3 to develop a mechanism to promote dialogue with the private sector and facilitate its participation in international cooperation on the environment and the green economy is not implemented. By amending GEO No. 195/2005, Recommendation 4.4 urging the Ministry of Environment and Forests to clearly identify budget sources which will be devoted to complying with the financial obligations under the EMEP was implemented.

### *Conclusions and recommendations*

#### Biological diversity

Efforts have been made by Romania to comply with its international reporting obligations on biological diversity; in some cases, however, the deadline for sending the report has not been met. For example, the submission of the Sixth National Report to the CBD has been pending since December 2018 and the new, revised NBSAP, posted on the Ministry's website for public consultations in 2018, has not been developed further. Reporting to MEAs and non-binding processes implies the collection of data, which are often difficult to gather due to hardware and software maintenance costs and the need for trained personnel.

#### Recommendation 6.1:

*The Government should improve the content of national reports, by including relevant and updated information at the national level, to meet reporting obligations and increase efforts to fulfil its reporting obligations under multilateral environmental agreements, especially under the Convention on Biological Diversity.*

#### European structural and investment funds

As at December 2019, Romania has used one third of the ESIF, totalling €30.84 billion, available to it. The country must guarantee an average contribution of

around 15 per cent of the total in order to spend the remaining two thirds by 31 December 2023.

#### Recommendation 6.2:

*The Government should adopt the necessary measures to accelerate the use of the European structural and investment funds, including in the 2014–2020 cycle.*

The Interministerial Committee for the Coordination of the Integration of Environmental Protection into Sectoral Policies and Strategies at the National Level had been inactive after 2007 but became more active again in 2011 when it was given responsibilities for coordination of sustainable development in Romania. It has been working thus far in a role to support sustainable development.

In 2017, the Government created the Department for Sustainable Development within the Prime Minister's Office. This has caused uncertainty as to the roles of the ministry in charge of the environment and the Interministerial Committee in the management of sustainable development and green economy. Consequently, work on commitments on green economy has stopped.

#### Recommendation 6.3:

*The Government should:*

- (a) *Revitalize the Interministerial Committee for the Coordination of the Integration of Environmental Protection into Sectoral Policies and Strategies at the National Level and give it a clear mandate, combined with the necessary resources, to exercise interministerial coordination functions and to monitor the implementation of international obligations on the environment, or related to the environment, assumed by Romania;*
- (b) *Support the ministry in charge of the environment to ensure that multilateral environmental agreements are also implemented in other sectors and other ministries.*

#### Transport, health and the environment

Studies show that road transport is increasing, and rail transport is diminishing. Consequently, the amount of air pollution from the transport sector is growing, road congestion is escalating, and the health of the population is worsening. Transport policies are managed by different actors, mainly by the ministry in charge of transport, dealing with infrastructure, but also by local authorities, dealing with local transport. Despite the deteriorating situation, Romania was not

taking part in the Transport, Health and Environment Pan-European Programme (THE PEP) in 2019.

Recommendation 6.4:

*The authorities in charge of the environment, health and transport should:*

- (a) *Identify responsible units or departments within environment, transport and health authorities to engage in the Transport, Health and Environment Pan-European Programme;*
- (b) *Set up a mechanism involving relevant stakeholders to coordinate policies related to transport, health and the environment with an effective exchange of information;*
- (b) *Identify policies and good practices based on the experience acquired within the Transport, Health and Environment Pan-European Programme to be implemented in the country.*

Desertification

Romania is a country particularly and severely affected by desertification. Stopping this trend requires the adoption of strong public policies and appropriate instruments that reduce the factors that contribute to desertification. The agri-environmental incentive package of the Rural Development Programme 2014–2020, which aimed specifically to address desertification issues, did not produce the expected results. This could indicate that the instrument chosen was not the most adequate. The country has not set land degradation neutrality targets, which could be instrumental in revitalizing the National Action Plan to Combat Desertification and contributing effectively to halting the current trend Romania faces with regard to desertification.

Recommendation 6.5:

*The Government should request the ministries in charge of the environment, regional development and agriculture to:*

- (a) *Set land degradation neutrality targets;*
- (b) *Evaluate the agri-environmental measures implemented so far and draw up and implement new ones that are efficient for the purpose for which they are intended.*

Data availability

Due to the lack of data on indicators 15.7.1 and 15.c.1 (Proportion of traded wildlife that was poached or illicitly trafficked), it is difficult to assess the implementation of SDG target 15.7 (Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand

and supply of illegal wildlife products) and target 15.c (Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities).

No data are available to assess the achievement of SDG target 11.4 (Strengthen efforts to protect and safeguard the world's cultural and natural heritage), measured by global indicator 11.4.1 (Total per capita expenditure on the preservation, protection and conservation of all cultural and natural heritage, by source of funding (public, private), type of heritage (cultural, natural) and level of government (national, regional, and local/municipal)).

Recommendation 6.6:

*The National Institute of Statistics, in cooperation with the Department for Sustainable Development and other relevant authorities, should ensure the collection of data for SDG global indicators 15.7.1, 15.c.1 and 11.4.1.*

Strengthening the implementation of the Carpathian Convention

Romania is party to the Framework Convention on the Protection and Sustainable Development of the Carpathians (Carpathian Convention) and has ratified its five protocols and accepted the amendment on climate change. The country would like to host the secretariat of the Convention.

However, as at October 2020, only one staff member in the Ministry of Environment, Waters and Forests is in charge of coordinating implementation activities under the Convention and its protocols, which makes it difficult to organize all activities in an adequate and timely manner in line with the full potential of the country, given the large area of the Carpathians located in Romania.

Recommendation 6.7:

*The Government should enhance institutional coordination and administrative capacity for the implementation of the Framework Convention on the Protection and Sustainable Development of the Carpathians.*

Participation in environmental agreements to which Romania is not party

Romania is party to most global and regional MEAs. Romania is not party to the Convention for the Control and Management of Ships' Ballast Water and

Sediments, nor to the 2009 Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships.

*Recommendation 6.8:*

*The Government should consider accession to:*

- (a) *The Convention for the Control and Management of Ships' Ballast Water and Sediments;*
- (b) *The International Convention for the Safe and Environmentally Sound Recycling of Ships.*

## Chapter 7

# CLIMATE CHANGE

### 7.1 Current and foreseeable environmental and economic impacts from climate change

#### *Environmental impacts from climate change*

##### Weather

According to the World Bank 2018 report “From Uneven Growth to Inclusive Development: Romania’s Path to Shared Prosperity”, in the next 50–100 years, increases in the annual average temperature could be in the range of 0.5°C–1.5°C in 2029 and in the range of 2.0°C–5.0°C by 2099, depending on the global climate change scenario used. Bucharest should rank as the fifth-fastest-warming city in the world with a summertime high temperature increase of 4–8°C in the year 2100.

Analysis of precipitation data for the interval 1901–2016 revealed no tendency in the overall annual amount of precipitation with increasing trends in autumn and decreasing trends in other seasons. The total amount of annual precipitation could decrease by 10–30 per cent at the end of the century, depending on climate models and the part of the country, with more irregular patterns and more frequent locally intense rainfall and hail.

Recent studies have calculated an important increase in the frequency of days with very heavy precipitation and the annual total wet-day precipitation. There are also indications that, while snowfalls are shorter, they are becoming more intense.

##### Extreme weather events

Heat waves in the summer and severe snow blizzards in the winter have become more frequent in the last decade. Most of the weather stations in the country have seen increasing trends in all heat wave parameters, such as number, frequency, maximum and duration. This trend is more pronounced in the south-eastern, southern and western plains.

In 2012, a major heat wave occurred in Romania with temperatures up to 42°C. In 2017 and 2019, warnings for extreme heat were issued.

Extreme heat hazard is classified as medium in most parts of the country, based on modelled heat information, which means that there is a 25 per cent chance that a prolonged period of extreme heat will occur in the next five years. Due to the effect of urban heat islands during heat waves, urban agglomerations will experience increased heat stress.

Climate change scenarios estimate a 20 per cent chance of severe droughts in the next 10 years, especially in the south-western and north-eastern parts of the country. This affects almost 50 per cent of the total agricultural land. The scenarios calculate that droughts by decreasing river flow will become more frequent and more severe. The forest fire hazard is classified as high and modelled projections of future climate show an increase in the frequency of weather in Romania that favours forest fires. Climate projections also indicate an increase in the severity of such fires.<sup>127</sup> Severe snow blizzards occur almost every winter, with especially extreme frost and snow periods occurring in 2012, 2014, and 2016–2019, causing havoc and deaths. Episodes with large amounts of rainfall will be more frequent, especially in mountainous areas. In combination with accelerated deforestation, an increase in the frequency of episodes with high precipitation will lead to an increased incidence of flash floods.

Romania is one of the most flood-prone countries in Europe. Between 2002 and 2013, this led to 183 fatalities. Flooding due to extreme rainfall in a short time often occurs in Romania. More than one million ha of land are exposed to flooding while nearly one million inhabitants live in high-risk areas. In 2013, flash floods caused nine deaths and nearly 7,000 people had to be evacuated. Climate change impact is expected to raise the number and effects of flood events as well as the occurrence of landslides in springtime when the snow melts.

##### Water resources

Freshwater resources in Romania are mainly fed from surface sources, i.e. the Danube and inland rivers, and are also fed and regulated by sources in the Carpathian Mountains and the more than 400 dams and 11 reservoirs. Groundwater sources deliver less than 10

<sup>127</sup> 2019 Global Facility for Disaster Reduction and Recovery [www.thinkhazard.org](http://www.thinkhazard.org).

per cent of the fresh water. Natural variations in the rainfall and snow in the mountains will be more prominent in the future, due to climate change. As Romania's water supply is dependent on weather systems, cities and regions are vulnerable for these variations. Shorter winters and higher temperatures lead to higher evaporation, 10–20 per cent lower river flows, possible deterioration of the water quality by higher mean temperatures, and lower dilution and oxygen content that may influence the fish populations.

Other vulnerabilities are the decrease in soil humidity, decrease of groundwater supplies, and reduced availability of water for the provision of drinking water and recreation areas. Increased flooding due to extreme precipitation caused by climate change can have an adverse effect on the water quality by diffusion of industrial and agricultural pollutants. These effects will increase if irrigation increases. Measures to preserve the aquatic ecosystems are shifting in Romania from hydrological technical works such as dams to ecological approaches such as the EU "Space for the river" strategy.

Measurements and calculations based on climate change models predict a long-term increase in the

water level in the Black Sea at a rate of approximately 0.19 cm/year. For the sea temperature near Constanta, the trend of surface water temperature for 1950–2016 is an increase of 0.02°C/year, i.e. 1.32°C warmer by 2016. The National Institute for Hydrology and Water Management within Romanian Waters carried out studies on the impact of climate change on river flow regimes and river basins in Romania in the period 2011–2018. Results of the modelling studies (decrease of multi-annual discharge regimes) have been published and presented in the yearly Danube Conferences.

#### Land and soil

Seismic risks are present in Romania and, although not directly connected to climate change, seismicity may be affected by climate change effects such as changing reservoir levels or the use of groundwater. Inefficient farming practices in the past have led to soil deterioration and erosion. A rise in the annual mean temperature will increase the number of drought periods in the country. In a scenario with an annual mean temperature that is 3°C higher in 2070 than in 1975, 38 per cent of the territory will be affected by severe dehydration and almost 30 per cent of the country faces the risk of desertification.

**Photo 7.1: Combating coastal erosion, beach reconstruction works**



*Photo credit: MoEWF*



Climate change is likely to increase soil erosion by water through its effect on rainfall intensity, vegetative cover and patterns of land use. These factors may lead to more and heavier landslides. An increase in landslides as an effect of climate change may lead to increased pollution of water resources by polluted soil. In several counties in Romania, threshold values for soil pollution by heavy metals such as lead, copper, chromium, mercury and arsenic are exceeded in rural as well as urban areas. For lead and copper, even alert threshold values are exceeded in some places. Products from crude oil refining such as benzene, toluene and polycyclic aromatic hydrocarbons are also one of the main sources of soil contamination in Romania. The toxic properties of these contaminations have negative effects on the soil quality and use and are a risk for agricultural products, water resources and human health. The CAMARO-D project (Cooperating towards Advanced Management Routines for land use impacts on the water regime in the Danube River Basin) aims to harmonize and improve the protection of water resources against negative impacts of land use and climate change and the reduction of flood risk.

#### Forests and other natural vegetation

The main consequences of climate change, resulting from the increase in temperature and longer drought periods, on forests in Romania are:

- The acceleration of the devitalization process and abnormal drying of trees, mainly in regions affected by droughts, steppe and forest-steppe respectively;
- Change of the natural Romanian geographic zones, with the steppe zone translated into semidesert, forest-steppe into steppe, and plain forest into forest-steppe. Also, there has been a soft evolution in the altitudinal change of several species, with an increasing tendency of forestry vegetation limit;
- A reduction of the growing process of the forests displaced at the plain ground level, which is partially compensated for by additional accumulation of biomass in the mountain area;
- An increase in forest vulnerability to the destabilizing factors: insect attacks, heavy wind, forest fires;
- A decrease of the soil quality, through an increase in soil acidity and alteration of the organic layers.

#### Biodiversity

Climate-change-induced meteorological effects such as higher temperature and less rainfall will lead to

changes in the speed of growth or behaviour and migration of plants and animal species. Wetlands, high mountain lakes and their flora and fauna and freshwater aquatic ecosystems will be affected by rising water temperatures and sea levels. The Danube Delta, which is a Ramsar site (vulnerable to salination), the Carpathian Mountains (vulnerable to change in vegetation, disappearance of alpine areas) and the Dobrogea region (vulnerable to desertification of steppes) are the most vulnerable to alterations in the structure of their habitats.

The main threats to Romanian biodiversity due to extreme events characteristic of climate change are:

- Modification of species behaviour, as a result of the stress induced on their adaptation capacity (a shorter hibernation period or lack thereof, affecting bears and bats in particular);
- Modification in the distribution and composition of native habitats as a result of the change in species distribution, the most vulnerable habitats being wetlands, high mountain lakes, rivers and streams, and marine and freshwater aquatic ecosystems affected by water heating and sea level rise;
- Increased invasion of exotic species at the level of the natural habitats and increased potential for them to become invasive;
- Threats to wild animals, especially those with low moving capacity and low-population species, due to increased forest fire risk in the Carpathian Mountains;
- Increased risk of soil erosion in the Carpathian Mountains;
- Extinction of certain species of flora and fauna, in particular species with unfavourable conservation status.

#### Human health

As a consequence of the expected increased frequency of heat waves in the next decades, increased thermal stress during summer would lead to a greater risk for human health. Urban areas will be most affected by the accumulation of heat in concrete and other building materials and the greater presence of combustion engines from industry and traffic.

For EU countries, it is estimated that each 1°C increase in temperature could increase mortality by 1–4 per cent. Other extreme weather events, such as flooding, storms and extreme droughts, will be more frequent and result in more victims.

**Photo 7.2: Cerna Valley, Carpathian Mountains**

*Photo credit: Mircea Vergheș*

A temperature increase for long periods of time can lead to fires and droughts that may lead to an increase of 25 per cent in respiratory disorders, especially in people of the most vulnerable ages. Psychological effects may occur because of exposure to natural disasters, which can have consequences related to increased stress, post-traumatic issues, depression and anxiety.

Other phenomena with possible effects on human health are the occurrence of insect-borne diseases (mosquitoes, ticks, sandflies) and the availability of clean drinking water. Human health is also influenced by the relationship between climate change, global warming and air pollution, for example, by the formation of low altitude ozone, which can lead to irritation of the respiratory system, increasing the number of respiratory disorder cases.

#### *Economic impacts from climate change*

As at December 2019, no systematic evaluation of the economic impacts of climate change on the different sectors in Romania had been carried out. However, in the MECC/World Bank project “OPERA-CLIMA, Component B” (2013–2014), sectoral rapid assessment reports were drawn up to incorporate climate actions in the 2014–2020 sectoral operation programmes to manage global warming in Romania. In Component C, dissemination notes for sector-based

analysis (marginal abatement cost analysis of mitigation measures in selected key sectors) have been conducted.

The dissemination notes include estimated costs of adaptation measures for the sectors of energy, agriculture, forestry, transport, urban and water. The notes also include additional information on the cost and benefits of mitigation and adaptation measures.

#### Energy

Climate change will affect the seasonal electricity demand in Romania. Investments in the energy sector to enhance energy efficiency and install additional RES and nuclear energy were, in the CLIMA project, estimated to be about €14 billion in the period 2014–2020.

Scenarios to elaborate the consequences of the 2015 EU Emission Reduction Strategies (2020 Strategy, 2030 Framework and 2050 Roadmap) for Romania in the period 2015–2050 show overall investments that increase from €27.6 billion in the Baseline to €36.5 billion in the Green scenario and to €33.6 billion in the Super Green scenario. Installations using renewables, natural gas or biogas have advantages over coal-fired installations due to higher energy efficiencies, less air and water pollution and less waste production.

### Industry and mining

Climate change mitigation measures such as the use of more energy efficient equipment and a shift in energy sources will influence energy use in the industrial and mining sector, which represents a major share of the heat and power use in the country. This transition in energy use requires large investment in the sector. An increase in extreme weather events such as heavy rain, landslides and extreme heat will affect industry, mainly by direct damage to plants and damage to infrastructure. Especially in the mining sector, extreme rainfall can lead to landslides and flooding of ponds and rivers, possibly causing heavy environmental damage.

### Agriculture, fishery, apiculture

Agriculture is quite vulnerable to climate change and this is especially so for the many small farms, most of which are for subsistence farming, that occupy half of the agricultural land. The Seventh National Communication on Climate Change under the UNFCCC indicates that, as a result of climate change, the number of floods in Romania has already risen in recent decades. The economic consequences of the intensification of flooding on the one hand, and the increasing frequency of droughts on the other hand, are still to be established, taking into account the cost of the expected measures for modernization and mechanization in the agricultural sector and to prevent further soil erosion and desertification. The consequences are not equally distributed across the agricultural sector, due to regional differences in the probability of negative impacts, differences in vulnerability, resilience and adaptive capacity and the differences in farm structure and size.

### Forestry

Forest productivity is expected to decrease as a result of climate change, due to the expected increased frequency of forest fires and biological effects such as infestations and plagues. No estimations concerning the potential economic impacts of climate change damage on the forests in Romania are available. Sustainable forest management, including the fight against illegal logging, and afforestation of abandoned agricultural areas are adequate measures to reverse the effects of climate change, which require effective national and EU funding. Forestry can provide additional abatement of 1.8 Mt CO<sub>2</sub>-eq. per year at a total cost of €15 million in the period 2015–2050. Analysis of different scenarios, afforestation, sustainable management of protected forests and sustainable management of forest production lead to

the prognosis of a final benefit of €86 million for the period 2015–2050.

### Transport

An increase in intense rainfall will lead to an increase in flooding that will damage roads and railway tracks and affect moisture levels in the soil, which degrades its stability. Vulnerability assessments for the different transport modes have been undertaken and emergency preparedness and resilience infrastructure measures are in development. The GHG emissions of the transport sector are expected to increase in the future, due to the still rising number of cars. Green scenarios for 2015–2050 will lead to an emissions reduction of 2–3 Mt CO<sub>2</sub>-eq. yearly compared with the business as usual (BAU) scenario. The cost of the necessary investments depends on the scenario and is estimated to be from €135 million (Green Scenario) to €1.7 billion (Super Green Scenario) over the period 2015–2050.

### Water

Climate change impacts on the water sector in Romania are a projected annual mean precipitation decrease of 5–20 per cent in the second half of the 21st century, compared with the second half of the 20th century. In summer, droughts and water stress are expected to increase and in winter more flooding events are probable. Investment in adaptation measures will reduce the risks of climate change for water supply, hydropower generation and agricultural production in Romania. The cost of these adaptation measures has been estimated for Green and Super Green scenarios (moderate vs ambitious adaptation plan). The estimated revenues will exceed the cost by €1.8 billion (Green scenario) and €1.0 billion (Super Green scenario) over the period 2015–2050.

### Housing and urban

Houses and other residential buildings must be built more resilient to the effects of extreme weather events caused by climate change, while the existing residential buildings must also be adapted. Not only adaptation to extreme weather events caused by climate change but also large investments to decrease the seismic risk and to enhance energy efficiency are necessary, according to the National Housing Strategy. The energy efficiency of residential buildings is still very low. In the Regional Operational Programme 2014–2020 for Romania (European Regional Development Fund), measures are proposed and implemented financed from the European Regional Development Fund and state funding up to €1.1 billion.

### Tourism and leisure

The possible economic impacts on tourism and leisure for Romania have not yet been evaluated in detail.

### Health-care systems

The World Health Organization (WHO) differentiates health costs related to climate change into impact costs and adaptation costs. Impact costs are costs of direct treatment, reduced productivity and loss of food or physical security while adaptation costs of health-care systems should result in overall savings in the end. In Romania, a detailed vulnerability, impact and adaptation assessment of climate change effects on health care, in which the economic impacts can also be estimated, has not yet been carried out. The combustion of fossil fuels is the most important cause of climate change that also contributes to outdoor and indoor air pollution, which combustion, if not adequately abated, has major effects on public health. Recent studies indicate that the economic cost of mitigation measures will be more than compensated for by the gains for health care.

## **7.2 Greenhouse gas emissions from economic sectors**

### *National Inventory*

As an annex I party to the United Nations Framework Convention on Climate Change (UNFCCC) and EU Member State, Romania produces and regularly updates its GHG inventory. The National Inventory Report and national communications are in line with the provisions in the guidelines for the preparations of national communications and national inventory reports by the parties that are included in annex I to the UNFCCC and its Kyoto Protocol. The Seventh National Communication on Climate Change and the Third Biennial Report were submitted in 2017. The Communication provides information on sectoral strategic plans and measures that contribute to achieving the GHG reduction targets according to the Kyoto Protocol and the EU climate and energy targets for 2020 and 2030.

The ministry in charge of the environment approved the National GHG Inventory; NEPA is the competent authority to administrate the Inventory's arrangements and system, and to submit the Inventory to the UNFCCC Secretariat. The European Environment Agency (EEA) and the EC supervise the deadlines for reporting. Recommendation 10.2 in the Second EPR of Romania urging the Government to clear out the

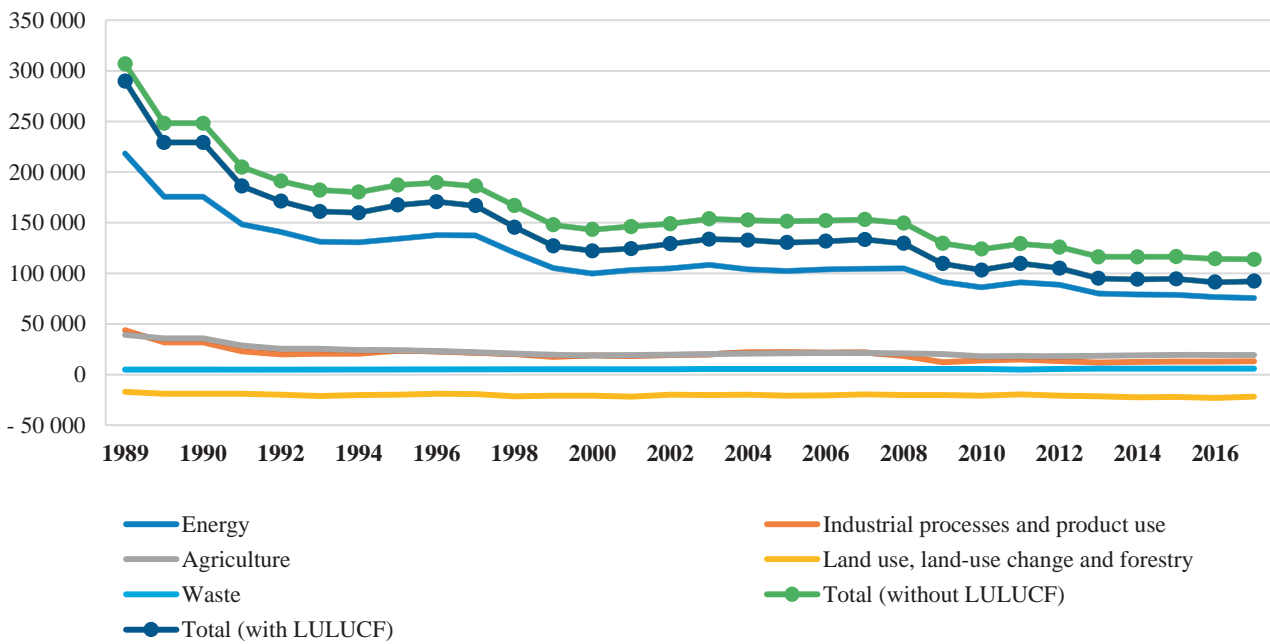
irregularities and deficiencies of the National GHG Inventory System to be able to return to the EU ETS was implemented and the compliance requirements have been fulfilled.

In May 2019, Romania submitted its 27th National GHG Inventory, in which it produced the (common report format) tables and database containing estimates on emissions and removals and background data for the National Inventory Report 2019 covering the period 1989–2017 (figure 7.1). The sectors characterized are Energy, Industrial processes and product use, Agriculture, Land use, Land-use change and forestry (LULUCF) and Waste. Data in the National Inventory Report concern the direct GHGs mentioned in annex A of the Kyoto Protocol: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>) and NF<sub>3</sub>, as well as the indirect GHGs (NO<sub>x</sub>, CO, NMVOC and SO<sub>2</sub>).

The estimation of the emissions and removals of GHGs from LULUCF follows the methodology presented in the 2006 Guidelines for National Greenhouse Gas Inventory of the Intergovernmental Panel on Climate Change (IPCC) and the 2013 Supplement to the 2006 Guidelines for National Greenhouse Gas Inventories: Wetlands (Wetlands Supplement). The LULUCF trend is determined by CO<sub>2</sub> removals in the IPCC category Forest land remaining forestland, with a little contribution from other IPCC categories.

### *General emissions trend*

The total GHG emissions excluding LULUCF have decreased from 306,690 Gg CO<sub>2</sub>-eq. in the base year 1989 to 113,796 Gg CO<sub>2</sub>-eq. in 2017, which is an overall reduction of 63 per cent. Including LULUCF, the GHG emissions decreased from 289,617 Gg CO<sub>2</sub>-eq. to 92,116 Gg CO<sub>2</sub>-eq., a reduction of 68 per cent. In the last decade of the 20th century, GHG emissions decreased, with more than 50 per cent due to the transition of Romania to a market economy, including the restructuring of the economy, the disappearance of inefficient industries and the start-up of the first reactor of the NPP Cernavodă. In the period 2000–2008, GHG emissions increased slightly and later stabilized as a consequence of the economic revitalization. Due to the global financial and economic crisis, GHG emissions decreased again in the period 2009–2012 and stabilized in the period 2013–2017. In 2017, GHG emissions per capita were 5.81 tons CO<sub>2</sub>-eq., which was below the EU-28 mean value of 8.45 tons CO<sub>2</sub>-eq. per capita.

**Figure 7.1: GHG emissions trend per sector, 1989–2017, Gg CO<sub>2</sub>-eq.**

Source: National Greenhouse Gas Inventory, 2019.

Note: LULUCF includes net CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O.

In 2017, excluding LULUCF, the largest contributing substance to the GHG emissions was CO<sub>2</sub> (66 per cent, on average), followed by CH<sub>4</sub> (25 per cent, on average) and N<sub>2</sub>O (7 per cent on average). The remaining GHGs (HFCs, PFCs, SF<sub>6</sub>, NF<sub>3</sub>) contribute around 2 per cent.

#### *Emission trends by gas*

CO<sub>2</sub> emissions, excluding LULUCF, have decreased from 208,946 Gg in 1989 to 74,998 Gg in 2017, i.e. by 36 per cent. This development is mainly caused by the decrease in fossil fuel combustion in the energy sector as a result of the decreased activities in public electricity and heat production, manufacturing industry and the construction sector. CH<sub>4</sub> emissions have decreased by 61 per cent in 2017 compared with 1989, mainly due to the reduction of animal husbandry in the country. N<sub>2</sub>O emissions in 2017 decreased by 59 per cent compared with the base year 1989, due to the reduction of animal husbandry and application of synthetic nitrogen fertilizers on soils. Fluorocarbon emissions showed a strong decrease (99.9 per cent) in PFCs emissions from primary aluminium production and an increase in HFCs and SF<sub>6</sub> emissions. The contribution of these substances increased to 2 per cent of the total GHG emissions expressed in CO<sub>2</sub>-eq.

#### *Emission trends by sector*

Emission removals from LULUCF are estimated at 21,680 Gg in 2017 (19 per cent of the GHG emissions excluding LULUCF). In 2017, the energy sector was

responsible for 66.4 per cent of the total GHG emissions excluding LULUCF of 113,796 Gg CO<sub>2</sub>-eq, the industrial processes and product use sector for 12 per cent, the agriculture sector for 17 per cent and the waste sector for 5 per cent (figure 7.2).

#### Energy

GHG emissions from the energy sector comprise emissions from the energy industries, manufacturing industries, construction, transport and other subsectors in accordance with the IPCC categories. By 2017, emissions had decreased by 65.4 per cent compared with the base year 1989. The largest decrease occurred in the years 1989–1992 due to the reduction in activities in energy-intensive industries. After some increase due to economic revival in the period 1993–1996, GHG emissions decreased again due to the start-up of the first reactor of the NPP Cernavodă. In the period 2000–2008, GHG emissions stabilized, but after 2008 there was a slight tendency for them to decrease, due to the economic crisis and shift in use of primary energy sources (more use of natural gas).

According to IEA, the energy intensity measured in terms of primary energy and GDP, decreased in Romania from 0.098 toe/US\$1,000 (2010 PPP) in 2012 to 0.075 toe/US\$1,000 (2010 PPP) in 2017 (indicator 7.3.1 of SDG target 7.3 (By 2030, double the global rate of improvement in energy efficiency)) constituting a 23 per cent decrease in 2012–2017, or an average of 4.9 per cent per year, which is higher

than both the original global target of annual reduction of 2.6 per cent and the revised in 2018 global target of 2.9 per cent for 2019–2030. The current trend, if it were to be maintained by the country, would allow Romania to reach target 7.3 by 2026, ahead of 2030.

In 2018, 58 per cent of the electricity in Romania was produced by hydropower, nuclear energy and renewable energy (wind, solar energy, biomass) and 42 per cent by thermal power plants (60 per cent coal, 40 per cent gas and oil). In the period 2010–2017, the share of coal in electricity production decreased by 15 per cent and the share of hydroelectricity decreased by 25 per cent. The share of natural gas increased by 30 per cent and the combined wind and solar share increased by a factor of 30. The share of nuclear energy remained stable in this period.

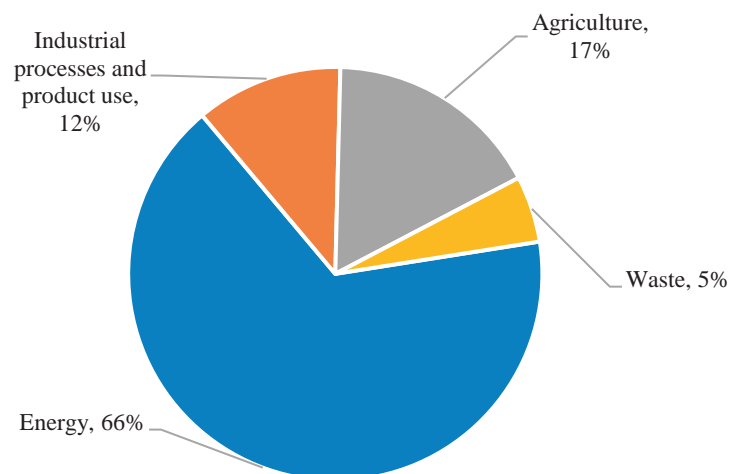
According to the 2020 World Energy Balances of IEA, the renewable energy share in the total final energy consumption increased from 21.55 per cent in 2012 to 23.05 per cent in 2018 (indicator 7.2.1 (Renewable energy share in the total final energy consumption (%)) of SDG target 7.2 (By 2030, increase substantially the share of renewable energy in the

global energy mix)). This decrease reflects the results of reducing fossil fuel dependence.

The residential sector contributes to 10.1 per cent of the total GHG emissions in the energy sector and 6.7 per cent of the total GHG emissions excluding LULUCF. The combustion of natural gas and biomass delivered the main contribution to the emissions. GHG emissions in this subsector of the energy sector have decreased by around 14 per cent since 1989, mainly due to the decrease in the number of inhabitants. The insulation level of residential, commercial and institutional buildings is still relatively low. The combustion emissions from the agriculture sector in the last 10 years are around 2,000 kt CO<sub>2</sub>-eq./year.

According to IEA, CO<sub>2</sub> emissions from fuel combustion (SDG target 9.4, global indicator 9.4.1 (CO<sub>2</sub> emission per unit of value added) decreased by 12.5 per cent from 2011 to 2017. During the same period, CO<sub>2</sub> emissions per unit of manufacturing value added (MVA) decreased by 31.4 per cent while CO<sub>2</sub> emissions per unit of GDP decreased by 31.4 per cent (table 7.1).

**Figure 7.2: GHG emissions excluding LULUCF, 2017, percentage**



Source: National Greenhouse Gas Inventory, 2019.

**Table 7.1: Series under SDG global indicator 9.4.1, 2011–2017**

	2011	2012	2013	2014	2015	2016	2017
CO <sub>2</sub> emissions from fuel combustion (millions of tonnes)	80.859	78.579	69.312	68.467	69.559	67.963	70.789
CO <sub>2</sub> emissions per unit of manufacturing value added (kg of CO <sub>2</sub> /constant 2010 US\$)	0.360	0.410	0.360	0.340	0.330	0.290	0.270
CO <sub>2</sub> emissions per unit of GDP (kg of CO <sub>2</sub> /constant 2010 US\$)	0.231	0.220	0.187	0.179	0.175	0.163	0.158

Sources: IEA (2019), CO<sub>2</sub> Emissions from Fuel Combustion. [www.iea.org/statistics](http://www.iea.org/statistics); UNIDO MVA 2020 Database. Available at <https://stat.unido.org>.

**Photo 7.3: Cerdacul Stanciului, Piatra Craiului National Park**

*Photo credit: Mircea Vergheleț*

#### Industrial processes and product use

In 2017, the mineral industry, metal industry and chemical industry accounted for the highest share of GHG emissions in the industrial processes and product use sector – 34.5 per cent, 29.2 per cent and 10.2 per cent respectively. Compared with 1989, GHG emissions from this sector in 2017 decreased by 70.2 per cent, mainly due to the decrease in industrial production. In the period 1989–1992, GHG emissions dropped by more than 50 per cent; after a period of relative stabilization until 2008, GHG emissions dropped again by almost 50 per cent due to the economic crisis and have been increasing slightly in the last few years. Changes in aluminium production technology have led to a 99 per cent reduction of PFC emissions since 1997.

#### Agriculture, fishery and apiculture

GHG emissions from the agriculture, fishery and apiculture sector are: CH<sub>4</sub> emissions from enteric fermentation, manure management and rice cultivation; N<sub>2</sub>O emissions from agricultural soils, manure management and field burning; and some CO<sub>2</sub> emissions from lime and urea application. Two thirds of GHG emissions from this sector come from CH<sub>4</sub> and one third from N<sub>2</sub>O. This sector emitted 50.8 per cent less GHG in 2017 than in 1989. The causes of this

decrease are the decline of livestock, except for goats, the decrease in rice cultivated areas and crop productions levels and the diminished use of fertilizers.

#### Land use, land-use change and forestry

According to the latest data of the National Institute of Statistics, in 2014, agricultural lands, including arable, orchards, vineyards, pastures and hayfields, made up 61.4 per cent of Romania's territory. Forests cover 28.2 per cent, while constructed areas, roads and railways cover some 4.8 per cent, humid areas, water and lakes some 3.5 per cent and other land 2.1 per cent. The CO<sub>2</sub> sink increased from 2011 to 2016 but decreased again in 2017.

#### Transport

In 2017, GHG emissions from the transport sector represented 23.8 per cent of the total emissions in the energy sector and 15.8 per cent of the total GHG emissions excluding LULUCF.

The transport sector includes GHG emissions from road transport, railways, domestic aviation and navigation and other transportation (table 7.2). The GHG emissions from road transport represent 96.13 per cent of the GHG emissions in this sector, followed

by emissions from rail transport, domestic aviation, domestic navigation and other modes.

**Table 7.2: Contribution of the GHG emissions from categories in the transport sector, 2017, per cent**

	%
Road transportation	96.1
Railways	2.28
Domestic aviation	0.83
Domestic navigation	0.74
Other transportation	0.05

Source: National Greenhouse Gas Inventory, 2019.

The GHG emissions from road transport increased 92 per cent in the period 1989–2017 due to the strong growth in the number of vehicles. The road vehicle fleet increased by 106 per cent from 2000 until 2018. In 2018, about 79.31 per cent of the road vehicles were older than 10 years. Passenger cars contributed 50.9 per cent and heavy trucks and buses 34 per cent of road transport emissions. In other transport categories, GHG emissions have fluctuated and there was no strong growth in emissions.

### Waste

GHG emissions from the waste sector gradually increased in the period 1989–2017, by 14.7 per cent. The amount of waste in the country has grown, but the number of managed landfills with methane recovery installations has also increased. In the period 1989–2017, GHG emissions from the solid waste disposal subsector increased by 171.5 per cent due to the increased trend of waste generation, while GHG emissions for the wastewater treatment and discharge subsector decreased by 42.2 per cent due to the decrease in population and an increase in the number of inhabitants connected to a sewerage system, plus the decreasing level of industrial production.

## 7.3 Legal, policy and institutional framework

### *Legal framework*

Romania ratified the UNFCCC in 1994 (Law No. 24/1994), the Kyoto Protocol under the UNFCCC in 2001 (Law No. 3/2001) and Paris Agreement in 2017 (Law No. 57/2017). Romania accepted the Doha Amendment to the Kyoto Protocol in 2015 (Law No. 251/2015).

### Environment

Romania's legislation contains national legal acts related to the administration of the National

Greenhouse Gas Inventory, which consists of three GDs, five MOs by the ministry in charge of the environment and a Protocol of Collaboration between the same ministry, NEPA, Romanian Auto Registry and Ministry of Interior. Additional national legal acts are related to the administration of the EU ETS and of the Union Registry of Greenhouse Gases emissions in Romania (seven MOs).

General environmental regulations, including climate change aspects, are set according to GEO No. 1995/2005 on environmental protection. This sets out the main responsibilities and obligations of the ministry in charge of the environment and of the other responsible entities, including private individuals.

### Other sectors

Specific sectoral laws have provisions with possible effects on GHG reduction and climate change, related to different sectors of society. Law No. 220/2008, modified by Law No. 139/2010, establishes a legal framework for the use of RES. Laws No. 121/2014 and No. 160/2016 on Energy Efficiency transpose Directive 2012/27/EU on energy efficiency (Energy Efficiency Directive). Law No. 114/2013 regulates the geological storage of carbon dioxide. Law No. 278/2013 on industrial emissions regulates permit conditions for installations in accordance with BAT conclusions and Directive 2003/87/EG establishing a scheme for greenhouse gas emission allowance trading within the Community. GD No. 964/2000 (Implementation of Nitrates Directive), MO No. 1182/2005 (Agricultural good practice code) and MO No. 352/636/2015 (protection of resources against nitrate pollution) are applicable in the agriculture sector. Other sector-specific legal instruments are Law No. 211/2011 on Waste Management, and GD No. 666/2016 (General Transport Masterplan), GD No. 928/2012 (monitoring and reduction of GHG emissions from transport), GD No. 935/2011 (promoting use of biofuels) and GD No. 90/2011 (emission performance standards for passenger cars from 2020).

### *Policy framework*

The Nationally Determined Contribution (NDC) of the EU and its Member States under the Paris Agreement entered into force in November 2016. Romania is committed to the binding target of at least 40 per cent domestic reduction in GHG emissions by 2030 compared with 1990 under the EU 2030 Climate and Energy Framework, to be fulfilled jointly as set out in the conclusions of the European Council of October 2014. Key targets of the 2030 Climate and Energy Framework are at least 40 per cent reduction in GHG



emissions from 1990 levels, an increase in the renewable energy share to at least 32 per cent, and at least 32.5 per cent improvement in energy efficiency. As a long-term target, the EU aims to reduce its GHG emissions by 80–95 per cent by 2050.

The 2013 National Climate Change Strategy (2013–2020) (GD No. 529/2013) includes post-Kyoto objectives, targets and actions for mitigation of and adaptation to climate change effects. The adaptation component of the Strategy was elaborated to provide guidelines and individual action plans for 13 different sectors. Because the Strategy did not contain clear schedules of measures and indicators – necessary for a national action plan – the then Ministry of Environment and Climate Change, in cooperation with the World Bank, implemented a project to provide advisory services on climate change to operationalize the Strategy. This project, called OPERA-CLIMA, aimed to enable Romania to advance towards attaining the Europe 2020 Strategy and was implemented in the period 2013–2015. The first components (A and B) of the project were to develop and operationalize an updated and extended strategy and climate-related actions for priority sectors using state and EU funding. Components C and D of the project provided for the development of a knowledge base for decision-making and capacity-building.

Following the implementation of components A and B, the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2030 and the National Action Plan for the Implementation of the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2020 were approved in 2016 (GD No. 739/2016). The main objective of the Strategy was to quantify the targets for GHG emissions reductions in line with the EU commitments for 2030 and including the roadmap for 2050 to be implemented by the Action Plan. In the Action Plan, for each priority sector and objective, the actions are established with all financial and organizational details, such as targets and sub-targets, responsible parties, deadlines and funding.

The Strategy and the Action Plan establish the following strategic objectives on forest management: management of existing forests; extension of wooded lands; and encouraging sustainable management of forests that are private property by providing advice, technical support and compensatory payment to owners. The aim is the conservation and enhancement of carbon stocks in the national forests. The Strategy and Action Plan contain provisions and measures on

adaptation to climate change. Based on the above, it can be concluded that Recommendation 10.1 in the Second EPR of Romania, urging the Government to: (a) finalize and adopt the new strategy on climate change; (b) follow this up with a climate change action plan; and (c) draft and adopt a strategy on adaptation to climate change and its action plan, has been implemented.

Following Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action, EU Member States were requested to develop integrated national energy and climate plans that would include their respective contributions to the collective EU targets and the necessary policies and measures to achieve these contributions in time tranches of 10 years. The Romanian Government notified the EU of its draft Integrated National Plan on Energy and Climate Change 2021–2030 in December 2018. The Plan is an obligatory, common base, structured plan resulting from the EU Energy Union strategy. The Plan has been jointly drafted by the Ministry of Energy and the Ministry of Environment, Waters and Forests. The document has been analysed by independent experts and recommendations for improvement have been provided. In June 2019, it was assessed by the EC on the ambition of objectives, targets, contributions and adequacy of supporting policies and measures.

The assessment comprises comments and recommendations for improvement and adaptation of the Plan, for example, on the share of energy from renewable sources and the national contribution for energy efficiency, which were assessed to be too low. The draft Integrated National Plan on Energy and Climate Change has been updated by taking the recommendations into consideration and made available to the public. The revised draft of the Plan (in the light of the EC recommendations) was issued for public consultation in February 2020 and the further revised document went through the screening phase of the SEA procedure in April–May 2020, before being submitted to the EC.<sup>128</sup> As at October 2020, the draft plan is still under the SEA procedure.

The strategic vision is the growth of the energy sector under conditions of sustainability, based on a diversified and balanced energy mix. Clean energy, the increased use of RES and increased energy efficiency are expected to support the GHG reduction targets for 2030 and 2050 set by the EU. Important factors will be the price of EU ETS certificates for coal-fired power plants, the cost of CO<sub>2</sub> capture and storage and the decrease in costs for new technologies

<sup>128</sup> [https://ec.europa.eu/energy/sites/ener/files/documents/ro\\_final\\_necp\\_main\\_ro.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/ro_final_necp_main_ro.pdf).

(wind, photovoltaic). The 2018 National Energy Strategy 2019–2030, with a horizon of 2050, incorporates results of implementation of the 2010 National Action Plan for Renewable Energy Sources and of the National Action Plan for Energy Efficiency III for 2014–2020 (GD No. 122/2015).

Key strategic investments that are outlined in the revised document are two new units at the NPP Cernavodă, a reversible hydropower plant at Tarnita Lapustesti, a hydropower plant on the Danube in partnership with Bulgaria and a new 600 MW coal-fired power plant in Rovinari. Total investments are expected to amount to €15 billion to €30 billion.

The National Energy Strategy and the draft Integrated National Plan on Energy and Climate Change 2021–2030 include key objectives, policies and measures for mitigation and adaptation in the energy production sector. The main operational objectives related to decarbonization and energy efficiency are a diversified and balanced energy mix containing advanced energy technologies and the development of means of production with low GHG emissions (nuclear, RES, hydropower). Another key objective is energy storage and back-up capacities by development of electricity storage via hydroelectric pumping and by building the Tarnita Lapustesti reversible hydropower plant. New power generation capacity to replace old fossil fuel power plants to be decommissioned are required to be equipped with energy-innovative techniques.

In the framework of the National Action Plan for Energy Efficiency III for 2014–2020 under the Energy Efficiency Directive, key directions are the promotion of high-efficiency cogeneration, modernizing the centralized district heating systems of communities and increasing the energy efficiency of residential and public buildings and public lighting systems. The Action Plan describes mitigation and adaptation measures in policies and action plans for the priority sectors. Assessment of the results must be reported to the EU annually.

The General Transport Master Plan (GD No. 666/2016) describes investments of €27 billion in the road transport sector until 2030. Master plans for road and rail transport contain measures to increase energy efficiency and reduce emissions from transport. The plans focus on the implementation of relevant EU legislation on emissions reduction and energy efficiency.

The most important measures proposed in the 2011–2020 National Action Plan for the Reduction of GHG

emissions in Civil Aviation are improvement in the efficiency of fuel used by at least 2 per cent per year and the capping of CO<sub>2</sub> emissions from the civil aviation sector, starting in 2020. For the industrial processes and product use sector, the focus is on an increase in energy efficiency and Regulation (No. 517/2014) on fluorinated GHG (F-gases), applied since 2015, aims to reduce these GHGs by two thirds in 2030 compared with 2015.

The National Rural Development Programme 2014–2020 was set up in line with the EU Common Agriculture Policy and the Europe 2020 Strategy. The strategic goals of the Programme are restructuring and increasing the viability of agricultural holdings, sustainable management of natural resources and fighting climate change, diversifying economic activities, creating jobs and improving infrastructure and services for the improvement of the quality of life in rural areas. Measures are expected to improve organic farming, afforestation and creation of woodland, use extensive forestry techniques and increase payments for forest environment climate commitments.

A key component for agriculture included in the National Action Plan for the Implementation of the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2020 is knowledge transfer to farmers and rural stakeholders regarding the role and importance of climate change mitigation, especially on animal breeding and fertilizer use. Implementation results of the Programme are the elimination of damage done by flooding, rehabilitation of communal roads and development of rural infrastructure and sewerage systems.

The National Forestry Strategy 2018–2027 states that the strategic vision of Romania is to have a forestry industry that contributes to the well-being of people in an economically, socially and environmentally sustainable manner. The Strategy includes measures for expanding wooded areas to increase carbon sequestration, maintaining carbon storage capacity and continued adaptation of forests to climate change.

To reduce GHG emissions from non-compliant landfills in accordance with the Landfill Directive, in the period 2013–2017, 41 non-compliant landfills were closed. One of the proposals in the National Strategy for Waste Management 2014–2020 is the reduction of GHG emissions, which, however, increased in the period 1989–2017 by 14.7 per cent.

**Photo 7.4: Soil regeneration project (in winter) near Copșa Mică town, Sibiu County**

*Photo credit: Romsilva, MoEWF*

SDS 2030 includes targets for adaptation and resilience to combat the dangers of climate change and natural disasters by integrating reduction and adaptation measures through described strategies and national policies.

In 2017, the then Ministry of Regional Development, Public Administration and European Funds published the Strategy for mobilizing investments in the renovation of residential and commercial buildings existing at national level, both public and private, version 2.

The Strategy aims to mobilize investments in the renovation of residential and commercial buildings, both public and private, in line with the Energy Efficiency Directive. The Strategy describes different phases for renovation of existing buildings to achieve a substantial reduction in energy consumption and improve living conditions in residential buildings and workplaces.

*Building resilience and developing adaptive capacity to climate change*

Romania is pursuing the achievement of SDG target 13.2 (Integrate climate change measures into national policies, strategies and planning). The National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions 2016–2030, the National Action Plan for the implementation of the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions 2016–2020, including the draft Integrated National Plan on Energy and Climate Change 2021–2030 and sectoral strategic documents, for example, on transport, energy,

agriculture, forestry and education, show comprehensive integration of the challenges of climate change, expected effects and possible adaptation measures in the different national and sectoral strategic documents.

Romania had in place a policy framework on risk management (GD No. 762/2008 on the approval of the National Strategy of prevention of emergency situations, GD No. 846/2010 on the National Strategy for Risk Management in case of Floods, GEO No. 1/2014 on certain measures in the area of emergency management and amending and supplementing GEO No. 21/2004 on the National Management System for Emergency Situations). A National System for Emergency Situations Management comprised of central and local authorities (GEO No. 21/2004) was set up. Its function is efficient management in life-threatening situations during natural or “man-made” disasters.

GD No. 557/2016 on the approval of risk type management complemented the policy framework on risk management. GD is expected to support the achievement of SDG target 1.5 (By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters) and global indicators 1.5.3, 11.b.1 and 13.1.2 (Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030) and 1.5.1 and 13.1.1 (Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population).

After the adoption of the Sendai Framework in 2015, the Government has been actively working to establish a national platform for disaster risk reduction, which is an interdisciplinary, multi-sector entity for consultancy to the national authorities for drawing up disaster risk reduction strategies and programmes. The country intends to consolidate by 2030 a unified national system of emergency intervention, rehabilitation and compensation service in the event of natural disasters, industrial accidents or extreme weather events caused by climate change effects and other environmental shocks and disasters.

During the national disaster risk assessment (2015–2018) by the General Inspectorate for Emergency Situations along with 13 public authorities, five types of risk were prioritized and analysed: earthquake, floods, droughts, forest fires and epidemics. Management capabilities in Romania were assessed according to the Risk Management Capability Assessment Guidelines (2015/C 261/03). Designated competences and responsibilities are regulated in GD No. 557/2016. In line with the Sendai Framework for Disaster Risk Reduction 2015–2030, Romania has established a National Platform for Disaster Risk Reduction.

According to the United Nations Office for Disaster Risk Reduction (UNDRR), the number of missing persons due to disaster in Romania was 5 in 2006, 1 in 2008 and 1 in 2016. Table 7.3 shows selected series under the SDG global indicators 1.5.1 (also 13.1.1) (Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population). According to UNDRR, the direct economic loss attributed to disasters in current US\$ (SDG series 1.5.2) amounted to US\$0.9 billion.

Regarding global indicators 1.5.4, 11.b.2 and 13.1.3 (Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies), in Romania, besides the national bodies involved (Department of Emergency Situations, General Inspectorate for Emergency Situations under the Ministry of Interior, other ministries), specific roles and responsibilities for disaster risk management are held at the county level (e.g. County Inspectorates for Emergency Situations). As at February 2021, none of the 3,181 local governments had adopted and implemented local disaster risk reduction strategies.

Romania has an ongoing programme for improvement and extension of the disaster response capacity of the responsible authorities managed by the National System for Emergency Situations Management. The estimated budget is €650 million, to be spent on intervention equipment and logistics and training. In the period 2016–2019, 15 national and international exercises for different disaster types have been held and experience was gained to improve preparedness.

One of Romania's intentions on disaster management is to play an active role in international assistance. Among implemented sectoral measures are programmes to reduce seismic risk (e.g. building adaptation, population training) and flood risk (Flood Risk Management Plan 2016–2021). The National Action Plan for the Implementation of the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2020 addresses the actions that must be performed for mitigation and adaptation of the consequences of climate change, which encompass disaster management.

**Table 7.3: Selected series under SDG global indicator 1.5.1, 2012–2018, number**

	2012	2013	2014	2015	2016	2017	2018
People affected by disaster	4 061	6 433	8 477	2 558	16 313	3 717	137 461
Deaths due to disaster	4	6	8	4	6	1	1 239
Deaths and missing persons attributed to disasters per 100,000 population	0	0	0	0	0	0	6
Deaths and missing persons attributed to disasters	4	6	8	4	7	1	1 239
Directly affected persons attributed to disasters per 100,000 population	20	32	42	13	83	19	704
Injured or ill people attributed to disasters	488	638	885	744	2 263	160	2 458
People whose damaged dwellings were attributed to disasters	1 863	4 161	5 436	1 065	9 016	2 286	19 027
People whose destroyed dwellings were attributed to disasters	73	134	127	49	115	46	908
People whose livelihoods were disrupted or destroyed, attributed to disasters	1 637	1 500	2 029	700	4 919	1 225	115 068

Source: United Nations Office for Disaster Risk Reduction, Global SDG Indicators Database, <https://unstats.un.org/sdgs/indicators/database/> (accessed 24 February 2021).

Regarding SDG targets 11.b (By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels) and 13.1 (Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries), the Ministry of Environment, Waters and Forests and the General Inspectorate for Emergency Situations are the designated authorities for the fulfilment of policy objective 2.4 of Decision No. 1313/2013/EU: Promoting climate change adaptation, risk prevention and disaster resilience. The approach in Romania is consistent with the existing climate adaptation strategies and includes a description of key risks, a description of the disaster prevention, preparedness and response measures to address the identified risks, and information on budgetary resources such as maintenance costs related to prevention, preparedness and response.

With regard to attaining SDG target 13.3 (Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning), education on the impact of climate change and

mitigation and adaptation measures is organized on various levels: pre-university education, university and post-university education and lifelong learning programmes. Occupational training and national ecological and environmental contests also contribute to the knowledge and awareness of the population. Information and media campaigns to inform the general public and special campaigns for target groups are included as priority actions in the National Action Plan for the Implementation of the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2020.

In the period 2006–2016, 67,358 people were affected by disasters, flooding being by far the most frequent type of disaster (table 7.4). In this period, 421 people died as a result of natural disaster, 71 per cent of them due to extreme temperatures. Direct economic loss due to disasters in this period was more than US\$1 billion, almost all related to a riverine flood event in 2010.

#### *Institutional framework*

##### Ministry in charge of the environment

The Ministry of Environment, Waters and Forests is the central public authority responsible for the general coordination of strategic documents and actions related to the mitigation of and adaptation to climate change.

**Table 7.4: Natural disasters, 2006–2016**

Year/Period	Type	Subtype	Deaths	Persons affected	Total damage (1,000 US\$)
2006	Flood	Riverine flood	37	18 871	0
2006	Flood	Flash flood	14	5 712	0
2006	Extreme temperature	Heat wave	26	200	0
2007	Flood	Flash flood	0	500	0
2007	Extreme temperature	Heat wave	30	0	0
2007	Flood	Riverine flood	12	3 760	0
2007–2008	Extreme temperature	Cold wave	38	0	0
2008	Storm	Extra-tropical storm	0	90	0
2008	Flood	Riverine flood	5	11 000	0
2009	Extreme temperature	Cold wave	43	20	0
2009	Flood	Riverine flood	11	4	0
2009	Extreme temperature	Cold wave	11	0	0
2010	Extreme temperature	Cold wave	52	0	0
2010	Flood	Riverine flood	26	12 237	1 111
2012	Extreme temperature	Cold wave	86	7 539	0
2013	Flood	Riverine flood	9	5 400	11
2014	Extreme temperature	Cold wave	13	0	0
2014	Flood	Riverine flood	4	525	0
2015	Flood	Riverine flood	1	1 500	0
2016	Flood	Riverine flood	3	300	0

Source: EM-DAT: The Emergency Events Database - Université catholique de Louvain (UCLouvain) - CRED, D. Guha-Sapir - [www.emdat.be](http://www.emdat.be), Brussels, Belgium.

It ensures that strategic documents and measures are in line with EU and other governmental policies. The Ministry is the coordinator of the National Commission on Climate Change. The Ministry is responsible for managing the National GHG Inventory System (through NEPA) and for the preparation and submission of the GHG Emissions Inventory to the UNFCCC Secretariat, EC and EEA, in accordance with their requirements.

The Environment Fund Administration manages the Environment Fund for the purpose of supporting and promoting projects and programmes for environmental protection and with a view to meeting EU objectives in the environmental and climate change fields.

NEPA ensures environmental monitoring. Due to institutional changes that occurred in 2012, it is no longer directly involved in the elaboration of climate change policies. Since July 2016, NEPA is the competent authority responsible for administrating the National Inventory Arrangements and National GHG Inventory System.

The National Meteorological Administration is the technical national authority on meteorology. Its main objectives are to provide sound prognosis and weather alerts, prognosis on the atmospheric dispersion of the pollutants in situations such as the occurrence of dangerous meteorological phenomena and accidental pollution, and agro-meteorological prognosis to specific users, as well as conducting climate studies and climate monitoring to adequately identify the observed changes and possible scenarios for the climate. It provides specific information for the elaboration and implementation of strategic documents to prevent the impact of dangerous meteorological phenomena in the medium and long term.

Romanian Waters ensures the administration of public goods for the purpose of studying, protection, valorization and sustainable use of the country's water resources, management of the national network for hydrological, hydrogeological and quality measurements belonging to the public domain, and management of the infrastructure for the National System of Water Management. Romanian Waters implements the policy on quantitative and qualitative water resources management, by actions including the study of water resources and the conservation, rational use and protection of water resources against their exhaustion and degradation, especially by adverse effects of climate change, with the purpose of ensuring their sustainable development and prevention of the destructive effects of waters.

NEG is responsible for specialized inspection and control and can exercise sanctioning, suspension and cessation of activities in cases of non-compliance with the conditions of regulatory acts on environmental protection and climate change.

The National Forest Administration is responsible for sustainable forest management with special attention on the role of forest management in climate change mitigation and adaptation. It is involved in climate-change-related projects such as the Drought Risk in the Danube Delta Project and Mitigating vulnerability of water resources under climate change.

#### Other institutions

The Ministry of European Funds is the central public entity responsible for the coordination of the European funds through eight national and regional programmes, with a total amount of €30.84 billion in 2014–2020. The Ministry was responsible for the management of five operational programmes for 2014–2020, including infrastructure, competitiveness, human resources, technical assistance, and support of disadvantaged persons. EU-funded activities related to climate change include promoting sustainable transport, enhancing access to and use and quality of information, climate change adaptation and risk prevention and stimulation of a low carbon economy.

The Ministry of Economy, Energy and Business Environment is responsible for the economy and industrial policies and for energy issues.

The Ministry of Public Finance is one of the main actors regarding the financial instruments related to climate change, such as trading of the ETS allowances, trading of assigned amount units, revenues resulting from trading the GHG emission allowances, and economies in the reserve of the new entries for joint implementation projects.

The Ministry of Transport, Infrastructure and Communication is responsible for all the transportation sectors, except for urban transportation, which is under the local authorities' competence. It is responsible for policy concerning the national infrastructure, as well as for economic policy on transport and climate change.

The Ministry of Public Works, Development and Administration is the central body responsible for climate-change-related issues in the areas of infrastructure, construction and urban planning. Improving the energy efficiency of buildings and related standards concerning climate change for

public services are among its competences. The National Authority for the Regulation of the Community Public Utility Services is subordinated to the Ministry and ensures the regulation and monitoring, at the central level, of the activities carried out by the Community Services for Public Utilities.

The Ministry of Agriculture and Rural Development is the central body responsible for climate-change-related issues in the areas of agriculture and rural development.

The Ministry of Foreign Affairs holds a key role in the international climate change negotiations. It is the national coordinator and technical focal point for the Europe 2020 Strategy.

The Ministry of Education and Research plays a role in education and research on climate change. Specific projects on ecology and climate change mitigation and adaptation are developed for the curricula of primary and secondary education.

The National Institute of Statistics is the main source of information and data for developing the GHG Inventory.

The National Authority for Energy Regulation under the Parliament regulates the energy, energy efficiency and renewable energy market. The Authority is responsible for monitoring and reporting on the implementation of the National Action Plan for Energy Efficiency, in accordance with the corresponding EU legislation.

The National Institute of Public Health, subordinated to the Ministry of Health, prepares annual reports on the impacts of climate change on human health, which are later communicated to the Ministry of Health and submitted to the Government.

The National Institute for Hydrology and Water Management manages flood-related information.

The National Institute for Research and Development is responsible for monitoring and research of the forest fund and for the LULUCF chapter in the GHG Inventory.

The General Inspectorate for Emergency Situations, a specialized institution of the Ministry of the Interior, is responsible for the management and prevention of disasters and operates the National Operational Centre. In addition to the headquarters, located in Bucharest, there are 41 inspectorates for emergency situations at the county level and a special

intervention unit that has national competence. In the context of climate change and the expected increase in extreme weather events causing disasters, a national population warning system, RO-ALERT, has been implemented. Warning messages can be received on mobile phones. In the event of an emergency, the Inspectorate has a coordinating role and works with relevant stakeholders, including local and regional authorities, fire brigades, medical emergency services, police and the army.

Local government authorities participate in projects that strengthen the process of adaptation to climate change as part of the sustainable development policy. For example, key objectives of the project “A Green Way to Sustainable Development” carried out by LEPA Sibiu are education and training for local authorities on climate change adaptation, organization of awareness campaigns, establishment of a regional network of county councils and municipalities, meteorological studies to support the implementation of climate change adaptation plans and elaboration of local strategies and action plans for climate change adaptation. In Romania, 64 cities have signed the 2030 Covenant of Mayors, an EU initiative by the EC targeting local authorities and populations to take the lead in the fight against climate change. Signatories that joined the Covenant between 2008 and 2015 have made the voluntary commitment to go beyond the EU’s 2020 targets of 20 per cent CO<sub>2</sub> emissions reduction.

#### Interministerial coordination

The National Commission on Climate Change is the main advisory body for interministerial coordination on climate-change-related issues. GD No. 1026/2014 strengthens and improves the role and functioning of the Commission, by establishing two layers of functioning (technical and political) and clarifying and extending the responsibilities of the Commission. The Commission comprises representatives from line ministries and one NGO with competencies in climate change. Since its reorganization, though, the Commission has been virtually inactive.

Recommendation 10.3 in the Second EPR of Romania urged the Government to improve and reinforce cooperation by: (a) strengthening the role of the National Commission on Climate Change in interministerial cooperation by increasing the frequency and regularity of the gatherings of the Commission; (b) strengthening the capability of the secretariat serving the National Commission on Climate Change; and (c) using the Working Group on Adaptation as a model for establishing climate-change-related working groups in other relevant areas

such as energy efficiency, transport and waste emissions. While the Commission was strengthened, its activity level remains low as at December 2019. No working groups were established, even though, in the context of the OPERA-CLIMA project (2013–2016), the Government has delivered rapid assessment reports for priority sectors that contain adaptation measures recommended for implementation in various sectors, such as energy, transport, water, agriculture, forestry and urban development. Therefore, it can be concluded that point (a) of the Recommendation was implemented to a limited extent during a limited period, while points (b) and (c) have not been implemented.

#### *Regulatory, economic and information measures*

##### Emissions trading

The EU ETS covers all large GHG-emitting installations in the industry, energy, and aviation sectors in the EU, setting a cap on the GHG emissions; aircraft operations have been included since 2012. The third phase of the EU ETS started in 2013.

Romania's emissions reduction target is 34.7 per cent in 2020 and 43.9 per cent in 2030, compared with 2005 levels. In 2018, Romanian EU ETS emissions were 44.8 per cent lower than in 2005. The change in ETS GHG emissions in Romania in the period 2018–2030 is expected to be 0 per cent if additional measures are applied; with existing measures, an increase of 4.6 per cent is projected.

Around 150 installations operate under EU ETS in Romania. Each operator must have a GHG emissions permit issued by NEPA and a CO<sub>2</sub> Monitoring and Reporting Plan as an annex to the GHG emissions permit that is validated and approved by the Agency annually. Allowances are issued yearly based on the National Implementation Measures approved by the EC. Operators submit an emissions report to NEPA every year, to be validated by a verifier accredited by an accreditation body. Each year, operators must, in the Union Registry of GHG Emissions, surrender a number of allowances equal to the number of emissions in the previous year.

##### Other greenhouse gas reduction instruments

The reduction of GHG emissions from most sectors that are not covered under the EU ETS, such as transport, buildings, agriculture and waste, is regulated in the EU Effort Sharing Decision for GHG emissions from sectors not included in the EU ETS system, which became operational in 2013. Romania's

national targets under this mechanism are to avoid an increase in GHG emissions compared with 2005 by more than 19 per cent, and to reduce GHG emissions by 2 per cent by 2030. Under this mechanism, GHG emissions in Romania are projected to increase by 2 per cent with existing measures or diminish by 1 per cent with additional measures.

Romania participates in the Joint Implementation Mechanism of the Kyoto Protocol as a host country and has signed 10 MoUs with annex I countries and with the World Bank (Prototype Carbon Fund) in the first commitment period of the Protocol (2008–2012). Under this mechanism, 18 projects have received a letter of approval and are in different stages of implementation. Some have been finalized, for example, the Dorobantu Windpark and the N<sub>2</sub>O emissions reduction project in Nitroporos. In the second commitment period under the Kyoto Protocol (2013–2020), Romania did not renew the existing memoranda and did not sign new ones.

The draft integrated national plan on energy and climate change 2021–2030 proposed a RES target for electricity production of 27.9 per cent in 2030. According to the EU and other experts, this target is below the technically and economically achievable target due to the estimated renewable energy potential. This was increased to 34 per cent in the final plan, delivered in 2020. In the last version of the plan, the percentage was 30.7.

##### Information

The National Action Plan for the Implementation of the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2020 includes targets on education, training and public information. These targets include the implementation of measures to adapt the vocational and academic curricula to climate change, public awareness actions through information, education and communication campaigns on the risks and opportunities from climate change effects, projects in schools, universities, communities and the private sector, and training of teachers on the effects of climate change. Monitoring, evaluation and reporting of implemented actions of the plan are essential for gaining information about its effectiveness, so each action in the plan must have its indicator(s). Various projects have been funded by the Operational Programme for Human Resources Development from the European Social Fund and from the state budget.

In the framework of the EU Human Capital Operational Programme 2014–2020, mitigation and



adaptation to climate change is within one of the three ESIF-funded operations. The Environment Fund finances programmes that promote energy efficient and non-pollutant vehicles by granting subsidies, public awareness about GHG emissions reduction, increasing the use of RES, afforestation of degraded land and the prevention or mitigation of effects caused by extreme meteorological phenomena.

## 7.4 Mitigation and adaptation

### *Mitigation scenarios*

In December 2019, the EC presented the EU Green Deal, with the aim to make the EU climate neutral by 2050. The strategy to reach this objective and the update of the EU-NDC were submitted in December 2020, with a target of at least 55 per cent reduction in GHG emissions by 2030 compared with 1990. Romania has already reduced its GHG emissions in 2017 by more than 60 per cent compared with 1990. The EC has recommended that Romania increase its renewable energy target from 27.9 to at least 34 per cent. Energy efficiency in Romania in 2015 improved by 35 per cent compared with 2000.

The Seventh National Communication describes GHG emission projections (figure 7.3). The projections have been drawn up for three scenarios: business as usual (WOM, excluding all measures after 2005), a scenario containing mitigation policies and programmes (WEM) and a scenario containing additional emissions mitigation measures (WAM).

The emission projection horizon is 2020–2035, with 2015 as the reference year. The emission projections

are based on assumptions about the macroeconomic indicators and have high uncertainty for 2035 due to the uncertainty of global and national economic developments. Romania achieved its Kyoto Protocol target for 2008–2012 and, in all three scenarios, emission projections are expected to stay below the Kyoto target level.

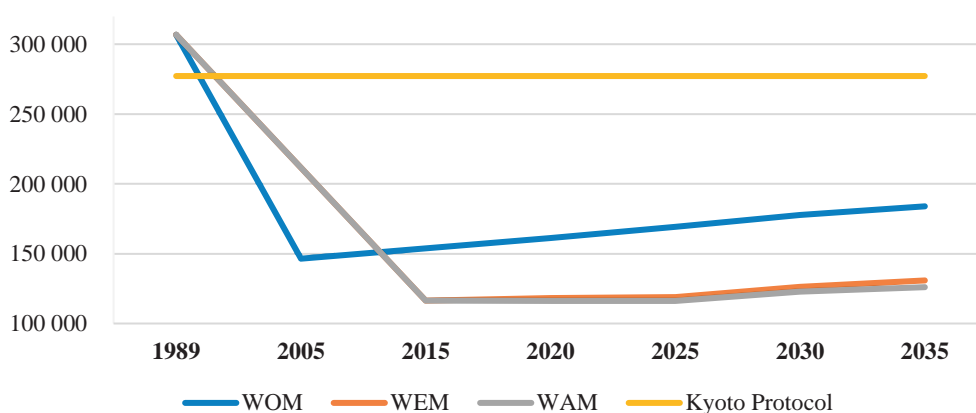
In the BAU (WOM) scenario, GHG emissions rise by 33.5 per cent in 2035 compared with 2015, while in the WEM and WAM scenarios there is little difference – emissions rise only slowly and are 26.75 per cent and 27.95 per cent lower, respectively, than in the WOM scenario.

GHG emission projections for 2015–2035 are based on assumptions related to population and economic growth, including interaction between the sectors. In the WOM scenario, total GHG emissions in 2035 are estimated at 184,000 Gg CO<sub>2</sub>-eq., while in the WEM and WAM scenarios, total GHG emissions are estimated at 131,000 Gg CO<sub>2</sub>-eq. and 126,000 Gg CO<sub>2</sub>-eq., respectively.

### *Resources*

The 2015 OPERA-CLIMA project provides estimates on investments that are needed to achieve the proposed objectives to reduce GHG emissions and implement climate change adaptation measures for the period 2015–2050. Total costs are estimated at €30 billion to €40 billion. The draft Integrated National Plan on Energy and Climate Change 2021–2030 also gives an estimation of cumulative investments (€2 billion for the energy sector).

**Figure 7.3: Total GHG emission projections**



Source: Seventh National Communication of Romania to the UNFCCC, December 2017, p. 160.

**Photo 7.5: Reforesting campaign “A forest as big as a country”**

Photo credit: MoEWF

URL: [www.opadurecatotara.ro](http://www.opadurecatotara.ro).

For the period 2014–2020, €7.1 billion was allocated for environmental expenditure in Romania within the (EU) Cohesion Policy, including for the shift to a low carbon economy (€2.9 billion), climate change adaptation and risk prevention and management (€479 million) and environmental protection and resource efficiency (€3.7 billion), from the European Cohesion Fund of ESIF.

Under the European Agricultural Fund for Rural Development budget for Romania 2014–2020 (€25 billion), 11 per cent is dedicated to agri-environmental-climate measures.

In 2017, Romania spent almost €1 billion on environmental protection. The Environment Fund grants subsidies in different programmes, for example, scrapping of old cars, purchase of hybrid or electric cars, clean public transport, afforestation, solar panels and waste management (chapter 3). According to the EC Environmental Implementation Review 2019, the total revenues from the auctioning of emission allowances under the EU ETS over the years 2013–2017 were €71 million, of which 55 per cent has been spent on climate and energy purposes. In 2019, 14 GHG reduction projects were proposed for funding by the EC through the EU ETS funding mechanism, a

total cost of €12 million. Most of the projects were on heat and power production.

The EU Green Deal Investment Plan, issued in December 2019 to attain a climate-neutral Europe in 2050, will provide extra EU funding of €750 million for Romania.

#### *Mitigation and adaptation efforts per sector*

Recommendation 10.4 in the Second EPR of Romania urged the then Ministry of Environment and Forests to develop appropriate projects and programmes to: (a) counter the rising GHG emission trends from the transport and waste sectors; and (b) anticipate and respond to the potential future increases in particular sectoral GHG emissions, for example, in the livestock farming sector.

While data at December 2019 are not available, GHG emissions from road transport have increased from 2013 until 2017 by around 25 per cent. GHG emissions from the waste sector remained relatively constant in the period 2013–2017. In the GHG emissions scenarios for 2025 and 2030, with existing and additional measures, the emissions are expected to decrease by around 25 per cent in 2030 compared with 2005. In the livestock farming sector, emissions have

also remained relatively constant in the period 2013–2017. This recommendation was not fully implemented.

### Energy

The four petroleum refineries that are currently in operation are already much more energy efficient and are responsible for 10 per cent of the total GHG emissions of the energy sector.

### Industry and mining

The implementation of BAT to reduce GHG emissions and increase energy efficiency is not strengthened in the environmental and GHG emissions reduction permits. Voluntary agreements and economic support for new tools to stimulate reduction of GHG emissions in industry are not promoted.

### Agriculture and rural development

At least 30 per cent of Romania's funds within the National Rural Development Programme were earmarked for climate change mitigation and adaptation measures in agriculture, increasing to €75 million for 2019. The money has been spent in support of investments in rehabilitation and modernization of the irrigation and drainage infrastructure, appropriate management of agricultural land (use of chemicals and fertilizers, reduction of the number of animals on pasture lands), use of crops with a high capacity to fix nitrogen in the soil and encouraging ecological agriculture, also contributing to adaptation to climate change effects. Future trends anticipate increased production and a reduction in the number of small farms.

### Forests

Mitigating the consequences of climate change on forests and adaptation of forests to climate change are key parts of sustainable forest management. Wooded areas have been expanded to increase carbon sequestration with the help of national and EU funding.

### Transport

No measures are taken to prevent the further increase of GHG emissions due to the growth of the fleet. Emission performance standards and promotion of the use of biofuels according to the EU directives are not implemented in the national legislation. Policy documents recommend introducing instruments such as pricing tools to stimulate more ecologically friendly transport, supporting the purchase of cars with low

GHG and other emissions to air, more and better enforced parking fees, increased urban transport efficiency, development of urban mobility plans, revitalization and extension of the railroad and metro network, development of infrastructure for alternative fuels, improved road and traffic management, a pollution tax on older cars, development of infrastructure for cyclists, increasing public awareness on GHG and other emissions, revising safety standards, and emergency planning in the road and rail sector. However, there are some initiatives to improve air quality, such as the RABLA Programme (box 8.1).

### Housing, buildings and urban development

No incentives and actions to increase energy efficiency and reduce GHG emissions from the housing sector are in place. Such incentives and actions would include thermal insulation programmes, revitalization and improvement of district heating, use of modern heat generating systems, issuance of energy performance certificates, development of minimum renovation performance standards, support of green mortgages, promotion of smart cities, green cities, planning of climate resilient cities, risk analysis, and emergency response plans to climate change effects. Nevertheless, since 2010, The Programme Casa Verde provides financial assistance for the installation of solar collectors, heat pumps or biomass heating systems in residential and public buildings (box 8.2).

With 100 per cent of the population having access to electricity in 2019, Romania achieved SDG target 7.1 (By 2030, ensure universal access to affordable, reliable and modern energy services) as measured by the indicator 7.1.1 (on the proportion of population with access to electricity). Similarly, more than 95 per cent of the population relies on clean fuels and technology (indicator 7.1.2 - Proportion of population with primary reliance on clean fuels and technology (%), which shows that Romania is on a good track to reach target 7.1 by 2030 as measured by this indicator.

### Tourism and leisure

Research programmes have been completed on the impact of climate change on tourism activities in Romania, including specific assessments of the vulnerability and adaptive capacity of tourist resorts. As at December 2010, this has not led to general mitigation and adaptation measures and legislation on tourism and leisure or on climate change.

### Health

Measures included in the National Strategy on Climate Change and Economic Growth Based on Low Carbon

Emissions for the period 2016–2030 and the National Action Plan for the Implementation of the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2020 have been announced for adaptation to extreme weather events that can have direct effects on public health in emergency situations or delayed effects in the long term. Flooding by heavy precipitation, heavy storms, frost, forest fires, extreme droughts and enhanced mortality rates during heat waves are direct threats for which preventive measures must be taken on risk prevention and emergency planning. Key actions in the plan include developing national capacity and training for surveillance and early detection of events that impact on public health using impact functions for continuous assessment, and investments in technology and risk reduction strategies to reduce vulnerability in critical areas.

The Inspectorate of the Ministry of Health produces a yearly report on health effects and risks in relation to environmental factors, including a chapter on climate change. Institutions in charge, such as the National Meteorological Administration, are expected to be enhanced in capacity to enable them to obtain the necessary data. The General Inspectorate for Emergency Situations has developed a risk assessment methodology for periodic national risk assessment (RO-Risk). This will be followed by risk management plans at the sectoral level.

## **7.5 Assessment, conclusions and recommendations**

### *Assessment*

Romania ratified the UNFCCC in 1994, the Kyoto Protocol in 2001 and Paris Agreement in 2017. As an EU Member State, the country is required to achieve the EU targets to reduce GHG emissions by 20 per cent in 2020 and at least 40 per cent in 2030, compared with 1990. Romania's GHG Emissions Inventory 1989–2017 and the annual reports of the EEA on emissions data show that the EU reduction targets are quite easily achievable and can be maintained for Romania, even if the higher economic growth scenarios eventuate. This is due to the rapid and substantial decrease in GHG emissions in the period 1989–1995 resulting from the rapid closure of many unprofitable manufacturing industries after the transition to a market economy.

The EU legislation on climate change has been transposed in Romanian legislation. The National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2030, the National Action Plan for the Implementation

of the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2020, and the draft Integrated National Plan on Energy and Climate Change 2021–2030 are key policy documents on climate change mitigation and adaptation.

Recommendations in the Second EPR of Romania on the adoption of new strategies and action plans (Recommendation 10.1) and necessary improvements in the National GHG Inventory System (Recommendation 10.2) have been implemented. Recommendation 10.3 on the role of the National Commission on Climate Change has been followed by GD No. 1026/2014, aimed at enforcing the role and improving the operation of the Commission. However, this has only partially met the recommendation. In the OPERA-CLIMA project (2013–2016) the Government, advised and supported by the World Bank, delivered rapid assessment reports for different sectors (energy, transport, water, agriculture, forestry, urban development) containing adaptation measures recommended for implementation. Recommendation 10.4 to counter the rising GHG emissions from the transport, waste and livestock farming sectors has been partially implemented for the waste sector but not for the transport sector because of the increase in the number of cars.

Romania has made progress in achieving SDG target 13.2 by the adoption of the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions 2016–2030, the National Action Plan for the implementation of the Strategy and other sectoral strategic documents. The adoption of GD No. 557/2016 on risk type management complemented the policy framework on risk management and contributed to the implementation of SDG target 1.5 and global indicators 1.5.3, 11.b.1, 13.1.2, and 13.1.1. Concerning global indicators 1.5.4, 11.b.2 and 13.1.3, specific roles and responsibilities for disaster risk management are held at the county level. However, according to the Sendai Framework Monitoring System, local governments have not adopted and implemented local disaster risk reduction strategies in line with national disaster risk reduction strategies. Concerning the achievement of SDG targets 11.b and 13.1, the Ministry of Environment, Waters and Forests and the General Inspectorate for Emergency Situations are the designated authorities for the fulfilment of the policy objective 2.4 of Decision No. 1313/2013/EU: Promoting climate change adaptation, risk prevention and disaster resilience, which is related to these targets. Education on the impact of climate change and mitigation and adaptation measures is organized on various levels with regard to attaining SDG target 13.3.

## Conclusions and recommendations

### Monitoring and reporting

The National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2030 and the National Action Plan for the Implementation of the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2020 list sectoral and cross-sectoral actions and measures. The Plan states that monitoring, evaluation and reporting of the progress and performance of implemented actions is essential to ensure their effectiveness, efficiency and equity. Each action in the Plan includes indicators to help monitor progress in implementation. As at December 2019, reports on the implementation of the actions had not been published.

#### Recommendation 7.1:

*The Government should:*

- (a) *Set up a monitoring framework for the evaluation and reporting of the state of implementation of the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2030, providing indicators that present quantitative estimates of impacts and effects;*
- (b) *Evaluate the indicators used in the National Action Plan for the Implementation of the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2020, use the lessons learned from the evaluation in setting up a new national action plan for the next implementation period and ensure regular, annual or biannual reporting on the progress of the action plan with substantive information, including qualitative and quantitative data and costs and benefits of measures, and increase public information and awareness of the results of the actions.*

### Energy sources mix

The National Energy Strategy 2019–2030, with a perspective of 2050, and the draft Integrated National Plan on Energy and Climate Change 2021–2030 describe operational objectives. These are translated into policies and measures to achieve EU targets (EU ETS and non-ETS). The objectives are described within the expected development of the future energy production structure, security and integrity of the energy supply, resilience against natural disasters and interconnectivity, as well as the replacement of old and obsolete equipment by modern, energy efficient

and clean installations. The Plan sets the renewable energy production target for 2030 at 30.7 per cent. According to these two documents, the current energy production mix from various sources is expected to be diversified and balanced, which the replacement of current inefficient installations would not alter.

#### Recommendation 7.2:

*The Government should:*

- (a) *Consider replacing older coal- and gas-fired power plants by new installations based on renewable energies;*
- (b) *Consider enhancing the share of energy from renewable sources in order to reach at least 34 per cent by 2030;*
- (c) *Improve the energy efficiency targets to a level that is more consistent with the EU level and Romania's potential.*

### Energy efficiency

The energy efficiency of residential and commercial buildings is very low, due to the lack or insufficient level of thermal insulation in most buildings. The Strategy for mobilizing investments in the renovation of residential and commercial buildings existing at national level, both public and private, has ambitious objectives concerning energy efficiency of buildings to meet EU directives and improve the energy systems of buildings. The improvement of energy efficiency in the building sector is expected to provide large economic, social and environmental benefits. The Government has established the legal basis for support schemes designed to improve the energy performance of buildings by co-financing.

#### Recommendation 7.3:

*The Government should:*

- (a) *Improve the energy efficiency of old district heating systems in apartment buildings by subsidizing technical provisions and rehabilitation of buildings and by stimulating awareness of energy use by the inhabitants by the installation of individual meter systems;*
- (b) *Create incentives to stimulate more economic use of energy sources, considering the concerns of poor and vulnerable parts of the population;*
- (c) *Support the enhancement of energy efficiency and address the issue of seismic risk in buildings by considering the introduction of specific incentives and also increasing the use of EU funds such as the European Regional Development Fund, European Social Fund and Cohesion Fund;*

- (d) *Develop financing products to support beneficiaries of renovations and the use of renewable energy in buildings;*
- (e) *Support research and development and demonstration projects for new technology and techniques to enhance energy efficiency in buildings.*

### Transport

In the period 2012–2017, GHG emissions from transport increased by around 17.9 per cent, mainly because of the road transport subsector, which is responsible for 96 per cent of the GHG emissions of the transport sector. Compared with emissions in the base year 1989, GHG emissions in 2017 had increased by over 61.5 per cent. The car fleet is relatively old and is expected to grow in the future with rising incomes. The infrastructure in urban areas is insufficient to absorb this growth, which leads to congestion, parking problems and severe air pollution. The 2016 General Transport Masterplan includes measures to slow the growth of transport emissions.

#### Recommendation 7.4:

*The Government should:*

- (a) *Stimulate the demand for low emission vehicles and the move of transportation to low emission modes;*
- (b) *Encourage municipalities to invest in better public transport with lower GHG emissions, public transport lanes and more safe walking and biking zones, especially in urban areas;*
- (c) *Encourage municipalities to limit urban driving by applying low emission zones that are forbidden to high emission vehicles;*
- (d) *Encourage municipalities with heavy traffic and high levels of pollution to apply user fees in congested areas;*
- (e) *Prepare for infrastructure that accommodates the use of electric cars;*
- (f) *Consider the possibility of modal shifts from road to rail transport;*
- (g) *Implement emission performance standards and promote the use of biofuels according to the national legislation.*

### Water and agriculture

Climate change is expected to have a major impact on water resources and management in Romania. An increase in the frequency and magnitude of floods, including flash floods and extreme droughts, especially in the south-east, is predicted. Flood protection infrastructure and water management organization lack sufficient investments to be adequately prepared for these challenges. An increase in extreme droughts caused by climate change has a big influence on the application of irrigation, which has largely declined after the transition to a market economy.

The impact of climate change on agriculture in Romania will vary depending on geographical location, but the overall effect will be negative as a result of increased flooding, more frequent and longer droughts and increased soil erosion. No mitigation measures are taken to decrease GHG emissions by improving the current low productivity levels. The EU Common Agriculture Policy provides the framework for climate change mitigation and adaptation in EU Member States.

#### Recommendation 7.5:

*The Government should:*

- (a) *Invest in the water storage capacity, including dam safety, while minimizing the environmental impacts of its interventions;*
- (b) *Implement measures to increase the efficiency of irrigation in the main agricultural areas (mainly the south-east) by improved reservoir management and transfer between basins;*
- (c) *Investigate the selection of climate resistant crops and the optimization of fertilizer use;*
- (d) *Stimulate minimum tillage and modern manure management in fields in order to minimize GHG emissions;*
- (e) *Improve the awareness of farmers about climate change mitigation and adaptation measures;*
- (f) *Assess and address the impacts of extreme weather events on the industrial and mining sectors, to avoid possible heavy environmental damage.*

***PART III: MEDIA AND POLLUTION MANAGEMENT***





## AIR PROTECTION

## 8.1 Air quality

In accordance with data on air quality in Romania during the period 2009–2018, it can be concluded that overall air quality in the country is satisfactory, with a clear descending trend in the concentration of pollutants, although some issues of concern remain. In the period 2009–2018, a number of Romanian cities had concentrations of PM and nitrogen dioxide (NO<sub>2</sub>) above the annual limit values set by EU and domestic legislation.

In the last 10 years, NO<sub>2</sub> concentrations were measured at 147 stations in Romania, although only one third of these stations have available data for the whole period. Only 11 of these stations are classified as “traffic stations”, located where the highest concentrations of NO<sub>2</sub> are expected, in urban areas (figure 8.1). Consequently, exceedances of NO<sub>2</sub> annual limit values are recorded at three traffic stations with complete data: Pitesti, Braşov, Iasi, Ploiesti and Timisoara. Exceedances of limit values were also recorded at 16 stations where NO<sub>2</sub> concentrations were not measured during the whole period 2009–2018: in Bucharest (2), Braşov (3), Cluj Napoca (4), Buchin (1), Constanta (2), Craiova (2), Giurgiu (1) and Iasi (1). Again, eight of these stations are classified as traffic stations, which points to the strong impact of traffic on air quality in Romania. Exceedances are constant throughout the whole observed period in Iasi, Braşov and Bucharest.

No exceedances of EU sulfur dioxide (SO<sub>2</sub>) standards were reported in Romania in the period 2009–2018. PM<sub>10</sub> concentrations in the period 2009–2018 were measured at 125 automatic stations, while filters from 129 stations are analysed by the gravimetric method. However, data for the whole observed period are available for the 41 stations that were operational throughout that period. The situation is different where PM<sub>2.5</sub> is concerned. There are three automatic stations with PM<sub>2.5</sub> analysers, while gravimetric analysis is done for only 30 stations. Data for the whole period 2009–2018 are available for seven stations.

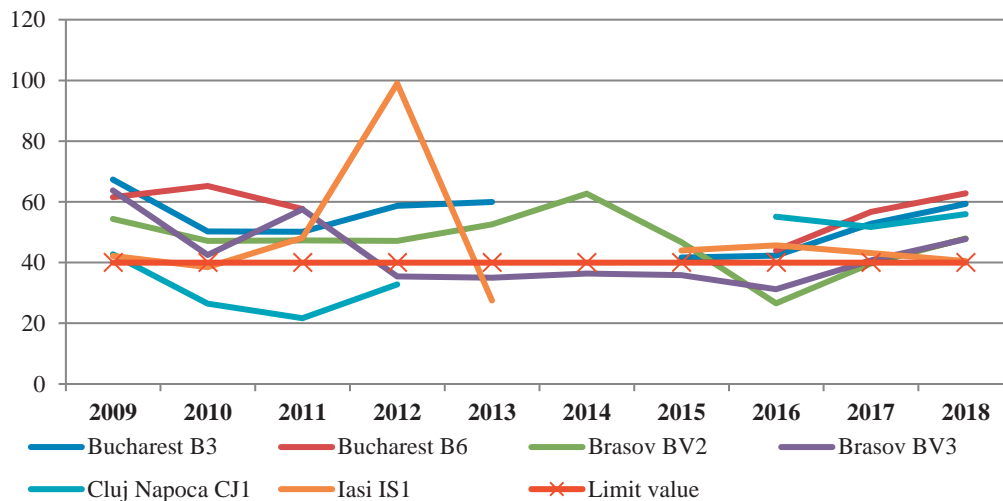
Exceedances of PM<sub>10</sub> annual limit values were more frequent in the period 2009–2013 and were observed in Braşov, Bucharest, Iasi Rovinari and Timisoara. According to the available data, there were no exceedances of PM<sub>10</sub> limit values after 2013, except in Iasi during 2017 and 2018, Ungheni in 2018 and Craiova in 2018. However, the EC referred Romania to the CJEU in 2018, “since the daily limit values for concentrations of PM<sub>10</sub> have been systematically and constantly exceeded in Bucharest since 2007, and that despite those exceedances, Romania has not established plans for that zone which comply with relevant EU legislation”.<sup>129</sup> Another legal proceeding is in train due to gaps in monitoring air quality, including the fact that Romania did not submit hourly values for concentrations of some pollutants to the EEA, which in turn does not enable proper analysis of air pollution (e.g. although average annual values are compliant with set limit values, population exposure might be above daily limit values in certain periods of the year). PM<sub>10</sub> concentrations in Bucharest/Ilfov County, with a few exceptions, generally fluctuate between the annual limit value set by EU and WHO Air Quality Guidelines, which might soon be accepted as the EU standard under the European Green Deal (figure 8.2). In this context, stricter air quality standards for PM<sub>10</sub> will pose a challenge for Romania.

Data on concentrations of PM<sub>2.5</sub> show that exceedances of the EU annual limit value of 25 µg/m<sup>3</sup> were recorded at certain stations all over the country, including recent exceedances at Iasi (2017, 2018), Miercurea Ciuc (2017), Brasov BV-2 (2017), Iasi IS-2 (2017, 2018), Satu Mare SM-1 (2012), Buzau BZ-1 (2012) and Craiova DJ-2 (2009). The stricter WHO Air Quality Guidelines (10 µg/m<sup>3</sup>) are exceeded at all stations that monitor this pollutant, with some exceptions: Timisoara TM-2 (µg/m<sup>3</sup> 9,94 in 2014), Sibiu SB1 (µg/m<sup>3</sup> 6,9 in 2010) and Galati GL-2 (µg/m<sup>3</sup> 7,81 in 2013, 7,61 µg/m<sup>3</sup> in 2014).

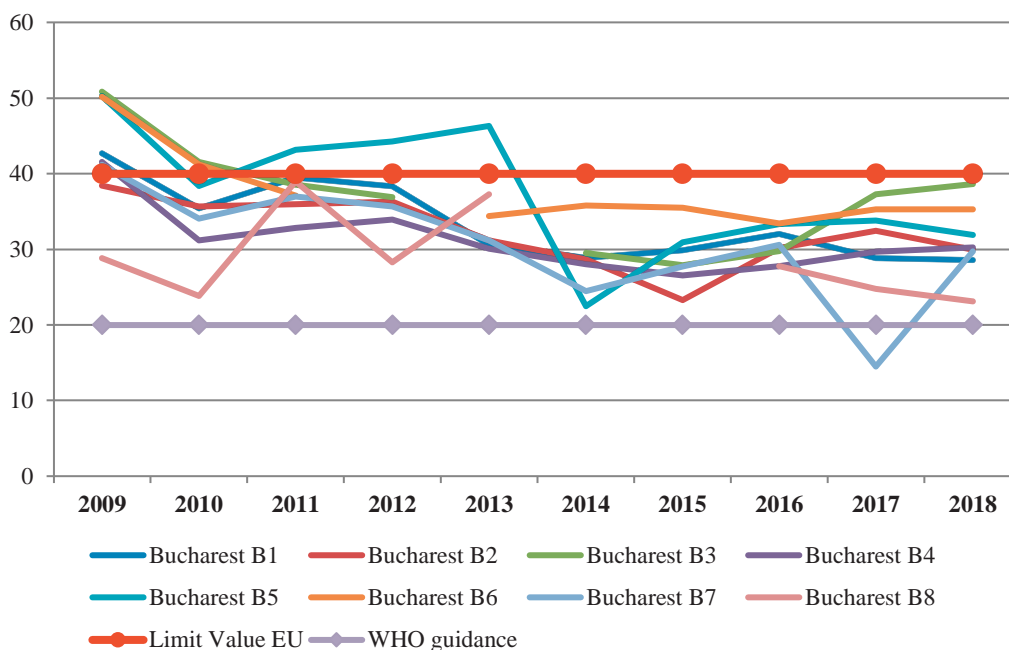
Data on heavy metals and benzo(a)pyrene in PM do not have sufficient time coverage (up to 33 per cent of valid data for the period of measurement for benzo(a)pyrene and 50 per cent for heavy metals) to enable analysis.

<sup>129</sup> Case C-638/18, Action brought on 12 October 2018 — EC vs Romania

<http://curia.europa.eu/juris/document/document.jsf?text=&docid=208627&pageIndex=0&doclang=EN&mode=req&dir=&occ=first&part=1&cid=1113736>.

**Figure 8.1: Average annual NO<sub>2</sub> concentrations recorded at selected traffic stations, 2009–2018,  $\mu\text{m}^3$** 

Source: Ministry of Environment, Waters and Forests, 2019.

**Figure 8.2: Average annual PM<sub>10</sub> concentrations recorded at air quality stations in Bucharest/Ilfov County, 2009–2018,  $\mu\text{g}/\text{m}^3$** 

Source: Ministry of Environment, Waters and Forests, 2019.

Ground-level ozone (O<sub>3</sub>) is measured at 105 stations throughout the country. Although the measurements are consistent at all stations, there is a complete data set for the period 2009–2018 for 78 stations. Of these, six are rural background stations where levels of O<sub>3</sub> are of particular importance, especially for monitoring the impact of ozone levels on ecosystems. O<sub>3</sub> is also monitored at three EMEP stations. Furthermore, within the International Co-Operative Programme on Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests), measurements of O<sub>3</sub> are carried out at four forest monitoring sites. The highest

concentrations of O<sub>3</sub> were recorded in Sanpetru, Braşov County, while the lowest were in Cluj Napoca, Cluj County. EEA estimates that, in 2017, 35.2 per cent of the Romanian population was exposed to concentrations of O<sub>3</sub>, which is higher than EU standards.

In 2017, one industrial station (Brazi, Prahova County) measured high concentrations (6.12  $\mu\text{g}/\text{m}^3$ ) of benzene. In 2018, it was lower (4.47  $\mu\text{g}/\text{m}^3$ ), below the annual limit value of 5  $\mu\text{g}/\text{m}^3$ . Similar concentrations of benzene are recorded in 2018 in two other stations,

Ploiesti ( $4.63 \mu\text{g}/\text{m}^3$ ) and Blejoi ( $4.85 \mu\text{g}/\text{m}^3$ ), in Prahova County.

## 8.2 Trends in emission levels

Romania is party to the Convention on Long-Range Transboundary Air Pollution (Air Convention) and regularly reports on its emissions. Romania's Informative Inventory Report (IIR) 2020 contains data for the period 1990–2018. In this analysis, focus was given to data available for the last 10 years (2008–2018).

Emissions of air pollutants were quite stable in the period 2008–2017, showing a slight descending trend, except for SO<sub>x</sub> where significant reduction (some 84 per cent) is obvious, emissions falling from 523 kt in 2008 to only 82.5 kt in 2018 (figure 8.3). The IIR assigns this reduction to the use of low-sulfur fuels and installation of desulfurization equipment in LCPs in order to achieve compliance with the EU legislation. Although not that visible in figure 8.3, NO<sub>x</sub> emissions during the last 10 years decreased by 25 per cent, from 301 kt in 2008 to 225 kt in 2018. This decrease in NO<sub>x</sub> emissions is explained by the use of NO<sub>x</sub> catalysts in road vehicles and low-NO<sub>x</sub> burners in industrial and power plants.

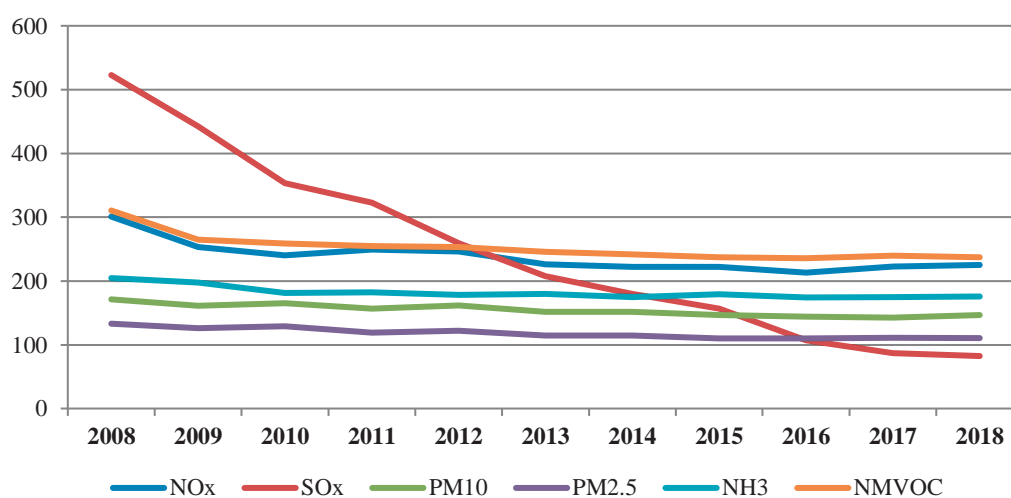
Emissions of particulates have also decreased. In 2018, emissions of both PM<sub>10</sub> and PM<sub>2.5</sub> decreased, by about 14 per cent and 17 per cent, respectively, compared with 2008. Emissions of ammonia (NH<sub>3</sub>) have been reduced by about 14 per cent, from 204 kt

in 2008 to 175 kt in 2018. Also, emissions of non-methane volatile organic compounds (NMVOC) were reduced by about 25 per cent. Despite the achieved reductions, some of them are insufficient to satisfy obligations stemming from the Gothenburg Protocol to the Air Convention and Directive 2016/2284 on the reduction of national emissions of certain atmospheric pollutants. While Romania achieved the ceilings projected for 2010, there is already a non-compliance trajectory for achievement of the reduction commitments set for 2020. Romania committed to reduce PM<sub>2.5</sub> emissions by 28 per cent by 2020 compared with 2005, which will amount to about 76 kt.

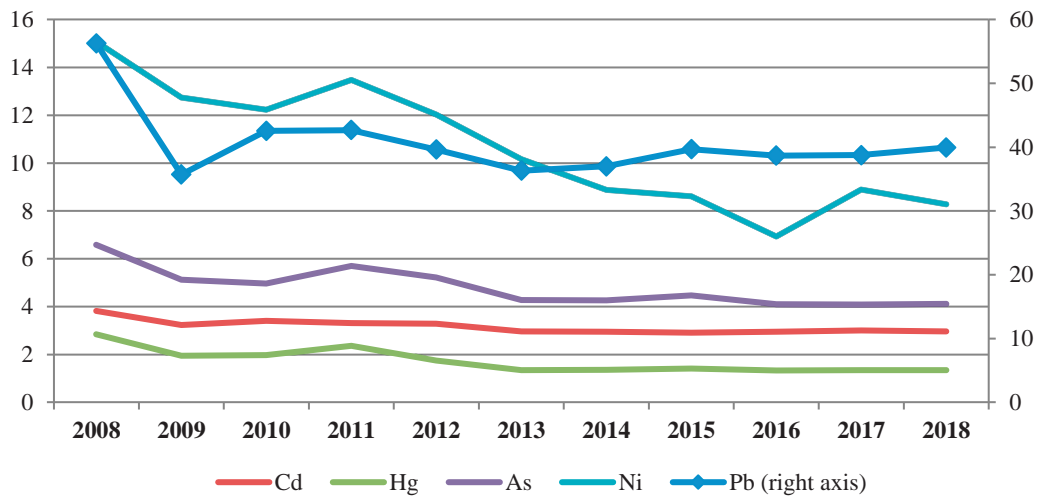
Emissions of all toxic metals decreased during the period 2008–2018 (figure 8.4). Achieved reductions were 29 per cent of Pb, 22 per cent of Cd, 52 per cent of Hg, 38 per cent of As and 45 per cent of Ni. Emissions decreased due to changes in the iron and steel production sector and combustion in manufacturing industries and electricity production.

Emissions of POPs were also reduced in 2008–2018. Emissions of polychlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs), expressed in grams, using international toxic equivalency (I-TEQ/g), dropped from 190.12 to 153. Total emissions of polycyclic aromatic hydrocarbons (PAHs) reduced by 18.5 per cent, from 71.5 t in 2008 to 58.3 t in 2018, and emissions of PCBs and hexachlorobenzene (HCBs) decreased by 29.6 per cent and 34.7 per cent, respectively.

Figure 8.3: Emission trends for the main air pollutants, 2008–2018, kt



Source: IIR 2020.

**Figure 8.4: Emission trends of Pb, Cd, Hg, As and Ni, 2008–2018, tons**

Source: IIR 2020.

**Photo 8.1: Bicycle rental station in Bucharest**

Photo credit: Nick Bonvoisin

Romania submitted its National Inventory Report to the EU and UNFCCC in May 2019, covering the period 1989–2017. It contains data on calculations of emissions of the indirect GHGs: NO<sub>x</sub>, NMVOC, CO and SO<sub>2</sub>. Romania reported significant differences in the calculation of emissions of CO in the GHG Inventory and IIR 2019 for certain sectors (100 per cent difference in the field of burning of agricultural

residues, 99 per cent difference in non-energy products from fuels and solvent use). There are also differences related to 2017 emissions of VOC and NO<sub>x</sub> in the two inventories.

The total GHG emissions in 2017, excluding removals by sinks, amounted to 113,795.945 kt of CO<sub>2</sub>-eq. Romania, as an EU Member State, has a common

GHG emissions reduction target with other Member States, defined as 40 per cent of reduction of the EU level by 2030 compared with 1990. Within the EU, achievement of this target is shared and, in Romania, should be achieved through the Integrated National Plan on Energy and Climate Change 2021–2030. Assessing Romania's draft plan, the EC stated that Romania could meet its GHG emissions target of -2 per cent in 2020 compared with 2005 for sectors not covered by the EU ETS if it implements policies and measures in line with the projections provided, notably in the transport and agriculture sectors.

It also notes that the draft plan does not describe how Romania intends to comply with the no-debit commitment in the LULUCF sector, which means that emissions are not higher than removals by sinks. It urges Romania to increase its energy efficiency and renewable energy targets, but also asks Romania to include in the final plan an analysis of the interactions with air quality and air emissions while presenting the impacts of policies and measures on air quality.

The consumption of ODS in Romania is governed by the EU legislation. Within the EU, the trade and use of ODS is regulated by Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer (ODS Regulation). This stipulates that each company producing ODS, importing them into and/or exporting them out of the EU, as well as feedstock users, process agent users and destruction facilities, must report their activities concerning ODS on an annual basis. Since 2012, reporting on ODS has been performed via an online EU platform, which ensures that reporting by companies is documented transparently, while providing the required level of security and confidentiality of the reported data. Data reported under the ODS Regulation is protected by strict confidentiality provisions, which include the aggregation of data by substance groups and by companies. EEA produces an annual report at the EU level without mentioning contributions by Member States separately.

In the 2019 Report on Ozone Depleting Substances, EEA states that the EU has already achieved its goals on the phase-out of ODS substances under the Montreal Protocol. In particular, the report shows that, in 2018, the consumption of ODS (an aggregated parameter that integrates imports, exports, production and destruction of ODS, except those for feedstock use) in the EU was negative (-1,505 tons), which means that more ODS were destroyed or exported than produced or imported.

### 8.3 Performance and gaps in air monitoring networks

The National Air Quality Monitoring Network consists of 148 stations spread throughout Romania's territory, which, for the purpose of air quality assessment, is divided in 54 units – 41 air quality zones matching county administrative borders and 13 agglomerations representing major cities and municipalities. It creates a complex structure that is very demanding in terms of the minimum number of stations required and parameters to be monitored. In July 2019, the EC sent an additional letter of formal notice to Romania urging its authorities to address a systemic failure to monitor air pollution as required by EU legislation on ambient air quality, although, as stated in the press release issued on 25 July 2019, while “Romania has been carrying out an overhaul of its air quality monitoring network, many gaps remain concerning the appropriate number and type of air quality sampling points. These shortcomings amount to a systemic failure to comply with obligations to monitor air pollution”. The Air Quality Directive requires Member States to monitor concentrations of sulfur dioxide, nitrogen dioxide and oxides of nitrogen, PM<sub>10</sub> and PM<sub>2.5</sub>, lead, benzene and carbon monoxide in all their zones and agglomerations, taking into account the rules related to the minimum number of stations, which is determined on the basis of population and concentration of pollutants. Where the concentration of pollutants is below the lower assessment threshold (usually 40–50 per cent of the limit value), continuous monitoring is not required.

The National Air Quality Monitoring Network was established in the period 2004–2011, when a majority of the stations were installed. Since then, seven stations were added, five in 2016 and two in 2017, the last one in Moldova Noua measuring only PM<sub>10</sub>, although classified as a “traffic” station, which should at least monitor NO<sub>2</sub> in order to assess traffic impact. The other 30 stations within the network are classified as “traffic” stations and monitor appropriate pollutants.

Of the 148 stations in the network, 16 are situated in rural areas. Nine of them are clearly rural background stations; hence, the network is concentrated in urban areas. Moreover, there are three EMEP air quality monitoring stations for assessment of trans-boundary transport of air pollution in Romania, but the 2018 EMEP Status Report states that Romania stopped reporting to EMEP in 2014. EMEP stations are usually rural background stations, located far from the impact of domestic pollution sources.

Most of the stations within the Romanian air quality monitoring network measure SO<sub>2</sub>, NO<sub>2</sub>, CO and O<sub>3</sub>. PM<sub>10</sub> is also monitored at almost all stations, though techniques are different – some stations have automatic measurement while others make an analysis of PM applying the gravimetric method. Still, more than 77 per cent of the stations have both types of equipment. Twenty per cent of the stations monitor PM<sub>2.5</sub>, most commonly by the gravimetric method. Some 50 per cent of stations have BTX<sup>130</sup> analysers. The analysis of contents of heavy metals in PM is performed by NEPA's and LEPA's laboratories, coordinated directly under the accredited National Reference Laboratory for Air Quality in Bucharest. The analysis of PAH content in PM is performed in the National Reference Laboratory for Air Quality and LEPA Olt laboratory. For 2018, Romania reported to EEA data on heavy metals for 31 stations, although, for 30 per cent of the stations, with insufficient data coverage. Data on benzo(a)pyrene in PM are reported for five stations with the coverage of data in the range of 24–40 per cent.

In the period 2009–2018, the National Air Quality Monitoring Network provided the most consistent measurements of O<sub>3</sub> and SO<sub>2</sub>. O<sub>3</sub> was monitored at 105 stations and a complete set of data for the whole period 2009–2018 is available for 78 stations. SO<sub>2</sub> was measured at 143 stations but a complete data set is available for only 70 stations, while NO<sub>2</sub> was measured in 147 stations with more frequent measurement gaps, so a complete set of data is available for 44 stations. PM<sub>10</sub> concentrations in the period 2009–2018 were monitored both at automatic stations (125) and by the gravimetric method, but data are complete for only 41 stations. PM<sub>2.5</sub> were automatically monitored at three stations, while gravimetric analysis was performed for 30; however, a complete data set for the period 2009–2018 is available for only seven stations.

This gives the impression that robustness of the network does not contribute to the quality and quantity of data suitable for long-term trends analysis. Frequent gaps in continuous monitoring point to the problems in the functioning of the network due to poor maintenance, causing insufficient data capture to meet data quality objectives for fixed measurement, as required by the Air Quality Directive (90 per cent of data capture). The EC Environmental Implementation Review 2019 for Romania states that “serious and structural shortcomings have been identified in the air quality data measured by the Romanian monitoring network and reported to the EC. In fact, the situation could be much worse than actually reported.”

## 8.4 Pressures on air quality

### *Agriculture*

Agricultural activities in Romania are responsible for 8.8 per cent of NO<sub>x</sub> emissions stemming from application of inorganic fertilizers and animal manure. In addition, off-road vehicles and other agricultural machinery caused another 4 per cent of NO<sub>x</sub> emissions. Moreover, the major proportion (87.81 per cent) of the NH<sub>3</sub> emissions is related to the agricultural sector, while the contribution of NMVOC from agriculture accounts for 15 per cent of the national total. Field burning of agricultural residues contributes to emissions of NO<sub>x</sub>, NMVOC, SO<sub>x</sub>, NH<sub>3</sub>, PM, black carbon, CO, heavy metals and PAHs. Emissions from this source accounted for 9.91 per cent of PAH emissions but contributed less than 1 per cent of total national emissions of other pollutants in 2017.

### *Energy*

The Romanian energy sector is characterized by well-balanced diversity of energy sources. The coal-powered plants are about 40 years old. As at December 2019, 28 plants are operating, of which 10 are functioning with coal, having an installed gross capacity of 5,915 MW. Compliance with emission limit values established by Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from LCPs and subsequently by the IED is still an issue. Wind energy potential is estimated at 23 TWh/year and solar energy in some regions (Bucharest and Dobrogea) ranges from 1,500–1,650 kWh/m<sup>2</sup>, but so far only 3 per cent of primary electricity production comes from these two sources and use of wind power is limited to 7 GWh/year.

The 2020 IIR states that the energy sector represents the main source of emissions of most pollutants. According to the inventory compiling methodology, the energy sector includes fuel combustion in the energy industry and in manufacturing, transport and small combustion, including off-road mobile machinery, as well as fugitive emissions from fuels. Looking at the subsectors, public electricity and heat production contributes to 16.52 per cent of NO<sub>x</sub> emissions, 60.93 per cent of SO<sub>x</sub> emissions and only 2.95 per cent of PM<sub>10</sub> emissions.

### *Industry and mining*

In 2018, manufacturing industries accounted for approximately 35 per cent of GDP and 29 per cent of the workforce in Romania. According to the draft

<sup>130</sup> BTX is a mixture of benzene, toluene and xylenes.

mining strategy for the period 2017–2035, the primary mineral resources are coal (more than 3.8 billion tons), salt (4.4 billion tons), gold and silver (760 tons) and cupriferous ore (443 million tons). There are also reserves of natural gas and crude oil, making Romania an oil producer, but the level of production is not high enough to make the country self-sufficient. Since 2000, more than 200 mining sites in the country were closed as their operations became unprofitable.

The 2020 IIR classifies the industrial processes and product use sector as a key category for emissions of heavy metals (Pb, Cd, Hg, As, Cr, Ni, Zn), NMVOC and POPs. It provides information on the contribution of some industrial activities to pollutant emissions in 2018:

- Stationary combustion in manufacturing industries and construction (NO<sub>x</sub> 4.11%, SO<sub>x</sub> 10.13%, Hg 5.83%);
- Stationary combustion in manufacturing industries and construction (iron and steel) (NO<sub>x</sub> 2.51%, SO<sub>x</sub> 21.97%, Pb 6.75%, Hg 12.92%, PCBs 17.35%);
- Mobile combustion in manufacturing industries and construction (NO<sub>x</sub> 4.38%);

- Iron and steel production (Pb 61.54%, Cd 14.49%, Hg 18.01%, As 23.28%, Ni 18.65%, Cr 43.55%, Zn 12.87%, PCDD/F 22.07%, PAHs 11.21%, PCBs 70.80%);
- Chemical industry (NMVOC 1.96%);
- Food and beverages industry (NMVOC 2.94%);
- Fugitive emissions from solid fuels (NMVOC 2.66%).

Among various industrial activities, including combustion in industry, the iron and steel industry is the main contributor to emissions.

### Transport

Generally, the transport sector is known for its negative impact on air quality, especially in populated urban areas with high traffic intensity. Romania is no exception, and it is obvious from data on air quality, for example, concentrations of nitrogen oxide recorded at “traffic” air quality monitoring stations in Romanian cities. Data on air emissions confirm this negative impact. Road transport alone is generating about 38.9 per cent of total NO<sub>x</sub> emissions in the country (table 8.1).

**Table 8.1: Emissions of air pollutants from road transport sector, 2018, per cent**

	NO <sub>x</sub>	NMVOC	Cu	Zn
Heavy duty vehicles and buses	21.46			
Light duty vehicles	5.42			
Passenger cars	12.98	3.84		
Gasoline evaporation		2.88		
Automobile tyre and brake wear			84.74	6.86

Source: IIR 2020.

### Photos 8.2 and 8.3: Sustainable mobility in Bucharest



Photo credit: Angela Sochirca



Photo credit: Virginia Fuse

### Housing

The residential sector contributes to air pollution mainly through district and domestic heating. In December 2015, the then Ministry of Regional Development and Public Administration and the then Ministry of Energy prepared the Report on the assessment of the national potential to implement high-efficiency cogeneration and efficient district heating and cooling. According to this report, approximately 22 per cent of all cities and towns in Romania (320 cities and towns) use a district heating system. Of the total number of cities, towns, municipalities and villages (2,861 municipalities and 12,957 villages), only 0.43 per cent have an operational district heating service.

The district heating system is under the management, coordination and responsibility of operators delegated by local public administration authorities. It is directly monitored and controlled by the National Regulatory Authority for Municipal Services.

The number of administrative units connected to a district heating system decreased by approximately 78 per cent during the period 1989–2014, dropping from 315 to 70; hence, the population using district heating services has declined from some 8.4 million in 1992 to 3.8 million in 2014. After 2014, the number of users continued to fall; in 2015, there were only 62 local administrative units operating under the district heating system, but data on the period after 2015 are not available.

In many places, the district heating network was completely removed, while in other places consumers just decided to disconnect from the network due to the poor quality of the service. A large proportion of the population without access to district heating, especially in rural areas, is using firewood for domestic heating. In addition, energy consumption is high due to the low energy efficiency of buildings.

According to the 2020 IIR, residential stationary combustion is one of the key categories of emission sources for all major pollutants, with a dominant ratio of national emissions of PM, carbon monoxide,

cadmium, zinc, polycyclic aromatic hydrocarbons, dioxins and furans (table 8.2).

### 8.5 Reducing the impact of air pollution on human health

Population exposure to high concentrations of air pollutants results in serious impacts on human health. In Romania, concentrations of key air pollutants considered in estimation of health risks (PM, NO<sub>2</sub>, O<sub>3</sub>) are, in certain areas, a matter of concern. If compared with WHO guidance values, which might, under the European Green Deal become binding for EU Member States in the near future, concentrations of PM, especially PM<sub>2.5</sub>, are exceeded all over the country. In this context, SDS 2030 sets two targets for 2030:

- Reducing the impact of atmospheric pollution on human health and the environment through a special focus on air quality;
- Reducing substantially the number of deaths and diseases caused by dangerous chemical products, pollution and the contamination of air, water and soil.

These targets are directly linked with SDG target 3.9 (By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination) and SDG target 11.6 (By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management). Like the other targets listed in SDS 2030, these are lacking precise, measurable values as well as methods to achieve them, which should be the subject of the Action Plan for implementation of SDS 2030.

In SDS 2030, both targets are elaborated under SDG 11 (Make cities and human settlements inclusive, safe, resilient and sustainable), underlining the exposure of the urban population to air pollution. It is necessary, in leaving no one behind, to promote well-being for all at all ages, taking care of air pollution in rural areas as well, and paying special attention to vulnerable groups in the population through the appropriate synergy of environmental and health policies.

**Table 8.2: Emissions from the residential stationary combustion sector, 2018, percentage of total emissions of selected pollutants**

NO <sub>x</sub>	VOC	PM <sub>10</sub>	PM <sub>2.5</sub>	CO	Pb	Hg	Cd	Cr	Zn	PCDD/F	PAH	HCB
5.95	30.84	63.31	81.55	65.08	9.02	6.73	55.6	24.47	60.2	64.46	75.54	29.17

Source: IIR 2020.



SDG global indicators defined for monitoring the achievement of these two targets are urban population exposure to air pollution measured through annual mean levels of particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>) in cities (global indicator 11.6.2) and mortality rate attributed to household and ambient air pollution (global indicator 3.9.1), which is estimated on the basis of general population exposure to air pollution. In 2016, crude death rate attributed to household and ambient air pollution was 123.4 deaths per 100,000 population and mean levels of fine particulate matter (population-weighted) was 14.76 µg/m<sup>3</sup>.

The 2018 Voluntary National Review provides Eurostat statistics on urban population exposure to air pollution by PM<sub>2.5</sub>, but only up to 2014, when Romania had a decreasing trend of exposure. Figure 8.5 shows an increasing trend of exposure in the period 2014–2017. This indicator measures the population-weighted annual mean concentration of PM at urban background stations.

According to the Romania's air quality country profile prepared by EEA, in 2017, the percentage of the population exposed to concentrations above EU standards set for PM<sub>10</sub> decreased to 21.4 per cent, compared with 54.3 per cent in 2015. The percentage of the population exposed to higher levels of PM<sub>2.5</sub> than the EU standards in 2017 was 35.5 per cent. This percentage doubles when the more stringent WHO guidance values are applied. According to the latest data compiled by EEA,<sup>131</sup> in 2017, 35.2 per cent of the population was exposed to concentrations of O<sub>3</sub> above limit values set by the EU, while there is less exposure to higher concentrations of NO<sub>2</sub>, which apply to only 1.1 per cent of the population.

On the basis of the exposure data, EEA calculated impacts on human health, accounting for 23,400 premature deaths due to exposure to high concentrations to PM<sub>2.5</sub>, 2,600 premature deaths due to exposure to NO<sub>2</sub> and 490 premature deaths due to exposure to O<sub>3</sub> concentrations above EU standards, as presented in its report on air quality in Europe 2019. Global statistics published by WHO<sup>132</sup> are somewhat different since WHO was considering data on air quality for a different year (2012). WHO estimates a total of 14,497 premature deaths or 73 per 100,000 inhabitants due to exposure to bad air quality and a total 314,939 years of life lost or 1,579 years lost per 100,000 inhabitants.

SDS 2030 gives an overview of measures implemented so far to reduce air pollution in urban areas. It highlights the rehabilitation of urban heating systems and refers to reduction of emissions of SO<sub>2</sub> and NO<sub>x</sub> from LCPs, which is not truly relevant to monitoring achievement of the above-mentioned targets. Dust emissions from LCPs decreased from 38,600 tons in 2007 to 5,300 tons in 2015. Total national emissions of PM<sub>2.5</sub> were reduced by some 17 per cent in the period 2008–2018 (figure 8.3). However, the population-weighted annual mean concentration of PM measured at urban background stations, which is the globally established indicator to monitor achievement of SDG targets 3.9 and 11.6, increased by almost 7 per cent in the period 2009–2017 (figure 8.5). Not enough measures are taken to reduce exposure of the population to air pollution in order to reduce its impact on human health.

SDS 2030 also promotes programmes financed by the Environment Fund Administration aimed at car fleet renewal and e-mobility (box 8.1).

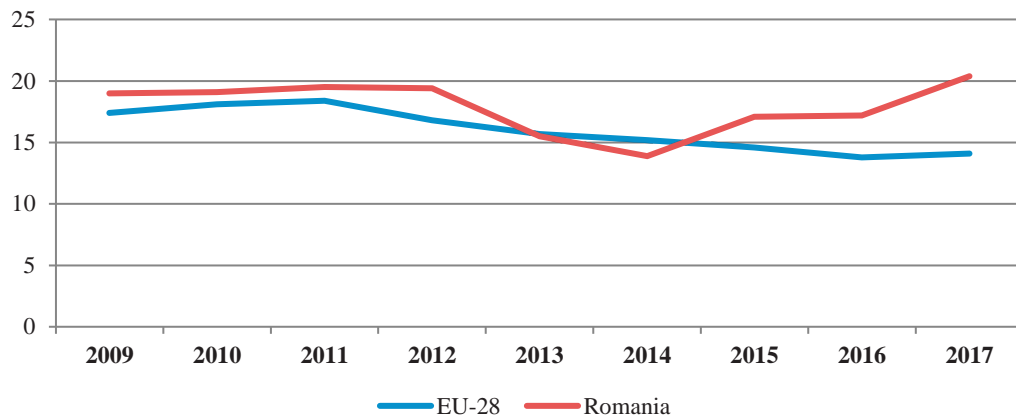
## 8.6 Legal, policy and institutional framework

### *Legal framework*

The main legal act dealing with air protection is Law No. 104/2011 on Ambient Air Quality, plus a package of secondary legislation. The Law establishes the National System of Integrated Air Quality Assessment and Management, consisting of the air quality monitoring network and the national inventory of emissions of air pollutants. The Law lists central authorities (ministries) with responsibilities related to the functioning of the National System in the following sectors: environmental protection, forestry, health, transport, industry, trade, agriculture, spatial planning, public administration, public order and national security. It also assigns responsibilities for air quality assessment and management both horizontally and vertically, providing a very comprehensive and detailed scope of competences of the various actors on both the national and local levels. Public administrative bodies subordinated, coordinated or otherwise functioning under the authorities of listed ministries are also included with their respective competences.

<sup>131</sup> [www.eea.europa.eu/themes/air/country-fact-sheets/2019-country-fact-sheets/romania](http://www.eea.europa.eu/themes/air/country-fact-sheets/2019-country-fact-sheets/romania).

<sup>132</sup> <https://apps.who.int/iris/bitstream/handle/10665/250141/9789241511353-eng.pdf?sequence=1>

**Figure 8.5: Population exposed to concentrations of PM<sub>10</sub> above EU standards, 2009–2017, percentage**

Source: Eurostat, Sustainable Development Indicators, 2019.

#### Box 8.1: Renewing the Romanian vehicle fleet

Starting in 2005 as an ordinary car scrappage programme, the RABLA Programme had evolved by 2019. The free scrapping bonus given to vehicle owners who opt not to register an old car (initially 3,000 lei, 3,800 lei since 2009, 6,500 lei since 2013) can be used when buying a new eco-friendly vehicle. The second step of the Programme, RABLA+, offered Romanian citizens a subsidy for buying a low-CO<sub>2</sub> emission vehicle. The subsidy amounts to some €4,200 for a hybrid plug-in and around €9,500 for an electric car.

The two programmes, which aim to stimulate renewal of the car fleet, can be accumulated. This means that a person can benefit from both the voucher for the purchase of a 100 per cent electric or hybrid car and the bonus granted through the RABLA Programme if it cancels the registration of a car more than eight years old. According to statistics issued by the Romanian Association of Automobile Manufacturers and Importers, electric and hybrid cars are on the rise: in the first five months of 2019, sales of electric and hybrid vehicles increased by 70 per cent.

**Photo 8.4: Visit and exploratory meeting for purchase of a fleet of electric buses, March 2021**

Photo credit: MoEWF, courtesy MAN Truck & Bus SE

The Law transposes the Air Quality Directive and uses the opportunities given by the Air Quality Directive to establish different air quality monitoring regimes using indicative measurements wherever possible (NEPA uses indicative measurements, when the evaluation regime allows it: in regime B, the indicative measurements are used together with the fixed measurements; in regime C, the indicative measurements can be considered sufficient for air quality assessment), which contribute to rationalization of the air quality monitoring network.

Since 2012, there were several interventions in the legal framework on air quality. In 2015, the Government adopted GD No. 257/2015 regarding the approval of the methodology for the development of air quality plans, short-term action plans and air quality management plans and GD No. 336/2015 for the amendment of annexes No. 4 and 5 of Law No. 104/2011 on Ambient Air Quality transposing Directive (EU) 2015/1480 amending several annexes to Directive 2004/107/EC and Air Quality Directive, laying down the rules concerning reference methods, data validation and location of sampling points for the assessment of ambient air quality. Additional amendments in this direction were introduced in 2016 by GD No. 806/2016 on amendment of annexes No. 4, 5, 6 and 7 of Law No. 104/2011 on Ambient Air Quality.

During 2015, the list of air quality zones and agglomerations given in annex 2 of the Law on Ambient Air Quality was amended by MO No. 1206/2015 of the Minister of Environment, Waters and Forests. In 2016, this list was amended again by MO No. 36/2016 of the Minister of Environment, Waters and Forests. The list of zones and agglomerations was then revised again in 2018 by MO No. 98/2018 of the Ministry of Environment. These amendments of the list of zones and agglomerations were related to their assessment and management regimes. The latest amendment of the list of zones and agglomerations (MO No. 598/2018 of the Ministry of Environment) was directed to air quality management, requiring development of air quality maintenance plans in all zones and agglomerations and air quality improvement plans in zones and agglomerations where there were recorded concentrations of pollutants above set air quality standards.

#### *Policy framework*

Romania does not have an air quality strategic document at the national level. The policy framework in this area is based on local air quality plans. In line with MO No. 598/2018 of the Ministry of

Environment, all 41 air quality zones and agglomerations in Romania should have air quality plans for the maintenance of air quality, while 14 zones (or part of a zone, such as the area delimited for Ploiești and Brazi cities, Ilfov County and Măgurele city) and agglomerations where there were exceedances of limit values of certain air pollutants should also have plans for improvement of air quality regarding concentrations of those pollutants.

According to the Law on Ambient Air Quality, county councils and the General Council of the Municipality of Bucharest (which has the same status as county councils) are responsible for developing air quality plans, and adopt their plan on the proposal of the president of the county council only upon endorsement given by the territorial public authority for environmental protection. County councils also monitor implementation and submit reports on the air quality plan to the territorial public authority for environmental protection. In addition to the counties' air quality plans, which are supposed to cover the whole territory of Romania, mayors are responsible for development of air quality plans in their municipalities/agglomerations if there are exceedances of limit values of concentrations of air pollutants, or else they participate in elaboration of air quality plans for the maintenance of air quality that are developed at the county level.

Municipal air quality plans are submitted for approval to the local council after prior approval of the county's LEPA. Reports on implementation of municipal air quality plans are submitted to the LEPAs. GD No. 257/2015 regarding the approval of the methodology for the elaboration of air quality plans, short-term action plans and plans for maintaining air quality provides municipalities and counties the opportunity to adopt joint plans if necessary, but this requires the involvement of an additional supervisory body (prefect) and an additional administrative procedure.

If properly implemented, this means that air quality management is based on more than 54 different documents produced by different local authorities, covering the entire national territory. Until 31 December 2019, seven air quality plans were approved by the Air Quality Assessment Centre of NEPA and adopted by the city halls of Bucharest, Braila, Bacau, Braşov, Galati, Iaşi and Magurele, as were 14 air quality maintenance plans. All plans are developed based on a standard methodology, so all include the same characteristics of data and information. According to GD No. 257/2015, NEPA developed an official procedure in order to facilitate approval of the plans by LEPAs. Following approval using this

procedure, the efficiency of implementation of these plans is increasing. For example, the air quality plans for Bucharest and Braşov were adopted in mid-2018. Both plans are focused on measures related to sustainable transport and contain measures related to improvement of district heating networks. Moreover, non-compliance with EU legislation in this regard is already the subject of the procedure before the CJEU on the air quality plan of Bucharest.

In line with obligations stemming from EU legislation as required by Directive 2016/2284, Romania had to develop the National Air Pollution Control Programme by April 2019, in order to reduce national emissions of SO<sub>2</sub>, NO<sub>x</sub>, VOC, NH<sub>3</sub> and PM and implement the Gothenburg Protocol to the Air Convention. In December 2019, drafting of this programme had not started. In 2017, the National Transition Plan for LCPs was revised (MO No. 1063/2017 of the Ministry of Environment), in order to postpone the deadline for compliance with emission limit values set for these installations by the recent BAT conclusions for LCPs, postponing achievement of emission limit values for 32 LCP installations to 30 June 2020. The revised plan does not contain an explanation on planned and ongoing measures for achievement of emission limit values by these plants.

### *Institutional framework*

#### Ministry of Environment, Waters and Forests

The Ministry of Environment, Waters and Forests is the main regulatory body that controls and coordinates air quality assessment and management, ensuring uniform implementation of the legislation related to air protection throughout the country. Apart from its main functions related to legislative and strategic planning tasks, it is also in charge of many technical issues, such as the management of the national air quality network, approval of the national emissions inventory prepared by NEPA prior to its submission to the relevant Air Convention and EU bodies, approval of the annual reports on air quality, air quality monitoring methods, equipment, networks and laboratories, and quality assurance and quality control procedures.

Horizontal coordination at the central level is based on exchange of information and the performance of some tasks by line ministries. A few specific requests defined as obligations of sectoral ministries by Law No. 104/2011 on Ambient Air Quality, for example, assessing the impact of air pollution on human health

or on forests and vegetation, are not performed since there were no available studies or reports produced based on these obligations. No interministerial structures (e.g. commissions, committees, working groups) are established with specific tasks related to cooperation on air protection.

#### National Environmental Protection Agency

The other important player in the area of air quality management is NEPA. Under NEPA, the Air Quality Assessment Centre has the following responsibilities: provision of technical support for the elaboration of normative acts, development of annual reports on ambient air quality at the national level, development of the national inventory of air pollutant emissions, verification and management of data on air quality from the National Air Quality Monitoring Network, and collection and validation of data from local air emissions inventories. The Centre is also in charge of approval of the plans for maintaining and improving air quality, providing the necessary data for informing the public about air quality and making available air quality data to all interested entities such as the Ministry of Health for assessment of the impact of air pollution on health. At the Air Quality Assessment Centre, data from the National Air Quality Monitoring Network are analysed daily for publication in the public information bulletin. The quarterly certification of the validation data by the county agencies is also performed. The Centre prepares air quality reports, which are available on NEPA's website. Annual reports are published on the air quality portal and NEPA's website.<sup>133</sup> The Centre reports the data to the EC and the EEA, according to Reporting Decision 2011/850/EU.

The National Reference Laboratory for Air Quality, another body within NEPA, provides technical and scientific support for: air quality monitoring and emissions measurement; establishment of methods for determining the concentrations of pollutants in ambient air, demonstrating, where necessary, their equivalence with the reference methods; elaborating the standard operating procedures and quality assurance and control procedures; ensuring the accuracy of the ambient air quality measurements, including by organizing comparisons at the national level; and organizing and controlling the activity of the calibration units organized within the LEPAs, as required by the national and European legislation.

NEPA has local branches (LEPAs) in each county, which perform various air quality management tasks, including air quality monitoring and analysis, data

<sup>133</sup> [www.anpm.ro/raportare-anuala](http://www.anpm.ro/raportare-anuala).

collection and processing, and maintenance of air quality stations. LEPAs are also responsible for compiling local emissions inventories. Enterprises subject to environmental permits or integrated environmental permits must submit a self-monitoring report to the respective LEPA (chapter 2), for checking by the LEPA's monitoring department. If problems are detected, NEG is then notified.

### National Environmental Guard

NEG, with its territorial branches, oversees the implementation of the Law on Ambient Air Quality. Apart from undertaking regular inspection tasks in line with the Law, it controls the implementation of the air quality plans. Although the task description is not sufficiently elaborated in the Law, the inspection alone cannot ensure the implementation of air quality plans because of the various types of actions and actors involved. The implementation of measures to improve and maintain air quality is not ensured through additional mechanisms, starting with regular reporting on implementation and recognizing obstacles in the implementation process in those reports. NEG also checks compliance of equipment used for monitoring air quality; however, it is not accredited to perform equipment compliance checks.

### Environment Fund Administration

The Environment Fund Administration implements national funding programmes<sup>134</sup> that target and have a clear effect on air quality based on the documentation, which includes air quality reports and emissions inventories.

#### *Fiscal and economic measures*

Air polluters are obliged to pay a tax on the emission of certain air pollutants in the ambient air. Tax is calculated per kg of emissions and differs for various pollutants on the basis of their toxicity (table 8.3). Revenues from air pollution taxes go to the Environmental Fund Administration. The financial statement of the Fund for 2018 shows that, based on GEO No. 196/2005, the Fund collected some 4.04 million lei. This includes revenues from other taxes, such as taxes for disposal of inert, non-hazardous, electric and electronic waste.

The Fund supports activities related to air protection. For example, in 2018, the Fund supported the

Programme for the development and optimization of the National Air Quality Monitoring Network (total value of 100 million lei) and Programme on promoting energy-efficient non-polluting road transport vehicles and recharging stations. Within the latter, the Fund supported the acquisition of buses and electric trolleybuses to improve public transport, to the value of 449.6 million lei, as well as 270 electric vehicles, to a total value of 11.3 million lei; some 65 per cent of these electric vehicles were acquired by legal entities and 35 per cent by citizens.

**Table 8.3: Taxes for emissions of pollutants into the atmosphere, lei/kg**

Pollutant	Tax
Dust	0.02
NOx	0.04
SOx	0.04
POPs	20.00
Lead	12.00
Cadmium	16.00
Mercury	20.00

Source: GEO No. 196/2005.

The Fund also invested 14 million lei in the Programme to stimulate the passage of freight from road transport to rail, in order to reduce air pollution and GHG emissions from the transport sector. The Fund also runs some long-standing multiannual programmes which have proven their positive impact on air quality over the course of previous years, such as the RABLA Programme (box 8.1) and Programme Casa Verde (box 8.2).

#### *Information measures*

The major source of information on air quality in Romanian is the web portal [www.calitateaer.ro](http://www.calitateaer.ro), which presents data from the National Air Quality Monitoring Network. Monitoring stations are presented on an interactive map and are identified with the code of the station along with the name or characteristics of the monitoring location.

During the winter of 2019–2020, there were many cases in which the Air Quality Index at some measurement points registered “very poor”. Nonetheless, there were no alerts or advice issued to vulnerable groups in the population on how to protect themselves from polluted air and explaining their role in reducing air pollution.

<sup>134</sup> [https://afm.ro/programe\\_finantate.php](https://afm.ro/programe_finantate.php).

### Box 8.2: Programme Casa Verde

Programme Casa Verde was initiated in 2010, providing financial assistance for the installation of solar collectors, heat pumps or biomass heating systems in residential and public buildings. The amount of the subsidy depended on the type of heating system and was up to 6,000 lei (€1,430) for solar collectors, up to 8,000 lei (€1,900) for heat pumps and up to 6,000 lei (€1,430) for biomass heating systems. In the first year, some 200 households benefited from the Programme. The Programme was renewed in 2011 with 6,987 individual and 60 corporate beneficiaries.

It continued in the following years, attracting more participants. During 2013–2014, it was available only for public buildings, but was later relaunched to include residential buildings. In 2016, Programme Casa Verde Plus added to the renewable energy solutions financed through investments in increased energy efficiency, thermal insulation, LED lighting, green roofs and ecological materials. In 2019, the Programme financed the installation of photovoltaic panels on residential buildings, aimed at individuals who want to become electricity producers. In September 2019, funds were ensured for 33,000 households who will be in a position to negotiate with the electricity companies about the price of the electricity they can provide to the network. The budget allocated to Programme Casa Verde in 2019 was 656 million lei (€138 million).

**Photo 8.5: Ministry of Environment, Waters and Forests’ Green Friday campaign to promote alternative and public transport for public servants, March 2021**



Photo credit: MoEWF

On the state air quality portal [www.calitate aer.ro](http://www.calitate aer.ro), only one of the “frequently asked questions” relates to protection from air pollution, but it is a very relevant question: Why are air quality indices for PM<sub>10</sub> so high? The answer given is that “air quality indices for PM<sub>10</sub> are calculated based on automatic measurements that do not represent the standard measurement method. Most quality indices will be high because of PM<sub>10</sub>, especially during the winter.” No further explanation is provided of results acquired by the standard (gravimetric) method, although it is used in Romania, and there is no data comparison and no explanation why PM<sub>10</sub> concentrations are higher in winter. Explanation for the air quality indices is provided on the air quality website.<sup>135</sup>

Under the heading “The main sources of emissions”, there is a link to Romania’s IIR for 2015. These reports are too technical for this purpose. The public needs concise, understandable and up-to-date information. The portal does not offer any analysis of air quality, while raw data cannot be exported except in a limited

series, through an application that requires multi-step selection of different parameters. No information on adopted air quality plans or other policy documents is available. The link to the latest annual air quality report is not functioning.

### 8.7 Assessment, conclusions and recommendations

#### Assessment

The concentration of air pollutants in Romania, assessed on the basis of available data for the period 2009–2018, shows a descending trend, although some issues of concern remain, for example, some cities had PM and NO<sub>2</sub> concentrations above the annual limit values set by the EU and domestic legislation. According to the 2020 IIR, residential stationary combustion is one of the key categories of emission sources for all major pollutants, accounting for a dominant proportion of national emissions of PM, carbon monoxide, cadmium, zinc, polycyclic aromatic

<sup>135</sup> [https://calitate aer.ro/public/monitoring-page/quality-indices-page/?\\_locale=en](https://calitate aer.ro/public/monitoring-page/quality-indices-page/?_locale=en).

hydrocarbons, dioxins and furans. The deterioration of district heating systems therefore is a matter of concern. The number of functioning district heating systems decreased by approximately 78 per cent during the period 1989–2014, resulting in increased use of firewood for domestic heating by a large proportion of the population and consequent episodes of bad air quality during the winter months.

The EC expressed concerns related to the quality of data and functioning of the Romanian air quality monitoring network, followed by an infringement procedure on this matter. During the period 2009–2018, more than half of the 148 stations did not produce sufficient data during the whole period. Data sets have gaps; complete data sets are available for only 49 per cent of stations for SO<sub>2</sub>, 74 per cent for O<sub>3</sub>, 30 per cent for NO<sub>2</sub>, 32 per cent for PM<sub>10</sub> and 21 per cent for PM<sub>2.5</sub>. Moreover, some parameters were not monitored at a sufficient number of stations of the appropriate type.

In defining its air quality zones and agglomerations, Romania was very ambitious, defining 41 zones and 13 agglomerations, all 54 requiring equal attention. Zones are defined within county administrative borders, while the big urban centres, which have the status of municipalities, are classified as agglomerations. This mode of organization might be suitable for air quality management purposes, as counties and municipalities are responsible for developing and implementing air quality plans, but it is very demanding in terms of air quality monitoring, especially considering the high maintenance costs of monitoring equipment.

Romania is implementing various projects that contribute to the reduction of air pollution, but the effects of those activities and their cumulative impact on pollution reduction are not analysed, compiled and reported. The health impact of air pollution in Romania is estimated at 26,490 premature deaths annually due to exposure to high concentrations of PM, NO<sub>2</sub> and O<sub>3</sub>.

The major impact (23,400 premature deaths), as calculated by EEA, derives from exposure to high concentrations of PM<sub>2.5</sub>. Of the 148 air quality monitoring stations, only three have automatic analysers for PM<sub>2.5</sub>. According to EEA data, in 2017, the proportion of the Romanian population exposed to concentrations of air pollutants above the EU standards was 35.5 per cent for PM<sub>2.5</sub>, 35.2 per cent for O<sub>3</sub>, 21.4 per cent for PM<sub>10</sub> and 1.1 per cent for NO<sub>2</sub>.

Analysis of filters from another 30 stations are made by the referent gravimetry method. In addition, no national policy exists with measures to reduce PM concentrations throughout the country, the deadline for bringing 32 LCPs in line with air emission standards expires in June 2020, and the national air pollution control programme, as required by the EU legislation by April 2019, is not yet developed. Public health policy does not elaborate on this issue either. Only Bucharest, where roughly 10 per cent of the total population of the country is concentrated, was requested to develop an air quality plan with measures to reduce PM<sub>2.5</sub> concentrations; other polluted zones were not subject to the same request. The fact that only a limited number of air quality plans have been prepared and adopted so far is also of concern.

European Green Deal intentions to push for even stricter air quality standards, aligning them with WHO guidance values, will require carefully and strategically planned actions in order to reduce air pollution and minimize its effects on the environment and human health.

Although responsibilities for air protection lie at the municipal and county level regarding the development, implementation and reporting on air quality plans, there is no air protection mechanism in the country. In rare cases when a decision is not made at the central level, it is made by the local branch of the central public administration. All plans, data and reports are submitted to, and at some point, approved by, the central administration. Vertical coordination is even less flexible, since the Ministry for Environment, Waters and Forests must approve all activities of the bodies subordinated to it, including very technical ones, while there is limited capacity and expertise in the Ministry to do so. It is extremely difficult to build a comprehensive, responsible, competent and reliable system of administrative bodies for air quality management if all the responsibility, competence and reliability comes from a single source.

As stated in the Joint report on air quality prepared by the Netherlands Court of Audit and the Supreme Audit Office of Poland,<sup>136</sup> from January 2019, “In the case of Romania, there is good coordination between the various government objectives: the achievement of the objectives for air quality in cooperation between the public-sector institutions with civil-society organizations active in the field is guaranteed by a National System of Integrated Air Quality Assessment and Management.”

<sup>136</sup> [www.nik.gov.pl/plik/id,19001.pdf](http://www.nik.gov.pl/plik/id,19001.pdf).

Romania regularly reports to the EU and the Air Convention on its air quality and emissions of pollutants into the air and summaries of analysis of the large volume of data produced are publicly available on NEPA's website. Data is offered on the web portal [www.calitate aer.ro](http://www.calitate aer.ro), which is the main source of official information on air quality for the general public. The annual air quality reports can be found at [www.anpm.ro/raportare-anuala](http://www.anpm.ro/raportare-anuala) and on the LEPAs' websites.

Romania has made progress in achieving SDG targets 3.9 and 11.6 through the adoption of SDS 2030, which set up two related targets aimed at: (i) reducing the impact of atmospheric pollution on human health and the environment through a special focus on air quality; and (ii) substantially reducing the number of deaths and diseases caused by dangerous chemical products, pollution and the contamination of the air, water and soil. Nevertheless, this Strategy still lacks measurable values as well as methods to achieve the targets. With regard to SDG global indicators 3.9.1 (Mortality rate attributed to household and ambient air pollution) and 11.6.2 (Annual mean levels of fine particulate matter (e.g. PM<sub>2.5</sub> and PM<sub>10</sub>) in cities (population weighted)), the population-weighted annual mean concentration of PM in Romania increased by almost 7 per cent in the period 2009–2017. There are not enough measures in place to decrease exposure of the population to air pollution and, in turn, reduce its impact on human health.

#### *Conclusions and recommendations*

##### Optimization of the air quality monitoring network

The number of air quality zones and agglomerations defined in Romania (54 in total) is very demanding in terms of requirements for air quality monitoring, especially considering the high maintenance costs of the monitoring equipment. Depending on the concentrations of air pollutants, three different regimes of air quality assessments can be applied, meaning that continuous monitoring of all parameters is not mandatory in zones with low risk of exceedances of limit values and that it can be supplemented or replaced by indicative measurements and/or air quality modelling.

Despite the large number of air quality monitoring stations (148) and their spatial distribution throughout the country, Romania is under the procedure of infringement of EU law regarding gaps in air quality monitoring. More than one third of air quality monitoring stations are classified as industrial stations although they are, in fact, urban background or

suburban background stations since they are exposed to different pollution sources.

Romania stopped reporting to EMEP in 2014, although three stations in the network are still marked as "EMEP stations" for monitoring of transboundary impacts. The number of rural background stations and of automatic stations monitoring PM<sub>2.5</sub> is insufficient to assess the impact of air pollution on ecosystems and human health. Large industries are not required to monitor air quality and report results to NEPA.

##### Recommendation 8.1:

*The ministry in charge of the environment should:*

- (a) *Revise the list of air quality zones and agglomerations, merging them when practical for air quality assessment purposes;*
- (b) *Optimize in each zone or agglomeration the necessary minimum number of air quality stations and monitor all parameters for which mandatory monitoring is required;*
- (c) *Revise the classification of the types of stations within the air quality monitoring network in accordance with their locations and impacts monitored;*
- (d) *Increase the number of stations with automatic PM<sub>2.5</sub> monitoring;*
- (e) *Increase the number of rural background stations in order to assess background levels of pollution;*
- (f) *Resume reporting data from three EMEP stations to the EMEP Programme;*
- (g) *Require industries subject to environmental permits or integrated environmental permits to monitor and report on air quality to the respective LEPA.*

##### Improvement of air quality data

In some cases, data on air quality do not meet data quality objectives. Data reported to EEA lack time coverage and therefore do not provide a reliable description of the situation, especially those data acquired by laboratory analysis (contents of heavy metals and PAHs in PM) and data from outdated and poorly maintained stations throughout the monitoring network.

There is only one accredited laboratory in Romania for air quality assessment – the National Reference Laboratory for Air Quality located in NEPA, in Bucharest. NEPA and LEPA laboratories are also in charge of the calibration of monitoring instruments of the air quality automatic stations. Internal calibration (with certified materials/certified reference materials) is performed by the local LEPAs, and external



calibration (with certified reference materials) is performed by the three Calibration Unit laboratories in Dolj, Iasi and Cluj LEPA's and by NEPA's National Reference Laboratory for Air Quality. Also, the National Reference Laboratory for Air Quality ensures the external calibration of the equipment from the Calibration Unit laboratories.

**Recommendation 8.2:**

*The ministry in charge of the environment, through the National Environmental Protection Agency, should:*

- (a) *Ensure the calibration of instruments for air quality monitoring, in line with the EU Air Quality Directive;*
- (b) *Improve data time series coverage in zones and agglomerations where continuous automatic monitoring is necessary through regular maintenance of the air quality network.*

**Functional strategic framework for improvement of air quality**

Romania lacks a national policy on air protection and its industrial emissions are not aligned with EU standards. All 54 air quality zones and agglomerations, as defined by MO No. 598/2018, are obliged to have air quality plans. This system, with its demanding administrative procedures, has delivered limited results in terms of the number of adopted plans and their implementation. The Ministry of Environment, Waters and Forests issued a methodology for the elaboration of air quality plans, short-term action plans and plans for maintaining air quality (GD No. 257/2015). Even if there are 54 quality and maintenance plans, the measures are established according to the needs or particularities of each area or agglomeration regarding dispersion conditions and important emission sources. However, in general, the measures are from the same categories: traffic management, encouraging the use of public transport, alternative transport and increasing energy efficiency. The advantage of elaborating the plans for each established territorial administrative unit (municipality or county or adjacent localities) is that each mayor or holder of activity is clearly responsible for the implementation of the measures.

For assessment purposes it is more practical to define zones and agglomerations according to the level of pollution (A, B and C regimes), rather than strictly following the territorial division. Merging of bordering zones or zones and agglomerations within them would help to minimize the number of monitoring stations, while obligations of administrative units related to air quality management

could stay unchanged. In addition, Romania uses the opportunity given by the Air Quality Directive to combine fixed and indicative measurements in zones and agglomerations where concentrations of air pollutants are between upper and lower assessment thresholds and to rely exclusively on indicative measurements, including air quality modelling in zones and agglomerations where concentrations of air pollutants are below the lower assessment threshold. Application of these principles would greatly help in optimization of the network, ensuring that continuous monitoring is performed where necessary, while keeping data available for zones with a low risk of exceedances of air quality standards.

**Recommendation 8.3:**

*The Government should:*

- (a) *Adopt a comprehensive strategic framework for the improvement of air quality, ensuring measurable targets and indicators, a high level of coherence with local air quality plans and regular reporting on implementation effects;*
- (b) *Improve mechanisms for air quality management at the local level by promoting joint air quality plans and providing clear guidance on air quality maintenance and improvement measures within the national strategic framework for the improvement of air quality.*

**Reducing the health impact of air pollution**

Air pollution poses a serious threat to public health in Romania, considering data on population exposure and the estimated number of premature deaths and years of life lost due to air pollution. However, no national policies in the environmental and health sectors address this issue, even though it is necessary to ensure well-being for all at all ages by reducing the health impact of air pollution through the appropriate synergy of environmental and health policies. While PM<sub>2.5</sub> emissions were reduced by some 17 per cent in the period 2008–2018, the population-weighted annual mean concentration of PM measured at urban background stations, which is the globally established indicator to monitor achievement of SDG targets 3.9 and 11.6, increased by almost 7 per cent in the period 2009–2017.

**Recommendation 8.4:**

*In order to achieve SDG targets 3.9 and 11.6 by 2030, the Government should develop a roadmap to reduce the impact of air pollution on human health and the environment through a special focus on air quality and*

*a substantial reduction in the number of deaths and diseases caused by air pollution.*

#### Public information

Information on air quality provided to citizens by the state administration is incomplete, lacking the necessary interpretation of air quality monitoring results, air quality indices and emissions inventories, advice to the general public in the event of bad air quality and guidance on the use of the air quality database. The portal [www.calitateaer.ro](http://www.calitateaer.ro) stores raw

data on air quality, but these data are not easily accessible and not relevant to the general public unless accompanied by suitable analysis and explanations.

#### Recommendation 8.5:

*The Government should raise public awareness on the negative impact of air pollution on human health and the environment, ensuring that data on air quality provided to the public contain all necessary information, such as sources of air pollution, short- and long-term impacts, recommendations for protection of vulnerable population groups and advice on how to contribute to emission reductions.*

## Chapter 9

# WATER MANAGEMENT

### 9.1 Water resources

Romania's climate is, in general, semi-arid. However, there are large differences in rainfall in different areas of the country such that threefold differences in rainfall are observed between the Carpathian Mountain areas and the eastern parts (Dobrogea).

Romania has 78,905 km of rivers, with the lower Danube River marking its southern border with Bulgaria. The country has 11 river basins: Crisuri, Banat, Somes-Tisa, Mures, Jiu, Olt, Arges-Vedea, Siret, Buzau-Ialomita, Prut-Barlad and Dobrogea-Litoral.

Romania has an annual 134.6 billion m<sup>3</sup> of total potential water resources (table 9.1). The annual usable water resources are 38.4 billion m<sup>3</sup>, of which more than half (20 billion m<sup>3</sup>/year) comes from the Danube River. Usable water resources, including the Danube, amount to 2,660 m<sup>3</sup> per person per year, which, compared with the European average of 4,000 m<sup>3</sup>/person/year, places Romania among the countries with relatively scarce usable water resources.<sup>137</sup> A usable water resources level below the threshold of 1,700 m<sup>3</sup>/capita is considered to create water stress.

**Table 9.1: Potential and utilizable water resources, billion m<sup>3</sup>, 2017**

	Potential natural resource	Utilizable resource
Interior river basins	40.0	13.7
Danube River	85.0	20.0
Groundwater	9.6	4.7
<b>Total</b>	<b>134.6</b>	<b>38.4</b>

Source: Romanian Waters, 2016.

Water resource availability shows high variability between river basins and in time. The country's water resources have had a linear downward trend over the past 20 years. A decreasing water resource trend is identified at the end of spring (May) and in early summer (June). According to multiannual seasonal analysis, the largest volume of water was available in the spring season (37.7 per cent) and the smallest in the autumn season (16 per cent).

To assess the development of the available water resources, EEA used the non-parametric Mann Kendall test. As a result, 51 of the analysed stations showed an increasing trend of water volumes in the autumn and during the winter months, while at the annual level the volumes were decreasing, particularly at the end of spring (May) and in early summer (June).

According to the analysis carried out within the National Management Plan relating to the portion of the international hydrographic basin of the Danube River that is included in the territory of Romania for the period 2016–2021 (NMP), all Romanian groundwater bodies had good quantitative status because the volume of the long-term water extraction does not exceed the available water resources. The analysis showed that, at the multiannual level, the deficient areas regarding the surface water resource are those corresponding to the hydrographic basins of the Dobrogea-Litoral, Prut, Vedea and Banat Rivers, as well as of the small rivers that are direct tributaries of the Danube River.

On average for the period 2012–2017, surface water resources amounted to 34 billion m<sup>3</sup> and groundwater almost 5 billion m<sup>3</sup> (table 9.2). Groundwater resources decreased by 13.75 per cent over the same period. All Romanian groundwater resources were assessed in 2014 by the Laboratory of Hydrogeological Studies and Research. The total value of phreatic groundwater resources in Romania is 158,353.64 l/s (4.99 billion m<sup>3</sup>); while the total value of the deep groundwater resources in Romania is 238,219.13 l/s (7.51 billion m<sup>3</sup>).

### 9.2 Water quality

According to the EC Environmental Implementation Review 2019 of Romania, the main pressures on surface waters are diffuse pressures from discharges not connected to the sewerage network (25 per cent of surface water bodies) and pollution from agricultural (12 per cent) and urban wastewater (5 per cent) discharges. For groundwater bodies, the main pressure is the diffuse pollution from agriculture and discharges that are not connected to sewerage networks, both affecting 10 per cent of groundwater bodies.

<sup>137</sup> [www.eea.europa.eu/soer/countries/ro/freshwater-why-care-romania](http://www.eea.europa.eu/soer/countries/ro/freshwater-why-care-romania).

**Table 9.2: Water resource, 2012–2017, million m<sup>3</sup>**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Total</b>	<b>40 132</b>	<b>39 364</b>	<b>39 364</b>	<b>39 270</b>	<b>39 270</b>	<b>38 346</b>	<b>38 346</b>	<b>38 346</b>	<b>38 346</b>	<b>38 346</b>
Surface water	33 825	33 953	33 953	33 859	33 859	33 679	33 679	33 679	33 679	33 679
Groundwater	6 307	5 411	5 411	5 411	5 411	4 667	4 667	4 667	4 667	4 667

Source: National Institute of Statistics, 2020.

**Photo 9.1: Bird sanctuary in Danube Delta. Great white pelicans (*Pelecanus onocrotalus*) and Cormorants (*Phalacrocoracidae*)**



Photo credit: DDBRA, MoEWF

Agricultural production is a major source of diffuse pollution, mostly as a result of excessive emissions of nutrients and chemicals such as pesticides. According to the EC Environmental Implementation Review 2019 of Romania, nutrient pollution or enrichment has the greatest impact on surface water bodies (27 per cent), followed by organic pollution (17 per cent), while chemical pollution affects 10 per cent of groundwater bodies.

#### *Groundwater*

The EC Environmental Implementation Review 2019 of Romania states that all groundwater bodies have good quantitative status. Between the first and second RBMPs, the proportion of water bodies with good chemical status increased from 86.6 per cent to 89.5 per cent, and 98 per cent of groundwater bodies are classified with high confidence.

According to the 2018 EEA report “European Waters Assessment of Status and Pressures 2018”,<sup>138</sup> 10.5 per cent of Romania’s groundwater bodies do not have

good chemical status. Since groundwater is considered a strategic resource in Romania, it is forbidden to abstract groundwater for irrigation.

According to the Synthesis of Waters Quality in Romania 2017, of 141 groundwater bodies monitored in 2017, 28 are considered to be in low chemical condition. From the analysis of the data obtained from the monitoring of wells located on groundwater bodies, most exceedances were recorded on nitrates, ammonium, chlorides, sulfates, lead, orthophosphates, phenols and arsenic. Regarding the pollution of groundwater with nitrates, exceedances of the quality standard for this indicator were registered for 212 wells, which represents 13.40 per cent of the total monitored wells. The main sources of the pollution with nitrates are:

- Permanent washing of soil impregnated with nitrogen compounds resulting from the application of fertilizers on certain categories of arable land, by atmospheric precipitation and irrigation water;

<sup>138</sup> [www.eea.europa.eu/publications/state-of-water](http://www.eea.europa.eu/publications/state-of-water).

- Lack of wastewater collection systems, especially in human settlements in rural areas.

Exceedances of the quality standard for nitrates are recorded especially in areas where the soil is affected by the application of fertilizers and due to the above causes, which may constitute a danger of pollution of the aquifers in the area.

#### Surface water

According to the 2018 EEA report “European Waters Assessment of Status and Pressures 2018”, more than 90 per cent of the surface bodies have good chemical status. As the EC Environmental Implementation Review 2019 of Romania states, ecological status/potential is good or high in most of the lakes and rivers (66.14 per cent), but in none of the transitional and coastal waters (figure 9.1). There are very few water bodies with unknown status/potential. However, the report states that a further in-depth analysis is needed to assess whether all the requirements are fulfilled and whether the effects of all newly planned modifications on water body status/potential are assessed at the quality element level.

#### Ecological status/ecological potential of surface water bodies

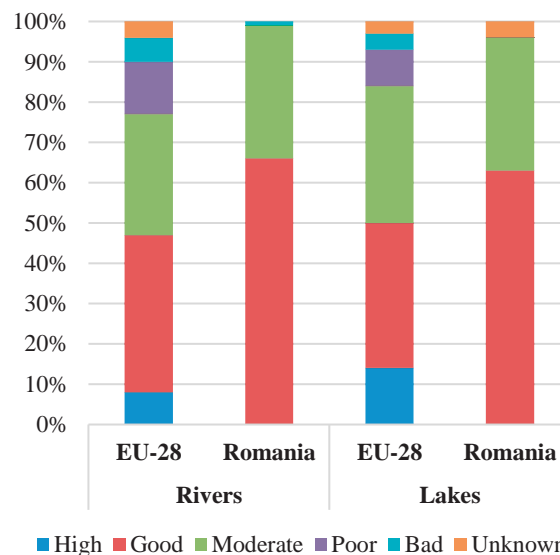
According to the 2018 EEA report “European Waters Assessment of Status and Pressures 2018”, Romania has a high proportion of water bodies with high or good ecological status or potential (table 9.3). The population of sturgeon species is also used as an indicator to monitor quality in the Danube River.

#### Lakes and water reservoirs

In 2017, water quality was assessed in 23 natural lakes: 9 had good water quality, 13 moderate and 1 bad. The main cause of non-achievement of the quality objective for natural lakes is the eutrophication process, a process favoured at small depths (about 3–7 m, with rapid development of algae), agricultural

activities leading to the enrichment of the waters with nutrients and impact from recreational areas in the vicinity of these lakes. Water quality was assessed in 94 reservoirs: 58 presented good level water quality and 36 moderate water quality according to the Synthesis of Water Quality in Romania 2017.

**Figure 9.1: Ecological status or potential of surface water bodies in Romania, percentage**



Source: EC Environmental Implementation Review 2019 of Romania.

#### *Drinking water quality: physico-chemical and microbiological parameters*

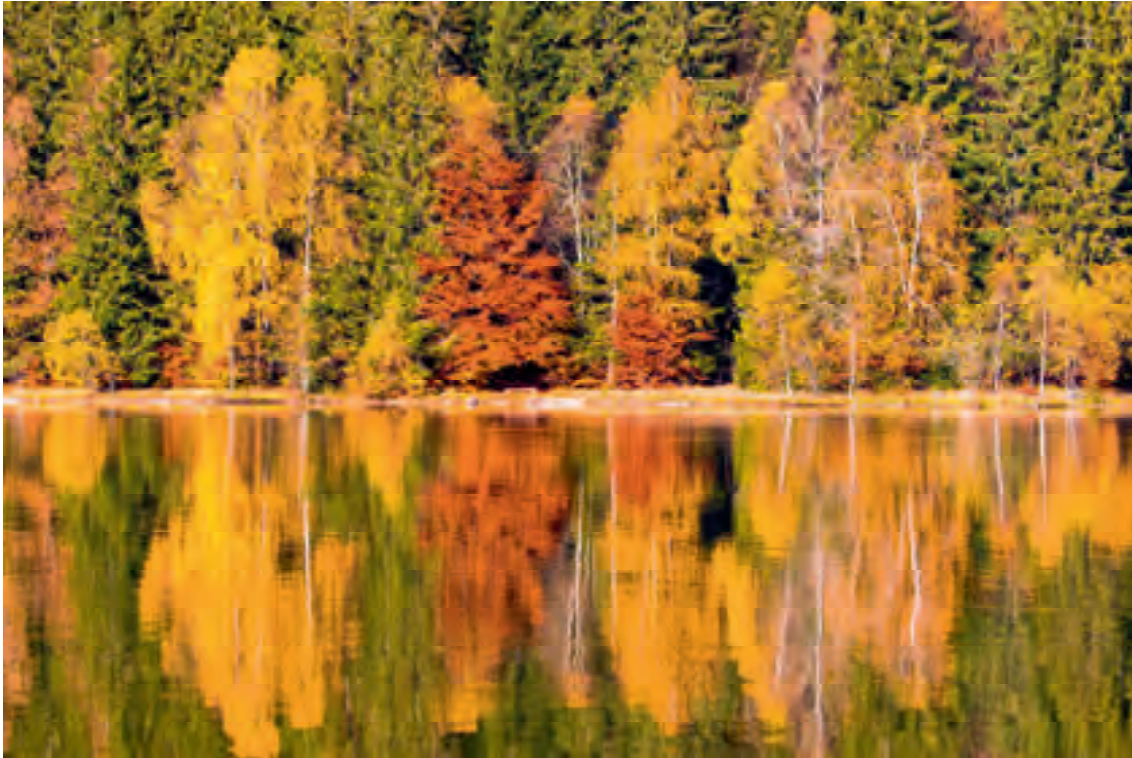
Romania has fulfilled its reporting obligations as provided in the Drinking Water Directive, i.e. to report every three years. According to the last report, for the period 2014–2016,<sup>139</sup> in 2016, 99.86 per cent of drinking water analyses were compliant for microbiological parameters in the drinking water supply zones that supply more than 1,000 m<sup>3</sup>/day or more than 5,000 inhabitants. For the physico-chemical parameters, the percentage of compliance was between 95.96 per cent for iron and 100 per cent for many other parameters.

**Table 9.3: Ecological status of surface water bodies – rivers**

	Number	Percentage
'1' = High status	1	0.03
'2' = Good status or good potential	2 001	66.11
'3' = Moderate status or moderate potential	1 009	33.33
'4' = Poor status or poor potential.	2	0.07
'5' = Bad status or bad potential.	8	0.26
Unknown	6	0.20

Source: RBMPs, Romanian Waters, 2016.

<sup>139</sup> <https://cdr.eionet.europa.eu/ro/eu/dwd/>.

**Photo 9.2: Saint Anne Lake – volcanic lake**

*Photo credit: Mircea Vergheș*

Also, 49 water supply zones were under a derogation in 2016 for excessive parametric values for nitrates, arsenic or boron, in accordance with the Drinking Water Framework. The next three-year report (2017–2019) is expected to be available in March 2021.

### 9.3 Water monitoring networks

In Romania, the monitoring programmes became operational in 2006. The National Integrated Water Monitoring System comprises six water subsystems: rivers, lakes, transitory waters, coastal water, groundwater and wastewater (monitoring the control of wastewater discharged into natural receivers). The monitoring also covers water bodies in protected areas. The monitoring is coordinated by Romanian Waters, which also maintains a database on water quality. Monitoring programmes defined for groundwater include a quantitative monitoring programme and chemical monitoring programme (surveillance and operational).

To increase the level of knowledge of the status of surface water and groundwater and to improve confidence in their assessment, the National Monitoring System was redesigned by updating the network and monitoring programmes in 2015. At the national level, approximately 935 surface water bodies (rivers, lakes, reservoirs, artificial lakes, coastal, transitional and territorial waters) and 141 groundwater bodies were monitored in 2017.

The surface water monitoring network consists of 942 gauging stations, spread across 11 water basin administrations, corresponding to the main rivers and watersheds (table 9.4).

**Table 9.4: Gauging stations, number**

<b>Water basin administration</b>	<b>Number</b>
Somes-Tisa	103
Crisuri	88
Mures	109
Banat	80
Jiu	79
Olt	104
Arges-Vedea	65
Buzau-Ialomita	56
Siret	131
Prut-Barlad	79
Dobrogea-Litoral	48

*Source: Romanian Waters, 2016.*

The physico-chemical and biological monitoring of the water resources is done by sections of fast flow control (on a daily and weekly basis) and of slow flow control (on a monthly basis). Under fast flow, data are monitored daily for approximately 12 quality indicators in more than 60 surveillance sections located on important rivers near the main water sampling and discharge sections. Under slow flow, data are monitored for 50–60 quality indicators.

The determinations are carried out within the laboratories of physico-chemical, biological and bacteriological analyses organized at the level of the basin districts and of the water management systems.

There are also several automatic stations equipped with sensors for water level, rainfall, water and air temperature. This is part of the DESWAT Hydrological Forecast System, implementation of which started after the 2005 flooding. This provides decision makers with analysis of a massive volume of data; by running large-scale forecast models, it identifies and interprets hydrological phenomena that could develop into a flood. Hydrological warnings and alerts can then be generated and distributed to the public and authorities charged with flood defence in Romania.

As at December 2019, the meteorological monitoring system comprised eight radar and 164 monitoring stations, the latter especially for forecasting heavy rainfalls and thus potential flash floods.

However, gaps exist in data on water quality, especially on drinking water, mostly because the management of drinking water provisions is distributed among municipal companies, county councils and regional operating companies. Moreover, a notable proportion of the population have their own water wells without regulated quality monitoring.

## 9.4 Water demand and supply

### *Water demand*

Since 1990, the total water demand has diminished due to the structural changes in the Romanian

economy, such as: industrial restructuring and closure of many heavy industry operations; diminished irrigation activity caused by the introduction of water fees, which led to the closure of non-viable farms and agricultural enterprises; and a decrease in drinking water demand as a consequence of water tariff increases and the switch from billing based on consumption estimates to actual metering.

As a result, total water demand dropped from 20.4 billion m<sup>3</sup> (close to full utilization of the country's usable water resources) in 1990 to about 6.8 billion m<sup>3</sup> in 2017 (table 9.5). As water demand is now lower than 30 years ago, with the existing water infrastructure the country can be assured of greater water supply than demand.

In 2019, water abstraction was at a lower level than the level of overall availability, indicating a certain degree of flexibility to cover future additional demand (given that the capacity of water management infrastructure was built to meet a demand level of over 20 billion m<sup>3</sup>).

However, the situation varies from river basin to river basin in terms of both demand and availability. The Dobrogea-Litoral Water Basin for example shows higher demand and less supply while the Somes-Tisa River Basin shows a contrary picture. National average figures can be misleading and fail to reflect the situation of water scarcity or the water stress in several river basins. Furthermore, many elements of water management infrastructure, for example, abstraction and wastewater treatment plants, have deteriorated due to years of inadequate maintenance and are not functioning at their initial design capacity.

**Table 9.5: Water abstraction and demand, 2012–2018, million m<sup>3</sup>**

	2012	2013	2014	2015	2016	2017
Abstraction						
Groundwater	598	581	554	590	635	646
Surface water	5 884	5 837	5 715	5 868	5 729	6 116
<b>Total</b>	<b>6 482</b>	<b>6 418</b>	<b>6 269</b>	<b>6 458</b>	<b>6 364</b>	<b>6 762</b>
Demand						
Water collection, treatment and supply	1 041	969	1 003	1 019	1 043	1 035
Agriculture, forestry and fishing	1 093	1 135	1 095	1 290	1 243	1 490
Mining and quarrying	..	..	..	..	..	..
Manufacturing	3 211	3 313	3 353	3 398	3 382	3 468
Electric energy production and distribution	1 125	990	805	740	688	756
Other activities	12	11	13	12	8	13
<b>Total</b>	<b>6 482</b>	<b>6 418</b>	<b>6 269</b>	<b>6 458</b>	<b>6 364</b>	<b>6 762</b>

Source: National Institute of Statistics, 2020.

**Photo 9.3: Dâmbovița River, Bucharest**

*Photo credit: Angela Sochirca*

The National Institute of Hydrology and Water Management developed a methodology to forecast water use requirements until 2020 and 2030. The purpose is to assess water quantities needed in the coming years in order to evaluate water policy development options to ensure water use requirements. The methodology proved to provide results close to reality for households, agriculture and other sectors; however, the forecast of industry needs is dependent on macroeconomic indicators, such as GDP and share of industry in GDP, which are estimated. The model forecast water use requirements for 2030 as: for the minimal scenario, 10 million m<sup>3</sup>; for the medium scenario, 12 million m<sup>3</sup>; and for the maximum scenario, 15 million m<sup>3</sup>. The medium or environmental scenario forecast double the 2017 level of water use. In 2018, the Institute started to assess the impact of climate change on flow regime in order to improve the water management resources.

Recommendation 7.1 in the Second EPR of Romania urged the Government to assess future drinking water needs in order to consider exploring additional water resources and the impact of the degradation of water reservoirs on water management. This recommendation is not implemented and remains valid.

The number of wastewater treatment plants declined by 38 per cent from 2012 to 2015 (table 9.6). No statistical data are available after 2015. Wastewater generation decreased by 61 per cent in the same period (table 9.7).

#### *Water abstraction*

#### Manufacturing, mining and quarrying

In 2017, water demand for manufacturing, mining and quarrying was about half of the total water demand. However, the sector raises quality concerns about wastewater treatment.

#### Agriculture, forestry and fishing

In 2017, water demand in the agriculture, forestry and fishing sector was 22 per cent of the total water demand and showed an increase of 36 per cent compared with 2012. In the 1980s, the policy was that Romania would be “the food basket of Europe”, and so large-scale developments were initiated to expand arable lands. Romania used to be ranked third among all European countries—just behind Spain and Italy—for its 3 million ha of irrigated lands.



**Table 9.6: Wastewater treatment plant stages by type of plant, 2011–2015, number**

	Stages	2011	2012	2013	2014	2015
Urban	Primary	282	376	107	112	126
	Secondary	217	220	299	321	327
	Tertiary	23	23	65	48	55
Industrial	Primary	475	490	480	133	142
	Secondary	179	207	201	197	196
	Tertiary	25	27	20	15	18
Independent	Primary	190	195	..	..	..
	Secondary	4	4	..	..	..
<b>Total</b>		<b>1 395</b>	<b>1 542</b>	<b>1 172</b>	<b>826</b>	<b>864</b>

Source: National Institute of Statistics, 2020.

**Table 9.7: Wastewater generation by activity sector, 2012–2018, million m<sup>3</sup>/y**

	2012	2013	2014	2015	2016	2017	2018
<b>Total</b>	<b>4 982.9</b>	<b>2 007.2</b>	<b>1 974.7</b>	<b>1 942.8</b>	<b>1 954.1</b>	<b>1 885.1</b>	<b>1 914.8</b>
Of which:							
Agriculture, forestry, fishing	2.5	2.2	1.8	1.8	3.1	2.2	2.3
Mining industry	53.0	58.9	54.8	51.6	57.1	38.0	37.7
Food processing industry	23.4	24.1	25.3	25.2	19.8	17.3	19.7
Basic metals	114.7	100.8	106.0	93.9	90.6	72.9	68.1
Transport	2.7	6.3	6.3	5.8	6.6	5.9	6.4
Textiles	5.5	3.2	6.9	5.1	29.4	4.9	4.0
Paper & paper products	2.7	3.0	3.2	3.5	3.9	3.7	4.4
Chemical products & refined petroleum	86.7	78.2	75.5	70.3	65.3	72.7	67.3
Production and distribution of electricity	3 466.2	516.9	580.2	551.6	506.5	546.4	554.5
Construction	2.9	4.7	6.7	7.4	9.0	8.2	7.3
Of which:							
Industrial wastewater	4 000.0	999.7	1 067.0	1 005.3	971.3	950.5	972.7
Domestic wastewater, of which:	982.9	1 007.5	907.7	937.5	982.8	934.6	942.1
Other activities	166.5	409.2	328.4	433.1	488.3	493.6	443.7
Household activities	816.4	598.3	579.3	504.4	494.5	441.0	498.4

Source: National Institute of Statistics, 2020.

After the change of regime in 1989, agricultural land was privatized but the new owners did not maintain the irrigation systems, which were first abandoned and then vandalized. Nowadays the country has no more than 1 million ha of land that is irrigable. As the effects of climate change are expected to increase, the need for irrigation will increase in some parts of the country, especially around the lower part of the Danube River.

### Energy

Currently, between 25 per cent and 30 per cent of the country's power generation comes from hydropower. Water demand in the energy sector has decreased by 33 per cent since 2012 and was a little over 11 per cent of total water demand in 2017. Due to the lack of

adequate maintenance and rehabilitation, many dams are operated well below their design level to ensure safety (box 9.1).

### Transport

Navigation traditionally plays an important role in transportation and is facilitated by hydro-morphological infrastructures such as a regulated branch through the Danube Delta named Sulina Branch, which offers a quick and safe access route through the Danube River to the Black Sea. There is also an access route from the Danube to the Black Sea through the canal between Cernavodă and Constanta. Bega Canal offers accessibility for very small boats between the Danube and the city of Timisoara. The Danube is the only river in Romania that is dredged.

### Box 9.1: Dams

Romania has 250 large and some 300 smaller dams. Some hydropower stations are rather old, the average age being around 40 years. Built between 1970 and 1990, these dams have deteriorated due to the lack of maintenance and rehabilitation. They need major rehabilitation work, along with retrofitting to adjust to changing demand and climate conditions, and new regulations (environmental flows). In 2009, the World Bank listed 276 dams, of which 72 were classified as having an important risk factor, 140 as having a very important risk factor and 27 as having an exceptionally important risk factor. About 20 per cent of them are privately owned. Private investors do not tend to invest in full rehabilitation of infrastructure such as dykes and dams. Nowadays, many of these facilities have to be operated below their original design level to ensure the safety of the downstream population.

Construction of certain hydropower stations ceased some 30 years ago, and they have still not been finished. In some cases, temporary solutions rely on smaller discharge thresholds, thus raising security concerns; one such is Siret–Bărăgan Chanel, recently transferred from the management of Romanian Waters to the National Agency for Land Reclamation. Other construction sites are still awaiting governmental decisions, such as the channelization of the lower part of Olt River with hydropower stations and blocks for navigation.

Hydropower energy has gained importance recently, as it is carbon free. Establishing a new, large-scale hydropower station is still a rather long and difficult process, so investors tend to prefer to build micropower stations.

In the last decade, micropower stations (typically producing from 5 kW to 100 kW of electricity) were considered as green and renewable energy resources. Some of them were not carefully designed, and NGOs complained that they also fragmented the landscape. Hydropower plants were often installed in protected habitats, leading to an infringement case initiated by the EC in 2015 under the Habitats Directive. Engineers emphasize that, from a simply technical point of view, an abundance of micropower stations does not give as great an output as fewer but bigger hydropower stations. On the other hand, the process for permission to build, which lies in the hands of local governments, may threaten safety considerations as well as the viability of ecosystems. As of December 2019, an application for a permit to build a hydropower station must include a forecast on the hydrological regime (considering high, low and mean thresholds) together with an economic analysis.

The deployment of micropower stations, therefore, has since been stopped; no new ones have been installed in recent years, and no more national funding is provided for them. The EU infringement process has been launched to investigate the details of deployment of micropower stations.

Dams have a notable impact on landscape and biodiversity, but can also be great instruments for water retention – an advantage in the age of climate change. On the other hand, water demand patterns have shifted notably since the 1990s. Climate change is also modifying the hydrological regimes, already causing a water discharge deficit, especially during the summer months. New regulatory requirements, such as compliance with environmental flows, are in place.

### Photos 9.4 and 9.5: Waterway inspection team: unclogging and inspecting the waterway



Photo credit: Romanian Waters, MoEWF

### Households

According to the National Institute of Statistics, the proportion of the population connected to water supply systems increased from 60.23 per cent in 2012 to 69.20 per cent in 2018 (table 9.8). Romania considers the insufficient connection rate, water scarcity and insufficient quality of water resources a priority for EU funding. Drinking water use also decreased following the installation of water meters, from 695 million m<sup>3</sup> in 2012 to 567 million m<sup>3</sup> in 2018 (table 9.9). According to Eurostat, the water consumption per inhabitant diminished from 33.9 m<sup>3</sup> in 2012 to 28.7 m<sup>3</sup> in 2015.

As at December 2019, about 4.5 million Romanians lack access to piped water within their residence. According to the 2018 World Bank report “Romania Water – Diagnostic Report”, universal access to piped water will not be achieved before 2040, at best, under a BAU scenario. This is a major public health issue since about half of those lacking access to piped water, close to 2.5 million people or 12 per cent of the national population, are reported to be self-supplied by wells from unsafe water sources.

Romania has the worst rate of universal access to piped water of all non-EU countries in the Danube basin, except for the Republic of Moldova. At the current pace of growth of coverage of piped water services, Romania would only be able to achieve universal access between 2040 and 2050. Because of the recent increase in tariffs for water supply and sanitation, affordability is now becoming a concern for poor families. Tariff increases were instituted over the past decade to ensure that sufficient funds were available to co-finance and operate the infrastructure needed for service provision and compliance—and they are expected to continue. It appears that, by 2016, the average tariff nationwide had already reached 2.9

per cent of average household income and exceeded 5 per cent of household income for poor households.

Compliance with the Urban Wastewater Treatment Directive has been challenging for Romania. According to the World Bank report, the country started from a very low base in terms of sewerage infrastructure and had negotiated the most generous interim deadlines (final compliance in 2018) among EU-13 countries. Despite having carried out investments together with implementing supporting reforms, Romania is today the worst performer among EU countries for compliance with the Directive. The World Bank report also concludes that “it is crucial for the Romanian Government to engage in a prioritization exercise”, although that document places an emphasis on finance and investment. Recommendation 7.2 in the Second EPR of Romania provided the Government with various steps to support the implementation of the Directive and therefore the implementation of the recommendation is ongoing. The final deadline for Romania to reach compliance with the Directive was 31 December 2018, according to the Accession Treaty. Given the very low compliance rates, the Commission decided to launch an infringement procedure against Romania based on the 2013 and 2015 intermediate deadlines set in the Accession Treaty, i.e. on compliance of agglomerations above 10,000 population equivalent (PE) with collection and treatment requirements. The issue of wastewater is targeted in the RBMPs, which aim to implement the Directive.

In the period 2009–2015, in the Danube Integrated River Basin District, sewerage systems and urban wastewater treatment plants have been constructed, upgraded or extended at almost 900 sites. According to EEA, in Bucharest, after the urban wastewater treatment plant started operating, concentrations of organic and nutrient pollution indicators decreased.

**Table 9.8: Population connected to water supply, 2012–2018, per cent**

	2012	2013	2014	2015	2016	2017	2018
Percentage	60.23	61.28	62.42	63.57	65.04	67.35	69.20

Source: National Institute of Statistics, 2020.

**Table 9.9: Drinking water supplied to consumers, 2012–2018, million m<sup>3</sup>**

	2012	2013	2014	2015	2016	2017	2018
<b>Total</b>	<b>1 035.4</b>	<b>1 014.2</b>	<b>995.5</b>	<b>744.0</b>	<b>740.7</b>	<b>746.4</b>	<b>751.8</b>
of which:							
for household use	694.8	690.0	684.5	561.3	563.4	561.9	566.8

Source: National Institute of Statistics, 2020.

Romania has taken great steps in improving water quality, especially by constructing and operating wastewater treatment plants. Nevertheless, the investment needed to ensure appropriate collection and treatment of wastewater from the remaining agglomerations with more than 2,000 PE is estimated at €12 billion.<sup>140</sup> This figure remains high despite several EU-supported projects. Other ongoing studies suggest even higher investment needs.

The connection rate of the population to sewage collection systems increased from 46.84 per cent in 2012 to 52.70 per cent in 2019 (table 9.10). The percentage of the population connected to wastewater collecting systems without treatment decreased from 9.20 per cent in 2012 to 1.29 per cent in 2019. By the end of 2016, in rural agglomerations, less than 15 per cent of the sewage load was collected and treated. In 2019, about 46.15 per cent of the population lived in a rural area. A proportion of the rural population is also resisting connection to both piped water and sewerage networks, claiming affordability constraints (both to finance the connections and to pay the recurrent bills).

There are also discrepancies in access to water supply and sanitation between Roma and non-Roma populations, mostly in urban marginal areas due to issues of land use, property titles and the rule of law more generally.

According to the EC Environmental Implementation Review 2019 of Romania, the last forecast projects should be completed by 2027–2030, far beyond the final deadlines of 2015 and 2018 set in Romania's Accession Treaty. In order to reach compliance, the Review recommends prioritizing water projects proposed for support from EU funds, speeding up their preparation and implementation. Moreover, the revenues generated by water companies are expected to ensure the operational continuity of the constructed infrastructure.

### Tourism and leisure

Water tourism could offer a valuable opportunity to benefit from the good ecological status of many Romanian rivers, especially the pristine rivers of Transylvania, by promoting sustainable development projects in remote and low-income rural areas. This is an attractive way to monetize the good ecological

status of rivers for the benefit of local populations. Tourism in the Danube Delta is also an important local economic activity, which benefits from the good water quality of the Danube River.

### *Sludge*

The sludge from wastewater treatment may cause problems. The gradual development of the wastewater sector in Romania has led to an increase in the quantities of sludge generated in urban and industrial wastewater treatment plants, which requires solutions for its disposal. Since 2016, sludge-related data collection improved. In 2018, sludge disposed of reached 100 per cent of sludge production (figure 9.2). Sludge is analysed to check whether it can be disposed of in agriculture as soil fertilizer. In 2018, 45.4 per cent was landfilled, 14.7 per cent used in agriculture, 1.1 per cent used in compost, 3.6 per cent incinerated and 35.2 per cent used otherwise, such as in landscaping.

Recommendation 7.3 in the Second EPR of Romania urged the Government to identify options for the safe handling of sludge from wastewater treatment. The implementation of the recommendation is ongoing.

### *Accidental pollution*

In 2017, 70 accidental pollution cases were registered. Pollution comes from petroleum products and other hydrocarbons (40 per cent), semi-solid and solid waste (27 per cent), low oxygenation conditions (8.5 per cent), unidentified substances (8.5 per cent), mine waters (2.8 per cent) and other sources (5.7 per cent). Oil pollution is largely due to the rupture of oil and saltwater pipelines.

## **9.5 Impact from and adaptation to climate change**

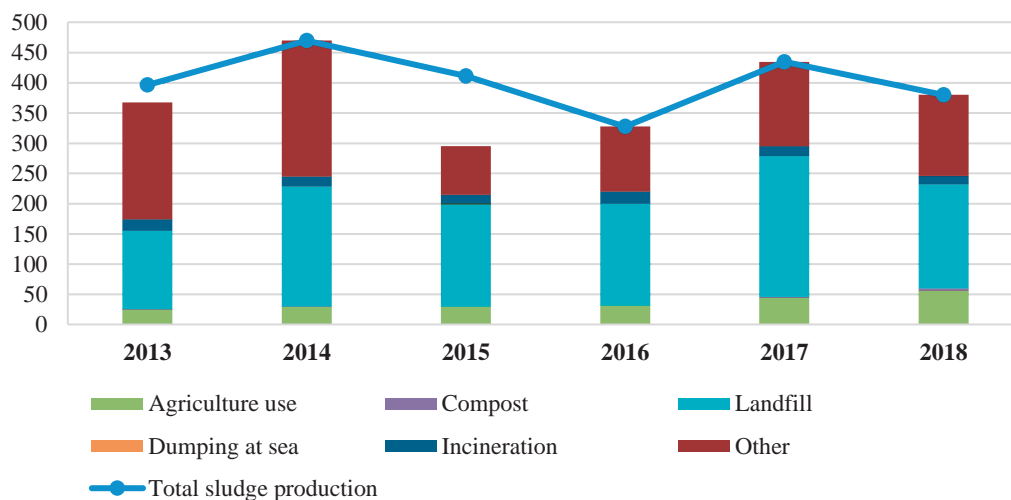
The drastic drop in water demand since 1990 has provided a buffer for water resources management, giving the country – from a quantitative point of view – a general sense of water security that can be challenged by climate change. However, climate change impact is already tangible in Romania. River discharge often shows lower volume than the average for the period; for example, during the autumn of 2019, the discharge volume of the Danube River was less than half of the period average.

<sup>140</sup> European Commission, Ninth Report on the Implementation Status and the Programmes for Implementation of the Urban Waste Water Treatment Directive (COM(2017)749) and Commission Staff Working Document accompanying the report (SWD(2017)445).

**Table 9.10: Population connected to wastewater treatment plants and collecting systems, 2012–2019, 1,000**

	2012	2013	2014	2015	2016	2017	2018	2019
Urban wastewater treatment plants	8 590	8 842	8 951	9 052	9 416	9 710	10 035	10 264
Primary treatment	1 644	1 756	1 473	1 208	809	626	677	723
Secondary treatment	2 857	3 503	3 825	2 905	2 055	1 207	1 213	1 371
Tertiary treatment	4 089	3 584	3 652	4 939	6 552	7 877	8 146	8 170
Industrial wastewater treatment plants	51	42	48	38	..	..	..	..
Wastewater collecting systems	9 413	9 342	9 392	9 472	9 703	9 979	10 293	10 515
With treatment	8 641	8 884	8 998	9 090	9 416	9 710	10 035	10 264
Without treatment	772	458	393	382	287	269	258	251

Source: National Institute of Statistics, 2020.

**Figure 9.2: Sludge production and disposal, 2013–2018, 1,000 tons**

Source: National Institute of Statistics, 2020.

There are decreases in the minimum flow indicators at 55 hydrometric stations (74.3 per cent of the total trend stations and 50 per cent of the total analysed stations) for a confidence level greater than 90 per cent. In contrast, there are increases in the minimum flow indicators at 19 hydrometric stations (17 per cent of the total analysed stations) and without trend for 36 stations (33 per cent).

Water basin administrations with the predominance of hydrometric stations that have a significant decreasing tendency of minimum flows are Prut-Bârlad, Someș-Tisa, Crișuri and Mureș. Moreover, at all stations analysed within the water basin administrations of Prut-Bârlad and Crișuri, and at most of the stations analysed within Someș-Tisa, significant decreases in the evolution of annual minimum rates over different durations of time have been noted.

There is an increasing trend in deficit indices (volume and duration) for the Q90 threshold at 39 hydrometric stations (86.7 per cent of the total trend stations and 35.5 per cent of the total number of stations) and for

the Q95 threshold at 33 hydrometric stations (84.6 per cent of the total trend stations and 30 per cent of the total number of stations). At the same time, indicators show the opposite direction (increase) for a smaller number of hydrometric stations.

The Danube River discharge in particular is being monitored because of the NPP Cernavodă. If the water level is lower than a certain threshold, the NPP operation must be limited or even stopped. This has happened in 2001 and 2002. The temperature of the cooling water is also monitored.

While mean values of projected river discharges are in the acceptable range, it is rather likely that in the future the country will face short periods of time with extremely high discharge levels, and longer periods with less than 30 per cent of the present mean levels of discharge.

Heavy rainfalls are common in May, June and July, potentially causing serious flash floods. Meanwhile, from the second half of July, and especially in August,

eastern and southern parts of Romania are prone to drought. For example, these areas entered a dry period in July 2019, which lasted until December – in four consecutive months rainfall was below the multiannual monthly levels. Moreover, November 2019 proved to be the warmest November ever recorded in Romania, with deviation of 5°C.

The EC Environmental Implementation Review 2019 of Romania states that climate change will put further strain on chronically underfunded water resources management by requiring, among other measures, major investments in dam storage and flood protection, in order to increase water storage to counter drought and improve protection from flooding downstream.

Agricultural areas in Romania are affected by droughts (about 7 million ha), erosion by water and landslides (about 6.4 million ha), temporary water deficit (about 4 million ha) and compaction (about 2.8 million ha). Drought is the limiting factor affecting the widest area of crops.

The area subjected to desertification, characterized by an arid, semi-arid or subhumid-dry climate, is about 30 per cent of the total surface of Romania, being mostly situated in Dobrogea, Moldova, the south of the Romanian Plain and the Western Plain. This area is predominantly used for agriculture (about 80 per cent of the total, 60 per cent of which is arable land) and silviculture (about 8 per cent).

In Romania, drought-affected areas have expanded over the past decades. The most affected areas are in the south and south-east, but the entire country has felt the effects of extensive pedological drought, especially in the last 30 years.

Climate change is already modifying the hydrological regimes, causing water discharge deficit, especially during summer months. As the vessel fleet on the whole Danube River is rather obsolete (being 30 years

old on average), navigation raises questions about being environmentally friendly, especially about low CO<sub>2</sub> emissions. The sector lacks a strategic policy that would also consider when inland navigation is more advantageous than rail transport. Existing technical frames for inland navigation were not built considering low summer water recharges, respecting nature conservation and using renewable energy resources as fuel.

Romania has protocols with all neighbouring countries on exchanging the latest monitoring data related to climate change. In June 2019, Romania launched the initiative to host a European Agrometeorology Centre for the WMO Europe Region in Romania. The aim is to exchange data and information on drought on a European level. The Centre is expected to start operation in 2023.

## 9.6 River basin management

Romania is divided into 11 water basins, by its main river catchment zones, managed by water basin administrations. Romania has a long tradition of river basin management. The water basin administrations issue licences and permits for all construction located near the water resources. They also verify data received from other resources, for example, from the drinking water providers, and monitor surface water and groundwater, and transitional and coastal water under the Water Framework Directive.

Water basin administrations are also responsible for the elaboration of the RBMP for their respective water basin. They regularly produce internal reports on the implementation of measurements, assessment of the status of water bodies, and risks. All RBMPs become part of the NMP, which is submitted to the EC. The World Bank report noted that the RBMPs and NMP were submitted to the EC on time. Romania has good river quality, with 71 per cent of rivers assessed as being of good or high ecological status in 2015.

### Photos 9.6 and 9.7: Unclogging and waterway reconstruction works, Olănești River, Priporu Village



Photo credit: Romanian Waters, MoEWF

River basin planning involves a large number of design companies and contractors for infrastructure works. This area is not properly regulated. Further development of water management is dependent on the government budget and external funding. The remaining cost of overall compliance with EU water legislation has been estimated at €29 billion in the second RBMP submitted in 2016.

### 9.7 Flood management

Land cover and flood vulnerability correlate, but it is not only logging that causes floods. In certain areas, forests remain untouched, but severe flash floods can still occur; this is not only related to the water retention capacity of forests, as the lack of protection against potential soil erosion can also exacerbate deluge. The transport of increased sediment of certain water flows could damage reservoirs within about five years.

Romania mapped flood risks and submitted its first flood risk management plan in compliance with the requirements of Directive 2007/60/EC on the assessment and management of flood risks (Floods Directive). The flood statistics are not always clear since the cause of a flood event can be as different as the bad state of a dam or a naturally occurring flood. While the Government is financing flood-related developments, smaller projects are financed by the water basin administrations from their own budget.

The main flood protection investments required, as identified under the Floods Directive, would amount to €3.7 billion. However, the requirements under this Directive are limited to risk assessment and submitting a flood risk management plan to the EC – there is no obligation to report on executing the plan and carrying out investments identified as being required.

The National Risk Management Strategy is being renewed. The Strategy is valid until 2030, but as it is about nine years old, it does not cover new aspects, instruments, responsibilities, provisions, rules and action plans.

The Floods Directive has established a framework for the assessment and management of flood risks, aiming to reduce the adverse consequences associated with significant floods. Romania has adopted and reported its first flood risk management plan under the Directive and the EC conducted an assessment.

The Commission's assessment found that good efforts had been made with positive results in setting objectives and devising measures focusing on flood

prevention, protection and preparedness. The assessment also showed that the flood risk management plan included measures that are not linked to the objectives. In addition, the EC Environmental Implementation Review 2019 of Romania states that there is scope for improving the integration of the flood risk management cycle's successive steps into the flood risk management plan.

According to the EC Environmental Implementation Review 2019 of Romania, floods cost the Romanian economy an average €140 million per year. Annual floods in different parts of the country in the period 2002–2013 have been estimated to have incurred economic losses of more than €6.3 billion. The two catastrophic floods in 2005 and 2010 caused more than 100 deaths and total economic losses of €2.4 billion. The average annual cost of floods has been estimated at €150 million for the period 2000–2015. The average annual economic losses due to floods have exceeded 4 per cent of the country's GDP in seven of the 42 counties (including Bucharest municipality).

### 9.8 Management of sea water and coastal areas

According to the 2018 EEA report on bathing water quality in Romania, in 2018, of the 49 bathing waters along the Black Sea, 28 were graded excellent, 19 good, 2 sufficient and none poor or not classified (table 9.11).

Water pollution from households represents the main water stress in the Black Sea area due to unmanaged urban sprawl and illegal buildings along the coast. A large proportion of the population is not connected to a sewerage system. Moreover, households are not obliged to be connected to a wastewater treatment system if such a system is not in place. This threatens the natural vegetation. Without the natural vegetation, the land is prone to erosion. As in other parts of the country, nitrate pollution from agriculture (mostly from fertilizer) continues to cause serious problems.

The number of tourists has grown steadily since 2002, reaching a peak in 2017 (of more than 1,247,541 arrivals, an increase of 12 per cent compared with 2016). Tourism's pronounced seasonal character has resulted in a concentrated impact during the summer months (in particular, July and August, representing more than 60 per cent of the total arrivals), when the population of the area multiplies by many times. Still, the current number of tourists is considered manageable and sustainable by the authorities.

**Photo 9.8: Protection against high waves at Cap Aurora seaside resort, Constanța County**

Photo credit: MoEWF

**Table 9.11: Coastal bathing water quality, 2015–2018**

	Excellent		Good		Sufficient		Poor		Not classified	
	Number	%	Number	%	Number	%	Number	%	Number	%
2015	15	30.60	23	46.90	10	20.40	1	2.00	0	0.00
2016	34	69.40	15	30.60	0	0.00	0	0.00	0	0.00
2017	25	51.00	23	46.90	1	2.00	0	0.00	0	0.00
2018	28	57.10	19	38.80	2	4.10	0	0.00	0	0.00

Source: EEA, Bathing Water Quality in the Season 2018, Romania.

Tulcea and Constanta cities have their own wastewater treatment plants already built, rehabilitated and modernized. Where the urban population is connected to the wastewater management system, treated wastewater is discharged into the Black Sea, 4 km offshore at Tulcea and 1.5 km offshore at Constanta.

## 9.9 Legal, policy and institutional framework

### *Legal framework*

By joining the EU in 2007, Romania undertook a legal obligation to comply with EU water legislation. This includes a series of directives focused on pollution abatement (Urban Wastewater Treatment Directive and Nitrates Directive) and monitoring (Drinking Water Directive and Council Directive 76/160/EEC concerning the quality of bathing water), along with the Water Framework Directive, which aims to maintain good water status through a results-based

approach at the river basin level. Compliance has presented major challenges for Romania (chapter 1). The main laws regulating water issues that have been adopted since 2012 are:

- Law No. 141/2018, GEO No. 78/2017, GEO No. 94/2016, Law No. 196/2015, Law No. 153/2014, GEO No. 69/2013 amending and supplementing the Water Law No. 107/1996;
- Law No. 205/2013 amending GEO No. 71/2010 on establishing the strategy for the marine environment;
- Law No. 279/2018 amending GEO No. 71/2010 on establishing the strategy for the marine environment;
- Law No. 272/2017 regarding the approval of GEO No. 22/2017 amending and supplementing Law No. 458/2002 regarding the quality of drinking water;



- Law No. 158/2014 for the ratification of the Protocol on the protection of the Black Sea marine environment against pollution from sources and activities on land, signed in Sofia on 17 April 2009.

According to the EC Environmental Implementation Review 2019 of Romania, since 2013, Romania has a revised action programme in place for the implementation of the Nitrates Directive. The revised legislation has brought significant improvements on the previous action programme implementing the Nitrates Directive. The Romanian authorities have decided to apply a “whole territory approach” instead of designating nitrate-vulnerable zones and have changed some of the measures in its action programme, with significant improvements.

#### *Policy framework*

As at December 2019, there was no general water management strategy in Romania. Romanian experts consider that a general water strategy bringing all aspects of water management under one strategy umbrella would be useful. A draft national strategy for the management of sewage sludge is expected to be approved by the Government by mid-2021. The aim of the strategy is to manage the use of sludge in a way that prevents and reduces its harmful effects on soil, water, vegetation, animals and humans. The strategy will also support the implementation of Directive 86/278/EEC on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture. According to the strategy, 50 per cent of produced sludge would be used in agriculture by 2040.

The 2018 World Bank report “Romania Water – Diagnostic Report” stated that Romania is not on track to comply with SDG 6 (Ensure availability and sustainable management of water and sanitation for all). Currently, about 12 per cent of the population is reported to rely on unsafe and non-potable water sources. The report suggests defining a strategy to ensure access to safe potable water for those households that will still rely on self-supply from private wells in the medium term. Romania has programmes and strategies that support implementation of the SDG 6 targets:

- Strategy for the contribution of the operational programme to the EU Strategy for smart, sustainable and inclusive growth and the achievement of economic, social and territorial cohesion;
- Large Infrastructure Operational Programme 2014–2020 (financed from the national budget

- and the EU, and is the leading programme to support Romania meeting the requirements on drinking water and urban wastewater treatment);
- Priority Axis 3 – The development of environmental infrastructure based on the efficient management of resources;
- National Programme for Local Development, financed from the national budget and dedicated to the development of local infrastructure in order to ensure in each locality a minimum set of public services, inter alia, for the following domains: health, water and sewerage. Most Programme funds allocated for water, sanitation and sewerage projects (94 per cent) are targeted at rural areas;
- National Strategy for the Sustainable Development of Romania 2030 (chapter 1);
- National Strategy for Waste Management 2014–2020 (chapter 10);
- National Climate Change Strategy 2014–2020 (chapter 7);
- Updated NMP, including the Programmes of Measures (chapter 9) according to the EU Water Framework Directive.

#### Sustainable Development Goals targets

For SDG target 3.9 (By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination), global indicator 3.9.2 is Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services). According to the Global Health Observatory, the estimated mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene in Romania was 0.36 deaths per 100,000 population in 2016. The EU average was 0.3 deaths per 100,000 population in that year.

For SDG target 6.1 (By 2030, achieve universal and equitable access to safe and affordable drinking water for all), global indicator 6.1.1 is Proportion of population using safely managed drinking water services. According to the 2019 WHO/United Nations Children’s Fund (UNICEF) Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, the proportion of Romania’s population using safely managed drinking water services increased from 81.89 per cent in 2010 to 81.99 per cent in 2020, an increase of 0.1 per cent in the last decade. At this pace, roughly 82.09 per cent of the population will be using safely managed drinking water services by 2030. However, since 2000, 100 per cent of the population in Romania is using at least basic drinking water services, according to WHO data.

For SDG target 6.2 (By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations), global indicator 6.2.1 is Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water. According to the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, the proportion of Romania's population using safely managed sanitation services in all areas increased from 62.36 per cent in 2010 to 83.14 per cent in 2020, i.e. an increase of 33.3 per cent in a decade. At this pace, Romania will be able to reach 100 per cent by 2030. In 2017, 51.25 per cent of the population was connected to a sewer, 1.58 per cent used a septic tank and 31.73 per cent used improved latrines and other services (table 9.12). The proportion of population using at least basic sanitation services reached 87.07 per cent in 2020 from 79.03 per cent in 2010, i.e. an increase of 10.2 per cent. At this pace, the country will be able to reach 95.99 per cent by 2030. Open defecation is not practised in Romania.

For SDG target 6.3 (By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally), global indicator 6.3.1 is Proportion of domestic and industrial wastewater flows safely treated. In 2018, 56.71 per cent of Romania's domestic and industrial wastewater flows were safely treated. In 2020, 83.70 per cent of bodies of water in Romania were of good ambient water quality, of which 93.20 of rivers, 44.40 per cent of groundwater bodies, and 66.70 per cent of open water bodies were of good ambient water quality.

For SDG target 6.4 (By 2030, substantially increase water use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity), global indicator 6.4.1 is Change in water use efficiency over time. According to Eurostat,<sup>141</sup> the rate

of freshwater abstraction increased from 322.55 m<sup>3</sup> per capita in 2012 to 344.22 m<sup>3</sup> per capita in 2017. According to the Food and Agriculture Organization of the United Nations, water use efficiency was US\$19.63/m<sup>3</sup> in 2008, reached US\$25.10/m<sup>3</sup> in 2016 and US\$27.91/m<sup>3</sup> in 2018 an overall increase of 42.2 per cent over the 10 years (figure 9.3). In comparison, in 2017, water use efficiency was US\$129/m<sup>3</sup> for Germany, US\$83.53 /m<sup>3</sup> for France and US\$44.33/m<sup>3</sup> for the Netherlands. The volume of freshwater withdrawal as a proportion of available freshwater resources, measuring the water stress level, was 6.8 per cent in Romania in 2008 and had decreased to 6 per cent in 2018, i.e. by 11.8 per cent in 10 years.

In terms of SDG target 6.5 (By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate), global indicator 6.5.1 (Degree of integrated water resources management), Romania scored 77 per cent in 2020. The score is divided into four sections: Enabling Environment, Institutions and Participation, Management Instruments, and Financing, for which Romania reported 96, 65, 84 and 44, respectively.

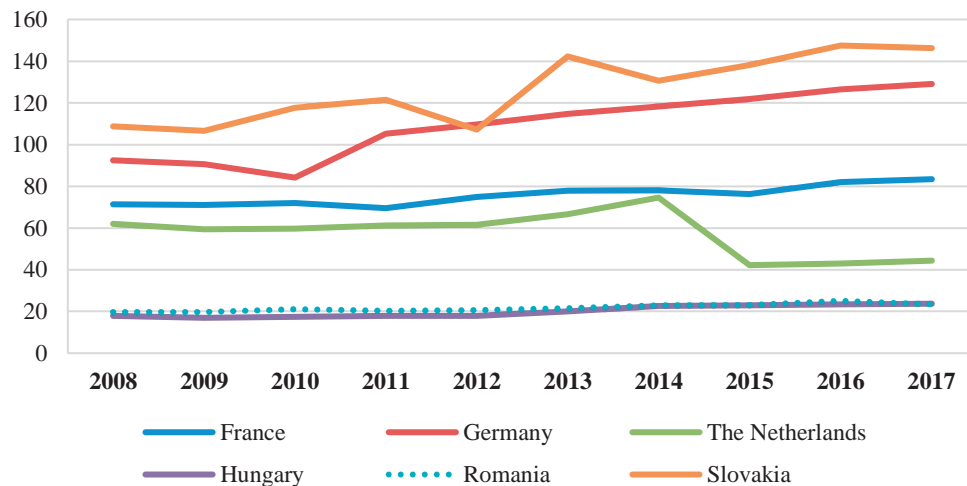
The score on Institutions and Participation is impacted by the lack of data on gender-specific objectives at subnational levels and gender-specific objectives and plans at transboundary level. The score on Financing was 44. On SDG indicator 6.5.2 (Proportion of transboundary basin area with an operational arrangement for water cooperation), Romania reported 100 per cent of transboundary aquifers and of transboundary basins (river and lake basins and aquifers) with an operational arrangement for water cooperation in 2018 (chapter 6). The SDG target 6.6 (By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes), global sub-indicator 6.6.1 on lakes and rivers permanent water area change varied from 2.7 per cent in 2012 to 4.9 per cent in 2020 according to the Global Surface Water Explorer extraction for UN Environment, i.e. an increase of 81.5 per cent in 8 years.

**Table 9.12: Trends in sanitation water service levels, 2012–2017, per cent**

	2012	2013	2014	2015	2016	2017
Improved latrine and other	38.60	37.22	35.84	34.46	33.10	31.73
Septic tank	2.25	2.11	1.98	1.85	1.71	1.58
Sewer	39.98	42.23	44.49	46.74	48.99	51.25

Source: <https://washdata.org/data/household#!/>.

<sup>141</sup> <https://ec.europa.eu/eurostat/web/environment/water>

**Figure 9.3: Water use efficiency, 2008–2017, US\$/m<sup>3</sup>**

Source: Food and Agriculture Organization of the United Nations, 2020.

### *Institutional framework*

While water management was the responsibility of different ministries, its internal institutional structure did not change during the period 2012–2019. Since 2019, after a governmental change, the Ministry of Environment, Waters and Forests is responsible for drafting water-related legislation and coordinates water-related concerns (chapter 1).

The National Administration “Romanian Waters” drafts water-related regulations, for example, relating to efficiency of water use, and manages sludge. It inspects and manages water quality. It has about 9,500 staff and an annual budget of €265 million. At the county level, units are responsible for water management. Due to their size, some counties have two units, with a total staff of around 50. The National Institute of Hydrology and Water Management conducts studies and produces scientific opinion. The Institute is also a member of the South East Europe Flash Flood Guidance System, which is coordinated by the World Meteorological Organization. The National Institute for Marine Research and Development “Grigore Antipa”, located in Constanta, is the focal point of the Convention on the Protection of the Black Sea against Pollution, and is a member of the Advisory Group of the Black Sea Commission, which convenes annually, involving experts from all Black Sea countries. The Institute bases its work on the EU Maritime Strategy Framework Directive, which describes obligations. The Institute, which is financed by the Ministry of Research, has 45 monitoring stations. The Institute cooperates with experts from Bulgaria, the Russian Federation, Turkey and Ukraine. The fact that not all partner countries use the same research parameters remains a challenge to be addressed.

The National Meteorological Administration actively cooperates with the media, not only to share meteorological forecasts but also to explain what they mean. For example, a traditional annual press conference is organized each January to give an overview of the previous year and share information on the threats to sensitive sectors such as agriculture and tourism. Similarly, World Meteorological Day (23 March) provides a good opportunity to gain deeper insight, following a topic nominated by the World Meteorological Organization, which changes each year. The Administration offers farmers daily meteorology data on soil moisture to enable them to plan when to irrigate. The Administration is also a member of the National Committee on Drought, where information sharing is enhanced. The Administration is the national focal point of the IPCC. The National Regulatory Authority for Municipal Services of Public Utilities elaborates the methodology for establishing, adjusting or modifying the prices and tariffs for water supply and sewerage services. The Authority carries out the regulation and central monitoring of activities on water services. The Authority is subordinated to the Ministry of Regional Development and Public Administration. Forty-five intercommunity development associations (IDAs) group local authorities that have delegated their water supply and sanitation services to a public regional operator. Their role is to supervise the performance of the respective public regional operators under the delegated services contracts, as well as approve the regional development plans that are proposed by public regional operators and include, inter alia, investment and tariff policies that are ultimately approved by the National Regulatory Authority for Municipal Services of Public Utilities (ANRSC). Water and sewerage operators set tariffs based on the methodology elaborated by the ANRSC (chapter 3).

In the case of the IDAs' and other investment projects that are developed through public funds provided, in whole or in part, from the state budget and/or non-reimbursable funds, the service is financed by the operator applying the single price/tariff and the tariff strategy, in accordance with the Cost-Benefit Analysis Methodology for investments in water infrastructure, approved by GD No. 677/2017 for Cost-Benefit Analysis Methodology. The tariff strategy is elaborated by the respective administrative-territorial unit or IDA for a period of at least five years and must be updated whenever necessary. The tariff strategy is a condition for financing water infrastructure investment projects using public funds granted from the state budget and/or non-reimbursable funds. Establishment of the level of the single price/tariff is approved, by a notice of the ANRSC, by decision of the deliberative authority of the administrative-territorial unit or, as the case may be, in compliance with the entrusted mandate, by decision of the general assembly of the IDA. Once established, subsequent adjustments to the single price/tariff are approved by the ANRSC in accordance with the pricing strategy and the formulas provided for in the management delegation agreement and/or the co-financing agreements, which are annexed to the delegation agreement.

In other cases, tariffs are established, adjusted or modified based on the Methodology approved by Order No. 65/2007 of the President of the ANRSC. Once notified by the ANRSC, the tariffs are approved by local authorities. There are 43 IDAs in which the regional operators used European funds for water and sewerage investments. Recommendation 7.4 in the Second EPR of Romania urged the Government to strengthen the institutional capacity of the IDAs so that they can better exercise their function of supervising regional operators of water supply and wastewater systems. This recommendation is

implemented. However, Romania does not report on SDG target 6.b (Support and strengthen the participation of local communities in improving water and sanitation management).

Commercialization and regionalization of water supply and sanitation services have been the backbone of the reforms in the past decade. According to the World Bank 2018 report "Romania Water – Diagnostic Report", fragmented municipal operators have been replaced by 43 public regional operators and two large private operators that provide piped water service to 11 million people, or more than 70 per cent of the connected population. Small public municipal operators serve about 1.5 million people. This was achieved by putting in place a new institutional framework in which municipalities delegated water supply and sanitation services to new public regional operating companies.

#### *Coordination at all levels*

Water-related duties are distributed among the organizations at the national, water basin and local levels. While this can be a practical arrangement, it can be negative given that administrative institutions that are active in water management hardly ever have comprehensive information on recent trends in water quantity, quality and needs, navigation, hydropower and irrigation, even when these issues are obviously interdependent.

#### *Bilateral and basin-wide cooperation*

Romanian Waters works in close cooperation based on bilateral agreements – there is intensive data exchange with all neighbouring countries, especially Hungary, Serbia and Ukraine. Other cooperative strategies are also developing well, for example, the European Union Strategy for the Danube Region (box 9.2).

#### **Box 9.2: European Union Strategy for the Danube Region**

Romania contributes to the implementation of the EU Strategy for the Danube Region. The Strategy aims to leverage international cross-cutting issues, bridge intersectoral policies under a unitary approach at regional level and bring public stakeholders closer to the official governmental channels, promoting bottom-up initiatives on the political agenda. Sustainability is the core principle of the Strategy, and hence, regional questions such as enhancement of environmental management are also highlighted. Romania chairs three priority areas: Inland waterways, Culture and tourism, and Environmental risks. Each year, the incumbent presidency of the Strategy organizes an annual forum to discuss recent macroregional issues. At the end of June 2019, the event was organized by Romania, with the country thus benefiting from special media attention as it was holding both the EU Council Presidency and the Strategy Presidency.

The Strategy works based on the "3 NO principles", i.e. no dedicated funding, no new legislation and no new organizations. However, the project promoters can form consortia and clusters and access a large variety of funds available at the regional, national and transnational levels. For example, Romania successfully attracted projects aiming to ameliorate navigation along the Lower Danube, as well as projects funded by the Danube Transnational Programme, such as Art Nouveau, Connect Green and Danube Floodplain, aiming to valorize the natural and cultural heritage of the region or restore the connectivity of the Danube River with the Danube Floodplain, to mitigate the flood risks and restore some of the river ecosystem services.

Various joint bodies cover the transboundary basin or sub-basins Romania shares with all riparian States (Bulgaria, Hungary, Republic of Moldova, Serbia and Ukraine). Each agreement has a secretary of the Joint Commission (usually an employee of the Ministry of Environment, Waters and Forests), who is responsible for cooperation and ensuring follow-up to the joint body's decisions. How the bilateral cooperation with neighbouring countries works differs according to the specific agreements:

- Bulgaria: The Joint Commission has four working groups: Working Group for river basin water management; Working Group on the Danube; Working Group on floods; and Working Group on the Black Sea;
- Hungary: Bilateral cooperation is developed through the Joint Commission, which normally meets once a year. Each subcommission has one meeting each year (according to the decisions of the Joint Commission);
- Republic of Moldova: Bilateral cooperation includes a subcommission on protection against floods and ice, a subcommission on quantitative water management and hydrometeorology, a subcommission on water quality protection and water bodies biodiversity, a subcommission on operation and maintenance of Hydrotechnic Knot Stanca-Costesti on the Prut River and an ad hoc subcommission;
- Serbia: work is developed under the subcommission on protection against floods and ice, subcommission on water quality protection and subcommission on hydrometeorology and quantitative water management;
- Ukraine: Bilateral cooperation is undertaken by three working groups: the Working Group on the Tisa River and its tributaries in the border area; the Working Group on the Prut and Siret Rivers and their tributaries in the border area; and the Working Group on the Danube River in the common border area.

## 9.10 Assessment, conclusions and recommendations

### *Assessment*

Since 2012, Romania has made progress in water management. As an EU Member, Romania regularly updates water-relevant legislation based on EU developments. No water strategy bringing all aspects of water management together is in place. Thanks to industrial modernization and household water consumption metering, water demand has decreased and remained stable. Ongoing investments in water infrastructure developments do not cover expansion of

water supply and sewerage networks, nor the renovation of dams.

Concerns remain about the impact of discharges not connected to the sewerage network, pollution from agricultural activities, and the population's limited access to water supply and sanitation systems in rural areas. The main water stress in the Black Sea area is pollution from households due to unmanaged urban sprawl and illegal construction along the coast.

Romania has a long tradition of river basin management. At governmental level, no changes took place after 2012 until, in 2019, after a governmental change, the Ministry of Environment, Waters and Forests became responsible for drafting water-related legislation and coordinating water-related concerns. A new institutional framework in which municipalities delegated water supply and sanitation services to new public regional operating companies allowed the replacement of municipal operators by regional public operators and large private operators.

Recommendation 7.1 in the Second EPR of Romania, which urged the Government to assess future drinking water needs and consider exploring additional water resources and the impact of the degradation of water reservoirs on water management, is not implemented and therefore remains valid. The implementation of Recommendation 7.2, offering steps to support implementation of the Urban Wastewater Treatment Directive, is in progress. The implementation of Recommendation 7.3 urging the Government to identify options for the safe handling of sludge from wastewater treatment is also under way. Recommendation 7.4 on strengthening the capacity of the IDAs is implemented.

Although progress has been achieved, Romania is not on a track to achieve SDG 6 by 2030, in particular on access to adequate and affordable water supply and sanitation services. Progress has been made as measured by the main global indicators of targets 6.1, 6.2, 6.3, 6.4, 6.5 and 6.6. Measurements on indicator 6.5.1 (Degree of integrated water resources management) reached 77 per cent for Romania in 2018. On indicator 6.5.2 (Proportion of transboundary basin area with an operational arrangement for water cooperation), 100 per cent of Romania's transboundary aquifers and transboundary basins (river and lake basins and aquifers) had an operational arrangement for water cooperation in 2020. With regard to SDG target 3.9 (By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination), global indicator 3.9.2 (Mortality rate attributed to unsafe water, unsafe sanitation and

lack of hygiene ...), the estimated mortality rate in Romania was 0.4 deaths per 100,000 population higher than the EU average in 2016.

### *Conclusions and recommendations*

#### Water management strategy

Water management covers various topics, including water supply and sewerage systems, hydropower stations, navigation, and managing floods and droughts. It involves governmental and non-governmental stakeholders. Water-related issues also include economic and social aspects. No dialogue involving all stakeholder groups is taking place. Information about the current situation is disseminated at various levels, including local organizations, representative groups, NGOs, environmental institutions and local communities, which would support the achievement of SDG target 6.b, on which Romania does not report. No strategy is in place to bring together all water-related matters, including financing.

#### Recommendation 9.1:

*The Government should develop and adopt a comprehensive water management strategy, addressing all water-relevant issues, including gender mainstreaming, in a long-term approach, by launching effective dialogues with all relevant groups and organizations to benefit from information about the ongoing situation and suggestions for the future.*

#### Drinking water data

In 2016, 99.86 per cent of drinking water analyses were compliant for microbiological parameters in the drinking water supply zones that supply more than 1,000 m<sup>3</sup>/day or more than 5,000 inhabitants. However, no in-depth analysis was carried out assessing whether all the Drinking Water Directive's requirements are fulfilled. According to the Global Health Observatory, the estimated mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (global indicator 3.9.2) was 0.4 deaths per 100,000 population in 2016. The EU average was 0.3 deaths per 100,000 population in the same year.

#### Recommendation 9.2:

*To improve monitoring of SDG global indicator 3.9.2 on the estimated mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene, the Government should ensure that:*

- (a) *Drinking water quality data are collected;*
- (b) *An in-depth analysis is carried out assessing whether all the requirements of Council*

*Directive 98/83/EC on the quality of water intended for human consumption are fulfilled.*

#### Water-related investments

Water demand has decreased since 1990 due to the installation of water meters, increased water prices, use of modern technology in industry and a decline in the water needs of agriculture. The National Institute of Hydrology and Water Management forecast water demand at 15 million m<sup>3</sup> for 2030 under the maximum water use scenario. The medium or environmental scenario forecast double the 2017 level of water use.

According to the National Institute of Statistics, the proportion of the population connected to water supply systems increased from 60.23 per cent in 2012 to 69.20 per cent in 2018. At the current pace of growth of coverage with piped water services, Romania will be able to achieve universal access only between 2040 and 2050. The proportion of the population using safely managed drinking water services (SDG target 6.1) increased from 81.81 per cent in 2008 to 81.92 per cent in 2017. By maintaining this pace, 82.07 per cent of the population would be using safely managed drinking water services in 2030.

The present level of connection to sewerage treatment plants leads to the conclusion that the targets for the implementation of the Urban Wastewater Treatment Directive will be difficult to achieve, particularly in rural areas. The proportion of the population using safely managed sanitation services (indicator 6.2.1(a)) increased from 62 per cent in 2010 to 83 per cent in 2020. Romania would be able to reach 100 per cent by 2030 by keeping up this rate of progress. In 2018, the proportion of domestic and industrial wastewater flows safely treated (indicator 6.3.1) was 56.71 per cent. In 2017, 83.69 per cent of groundwater bodies and 62.61 per cent of surface water bodies were of good quality.

Romania scored 72 per cent on implementation of integrated water resources management in 2018. This low rate is due to the lack of investment (on management instruments and financing the score was 44 per cent) and the lack of data on gender-specific objectives at subnational levels and gender specific objectives and plans at transboundary level (on institutions and participation the score was 65 per cent). However, Romania reported 100 per cent implementation of transboundary water bodies with an operational arrangement for water cooperation (indicator 6.5.2).

Recommendation 9.3:

*The Government should:*

- (a) *Invest in water infrastructure, such as water supply systems, water pipes, wastewater treatment plants and sanitation networks, in particular in rural areas;*
- (b) *Review the requirements in technical normative documents on industrial wastewater discharges, in order to set wastewater discharge limits for different branches of industry;*
- (c) *Ensure that, when revising river basin management plans, future drinking water needs and water quality objectives are taken into account in order to consider exploring additional water sources such as additional reservoirs.*

Sludge management

Only a small amount of sludge is used in agriculture. With the decrease in pollution from industrial wastewater discharges, improved sludge quality is expected. A draft national strategy for the management of sewage sludge is expected to be approved by the Government by the end of 2021.

Recommendation 9.4:

*The Government should review, adopt and implement the strategy for the management of sewage sludge considering new trends in this area.*





## WASTE AND CHEMICALS MANAGEMENT

### 10.1 Practices and trends in waste management

#### *Waste data*

With regard to the system of data collection on waste, well-structured and valid statistical information is expected to be collected when EU-compatible methodology is implemented on all waste streams, through an integrated online system of record keeping. Reporting on waste management by operators is not usually done by appointed and trained persons, based on clear methodology. Some waste reporting systems exist and are managed by NEPA, the Environmental Fund and public administrations. However, the lack of an integrated online system of record keeping does not enable crosschecking of data reported, such as generator vs operator, forwarder vs receiver, sharing one data source among institutions. Such a system is not implemented in Romania.

Recommendation 8.4 in the Second EPR of Romania, asking the then Ministry of Environment and Forests to ensure that detailed, verified background information be made available for the development of a new integrated waste management strategy for the period 2014–2023, is not implemented as at December 2019.

#### *Municipal solid waste and similar waste*

##### Generation and collection

NEPA collects and manages data on the generation and collection of municipal solid waste (MSW). NEPA collects information reported by different types of companies, for example, waste generators, companies permitted for waste collection and treatment, and sanitation companies, through online questionnaires. NEPA validates, assesses and processes data in accordance with the different reporting obligations. According to NEPA, in 2017, Romania generated 5.3 million tons of MSW, which is about 272 kg per capita. This is below the EU-28 average of 487 kg per capita in 2017.

The MSW generated per capita increased from 251 kg in 2012 to 272 kg in 2017 (table 10.1). The share of

MSW treated of the MSW generated increased between 2012 and 2017 by 15 per cent, with a big jump between 2015 and 2016, from 87.4 per cent to 98.9 per cent (table 10.1). Nevertheless, this increase was not followed by a comparable trend of MSW collection coverage rate at the national level, which increased by 2 per cent (table 10.2). The population covered by waste collection services has continued to increase steadily since 2012. The preliminary data for 2018 indicate that 96 per cent of urban areas and 79 per cent of rural areas were covered by waste collection services. On the national level this represents 88 per cent coverage (table 10.2).

MSW collection and treatment are among the responsibilities of the local public administration and might be delegated to private companies. According to the National Romanian Regulator for Public Services, there are 336 operators licensed for sanitation services as at 2019. The increase in waste collection coverage and related tariff remains a challenge. The population is not used to paying for their waste collection services. In addition, in rural areas, the waste collection services used to be scarce and the amount of waste was lower than in urban areas. Collection of waste solely from rural areas is not economically viable and thus less attractive for operators.

To modernize the municipal waste management system, Romania, with the support of EU funds, has been gradually introducing solid waste integrated management systems (SWIMS). These systems are aimed at the development and integration of all the elements necessary for a functional waste management system, including separate waste collection, transport, transfer, treatment and disposal within a county. Typically, a single system for one county covers both urban and rural areas, aiming at financial sustainability.

The Government also financially encourages municipalities to organize waste collection services. However, any administrative territorial unit that has not organized a public sanitation service contributes to the Environment Fund Administration €10 per ton of municipal waste not collected.

Table 10.1: MSW amount per year by treatment, 2012–2017, tons

	2012	2013	2014	2015	2016	2017
<b>Total generation*(t)</b>	<b>5 044 121.0</b>	<b>5 070 805.0</b>	<b>4 956 075.0</b>	<b>4 903 535.0</b>	<b>5 142 542.0</b>	<b>5 333 171.0</b>
Generated (kg/capita)	251.0	254.0	249.0	247.0	261.0	272.0
MSW treated (t)´	4 261 000.0	4 270 000.0	4 338 000.0	4 288 000.0	5 079 000.0	5 324 000.0
Treated/generated (%)	84.5	84.2	87.5	87.4	98.9	99.6
Separately collected per year (t)**	377 510.0	398 583.0	412 560.0	430 305.0	580 602.0	696 742.0
Separately collected/waste generated (%)**	7.5	7.9	8.3	8.8	11.3	13.0
Sorted after collection (t)***	639 585.0	882 501.0	1 058 255.0	969 838.0	1 169 791.0	1 194 415.0
Sorted after collection/MSW generated (%)	12.7	17.4	21.4	19.8	22.7	22.4
Recycled, composted or prepared for reuse (t)	745 284.0	670 076.0	647 536.0	649 591.0	689 443.0	746.0
Recycling: material (t)´	165 000.0	215 000.0	256 000.0	284 000.0	331 000.0	393 000.0
Recycling: composting + digestion (t)´	580 000.0	455 000.0	391 000.0	365 000.0	352 000.0	353 000.0
Recycled, composted or prepared for reuse/waste generated	14.8	13.2	13.1	13.2	13.4	13.9
Recycling: material/waste generated (%)	3.3	4.2	5.2	5.8	6.4	7.3
Recycling: composting + digestion/waste generated (%)	11.5	9.0	7.9	7.4	6.8	6.6
Recovery: co-incineration (t)	88 776.0	97 368.0	132 601.0	116 296.0	219 608.0	227 280.0
Recovery: co-incineration/waste generated (%)	1.8	1.9	2.7	2.4	4.3	4.3
Disposal: compliant landfills (t)	2 811 443.0	3 052 872.0	3 052 966.0	3 096 145.0	3 330 021.0	3 717 951.0
Disposal: compliant landfills/waste generated (%)	55.7	60.2	61.6	63.1	64.8	69.7
Disposal: non-compliant landfills (t)	615 204.0	449 641.0	540 661.0	426 181.0	237 488.0	51 912.0
Disposal: non-compliant landfills/waste generated (%)	12.2	8.9	10.9	8.7	4.6	1.0
Other disposal ****(t)	97 780.0	435 038.0	348 098.0	302 629.0	498 124.0	534 172.0
Other disposal****/waste generated (%)	1.9	8.6	7.0	6.2	9.7	10.0

Source: NEPA, 2019; Eurostat.

Notes: \* NEPA database. \*\* includes separately collected household waste, as well as WEEE from households and other recyclable waste collected by permitted companies. \*\*\* represents only household waste, separate or mixed collection, that is sent to sorting facilities. \*\*\*\* mainly temporary storage. The listed ways of treatment include more treatments that waste can undergo, e.g. some waste undergoes more treatment stages, i.e. sorting and later material use. Therefore, the total sum of waste that undergoes treatment exceeds 100 per cent.

Table 10.2: Population covered by waste collection services, 2012–2018, per cent

	2012	2013	2014	2015	2016	2017	2018
Urban areas	87.00	88.98	92.26	93.67	94.50	95.90	95.58
Rural areas	60.44	66.80	69.12	71.79	75.10	79.15	79.38
National coverage	75.04	78.96	81.59	83.57	85.55	88.12	88.09

Source: NEPA, 2019.

GEO No. 74/2018 approved by Law No. 31/2019 introduced measures to move the national MSW system closer to the principle of integration. One of the stimulating measures is the introduction of a landfill tax for disposal of MSW, in addition to that for disposal of construction and demolition waste (officially called “contribution to the circular economy”). Together with the programme on development of SWIMS in counties, it promises a further increase in coverage and integration of remote rural areas into the waste management system.

To deepen integration, the NWMP for the period 2018–2025 identified additional infrastructure needed. Most of the additional capacities are needed in mechanical-biological treatment (970,000 t/y) and anaerobic digestion (mostly represented by biogas plants, with total capacity of 821,000 t/y), followed by incineration capacities with energy recovery (173,000 t/y), sorting (52,000 t/y) and composting plants (27,000 t/y). In addition, transformation of waste into secondary raw material for material use or product would help create economic value for waste. To do so, the waste management system must be economically stimulated to integrate with industries and technologies for the utilization of waste materials, in cooperation with the research and development sectors. Creating value from waste would also improve the economic balance of waste collection from rural areas.

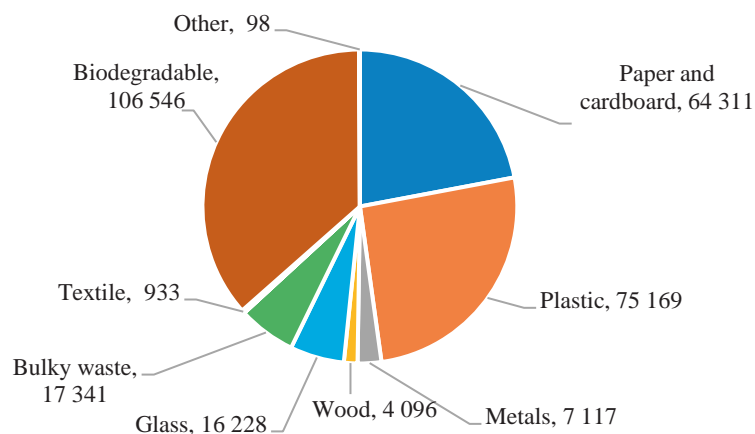
#### Separation and sorting

The separate collection of recyclables from MSW remains low, at only 12.9 per cent of the total MSW generated in 2017 (table 10.1). In 2018, the greatest

amount separately collected was biodegradable waste (107,000 t), followed by plastics (75,000 t) and paper and cardboard (64,000 t) (figure 10.1). Another possibility for separating recyclables from MSW in Romania is the sorting of mixed waste after its collection. In 2017, 22.5 per cent of MSW collected underwent sorting, up from 15 per cent in 2012. Comparison of data on the share of MSW separately collected and sorted after collection (in 2017, 13.1 + 22.5 = 35.6 per cent) with data on MSW recycled, composted or prepared for reuse (in 2017, 13.9 per cent) indicates a relatively low yield of recyclables (40 per cent) from separately collected/sorted waste. The low separation rate of recyclables was noted by the EU and the country is at risk of missing the 2020 target of 50 per cent of MSW prepared for reuse/recycling. The capacities of facilities needed, in addition to those existing, is 52,000 t/y, according to the NWMP for the period 2018–2025.

The current low MSW separate collection/sorting and recycling rate is not a nationwide pattern. Some counties have a SWIMS in place (box 10.1). The issue originates from the beginning of the transformation of the national waste management system to EU standards. Great efforts have been made to introduce SWIMS, covering rural and urban areas and with one for each county, with some exemptions. With the support of EU funds, SWIMS project implementation started in 2007 and, since then, 32 of the 42 counties (including Bucharest municipality) have taken part in the process. By 2019, up to 20 SWIMS were fully functional and operating successfully. The remaining municipalities outsource sanitation services, which results in longer transportation distances and higher costs.

**Figure 10.1: Waste collected separately by sanitation operators, 2018, tons**



Source: NEPA, 2019.

**Box 10.1: SWIMS in Pitest, Argeş County**

The SWIMS in Pitest municipality, Arges County, is an example of good practice. The system of waste management facilities and services for the whole county is operated by one company, with MSW collection provided by three other, different companies. The SWIMS facility includes a composting plant, mechanical-biological treatment, sorting line, construction and demolition waste shredder, and compliant landfill with gas-collection system to produce energy and wastewater treatment plant, all operated in accordance with national standards.

The SWIMS also services the commercial sector. All the separately collected/sorted outlets are contracted to recycling companies. These include more than 10 items, such as paper, cardboard, various plastics, metals, glass, refuse-derived fuel, compost and wood.

**Photos 10.1 and 10.2: Separate waste collection in Bucharest (left) and Brasov (right)**

*Photo credit: Angela Sochirca*

GEO No. 74/2018 allows municipalities to amend the contracts by introducing performance indicators for waste collection companies in order to increase the rate of separate collection of recyclable waste and meet the recycling goals by 2020 and beyond. Penalties for not fulfilling the targets were also introduced.

To benchmark the national performance against SDG target 12.5 (By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse), global indicator 12.5.1 (National recycling rate, tons of material recycled), the latest publicly available data are from 2016. In 2016, the country reached 30 per cent on the EU indicator (Recycling rate of waste excluding major mineral wastes) (the EU-27 average was 56 per cent, an increase of 2 percentage points on its average of 54 per cent in 2012). The most “recycling” in Romania is done by the manufacturing sector (estimated at 63 per cent as of 2017, including secondary waste), while the municipal sector reached only 13.9 per cent recycling in 2017 (the EU 2020 target is 50 per cent municipal waste prepared for reuse/recycling).

Romania has endorsed the EU policy framework with the key principles of waste prevention, recycling and reuse. The country has developed specific programmes and co-financed substantial funds from the EU dedicated to these programmes to approach target 12.5: a) Sectoral Operational Programme 2007–2013, Priority Axis 2 –“Development of integrated waste management systems and rehabilitation of historically contaminated sites”; and b) Large Infrastructure Operational Programme 2014–2020, Priority Axis 3 – “Development of environmental infrastructure under efficient resources management conditions”.

Romania has developed administrative support to facilitate these programmes, though with poor results. The country has been also implementing monetary measures, including a €10 penalty per each ton of recyclable waste that is not diverted from landfill. In addition, municipalities struggle to recruit sufficient qualified personnel. The same applies to environmental institutions. Overall awareness of needs and methods of sustainable waste separation and recycling has not been raised systematically.

Despite having implemented some measures, and with an as yet incomplete basic waste management infrastructure, Romania is at the beginning of its path to sustainable consumption. On the one hand, the purchasing power of rural areas is low, as reflected in low consumption and, consequently, a low waste generation rate. On the other hand, Romania's economic power relies too much on primary resources and the volume of primary resources needed for generation of GDP is one of the highest in the EU. While some EU countries are phasing out waste disposal on landfills in favour of waste utilization, Romania is catching up with the rehabilitation of non-compliant landfills and construction on new, compliant landfills.

Most worrying is the low demand for environmental technology, which is caused by the absence of measures discouraging waste disposal, such as a landfill tax. Its introduction would reduce waste generation and divert waste from landfills to material recovery facilities. According to the EU waste legislation implementation report, Romania was at risk of missing the 2020 municipal waste reuse/recycling target of 50 per cent.<sup>142</sup>

### Landfilling

As at 2019, all MSW is deposited in compliant landfills. According to NEPA, in 2017, approximately 3.7 million tons (70 per cent) of MSW was disposed of in compliant landfills, and only 52,000 tons (1 per cent) was disposed of in non-compliant landfills (table 10.1), which is a decrease of 11 per cent compared with 2012. The share of waste disposed of in other ways (mostly stored) has increased by 8 per cent to 10 per cent in 2017.

There are 16 storage facilities for temporary waste storage in the country. Temporary storage is generally allowed for one year prior to disposal and three years prior to recovery, during which the owner can test how to treat it in order to follow the waste hierarchy. After that period, and only if there is no other possibility of utilization, the owner of the temporary storage can dispose of the waste. In the case of MSW and with respect to the predominant way it is treated in Romania, most of the stored waste is most likely to be disposed of to a landfill. The amount of waste landfilled increased from 68.8 per cent in 2012 to 80.7 per cent in 2017.

By December 2019, Romania had closed 213 of its 240 landfills that did not comply with the Landfill Directive, supported by European funds and the

national budget. Of the 27 remaining non-compliant landfills, the Environment Fund will support the closure-rehabilitation costs for 10 of them and the European funds and/or national budget will cover the closure-rehabilitation costs for 17 others.

Romania is facing challenges in securing the capacities required for sustainable MSW disposal in the future, rehabilitating closed non-compliant landfills and introducing viable economic schemes for landfill tariff setting. In addition, some facilities, including newly constructed SWIMS landfills, are left with limited maintenance, because some tenders for a municipal sanitation service operator have been repeatedly delayed as competing parties lodged court appeals against the tender decision. As a result, this could hand operators the argument that they cannot guarantee compliant performance of such facilities.

According to NEPA, in 2018, Bucharest generated 0.75 million tons of MSW and disposed of it on the three landfills servicing the municipality, while the Ministry of Environment, Waters and Forests estimates that Bucharest generates approximately 1 million to 1.1 million tons of waste annually. The environmental permit of the landfill Ecorec Glinahas expired in February 2019 because of non-compliance, while the other two landfills with environmental permits (Chiajna-Rudenei and Vidra) have remaining capacity of only 4.2 million m<sup>3</sup> (i.e. three years' capacity – provided the density of waste is 0.5 t/m<sup>3</sup> and the landfills receive 0.75 million tons of municipal waste only from Bucharest). In fact, the landfills also receive waste from Ilfov County.

As a result, Bucharest is facing an issue in terms of waste disposal capacity. Bucharest has not yet implemented a SWIMS and did not invest in waste management infrastructure. A waste incineration station was expected to be built in Bucharest, but because the urban environment was deemed unsuitable for such a plant, the project has been postponed. In the context of 2019, the waste incineration station was considered a realistic solution for management of the municipal waste.

Romania has improved its MSW management since its EU accession. In 2018, 95.6 per cent of urban areas were covered by waste collection. In Bucharest, the waste collection rate reached 100 per cent, of which 18 per cent was sent to sorting facilities, while separate collection of recyclables at source is only now emerging.

<sup>142</sup> [https://ec.europa.eu/environment/waste/pdf/waste\\_legislation\\_implementation\\_report.pdf](https://ec.europa.eu/environment/waste/pdf/waste_legislation_implementation_report.pdf).

**Photo 10.3: Mechanical biological treatment plant of municipal waste, Pitești city, Argeș County**



*Photo credit: Boris Urbanek*

Cities also produce a substantial amount of sewage sludge from the treatment of wastewater. In 2018, the Bucharest wastewater treatment plant generated 31,000 tons of dry matter, which corresponds to approximately 155,000 tons of sludge. All the sludge received treatment (anaerobic digestion) and more than 90 per cent of it was used as a fertilizer after the treatment.

According to the Ministry of Environment, Waters and Forests, all the MSW collected in Romania and designated for disposal is landfilled on compliant landfills. However, in 2018, numerous complaints from citizens were addressed to the European Parliament regarding air pollution from the Chiajna-Rudenei landfill, which serves mainly the northern and western parts of Bucharest. Petitioners referred to the issue as long lasting.

Under SDG 11 (Make cities and human settlements inclusive, safe, resilient and sustainable), target 11.6 is: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management. The National Institute of Statistics does not collect data on global indicator 11.6.1 (Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities).

There is an expectation that data will be collected for this indicator. In the context of monitoring implementation of the 2008 first National Sustainable Development Strategy – Horizons 2013–2020–2030 (chapter 1), the National Institute of Statistics used to collect data on the amount of household waste collected per inhabitant by counties.

**Photo 10.4: Waste management plant output, Leț Village, Covasna County**



*Photo credit: MoEWF*

#### *Manufacturing waste*

Generators of manufacturing waste are responsible for managing waste on their own or through another company, in both cases in accordance with the environmental permit for waste collection or treatment. The manufacturing sector generates approximately 7 million tons of waste annually. The two subsectors – manufacture of wood and of products of wood and cork, and manufacture of basic metals and fabricated metal products – together generated almost 60 per cent of the total manufacturing waste between 2012 and 2016. The next largest categories were the manufacture of chemical, pharmaceutical, rubber and plastic products (12 per cent), food products (8 per cent), computers and electronics (7 per cent) and agricultural products (6 per cent).

NEPA provides data for the indicator “treatment, recycling and reuse”, which includes the secondary waste resulting from treatment of waste. This accounts for the greatest amount of waste and is followed by co-incineration (energy recovery) and disposal on compliant landfill/surface impoundment (table 10.3). Differences exist between the amount of waste generated and amount of waste treated and disposed of because of the amount of waste that is stored each year at the place of generation prior to its treatment and disposal. Industrial waste can be stored for one year prior to its disposal and three years prior to recovery.

Co-incineration is well established in Romania since all cement factories have invested in specific technologies and have been authorized for the co-incineration of a wide range of wastes. This is a key advantage that offers potential for more sustainable schemes of waste management such as energy and

material use and waste processing. In 2016, the total capacity of energy use waste management installations in Romania was 6.2 million tons, compared with 7 million tons of manufacturing waste generated annually.

The disposal of industrial waste on compliant landfills and impoundments is organized in such a way that manufacturing companies usually operate their own compliant waste management facility for hazardous and non-hazardous waste. There is no longer any non-compliant industrial landfill operating in the country. Although 47 non-compliant industrial sites are under an EU infringement procedure, they are not in operation and are awaiting remediation or rehabilitation. The number of companies with foreign capital licensed for waste management operations in Romania is very low (up to three companies).

#### *Waste from the energy sector*

Energy sector waste characteristics are primarily driven by the energy mix of the country: 23 per cent of energy is generated by coal combusting plants, 16 per cent by combustion of hydrocarbons and the

remainder by renewable sources and nuclear power. Coal combusting plants generally generate a substantial amount of combustion wastes of various quality, which can be utilized depending on the combustion technology. Thus, slag and ash usually form 20 per cent to 30 per cent of the input in high temperature combustion technology and gypsum products can form 20 per cent.

Only a small amount of Romanian energy sector waste is recovered: 7.2 per cent in 2012 and 9.4 per cent in 2016 was recycled and backfilled. The dominant treatment for energy sector waste in Romania is landfilling, which accounted for more than 90 per cent in 2016 (table 10.4). The main reasons for this treatment are the lack of a landfill tax, the lack of implementation of end-of-waste criteria and the lack of the required legal framework and technical standards for end-of-waste and product criteria. This situation and the potential misuse of end-of-waste criteria hampers the opportunity to use the potential energy by-products in the construction industry, or as material for rehabilitation of waste disposal sites, for example.

**Table 10.3: Manufacturing waste treatment per activity, 2012–2018, tons**

	2012	2013	2014	2015	2016	2017	2018*
<b>Total generated</b>	<b>6 029 400</b>	<b>6 931 698</b>	<b>6 744 598</b>	<b>7 268 925</b>	<b>7 793 777</b>	<b>6 516 576</b>	<b>6 847 387</b>
Treated, recycled and reused**	4 282 534	4 093 583	3 984 147	3 891 135	4 174 648	4 119 311	3 990 809
Co-incineration	1 409 407	1 400 413	1 934 052	1 981 204	1 779 369	1 508 232	1 710 593
Share of total generated (%)	23.4	20.2	28.7	27.3	22.8	23.1	25.0
Compliant landfills	684 081	652 398	778 626	745 971	722 143	719 427	465 809
Share of total generated (%)	11.3	9.4	11.5	10.3	9.3	11.0	6.8
Surface impoundment***	547 323	542 758	555 029	611 986	585 881	605 460	600 623
Share of total generated (%)	9.1	7.8	8.2	8.4	7.5	9.3	8.8
Incineration on land	159 787	35 255	44 810	50 401	50 334	58 938	60 932
Share of total generated (%)	2.7	0.5	0.7	0.7	0.6	0.9	0.9

Source: NEPA, 2019.

Notes: \* Preliminary data. \*\* Includes also secondary waste from waste collection/treatment activities that are recovered by manufacturing industry. \*\*\* Surface impoundment, e.g. placement of liquid or sludgy discards into pits, ponds or lagoons.

**Table 10.4: Treatment of combustion wastes, 2012, 2014 and 2016, tons**

	2012	2014	2016
Waste treatment	9 361 909	7 195 789	7 036 126
Disposal			
Landfill (D1, D5, D12)	8 685 485	6 616 269	6 371 576
Incineration (D10)	2	0	0
Recovery			
Recycling	676 361	563 729	656 587
Backfilling	61	15 791	7 963

Source: Eurostat, 2019.

Note: D1: Deposit into/onto land, e.g. landfill. D5: Specially engineered landfill, e.g. placement into lined discrete cells which are capped and isolated from one another and the environment. D10: Incineration on land. D12: Permanent storage, e.g. emplacement of containers in a mine.

### Construction and demolition waste

Construction and demolition waste is usually the most abundant waste stream at the national level, competing with mining sector waste. The recent trend in construction and demolition waste generation was rather stable, except for an excessive drop between 2016 and 2017, from 1.3 million to 0.7 million tons (table 10.5). Recycling rates increased from 2012 to 2016 and reached 73 per cent in 2017.

Nevertheless, data from NEPA on generation and treatment, in comparison with Eurostat data, differ significantly on most of the recycling and backfilling items, indicating non-compliance with classification of recycling and backfilling. Eurostat data for 2016 present that 560,000 tons of mineral waste from construction and demolition waste was recycled, 420,000 tons was backfilled and 173,000 tons was landfilled. The difference between the amount of waste generated and treated indicates waste dumping. The amount of waste generated is only an estimate,

based on reports by municipalities, waste collection operators and waste disposal operators. According to Law No. 211/2011 on Waste Management, all waste generators are obliged to report. However, it is difficult to identify construction and demolition companies because they do not need an environmental permit. Often, they do not report the amount and treatment of construction waste generated by their activities. Reporting is the obligation of the owner of the construction and demolition permit.

Despite the recycling target (70 per cent of construction and demolition waste generated to be recycled in 2020), as at December 2019, Romania had not introduced specific legislation on construction and demolition waste management to facilitate its separate collection, treatment and use. Some regulations are in place on general waste management principles affecting construction and demolition waste, including the general obligation to recycle and recover, the construction permit process, construction and demolition waste within the NWMP and other matters.

**Table 10.5: Construction and demolition waste, 2012–2017, tons**

	2012	2013	2014	2015	2016	2017
Generation	1 328 097	1 231 850	1 059 947	1 072 109	1 294 665	703 277
Recycling	339 218	483 227	479 151	476 976	737 100	398 919
Backfilling	145 672	147 407	146 499	158 185	220 686	116 055
Disposal on compliant landfills	257 470	135 641	232 799	133 497	173 290	40 472

Source: NEPA, 2019.

**Photo 10.5: Construction and demolition waste treatment, Pitești city, Argeș County**



Photo credit: Boris Urbanek



GEO No. 74/2018 introduced the construction and demolition waste disposal tax. This breakthrough instrument must, nevertheless, be accompanied by enforcement measures to avoid an increased amount of construction and demolition waste being illegally dumped. A proportion of the construction and demolition waste is mismanaged because there is almost no capacity left for its disposal.

However, there are examples of good practice. For example, SWIMS waste management operators run the system, including construction and demolition waste collection, recycling and waste utilization for commercial purposes.

#### *Mining and quarrying waste*

The amount of mining and quarrying waste varies between 150 million tons and 225 million tons annually, which makes it, by far, the major waste generating sector in Romania, accounting for 85 per cent to 90 per cent of the national total in the period 2012–2017. The reason for the fluctuation in annual amounts is due to fluctuation in mining activities. Most mining and quarrying waste is disposed of on compliant landfills (96.6 per cent to 98.7 per cent), followed by disposal on impoundments (0.9 per cent to 1.7 per cent) (table 10.6).

All mining waste management facilities must have a mining waste management plan approved by the competent authority. The waste installations are also subject to a waste facility hazard classification. For “A category” facilities, a safety management system and internal emergency plan must be prepared, and an external emergency plan should be prepared by the competent authority.

The different categories of waste management facility may be operated only by a competent person, under the conditions of the permit issued by the competent authority. Directive 2006/21/EC on the management of waste from the extractive industries also stipulates conditions for mining waste facility closure and after-closure procedures. Environmental protection preventive measures must be taken. The start of a

mining waste processing operation in Romania is conditional on a guarantee to be paid by the operator. The aim of the guarantee is to have all measures stemming from the environmental permit financially secured and funds available for the rehabilitation of the waste management site. Relevant institutional plans reflect progress in the mining waste sector through evaluation of objectives and targets set, for example, the target to increase the share of operations that meet international operating standards/closure plans to over 50 per cent in 2022.

Romania is also facing a challenge in the closure of economically inefficient mines, which started in 1998 and will continue up to the closure of all 556 mines covered by the programme. The Ministry of Economy reports in the Institutional Strategic Plan (2019–2022) that no progress was registered in this respect and the associated activities encountered a series of obstacles but are in progress. Romania missed the 2018 targets on remediation of contaminated sites that were inventoried and was fined due to the failure to restore the Bosneag pond (chapter 1).

#### *Agricultural waste*

Every two years, the National Institute of Statistics carries out a survey on statistical data on agricultural waste. The analysis, based on 2014 and earlier reported data, revealed deficiencies in the reporting system. Therefore, the country set a target to improve the data reporting system for both the generation and management of agricultural, forestry and fishery waste by 2018 (data for 2018 will only be available in 2020). NEPA receives aggregated data from the National Institute of Statistics in the format required by Regulation No. 2150/2002 regarding waste statistics.

Data available show that vegetal waste formed 95 per cent of the total waste generated by the sector in 2016.

Waste treatment in agriculture must be carried out in waste recovery or disposal facilities, in accordance with the legal provisions in force – for organic waste, preferably through biogas plants and composting (material use).

**Table 10.6: Mining and quarrying waste, 2012–2017, tons**

	2012	2013	2014	2015	2016	2017
<b>Total</b>	<b>223 292 739</b>	<b>218 894 151</b>	<b>152 783 565</b>	<b>154 649 656</b>	<b>153 917 820</b>	<b>204 434 984</b>
Disposed of on compliant landfills	220 155 607	216 139 439	147 554 456	150 833 685	151 074 066	201 014 900
Share of the total generated (%)	98.6	98.7	96.6	97.5	98.2	98.3
Surface impoundment	2 316 731	2 066 476	2 357 981	2 650 997	2 602 209	2 663 320
Share of the total generated (%)	1.0	0.9	1.5	1.7	1.7	1.3

Source: NEPA, 2019.

In 2016, of 730,000 tons of animal and vegetal waste treated in Romania, 580,000 tons (80 per cent) was subject to material use, 10 per cent subject to energy recovery, 4 per cent was incinerated and the remaining 6 per cent was landfilled. The amount of agricultural waste used has increased steeply, by 80 per cent, from 2012 to 2016. Even such a steep increase did not lead to meeting the 2013 national target of 50 per cent biodegradable waste to become subject to material or energy recovery through aerobic and anaerobic processes. Romania has not yet set a new target on biodegradable waste.

### Hazardous waste

Hazardous waste represented 0.35 per cent of the total waste generated in 2016 (later official data on total waste generation was not available as of 2019). In 2018, Romania generated 556,000 tons of hazardous industrial waste (figure 10.2), representing 32 kg per capita per year (the EU-28 average was 197 kg per capita). The low amount of hazardous waste reflects the structure of the national economy rather than state-of-the-art production technologies or a substantial reduction in the separation of hazardous properties or hazardous components.

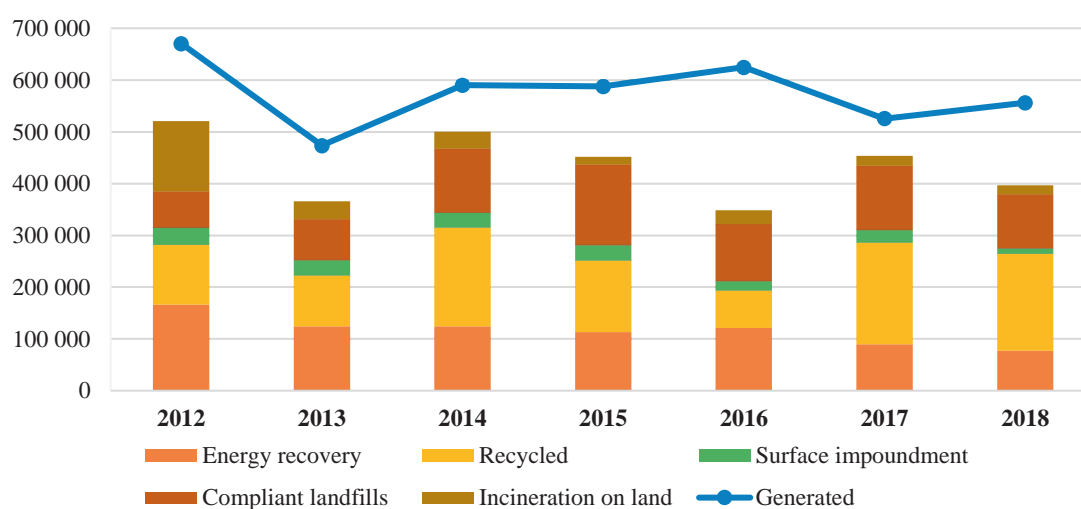
NEPA estimated that, in 2017, hazardous waste generating sectors were: the mining industry (53 per cent); manufacturing of basic metals and fabricated metal products (27 per cent); the service sector (14 per cent); and households, manufacturing of electrical and electronic products and vehicles, and manufacture of

coke and refined petroleum products (6 per cent). Between 2012 and 2018, the share of hazardous waste treated in waste management installations fluctuated between 56 and 86 per cent of total generated hazardous waste, without an increasing trend. The gap in treatment could be explained if part of the waste disposed of on compliant landfills had not received treatment prior to landfilling as defined by the Landfill Directive.

According to the United Nations Statistics Division, Romania generated 34.17 kg per capita of hazardous waste in 2012 and 31.57 kg per capita in 2016. In 2016, the proportion of hazardous waste incinerated was about 12.62 per cent of treated hazardous waste, while 52.80 per cent was landfilled and 34.58 per cent was recycled. These data cover global SDS indicator 12.4.2 ((a) Hazardous waste generated per capita; and (b) proportion of hazardous waste treated, by type of treatment) of target 12.4 (By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment).

Operation of all non-compliant hazardous waste landfills was ceased years ago. Sites are awaiting rehabilitation or remediation. Hazardous waste landfills and impoundments in operation are compliant with their environmental permits.

**Figure 10.2: Hazardous industrial waste, 2012–2018, tons**



Source: NEPA, 2019.

**Photo 10.6: Farm and agricultural waste treatment platform**

*Photo credit: MoEWF*

Although the amount of hazardous waste generated per capita is low (16 per cent of the EU average in 2017), only 71 per cent received treatment. Also, a substantial part of hazardous waste from the municipal sector has been disposed of in landfills or ends up in the sewerage system or in the environment instead of being separately collected and duly treated. Only 57 per cent of wastewater from households received treatment in 2017. The 2018 State of the Environment Report documents hundreds of confirmed old mining objects, industrial and waste disposal sites causing air, water or soil contamination. In 2019, the management of waste containing PCBs still lacked dedicated institutional capacity and did not fully comply with international practices.

The European policy framework on waste management adopted by Romania is enabling significant improvements in pursuit of the EU 2020 target. Nevertheless, Romania has not yet completed implementation of environmental and human health protection measures. The beginning of the product cycle is organized according to international standards. The storage of chemicals and disposal of waste chemicals from the industrial sector is organized in compliance with environmental permits.

SDS 2030 sets national goals, for example, to implement the separate collection of hazardous household waste by 2022. However, companies are not motivated to treat more hazardous waste or apply

the best available waste treatment techniques to reduce the impact on human health and environment. Despite the number of dedicated programmes launched, improvement of the hazardous waste management system is slow. For all its commitments, the country does not have enough human and financial resources for the task.

Insufficient motivating measures to reduce the environmental and human health impact of the disposal of end-of-life products by the endorsement of BAT were introduced. Robust motivating instruments in Romania to increase the treatment of hazardous waste and minimize its generation, apart from focusing on the end-of-pipe solution, are lacking. A landfill tax and a hazardous waste disposal tax are not in place to motivate industries to implement best available production technologies and techniques to treat the waste. There are no schemes, nor the infrastructure developed, to enable disposal of the hazardous components of municipal waste such as waste chemicals, paints, oils, batteries or sharps.

#### *Medical waste*

Each county and Bucharest municipality have public health departments, which oversee medical waste practice in hospitals, medical centres, dentistry centres and other medical units. Hospitals have an authorized coordinator for proper medical waste management to elaborate the internal medical waste management

plan. According to the methodology on medical waste data collection, the coordinator reports on medical waste generated, its management, and incidents/accidents linked to medical staff involved in the handling of healthcare waste. The key implemented principle related to waste management is to separate the hazardous and other waste streams and divert hazardous waste from landfills (table 10.7).

The capacity for treatment of hazardous medical waste is sufficient on both the national and county levels. The equipment includes 11 hazardous waste incineration stations, 14 infectious waste treatment stations and 23 small-capacity items of sterilization equipment. Medical waste after sterilization (disposal of which is obligatory) can be disposed of in non-hazardous waste landfills. Expired drugs are collected by local pharmacies and disposed of via incineration.

Incidents concerning health-care waste or drugs disposal from health care units have been recorded in 2016. When such an incident happens, the institutions involved – the respective county public health department, NEG (through the Local Environmental Guard) and the Inspectorate for Emergency Situations – take action to mitigate the impact and issue a warning to relevant institutions and the public.

#### *Radioactive waste*

The major radioactive waste management facilities in operation include the NPP Cernavodă, the Nuclear Fuel Plant in Pitesti, nuclear research institutions and the uranium mining and milling industry, including facilities rehabilitated or awaiting rehabilitation (table 10.8). In addition to the major sources of radioactive waste, there are also minor sources, i.e. health-care-related and industrial facilities.

To improve the management and sustainability of radioactive waste management and decommissioning activities, the radioactive waste generators contribute to the two earmarked funds. The amount of the contribution should enable full coverage of radioactive waste management and decommissioning activities. Nevertheless, the amount of the contribution, determined in 2011, deserves revision. Studies have been done on the level of the costs, but Romania has still not revised the financial contribution.

There are plans to extend the capacity of some radioactive waste management facilities. Competent authorities are striving to obtain the siting licence for the new, near-surface, low- and intermediate-level waste repository that is planned to be opened in 2023. The closure of the first part of Cetatua II tailing pond remains a challenge, and the rehabilitation of rock dumpsites is only partially addressed.

One of the key aspects of safe management of radioactive waste is having qualified staff. Despite this need, the key institutions in the country are facing a shortage of qualified personnel, for example, in the Nuclear Agency for Radioactive Waste, as well as the National Commission for Nuclear Activities Control, which has 62 vacancies. This poses an increased risk to future radioactive waste management.

#### *Persistent organic pollutants waste*

Disposal of the obsolete pesticide stocks of 2,516 tons from 218 locations in Romania was completed between 2004 and 2006. As at December 2019, the authorization for marketing and use of pesticides has been issued by the National Phytosanitary Authority following the decision of the National Committee for Plant Protection Products Authorization.

**Table 10.7: Health-care waste, 2012–2018, tons**

	Public and private sanitary units with and without beds						Small medical cabinets**	
	Waste generated			Health-care waste			Waste generated	
	Total	Hazardous	Non-Hazardous	Incinerated	Treated	Landfilled	Total	Hazardous
2012	33 732	8 926	24 806	5 811	2 071	25 850		
2013*	25 645	7 943	17 702	5 941	1 931	17 773		
2014	14 441	8 946	5 495	6 525	2 404	5 512		
2015	11 980	9 929	2 051	7 352	2 567	2 061	7 717	5 132
2016	13 059	10 929	2 130	8 107	2 907	2 045	7 717	5 132
2017	14 818	12 518	2 300	9 462	3 179	2 177	7 717	5 132
2018	15 424	13 031	2 393	10 034	3 156	2 234	7 717	5 132

Source: National Institute of Public Health.

Note: \* Since 2013, the new legislation and the new methodology for data collection and processing had been implemented according to MO No. 1226/2012 on health-care waste management. \*\* estimate.

**Table 10.8: Radioactive waste management facilities**

	Waste management operation
NPP Cernavodă	Pre-treatment and storage of NPP solid operational waste, except spent resins
	Organic liquid pre-treatment and storage
	Storage of NPP spent resins
	Gaseous filtering and airborne releasing
Nuclear Fuel Plant Pitesti	Aqueous liquid decontamination and environment discharging
	Gaseous filtering and airborne releasing
	Storage of liquid waste and liquid effluents
	Storage of low contamination solid radioactive waste (only natural uranium). There are two categories: combustible and non-combustible
Nuclear research institutes	
RATEN/ICN-Pitesti	Treatment and conditioning of waste generated at ICN Pitesti and FCN Pitesti
	Recovery of uranium from waste generated at FCN Pitesti
	Storage of HLW and LILW-LL
IFIN-HH-Magurele	Treatment, conditioning and storage of non-fuel-cycle radioactive waste
IFIN-HH-Baita-Bihor	Disposal of non-fuel-cycle radioactive waste
Uranium mining and milling	
CNU – Feldioara	Settling and storing of radioactive tailings resulting from milling process
	Final settling of fine tailings
	Storage of low activity solid waste
CNU-Suceava CNU-Steii (Bihor) CNU-Oravita (Banat)	Storage and environmental rehabilitation/remediation of sterile and radioactive rock dumps resulting from research and uranium mining activities

Source: National Commission for Nuclear Activities Control, 2017.

Note: ICN: Institute for Nuclear Research; FCN: Nuclear Fuel Plant; HLW: High Level Waste; LILW-LL: Low and Intermediate Level Waste – Long Lived; IFIN-HH: National Institute for Research and Development in Physics and Nuclear Engineering – Horia Hulubei; CNU: Uranium National Company.

The national inventory on PCBs includes information on equipment with a PCB volume  $>5 \text{ dm}^3$  and a concentration  $>500 \text{ ppm}$ . However, equipment with lower concentrations of PCBs is not inventoried. Romania missed the 2010 deadline for decontamination/disposal of equipment with PCB content greater than  $5 \text{ dm}^3$  that remained in operation. The delay in part of the PCBs agenda was caused by gaps or inaccuracies in the national legislation. The level of progress on this issue was not published. It is planned to revive the national secretariat for designated compounds to activate effective measures.

The commercial operators holding equipment containing PCBs have the obligation to draw up decontamination and disposal plans. According to Eurostat data, in 2016, 106 tons of waste containing PCBs was generated. According to NEPA, for the period 2012–2015, 27,172 capacitors and 67 transformers with PCBs ranging from 50 ppm to 500 ppm were destroyed in Romania. For equipment with the same PCB content, in 2015, there were 5,100 capacitors and transformers stored safely awaiting destruction and 35,000 available, in use or in need of safe storage/destruction.

According to the NWMP, Romania has five operating incinerators with an environmental permit and a total

projected capacity (not only for PCB-containing waste) of about 50,000 tons per year, plus one plant for the dismantling and decontamination of capacitors and transformers (3,900 t/y) and one plant for physico-chemical treatment (dichlorination), with a capacity of 4 tons per hour. With 324 tons of PCB-containing waste having been generated in 2018, the nominal capacity is sufficient.

#### *Specific streams*

##### Organic waste

About 60 per cent of MSW is organic waste. Referring to the Landfill Directive and with respect to the prolonged transitional period for Romania, the binding target for organic waste disposed of on landfills in 2020 is 35 per cent (by weight) of the organic waste disposed of on landfills in 1995 (4.8 million tons). Data reveal a decrease in the amount of organic waste recycled of 38 per cent from 2012 to 2017, while the EU average increased by 16 per cent during the same period (table 10.9). The reduction to 35 per cent of the total quantity (by weight) of organic waste produced in 1995 means that the target value for 2020 is 1.68 million tons.

In 2017, Romania generated around 5.3 million tons of MSW, approximately 60 per cent of which (approximately 3.2 million tons) was organic waste. Of this, only 355,000 tons (6.6 per cent of total MSW) underwent composting/digestion and was diverted from landfill. To reach the goal applicable for 2020, in 2017 (the latest available data), Romania would already have had to divert an additional 1.325 million tons of organic waste from landfills.

This, together with very general and incomplete provisions in regulations and policies, suggests a challenge for Romania. Within SWIMS projects, green waste from sanitation service activities is composted and garden composters were distributed to households as a waste prevention measure.

According to the Romanian Compost Association, at the end of 2017, nine facilities operated with a total capacity of 124,318 tons per year; 29 facilities were constructed but not operating, with a total capacity of 787,341 tons per year and seven facilities were under construction, with capacity of 521,874 tons per year. If the facilities had been fully operational, their total capacity of 1.4 million tons per year would have met the level needed in the municipal sector.

#### Packaging waste

In the MSW sector, most of the glass, paper, plastics, aluminium and other metals waste is packaging waste. According to the NWMP, 60 per cent of all Romanian packaging waste comes from the MSW sector.

The extended producer responsibility principle for packaging producers was introduced in 2004. Since then, a competitive system has been developing, with more than 700 entities licensed for collection of packaging waste from households, industry and commerce. The responsibility can be fulfilled either individually or via an authorized economic actor. The collectors are specialized waste collection operators who are also waste recyclers. Parties involved in packaging and packaging waste management report annually to NEPA.

By 2019, Romania managed to implement the EU packaging waste framework legislation, though with some delay. In 2015, Romania was taken to the CJEU for failure to amend packaging waste legislation.

Issues pertaining to unclear definitions of roles and responsibilities within the system and ineffective operation of the system were addressed through GEO No. 74/2018.

Data on packaging waste showed an increasing trend in its generation with a maximum of 1.35 million tons generated in 2016 (table 10.10). The increase can be most probably attributed to the country's economic growth. Although Romania missed the 50 per cent glass recovery target for 2015, overall recovery (including recycling and energy use) reached 62 per cent and recycling of domestic packaging reached 60 per cent in 2016. Targets for overall recycling are 65 per cent for 2025 and 70 per cent for 2030. Based on trends from 2012 to 2016 and the lack of the latest data, it is not possible to predict the country's performance towards these remote targets.

To increase the recovery of packaging, Romania has introduced: (i) a contribution of €0.4 for each kg below the binding objective for non-valorized packaging waste, payable by the authorized extended producer responsibility entity to the Environment Fund; (ii) a contribution of €0.4 per kg, payable by entities that introduce packaged goods and packaging on the national market to the Environment Fund; and (iii) a deposit refund scheme for reusable bottles to the value of €0.1 per bottle, since 2019.

#### Waste batteries and accumulators

The extended producer responsibility scheme is applied to the management of waste batteries and accumulators. The producers of batteries and accumulators are obliged to organize the collection of waste batteries and accumulators, either individually or by transferring the responsibilities within a collective system operated by an authorized company.

The country reporting on treatment of waste batteries and accumulators shows a gap in 2016 when the country target of 45 per cent for collection was due (table 10.11). According to the latest available data, Romania collected 20 per cent of waste batteries and accumulators in 2015. Concerning the national reporting issues, the NWMP has an outdated, paper-based data reporting system on batteries and accumulators.

**Table 10.9: Recycling/composting and anaerobic digestion of biodegradable waste, 2012–2017, kg/capita**

	2012	2013	2014	2015	2016	2017
EU-28 estimate	70	72	74	75	81	81
<b>Romania</b>	<b>29</b>	<b>23</b>	<b>20</b>	<b>18</b>	<b>18</b>	<b>18</b>

Source: Eurostat, 2019.

**Table 10.10: Domestic packaging waste, 2012–2016**

	2012	2013	2014	2015	2016
Total					
Generated (t)	1 059 557	1 054 139	1 244 737	1 396 561	1 350 168
Recovery (%), 2015 target 60%	57.4	54.5	56.4	56.9	62.3
Recycling (%), 2015 target 55%	56.8	52.8	54.8	55.9	60.4
Paper and cardboard packaging					
Generated (t)	303 108	311 578	388 017	441 764	427 434
Recovery (%)	70.2	76.9	83.8	89.6	93.2
Recycling (%)	69.8	74.6	83.4	89.3	92.5
Plastic packaging					
Generated (t)	298 042	290 279	336 818	359 036	348 794
Recovery (%)	51.9	54.5	46.1	47.5	49.9
Recycling (%)	51.3	51.7	44.5	46.7	46.5
Wooden packaging					
Generated (t)	239 774	248 660	289 691	334 573	299 876
Recovery (%)	42.8	29.7	31.3	31.5	31.5
Recycling (%)	41.1	28.9	26.6	28.8	27.6
Metallic packaging					
Generated (t)	58 333	54 406	65 666	66 830	64 006
Recovery = recycling (%)	55.5	52.8	64.2	64.1	62.1
Glass packaging					
Generated (t)	160 259	149 205	164 521	194 347	210 027
Recovery = recycling (%)	66.3	49.2	54.2	41.1	64.1

Source: Eurostat, 2019.

**Table 10.11: Waste batteries and accumulators, 2012, 2014, 2016, 2018, tons**

	2012	2014	2016	2018*
Generated	59 667	61 643	53 232	39 383
Recycled	39 699	34 706	..	46 865

Source: Eurostat, 2019.

Note: \* NEPA preliminary data.

By 2019, Romania has not provided the EC with its report on collection of waste batteries and accumulators for 2016 and 2017 (collection rates, indication of how the data necessary to calculate the collection rate have been obtained, levels of recycling achieved and efficiency of recycling).

In 2019, the treatment capacity for waste batteries and accumulators was 75,807 tons. The biggest and most modern treatment facilities, SC Monbat Recycling S.R.L. and SC Rombat S.A., have a total capacity of 70,000 tons per year. Nevertheless, 21,400 tons of waste batteries were exported for treatment while 9,500 tons were imported in 2017.

#### Waste electrical and electronic equipment

The extended producer responsibility scheme is also applied to waste electrical and electronic equipment (WEEE), but with lower efficiency. Only registered producers and importers of electrical and electronic equipment (EEE) can put EEE on the market.

Producers and importers can implement the extended producer responsibility scheme individually or by transferring this responsibility to an authorized operator. The possibility of a clearinghouse system based on the establishment of an independent third party acting as regulator of a competitive market, has not yet been enacted.

Comparison of EEE products placed on the market and the amount of WEEE collected from the resident population shows substandard performance in WEEE collection, below the national objectives (table 10.12). The national target for WEEE collection for 2015 (4 kg/capita, the same as the EU target for 2015) was not met, nor was the target for 2016–2019 (45 per cent). The low collection rates at the local public authority level are caused by an underdeveloped infrastructure for the collection of WEEE and contradictory obligations regarding the responsibility of collecting WEEE from households. Unclear definitions of responsibilities remain in the applicable legislation.

The WEEE recovery rates of treated vs collected WEEE have fulfilled the binding objectives for all WEEE categories between 2012 and 2017, with an average of 92 per cent of WEEE treated. The NWMP estimates that Romania has 120,000 tons annual treatment capacity for WEEE. In 2016, 200,000 tons of EEE were placed on the market and 47,000 tons of WEEE (2.2 kg per capita) were collected. If 4 kg per

capita were collected, as per the EU 2015 target, the treatment capacity would be more than sufficient.

According to the EC, Romania has failed to meet its obligation to provide the 2015 report on the progress made towards implementation of the targets in the structure defined by the Commission, including a detailed description of how the data have been compiled.

### Sludge

Sludge is a waste stream resulting mainly from almost all human activities using water and treating it. Statistical data from Eurostat show that urban wastewater treatment plant sludge production was constantly increasing from 2012 to 2017, indicating that connection to sewerage systems and instalment of wastewater secondary treatment plants has been increasing in Romania (table 10.13). In 2017, 53.56 per cent of wastewater sludge went to landfill, 10.12 per cent was used on agricultural land, 3.82 per cent was incinerated, 0.4 per cent was used for composting and the remaining 32.08 per cent was otherwise

applied (figure 10.3). The connection rate to sewerage systems stood at 48 per cent nationwide in 2015. Should the urban wastewater collection and treatment system increase, the pressure of sludge management on urban wastewater treatment plants would also increase. A draft law on sludge management is expected to cover all the treatment processes in sludge management prior to its utilization on agricultural land as stipulated by Council Directive 86/278/EEC on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture.

### End-of-life vehicles

The latest data available on end-of-life vehicles cover 2015, when Romania missed the target of 95 per cent reuse and recovery of end-of-life vehicles (table 10.14). The country has not fulfilled its reporting obligation on end-of life vehicles for 2015 and 2016 to the EC by 2019 (to report on the targets set by Directive 2000/53/EC on end-of life vehicles, description of the data used). Between 2012 and 2015, the number of end-of-life vehicles decreased from 58,000 to 42,000, with a minimum of 38,000 in 2013.

**Table 10.12: EEE products and WEEE, 2012–2016, kg per capita**

	2012	2013	2014	2015	2016
EEE products placed on the market	6.51	6.85	7.01	8.49	10.19
WEEE collected from households	1.04	1.55	1.50	1.79	2.19
WEEE collected from other sources	0.11	0.11	0.12	0.27	0.17
WEEE treated in Romania	1.12	1.60	1.56	1.74	2.05
WEEE treatment (EU-27)	1.15	1.66	1.62	1.81	2.21

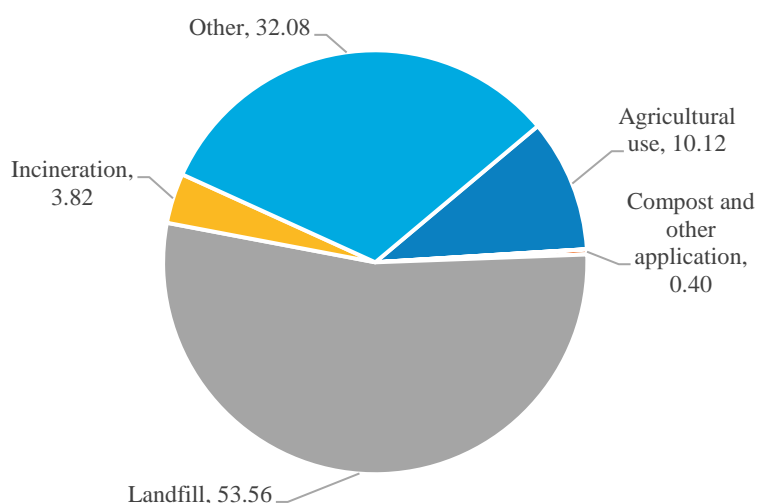
Source: Eurostat, 2019.

**Table 10.13: Sewage sludge production and disposal, 2012–2017, 1,000 tons**

	2012	2013	2014	2015	2016	2017
Urban wastewater treatment plant						
Sludge production	85.40	172.80	192.33	210.45	240.41	283.34
Sludge disposal	48.40	172.40	192.33	155.81	240.41	283.34
Agricultural use	2.20	8.00	13.05	10.64	17.56	35.00
Compost and other application	1.30	0.30	0.20	..	0.34	1.76
Landfill	43.00	117.70	145.14	104.23	177.61	168.45
Incineration	0.40	..	1.24	0.50	0.38	0.02
Other	1.40	46.50	32.70	40.91	44.49	78.09
Other wastewater treatment plant						
Sludge production	165.20	224.00	277.54	200.72	158.33	151.41
Sludge disposal	107.20	195.20	277.54	138.67	158.33	151.41
Agricultural use	11.20	17.00	16.47	18.60	14.29	9.00
Compost and other application	5.70	0.20	0.03	..	..	..
Landfill	49.00	11.60	53.42	66.22	61.32	64.41
Incineration	49.00	11.60	53.42	66.22	61.32	16.60
Other	41.20	147.00	192.47	39.72	63.30	61.39

Source: Eurostat, 2019.



**Figure 10.3: Sewage sludge disposal, 2012–2017, 1,000 tons**

Source: Eurostat, 2019.

**Table 10.14: End-of-life vehicles, 2012–2016, per cent**

	2012	2013	2014	2015	2016
EU target – Reuse and Recycling	80.0	80.0	80.0	85.0	85.0
<b>Romania</b>	<b>84.0</b>	<b>83.8</b>	<b>84.1</b>	<b>85.1</b>	..
EU target – Reuse and Recovery	85.0	85.0	85.0	95.0	95.0
<b>Romania</b>	<b>86.0</b>	<b>87.4</b>	<b>88.5</b>	<b>90.8</b>	..

Source: Eurostat, 2019.

The high number in 2012 is a result of Romania's response to the economic crisis, stimulating economic growth through subsidies on new cars in exchange for discarding obsolete vehicles.

In 2014, the EU started an infringement procedure regarding the incomplete transposition of Directive 2000/53/EC on end-of-life vehicles but ended the process in 2015 after Romania adopted Law No. 212/2015 on Management of End-of-life Vehicles. In 2016, the extended producer responsibility scheme came into force in the end-of-life vehicles sector. Recently, the extended producer responsibility scheme for end-of-life vehicles has applied to individual vehicle owners. The producers chose to set up collection networks through private contracts with companies authorized to dismantle end-of-life vehicles.

By 2019, there were 735 authorized economic actors active in the collection and/or treatment and shredding of end-of-life vehicles. As at December 2019, the country was planning to improve extended producer responsibility practice and the data reporting system on end-of-life vehicles.

#### Used tyres

Romania has applied the extended producer responsibility scheme to used tyres since GD No. 170/2004 on the management of used tyres came into force. Legal entities that place on the market new and/or used tyres for reuse are obliged to collect 80 per cent of the tyres placed on the market in the previous year and to use all of the used tyres collected. These obligations can be fulfilled individually or within a collective system operated by an authorized company.

Data on treatment of used tyres are not available on Eurostat for Romania. According to the NWMP, the main country objectives to increase the collection rate and material and energy use were fulfilled in the period 2012–2014. Most of the used tyres were co-incinerated in cement factories. Updating the legal framework regarding the management of used tyres and promoting material use or reuse approaches would help the country achieve higher recycling targets.

#### Used oils

Used oils (also referring to waste oil) management activity is regulated by GD No. 35/2007 regarding the management of waste oils. The extended producer responsibility scheme has been introduced to manage

used oils. According to this regulation, parties involved in the waste oil management system report annual data to NEPA (table 10.15).

**Table 10.15: Used oils, 2012, 2014, 2016, 2018, tons**

	2012	2014	2016	2018*
Generated	78 027	68 592	65 778	42 002
Waste treatment	57 534	45 829	43 120	35 350
Treated/generated (%)	74	67	66	84
Disposal – landfill	1 351	2 043	234	834
Disposal – incineration	1 466	583	2 166	..
Incinerated/treated (%)	2.6	1.3	5.0	2.4
Recovery – energy recovery	33 515	35 062	18 710	..
Recycled/treated (%)	58.3	76.5	43.4	..
Recovery – recycling	21 202	8 141	22 010	..
Recycled/treated (%)	36.9	17.8	51.0	..

Source: Eurostat 2019.

Note: \* NEPA preliminary data.

The NWMP indicated a number of challenges and targets concerning the period 2012–2018 and beyond, which remain to be addressed and are still relevant to improving the collection of waste oils, eliminating the illegal market of waste oils, encouraging energy recovery in cement kilns and improving the collection network in each county. In addition, the legislation on waste oil management lacked objectives that the responsible persons, individually or through third parties, should have achieved. Also, data on waste oils were only reported by the operators collecting hazardous waste.

## 10.2 Transboundary movement of waste

Imports of waste to Romania are not allowed for landfilling and incineration purposes. Romanian exports and imports of hazardous waste show an increasing trend between 2012 and 2017. Data on transboundary movement of non-hazardous waste are incomplete because of changed reporting obligations in 2015. Since 2016, Romania has not been obliged to report on the so-called Green listed waste (recyclables) transboundary movement.

In 2017, the predominant exports of hazardous waste to EU Member States were waste lead acid batteries (21,395.643 tons), lead paste (1,741.622 tons) and waste mineral oils (1,654.15 tons). The predominant purpose of waste exports was for recovery.

NEPA is the competent authority for all notifications of import, export and transit according to Regulation 1013/2006 on shipments of waste. In 2017, imports of hazardous waste items from the EU included waste lead acid batteries (9,184.873 tons), treated recycled

wood (1,578.4 tons) and mixed batteries (338.22 tons). A total of 65.91 tons of capacitors contaminated with PCBs were imported for recovery purposes.

According to data from the Ministry of Environment, Waters and Forests, until 2015, a substantial proportion of non-hazardous waste imports was represented by metals, plastics, paper, plastic packaging and end-of-life vehicles.

## 10.3 Practices and trends in chemicals management

Management of chemicals in Romania is driven by the EU framework regulations on chemicals management (directly applicable on a national level), including Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Classification, Labelling and Packaging (CLP) Regulation (EC) No 1272/2008, and Biocidal Products Regulation (BPR) Regulation (EU) 528/2012.

### Production

From 2012, the chemicals sector was maintaining a descending trend in terms of the number of active enterprises, employees and production. From 2013 to 2017, production decreased from 5.5 million tons to 3.2 million tons per year (table 10.16). The chemicals industry mainly produces petrochemicals, organics and inorganics, agrochemicals, varnishes and paints, lubricants and cosmetics.

**Table 10.16: Chemicals production, 2013–2017, million tons**

2013	2014	2015	2016	2017
5.529	5.125	4.467	3.636	3.245

Source: NEPA, 2019.

Romania regulates the production and consumption of chemical substances on their own, mixtures and articles in order to be compliant with the REACH Regulation. Pursuant to the REACH Regulation, producers of chemicals in Romania are obliged to register chemical products with a planned production capacity greater than 1 ton per year. Production companies must identify and manage risks linked to substances they manufacture and market in the EU. Producers are obliged to demonstrate how the substance can be safely used and must communicate the risk management measures to the users. If the risks cannot be managed, authorities can restrict the use of substances. The Government disincentivizes economic entities from marketing substances

classified as dangerous for the environment with a specific charge of 2 per cent of the marketed value.

Only a few NEG inspections found non-compliance relating to storage and labelling of chemicals. NEG conducted 147 and 203 REACH- and CLP-related inspections in 2017 and 2018 respectively and imposed sanctions amounting to 15,000 lei (€3,100) in 2018. For comparison, sanitation operators were sanctioned to the tune of 1.5 million lei in 2018.

#### *Imports and exports*

In 2018, Romania submitted five import responses under EU Regulation No. 649/2012 concerning the export and import of hazardous chemicals (PIC Regulation), including regarding consignments of pesticides and chemical compounds for industrial use. Between 2012 and 2017, there were eight import responses recorded in the Rotterdam Convention database. The process is under the responsibility of the Ministry of Environment, Waters and Forests. The permit issued is valid for one month, indicating, inter alia, the place of entrance to the country. Other chemicals that are excluded from the scope of the PIC Regulation are being traded, for example, in 2017, exports reached US\$2.2 billion and imports US\$8.2 billion.<sup>143</sup>

#### *Storage and use*

The most commonly used chemical substances from 2013 to 2017 were nitric acid (0.59 million tons in 2017) and anhydrous ammonia (0.52 million tons in 2017) (table 10.17).

Any person or legal entity that uses and stores these and other chemicals in Romania must, among other matters, respect the following obligations:

- Not cause contamination of the transport vehicle/or the environment;

- Only store chemicals packaged and in protected, well-ventilated places;
- Keep strict records on chemicals quantity, characteristics, protection measures and management of used containers;
- Provide information and data in accordance with the legislation in force;
- Eliminate dangerous substances and preparations that have become waste in such a manner as to protect the environment and human health;
- Identify and prevent the risks that dangerous substances and preparations may pose to the population and report on discharges or accidents to the authorities.

NEG inspects chemicals management sites. Inspections focus on general obligations and those specific to an operator, checking, inter alia, chemicals safety data sheets requirements, such as classification, labelling, storage and handling, accidental release measures, first aid measures and firefighting measures. In the case of non-compliance, the impounded chemicals are held in legal custody in facilities with properly authorized warehouses. The regular inspections ensure that operators store only necessary volumes of chemicals and avoid expiration of chemicals, preventing chemical waste generation. Moreover, operators are pushed to replace the substances of very high concern with less or non-hazardous substitutes.

#### *Transportation*

Romania applies the rules for carriage of dangerous goods by road (GD No. 1175/2007), under the responsibility of the Ministry of Transport. However, accidents resulting in chemical spills were recorded repeatedly between 2012 and 2018 by NEG. Nevertheless, according to NEPA, no major impact on the environment and human health was reported.

**Table 10.17: Selected chemicals in use, 2013–2017, tons**

	2013	2014	2015	2016	2017
Nitric acid	611 000	620 000	670 000	650 000	590 000
Anhydrous ammonia	604 000	540 200	484 700	452 300	515 000
Calcium dihydroxide	303 680	306 000	406 900	..	..
Diesel (petroleum), hydrotreated light	129 000	..	..	..	..
Fuels, diesel	..	..	763 084	..	..
Urea	..	..	..	90 300	8 000
Methanol	..	..	..	..	72 300

Source: NEPA, 2019.

<sup>143</sup> World Integrated Trade Solution (WITS) database.

For transportation of health-care waste (including chemicals), companies must follow the specific conditions stipulated in GD No. 1061/2008 on non-hazardous waste and hazardous waste transport in Romania. The motor vehicles used for such transportation are certified by the National Institute of Public Health through a technical report based on MO No. 613/2009.

### *Disposal*

Chemical waste generation increased by 27 per cent between 2012 and 2018, from 61,000 tons to 78,000 tons. The same common principles applicable to other waste streams drive chemicals disposal, though with some specifications. Chemical safety assessment is undertaken as a part of chemical substance registration before production is permitted. The registration includes recommendations on the safe and environmentally compliant manner of disposal. Not all the waste generated is treated prior to its disposal in Romania; 72 per cent was treated in 2016. The diversion of hazardous and non-hazardous chemical waste from landfills (12 per cent was landfilled in 2012, 1 per cent was landfilled in 2016) to waste energy recovery (14 per cent in 2012, 52 per cent in 2016) or incineration is worthy of mention. If the waste goes to landfill, it is usually done at the facility operated under the producer's licence and the environmental permit. The lack of chemical waste disposal facilities is not reported in the NWMP. Still, the country exports thousands of tons of chemicals or chemicals containing waste annually.

The municipal sector also generates chemical waste that can be separately collected, treated and disposed of. While hazardous components of MSW such as WEEE, batteries and fluorescent lamps are separately collected, this is not the case with chemical waste. The system of separate collection yards has not been developed; therefore, it is highly probable that most waste chemicals from the municipal sector end up in the sewerage system, on compliant landfills or in the environment.

## **10.4 Pressures from waste and chemicals**

### *Air*

Since 2012, total GHG emissions from the waste management sector have increased and have maintained an almost stagnating trend of about 5.8 million CO<sub>2</sub>-eq. tons per year (figure 7.1). The major impact is caused by methane (90 per cent). GHG and other emissions can be attributed mainly to formerly established non-compliant waste management operations (non-compliant landfills and dumpsites),

storage of waste containing biodegradable compounds and transportation. Mining waste management contributes to dust particle emissions.

Selected air pollutant emissions (ammonia, NMVOC, PM<sub>2.5</sub>, PM<sub>10</sub>, sulfur oxides and nitrogen oxides) from the waste management sector show a reduction in total emissions between 2012 and 2017, with the lowest level in 2016. Volatile organic compounds (VOC) pollution is widespread in many industrial plants in the chemical and metallurgical industries, but also in fuel burners and waste incinerators. The chemical and waste management sectors generate sulfur oxides, nitrogen oxides and ammonia, i.e. acidifying substances. These sectors contribute to acidification of the environment less than the energy and agricultural sectors. However, chemical production accounts for the second highest level of NMVOC emissions from industrial subsectors in 2017 (after the food industry).

Waste management processes also emit dioxin and furan (POPs); in 2017, waste management was the second largest source of polychlorinated dibenzo-p-dioxins/polychlorinated dibenzofurans, after the energy sector. In 2017, 33 incineration and co-incineration plants were inventoried and capacities of both types of plants have been steadily increasing since 2014. In 2017, incineration capacity was 0.27 million tons per year and co-incineration capacity was 1.7 million tons per year. Nevertheless, the major waste management installations are subject to rules on IPPC (chapter 2). There were 125 of these sites in 2017.

Waste management installations are subject to complaints by citizens of bad management/operation or low air quality in close vicinity to waste management sites. Incidents associated with waste and chemicals affecting air quality are no exception. According to NEG, in 2018, there were 44 accidents related to waste and chemicals management that affected air quality.

### *Water*

Non-compliant landfills, dumpsites, accidental pollution emissions and abandoned industrial sites contribute to contamination of surface water and groundwater. The same applies to industrial installations (including the chemical industry) discharging wastewater, whether they are compliant or non-compliant with environmental standards. In terms of the contribution of nutrients to water contamination, the greatest pressure is presented by human agglomerations (45 per cent of total contributions). In 2017, there were 70 reported incidents resulting in pollution of surface water courses, including 28

concerning untreated wastewater, 19 concerning oil and hydrocarbons, 6 concerning semi-solid waste release and 2 concerning mine waters.

According to WHO, in 2018, 56.7 per cent of domestic wastewater in Romania received safe treatment (SDG global indicator 6.3.1 (Proportion of domestic and industrial wastewater flows safely treated)) of target 6.3 (By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally). According to Eurostat, the share of the population connected to at least secondary wastewater treatment increased from 35.3 per cent in 2012 to 46.5 per cent in 2017.

The performance of the economic sector is not published but compliant wastewater management is one of the preconditions of the environmental permit that commercial operators must obtain. In the domestic sector, improvement is tangible, though Romania did not meet targets for wastewater collection and treatment stemming from its EU membership. The country estimated that the basic measures for human agglomerations to comply with Directive 91/271/EEC concerning urban waste-water treatment will have cost €12.8 billion. To support the process, the Environment Fund established the Water – Sewerage Network Programme to fund the construction of sewage treatment plants, sewerage networks and wastewater treatment plants for agglomerations with more than 2,000 inhabitants. As of 2019, more than 230 contracts had been financed to a total amount of €202 million. The national programme for compliant measures includes works for extension or construction of sewerage networks and plants with secondary and advanced treatment and sludge management.

In 2017, 61.4 per cent of water bodies had good ambient water quality (global indicator 6.3.2 (Proportion of bodies of water with good ambient water quality)). Data on the ecological state or ecological potential of the monitored watercourses indicate that 51.3 per cent of rivers were of very good or good quality in 2017 and 44.33 per cent of moderate quality. However, the quality of surface water shows a declining trend since 2012. According to the National Institute of Public Health, anthropogenic activities negatively affected the quality of surface water and groundwater. More than 40 per cent of the total length of rivers monitored cannot be used for centralized drinking water supply because of its natural quality patterns. Of those potentially usable, 55 per cent are contaminated.

Waste and chemicals management activities in Romania have been contributing to the contamination of waters, mainly through accidental pollution, non-compliant disposal of waste and contaminated chemical industry sites. Pollutants can also reach waters via airborne pollution resulting from waste management and the chemicals industry. In 2017, 1 per cent of MSW was disposed of on non-compliant landfills and there are 47 non-compliant industrial landfills and 27 non-compliant landfills that must be rehabilitated according to the provisions of Directive 1999/31/CE on the landfill of waste. For rehabilitation of these sites, specifically dedicated programmes administered by the Environment Fund have been launched. By 2019, 13 applications regarding the municipal landfills had been submitted, of which eight had been already granted €9.5 million. The Environment Fund assumes responsibility for those non-compliant industrial sites, and their rehabilitation, whose owners are in bankruptcy. The latest inventory of potentially contaminated sites identified 155 mining and metallurgy sites, 23 chemical industry sites, 693 oil industry sites and 90 others.

The waste management and chemicals policy framework to achieve SDG target 6.3 is in place. The EIA procedure is a component of the procedure for environmental permitting of waste management, wastewater and chemical management operations. Pollution prevention measures are applied within IPPC. Control of major-accident hazards involving dangerous substances is being implemented and inspected within the country, and sanctions are applied according to the polluter pays principle.

Rehabilitation of non-compliant landfills is planned to be completed by 2023, but actual completion will probably exceed this date. Although none of these sites is no longer in operation, a significant number of them have not been rehabilitated (encapsulated) and are not in compliance with the Landfill Directive. Thus, these sites still emit pollutants and pose a risk to water quality. For operations that were not subject to implementation of modern environmental standards, i.e. state-owned enterprises in the 1990s and earlier, there is a sound policy framework in place, i.e. the National Strategy and National Action Plan for Management of Contaminated Sites since 2019. Substantial funds have been spent to rehabilitate contaminated sites, also using EU funds.

However, the range of these historic environmental burdens is overwhelming for Romania. An effective solution to this issue is hampered by property rights occasionally being unclear, and inappropriately resolved responsibilities for historical contamination

caused by the State. The financial resources needed to remediate these sites are estimated to be around €8.5 billion.

The total share of the waste and chemicals management sector in water pollution is not yet known. To raise part of the financial resources needed, the country has an opportunity to introduce a landfill tax on all types of waste disposed of (30 million tons of waste per year would generate €1.5 billion annual income, provided the waste disposal tax of €50 per ton is introduced). Tangible progress has been achieved in the proportion of wastewater safely treated, which improved by 11 per cent between 2012 and 2017.

#### *Soil and land*

Physico-chemical and chemical soil pollution affected 900,000 ha of agricultural land in Romania in 2018. As there is no specific EU regulation oriented towards soil protection, the country applies general environmental protection instruments to prevent soil degradation. These instruments are concentrated in urban and environmental permitting procedures, including EIA. These procedures assess the impacts of an operation on the environment and any conflict of interest under sectoral laws. If a potential impact is identified, preventive and mitigation measures are put in place to monitor the environmental impact. Quality standards for acceptable soil contamination are in place and include alert and intervention thresholds for soil pollutants for the identification of contaminated sites. Those values are established for both sensitive and less-sensitive land uses.

Despite the general soil degradation prevention measures, chemicals production and, to a lesser extent, waste management operations, affect large areas of soil via airborne pollution. According to the 2017 NEPA indicators report, airborne pollution originates from chemical fertilizer plants, pesticides production, oil refining activities and other such activities, for instance in Bacau, where 105,000 ha of agricultural land is affected. Chemical plants also contribute to acidification of soil through emissions of substances that create acid rain. Dismantling of ash deposits of coal-fired powerplants emits dust particles and contaminates soil, and eventually waters, although environmental damage stemming from such technological indiscipline is easily preventable. In total, airborne substances stemming from industrial and agricultural activities caused soil pollution on an area of 360,000 ha, as reported in 2018.

Soil also suffers damage due to accidental contamination. The most frequently affected areas

were zones where accidents occurred on equipment containing oil/crude oil, sludge and fuel, and salt water. NEG registered 54 incidents related to the waste and chemicals sector in 2018. Originators of accidents are obliged to take necessary measures to mitigate negative impact and to decontaminate the site and are sanctioned according to the polluter pays principle.

Non-compliant operations in waste management and chemicals industry facilities have been contributing to contamination of soil and other environmental assets for decades. In 2018, waste deposits have contributed to excessive soil damage on 5,800 ha, industrial inorganic waste deposits (including mining and quarrying) affected 800 ha, and 570 ha were damaged by radioactive materials. Romania had been reporting the same numbers since 2012, which indicates a lack of progress in addressing these issues.

#### *Landscape*

Of all waste and chemicals management activities in Romania, the most significant effects on the natural landscape have resulted from the storage or disposal of mining waste on the surface. To gain an overall picture of the effect and extent of soil degradation, Romania monitors the area of land affected by activities resulting from waste management, such as deposits, waste dumps, tailing ponds, flood tailings and dumps. The total area affected by waste deposits was constantly reported by NEPA as 6,639 ha (table 10.18) from 2012 to 2018. Covering the soil with waste and soil residues is an example of improper land use management that has led to the loss of about 18,000 ha of agricultural land.

#### *Biodiversity and ecosystems*

No studies on the impact of waste and chemicals on biodiversity have been carried out in Romania.

#### *Human health*

Hazardous chemicals pose risk to human health of direct exposure. Activities linked to hazardous chemicals in a professional sphere are subject to inspections and enforcement of the Labour Inspection and county public health departments. Transposition of the corresponding EU Directives has been following its amendments (the latest in 2019). Health and safety rules cover protection of workers from carcinogens, mutagens and asbestos. These rules set, inter alia, occupational exposure limits and minimum safety and health requirements for workers, and also CLP of chemicals.

**Table 10.18: Degree of soil degradation by selected waste-related processes, ha**

	Low	Moderat	High	Very	Excessive	Total
Deposits, waste dumps, tailing ponds, flood tailings, dumps, etc.	247	63	236	320	5 773	<b>6 639</b>
Inorganic wastes and residues from industry	10	217	207	50	360	<b>844</b>
Radioactive materials	..	500	..	..	66	<b>500</b>
Organic waste and residues from the light food industry and	13	19	12	17	287	<b>348</b>
Waste agricultural and forestry residues	37	65	90	642	306	<b>1 140</b>
Animal manure	2 883	993	363	265	469	<b>4 973</b>
Pesticides	1 058	650	224	77	67	<b>2 076</b>
Salt water from oil extraction	952	497	408	205	592	<b>2 654</b>
Petroleum products	-	473	248	5	25	<b>751</b>

Source: NEPA, Annual Report on State of the Environment for 2018, 2019.

Employers are responsible for reducing the use of chemicals, preventing workers from exposure to chemicals, managing related risks, informing competent authorities, providing hygiene and personal protective measures, and providing training, etc. Workers at risk are supplied with medical surveillance.

Regional public health authorities receive notifications on occupational diseases caused by exposure to chemicals and these data are registered in the National Occupational Diseases Registry. The National Institute of Public Health then publishes annual reports on occupational diseases.

According to WHO, in Romania, the mortality rate attributed to unintentional poisoning (SDG global indicator 3.9.3) decreased from 2.6 deaths per 100,000 population in 2010 to 1.9 deaths per 100,000 population in 2019 – a decrease of 27 per cent. In 2016, the EU average was 0.3 deaths per 100,000 population and the world average 1.45 deaths per 100,000 population. To facilitate implementation of SDG target 3.9 (By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination), Romania has set up a national target: Identification and remediation of particularly contaminated sites under the Protocol on Water and Health, implementation of which is in progress.

#### *Contaminated sites*

Many of the former state enterprises remain state property, but a substantial number of them were privatized. During the privatization process after 1990, only minimal environmental requirements were imposed on new owners of sites in privatization contracts. Now, private owners are responsible for and obliged to remediate the contamination resulting from earlier state activities. For abandoned sites, management responsibility resides with the national public authority.

The preliminary national inventory of potentially contaminated sites was drawn up in 2008 and estimated there were 1,628 potentially contaminated sites. In 2015, the estimate was 1,183 potentially contaminated sites and 210 confirmed contaminated sites, and estimated costs for remediation reached €7.145 billion and €1.3 billion, respectively. The latest inventory of contaminated sites, as of 2018, is dominated by the mining sector, and includes mining waste sites and MSW, chemicals industry and industrial waste disposal sites. Together these account for more than 100 confirmed contaminated sites.

The National Strategy and National Action Plan for Management of Contaminated Sites in Romania was developed in 2009 and defined necessary resources required to take short, medium and long-term steps towards its objectives. In 2014, the project “Rehabilitation of historically contaminated sites with petroleum products in Romania – phase 1” was launched, followed by approval of the National Strategy and National Action Plan.

To manage contaminated sites in the waste management sector, Romania launched programmes co-financed by EU funds, including the Sectoral Operational Programme 2007–2013, Priority Axis 2 – Development of integrated waste management systems and rehabilitation of historically contaminated sites, and the Large Infrastructure Operational Programme 2014–2020, Priority Axis 3 – Development of environmental infrastructure under efficient resources management conditions; Programmes of the Environment Fund: “Closure of non-compliant municipal landfills”; “Waste management”; “Closure of non-compliant hazardous and non-hazardous industrial waste landfills”.

Cases of unclear property rights or unsolved environmental liabilities in the process of privatization delay the process of remediation of the contaminated sites. Moreover, unclear delimitation between the historic contamination and current operation can lead

to future ambiguities. Owners of contaminated sites are subject to conditions for contamination management on their sites within their environmental permit. There are no national deadlines for the management of contaminated sites. Most of the works that have been commenced have followed site investigation and contamination risk assessments, with private owners using private funds. Owners of mining industry sites might have the opportunity to use EU funds for their remediation.

#### *Development and well-being of local communities*

Local communities have benefited from increasing waste collection coverage, increasing share of wastewater undergoing treatment and municipal SWIMS, which are widely instituted across the country. The population benefits from the newly installed and properly operated waste disposal installations and rehabilitation of waste disposal sites completed so far and from safe chemicals management. However, these developments are not distributed evenly over the country. By 2019, 48 per cent of counties possessed a fully operating SWIMS. In 2018, 20 per cent of rural areas were not covered by waste collection services and there was insufficient development momentum – between 2012 and 2017, the proportion of the population connected to at least secondary wastewater treatment increased by only 11 per cent, despite available funding from the EU.

The waste and chemicals management operations in Romania emit GHGs, dioxins, furans, volatile components, acidifying components and dust particles. Some communities suffer from air pollution caused by waste burning. Waste and chemicals operations are also liable for soil and water contamination, which is limiting the development of local communities. However, the extent of contamination is not yet fully known. Romania ranks 45th of 149 countries under the 2019 Social Progress Index,<sup>144</sup> but ranks 81st of 149 countries for outdoor air pollution attributable to death. According to the 2019 Europe Sustainable Development Report,<sup>145</sup> Romania ranked 27th of 28 EU Member States.

#### **10.5 Chemicals emergency preparedness, response and follow-up**

Chemical risk management is defined and organized by the legal and institutional framework involving environmental and human health protection and occupational safety and health. Facilities producing

chemicals must obtain an environmental and operational permit. Chemical products undergo a complex process of registration (production >1 t/y) according to REACH provisions (Law No. 349/2007), which include, among others, identification of their hazardous properties. Chemical products are accompanied on sale and distribution by information on relevant safety, environmental and waste management measures to be followed during the whole life cycle of the product. Chemicals are accordingly classified, labelled and packaged (GD No. 398/2010) and used according to their safety data sheets and to country standards on health, safety and the environment.

Through implementation of the Seveso Directive into the national legislation, Romania must ensure that specific measures such as a safety management system, an internal emergency plan, and safety report sharing are in place to control major accidents involving dangerous substances. NEG conducts regular and ad hoc inspections of companies producing and using chemicals and of waste management facilities. In the event of an accident, an operator informs NEG and takes immediate action according to the emergency plan and the health, safety and environmental plans to prevent harm to the environment and human health. NEG also decides which institution should be involved in the emergency inspection, such as NEPA or the National Institute of Public Health. If the operator violates any obligations, they can be charged and potentially penalized, their operational licence can be suspended or the event can be considered a criminal act and referred to a legal authority. After the investigation, NEG sets corrective measures and, usually, stricter rules for the operator. According to NEG, operators are following nationwide standards.

#### **10.6 Legal, policy and institutional framework**

##### *Legal framework*

##### Waste management

The waste management legal framework has incorporated most of the provisions of the EU legislation, though, in some cases, with a delay (i.e. end-of-life vehicles) or only partially (i.e. equipment containing PCBs, wastewater sludge treatment). In some cases, there has been a lack of sufficient specification of the provisions of primary legislation in the secondary legislation and technical standards. Greater specificity would enable fulfilment of the

<sup>144</sup> [www.socialprogress.org/?code=ROU](http://www.socialprogress.org/?code=ROU).

<sup>145</sup> <https://eu-dashboards.sdgindex.org/>.



provisions of the primary legislation. This is the case in terms of construction and demolition waste management, biodegradable waste, treated sewage sludge and energy sector waste. Specific provisions on implementation mechanisms would enable the use of waste materials as products (to be applied in the construction industry) or as fertilizers on agricultural land (sewage sludge) and would reduce the amount of waste generated by channelling wastes to a material or energy use.

Some provisions are lacking, for example, legal provisions enabling and facilitating acquis implementation, especially those concerning cross-sectoral activity, specific (fiscal) tools and development of methodological guidelines. There is no listing of specific waste codes affected by a waste stream regulation, which would make the application of the waste-related legislation more efficient. Also, short implementation periods for some legal provisions put pressure on end users. Although the Ministry of Environment, Waters and Forests applies the impact assessment within the legal act preparatory phase, the assessment focuses primarily on economic impacts of the regulation or its applicability, or the regulation is not subject to deep analysis.

Law No. 211/2011 on Waste Management covers all types of waste, except radioactive materials, decommissioned explosives, faecal matter, wastewater and animal carcasses. Romania has adopted GEO No. 68/2016 to the Law on the waste regime because of the risk of potential infringement due to incomplete implementation of Directive 2008/98/EC on waste, which was later amended by Directive (EU) 2018/851. It transposes the EU Waste Framework Directive, establishes provisions to protect the environment and human health and introduces modern principles of waste management and provisions specific to the country. In addition, the Law defines the general duties of parties involved in waste management, specific provisions for the municipal sector, the waste hierarchy and end-of-waste status. The Law applies the polluter pays principle, introduces the EU waste coding system and the extended producer responsibility concept, and includes provisions on recovery, reuse, recycling and disposal of waste along with specific provisions on hazardous waste management and special waste streams (oils and biodegradable waste). Moreover, it stipulates conditions for licensing, permitting and registration and includes provisions on waste management plans, waste prevention programmes, enforcement and record keeping.

Law No. 101/2006 regarding the sanitation service of the localities, as amended, establishes the legal

framework regarding the establishment, organization, management, financing and control of public sanitation services of the localities.

GD No. 856/2008 regarding management of waste from extractive industry transposes Directive 2006/21/EC. It deals with waste resulting directly from prospecting, extraction, treatment and storage of mineral resources and quarries. The Law requires operators to manage mineral extractive waste according to an approved waste management plan and preventing environmental harm, economic damage and negative effect on human health. The Ministry of Environment, Waters and Forests, through the counties' environmental authorities, and the National Agency for Mineral Resources are the key authorities for approving the mining waste management plan. The Law imposes the obligation to establish a financial guarantee before performing any operation involving the accumulation and storage of extractive waste in a waste installation, which should ensure that all obligations in the environmental permit are financially secured and funds are available for the rehabilitation of the waste installation site.

The Agency requests proof of the establishment of a financial guarantee according to a defined procedure. The operator estimates the amount of the guarantee. The procedure is approved by a common order of the President of the National Agency for Mineral Resources, the Minister of Environment, Waters and Forests and the Minister of Economy, Energy and the Business Environment.

### *Chemicals*

In the case of the chemicals legislation, the link between the international, EU and national legislation and policy framework is through the implementation of the SAICM policy framework and the EU REACH regulations.

Law No. 349/2007 on the institutional framework in the chemicals management field establishes the competent authorities and their responsibilities relating to REACH.

The implementation of EU Regulation 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP Regulation) is enabled on the national level through GD No. 398/2010 on establishing measures for implementation of classification, labelling and packaging Regulation provisions. This is in line with the Globally Harmonized System of Classification and Labelling of Chemicals of the United Nations. All industrial sectors in Romania, including producers, importers and users,

are obliged to classify, label and package their hazardous chemicals appropriately according to the CLP Regulation before placing them on the market. The CLP Regulation contains detailed criteria for the labelling elements: pictograms, signal words and standard statements for hazard, as well as standard statements for prevention, response, storage and disposal, for every hazard class and category. It also sets general packaging standards.

GD No. 770/2016 regarding some measures for the application of EU Regulation No 649/2012 on the export and import of hazardous chemicals designates the national authorities for the coordination and application of the Regulation's provisions. This Decision establishes the contravention sanctions that are applied for non-compliance with the Regulation's provisions. Thus, the Ministry of Environment, Waters and Forests is the national authority for the coordination and implementation of the Regulation, and the General Directorate of Customs and NEG are the authorities for control of export and import of hazardous chemicals.

According to the provisions of GD No. 617/2014 on establishing the institutional framework and measures for the implementation of Regulation (EU) No 528/2012 concerning the making available on the market and the use of biocidal products, the Ministry of Health is the competent authority for coordination of enforcement measures at the national level. The State Sanitary Inspectorate, NEG and the National Sanitary Veterinary and Food Safety Authority are the authorities responsible for inspections for compliance with the Regulation's requirement provisions on official controls and enforcement (article 65).

GD No. 1218/2006 on establishing the minimum requirements for safety and health at work to insure workers against the risks related to the presence of chemical agents transposes Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

#### *Policy framework for waste management*

Romania's EU membership commitments define the national waste management policies. To comply with all environmental requirements linked with its accession to the EU, Romania had to deal with several specific challenges. Pursuant to the latest NWMP for the period 2018–2025, waste management plans for 41 counties and Bucharest municipality were developed by county councils with the assistance of the LEPAs and are expected to be approved in 2021. Local waste management plans will be developed accordingly.

In 2007, the implementation of the SWIMS projects started, supported by EU funds. So far, 32 of the 41 counties and Bucharest municipality have been involved: 14 county-level projects were completed within the Sectoral Operational Programme 2007–2013 and 18 were phased into the Large Infrastructure Operational Programme 2014–2020.

The National Strategy for Waste Management 2003–2013 was revised in 2013 (GD No. 870/2013). The Strategy established the policy and strategic waste management objectives of Romania for the period 2014–2020. In addition to the Strategy, the NWMP for the period 2004–2014 was prepared to complement the provisions of the Strategy with the application of measures promoting the waste hierarchy. Since the NWMP came into force, it has been the binding waste management strategic document for the national level elaborated to comply with the Waste Framework Directive. The NWMP was later extended to 2017 due to the delay in preparation of the new one, which will be compliant with the Waste Framework Directive. Its amendment measures cover the period 2018–2025, although it is based on 2010–2014 data. The Plan provides the basis for mandatory county waste management plans. This Plan is to be amended by 2022 to implement the latest EU circular economy targets. The country has also developed the Waste Generation Prevention Programme, integrated with the NWMP into a single document, both drafted following the EU guidance document.

The NWMP is the central policy document that provides data on waste management with a critical assessment of waste management performance and the reasoning behind the designation of status. It defines specific targets according to the EU targets and related measures. Three options were assessed and designed to ensure the national targets stemming from EU membership are met:

- Zero option – all planned installations, including SWIMS projects, should be implemented by 2018 and all waste is collected (this condition was not fulfilled by 2019);
- First option – includes the Zero option and, in addition: extension of the system of separate collection of recyclable waste, including biodegradable waste, sorting capacities and composting capacities; accomplishment of anaerobic digestion installations and mechanical-biological treatment installations; closure of non-compliant landfills and construction of new compliant landfills; and closure of full cells;
- Second option – includes the First option and, in addition, MSW incineration plants with energy recovery.

The installations identified for investment in the NWMP qualify for the EU funding period 2014–2020. For the upcoming Cohesion funding period, the EU will not support MSW incineration installations with energy recovery, nor the construction of new compliant landfills. The investments required for the implementation of the Plan are estimated at about €1.154 billion. The Plan also introduces the evaluation of the maximum tariff per ton of MSW, through affordability assessment. The Plan introduces waste policy tools, such as the pay-as-you-throw instrument. The implementation of targets should be monitored through indicators.

The 2018 Waste Generation Prevention Programme, included in the NWMP, is the first planning document regarding the prevention of waste in Romania. It was developed based on the country's obligation pursuant to the EU Waste Framework Directive, though with delay (the deadline for EU countries was the end of 2013) and with use of the EU Guideline for development of a waste generation prevention programme. Its measures cover the period 2018–2025. Being the first targeted policy of its kind, the Programme summarizes the existing waste prevention measures for municipal waste (individual composting under SWIMS), food waste (Law No. 217/2016 on Food Waste Reduction), packaging waste (ecotax for plastic bags), WEEE, waste batteries and accumulators, and GPP (Law No. 69/2016 on Green Public Procurement).

In its second part, the Waste Generation Prevention Plan defines the future priority areas and measures for municipal waste (four measures), packaging waste (five), and industrial waste resulting from the processing industry, i.e. waste from wood processing and from the chemicals industry, metallurgy and iron and steel industry (two). The action plan is defined as well as indicators and targets to be addressed. The Programme is to be evaluated and amended every six years at the latest.

Romania has implemented Recommendation 8.1 in the Second EPR of Romania urging the then Ministry of Environment and Forests and the Ministry of Administration and Interior to analyse possibilities to ensure full coverage of rural areas by waste collection services and draft a relevant plan of action, by developing the NWMP in 2017. It covers urban and rural areas of the entire country and integrates the concept of waste management systems, which has already been implemented with the support of EU funds (so-called SWIMS projects). The integrated system requires the implementation of one waste management system per county, covering both rural and urban areas within the county. As at December

2019, not all counties have developed their integrated waste management systems to a fully functional state; however, the waste collection services are secured in those counties. Thus, between 2012 and 2019, the MSW collection rate in rural areas increased from 60 per cent to 79 per cent and in urban areas from 87 per cent to 96 per cent.

To assess and manage soil contamination, the National Strategy and National Action Plan for Management of Contaminated Sites introduced methodology for the inventory and investigation of contaminated sites. With Law No. 74/2019 regarding the management of potentially contaminated and contaminated sites (excluding mining waste, radioactive waste and other sites), a new approach was established. The Law introduced a list of potentially contaminating activities, such as waste management operations and fuel management. In the first stage, municipalities identify such activities within their territorial jurisdiction. Then, owners or operators of these sites fill in a questionnaire (mainly assessment of preceding potentially contaminating activities on the site) to be analysed by the LEPA.

If the site is assessed as potentially contaminated, an authorized person undertakes preliminary investigation of the site followed by detailed site investigation together with risk assessment for the owner/operator of the site. Based on the results, NEPA prioritizes sites and decides whether the site should be remediated or the regime of its utilization should be changed. In some cases, the owner develops a feasibility study and remediation project. The costs of remediation are borne by the owner, though there are also possibilities for co-funding such activities. Data on potentially contaminated sites and contaminated sites are collected and updated in the National register on contaminated, potentially contaminated and remediated sites, managed by NEPA.

The 2014 National Healthcare Waste Management Strategy and Plan, revised in 2019, is the policy document on medical waste management. The key strategic document for POPs management is the National Plan for the Implementation of the Stockholm Convention on POPs for the period 2008–2029.

#### *Chemicals policy*

As part of the project “Strengthening Planning and Budgeting Capacity and Supporting the Introduction of Performance Budgeting”, four-year plans for the key institutions have been prepared to create a relevant policy framework and promote cooperation and exchange of information between institutions. For

environmental aspects of chemicals management, the Institutional Strategic Plan 2019–2022 for the then Ministry of Environment was developed.

The Plan has major strategic objectives and indicators related to objectives to reduce the effects of hazardous substances on the environment and human health. The Ministry of Environment, Waters and Forests has recently conducted inter- and intra-institutional capacity-building campaigns, organized thematic workshops and training and developed thematic methodologies. These focus on chemicals, POPs and biocides, the application of REACH, CLP for industries, and regulatory risk management.

The Ministry of Health also has a strategic framework to monitor the health risk resulting from hazardous substances, which aims for optimal cooperation among institutions involved in regulating, monitoring and responding to environmental accidents.

#### *Institutional framework for waste management*

The Ministry of Environment, Waters and Forests is responsible for waste management. It is responsible for the preparation of laws and transposition of EU directives related to waste management and international waste management treaties. It is also responsible for the national waste management strategy, and policy preparation, updating and implementation. The Ministry reports to the Government and international institutions on the country's performance on its waste management commitments.

NEPA is responsible for implementation of policies, strategies and legislation at the national level. It also provides technical support and data to the Ministry. It is responsible for collection and reporting of waste management national data from parties involved in the waste management system and reports to the National Institute of Statistics and Eurostat. NEPA issues environmental permits for activities that cover more than one county and coordinates the LEPAs. At the county level, the LEPAs issue environmental permits for municipal and other sectors' waste management installations. The LEPAs also support county councils in drafting the county waste management plans. Nevertheless, NEPA does not have enough human resources, especially at the county level, to fulfil all these obligations, which limits its working capacities.

NEG is responsible for control and enforcement of the environmental law. NEG can sanction economic operators for non-compliance with conditions stipulated by their environmental permit. NEG could

ask NEPA or the respective LEPA to suspend or revoke the environmental permit in a case of violation of the environmental and regulatory conditions (i.e. industrial pollution control and risk management, hazardous substances). NEG also imposes measures to prevent risks and reduce environmental threats. NEG has also been facing a human resources shortage, having difficulty attracting qualified staff, mainly at the subnational level.

The Ministry of Regional Development and Public Administration participates in drawing up the NWMP, provides support to local public administration authorities to set up their waste management systems, develops or participates in MSW management strategies and programmes, supports local public administration authorities in the implementation of SWIMS and develops specific regulations related to waste management for local public administration authorities.

#### **Photo 10.7: Promoting waste recycling in the ministry responsible for the environment**



*Photo credit: Angela Sochirca*

Ministry support for local authorities would become less necessary if personnel capacities were improved at the municipal level. The National Romanian Regulator for Public Services, coordinated by the

Ministry, controls the quality of public services, including waste management, which is under the responsibility of municipalities. At the national level, it mainly prepares and issues quality standards (tertiary legislation) and oversees the licensing of waste management operators. The Regulator adopts methodological norms regarding tariffs for sanitation services, and regulates the framework regulation of sanitation services, tender specifications and the framework contract for the provision of sanitation services. Its activity is shared among eight local agencies.

### Municipal level

Local public administration authorities are responsible for municipal waste management, including collection, separate collection, treatment and disposal of MSW including hazardous waste. They organize the services either directly through their specialized departments (which can be joined together with other municipalities to supply local or county services) or delegate the sanitation services by contracting external operators (of mixed or private ownership). However, personnel at the municipal level lack both the experience and environmental and management qualifications required to control or manage sanitation services. Therefore, they receive methodological and quality control from different institutions.

In connection with SWIMS, municipalities create intercommunity development associations (IDAs), usually on a county level. Their purpose is to couple administrative-territorial units to prepare and promote regional development projects that are of common interest for their members in the public utility services field. In the case of SWIMS, the purpose is the rehabilitation, modernization and development of the public utilities systems, i.e., the sanitation services. The municipality collects payments for collection services from citizens, companies and institutions that do not have a signed contract with an operator of waste collection services.

Local councils approve the rules for providing a waste collection service, its parameters and the rights and responsibilities of all stakeholders; they approve tender specifications for operators and framework contracts with users of the waste collection service. They also approve tariffs and tariff adjustments requested by economic operators.

The agencies of the National Romanian Regulator for Public Services at the municipal level grant, amend, suspend or revoke licences for operators of waste collection and disposal systems in the municipal sector. The Regulator also monitors operators and the

local public administration authorities in the implementation of, and compliance with, the relevant legal framework, provides methodological guidance and imposes financial penalties as appropriate. Tariff setting, quality control, monitoring of operators and compliance checking are in the interest and responsibility of municipalities.

Municipalities are responsible for their municipal waste management system and for that they receive institutional support from two ministries and their respective specialized agencies. However, they still have limited capacities to effectively control the quality of sanitation services, ensure its economic sustainability and monitor performance.

The key institutions responsible for the management of POPs waste in the environmental context are the Ministry of Environment, Waters and Forests, NEPA, NEG and the LEPAs. The Ministry of Agriculture and Rural Development is the main authority for pesticides management.

### *Institutional framework for chemicals management*

#### Registration, Evaluation, Authorisation and Restriction of Chemicals

The Ministry of Environment, Waters and Forests coordinates the implementation of the REACH Regulation and cooperation with the EC and European Chemicals Agency. The Ministry is responsible for reporting to the EC in line with article 117 provisions. NEPA implements the REACH Regulation in cooperation with the EC and European Chemicals Agency and is the national help desk. NEG enforces, imposes fines and sanctions in the case of non-compliance.

The Ministry of Health is responsible for human health protection aspects.

The Ministry of Labour, Family, Social Protection and the Elderly is responsible for aspects of occupational safety and health. The National Labour Inspection, subordinated to the Ministry, is responsible for enforcement of occupational safety and health aspects.

The Ministry for National Defence is responsible for compliance with article 2 (3) of the REACH Regulation and the national regulatory system.

#### Classification, labelling and packaging

Institutions involved in implementation of the CLP regime include: the Ministry of Environment, Waters

and Forests for coordination of implementation of the CLP Regulation according to article 43; the Ministry of Health for classification and labelling harmonization according to article 37 (1); NEPA for implementation of the CLP Regulation and the national help desk; NEG for enforcement; and the National Authority for Consumer Protection for products for public use.

#### *Regulatory, economic, fiscal and information measures*

##### Permits

Waste and chemicals management operations require an environmental permit issued by the relevant LEPA, and occupational safety and health related approvals, including a fire safety permit. Legal aspects and demands concerning environmental protection are addressed via the environmental permit.

Within the environmental permitting procedures, authorities involved in the decision-making process include the water authority, public health department, air protection authority and Emergency Situation Inspectorate/fire brigade, depending on the character of the operation.

For new facilities, the process also involves the EIA procedure, and selected operations are subject to the IPPC procedure and Seveso Directive provisions. All these procedures precede the construction permit stage. The construction permit holder prepares an operational plan, which is again subject to approval by relevant environmental authorities and those responsible for occupational safety and health. The operator is responsible for introduction and fulfilment of all provisions set within the permitting process, including health, safety and the environment, and monitoring frequency and parameters. Monitoring and reporting are usually done on an annual basis, or more frequently upon request by an authority, for example, the LEPA on environmental aspects.

In addition, operators of MSW collection and disposal systems under public utility services must obtain a specific licence to operate from the National Romanian Regulator for Public Services. Operators apply for their licence within 90 days of the commission for operation having been signed.

Applicants supply qualification documents, such as relevant contracts, local council decisions, environmental authorizations, financial and economic indicators and a list of technical equipment they possess.

##### Taxes and fees

The landfill tax was applicable from January 2017 to June 2017. It was suspended due to the lack of related methodology. As a result, Romania does not apply a progressive waste disposal tax on the majority of waste streams. In addition, hazardous waste disposal is not subject to an extra disposal tax. To prevent the repeated resale of waste, economic entities contribute 2 per cent of the income realized from the sale of waste to the Environment Fund. Economic operators introducing on the national market substances that are dangerous for the environment pay a contribution of 2 per cent of the value of the substance to the Environment Fund.

Besides these taxes, the substantial revenues contributing to the Environment Fund come from the penalties or charges, promoting recovery and recycling, that are applicable on the following items only if the applicable legal targets are not met: packaging, EEE, portable batteries and accumulators, tyres and mineral oils. Companies introducing oils on the national market must pay a contribution of 0.3 lei/kg. GEO No. 74/2018 established a “contribution to the circular economy”, introducing the concept of the “extra” amount of waste, which is computed from the average estimated MSW production of 233 kg per inhabitant per year in urban areas and 105 kg per inhabitant per year in rural areas.

In January 2019, the price of extra waste was €8.30 per ton, and from 2020 onwards €22.20 per ton. These contributions are applicable for municipal waste deposited on landfills above the binding limit – per extra ton of the waste deposited – and on all construction and demolition waste. In addition, an ecotax of €0.03 equivalent per piece is applied on plastic shopping bags.

MSW tariff setting varies from municipality to municipality and between urban and rural areas. The tariff setting methodology was issued by the Ministry of Environment, Waters and Forests and the National Romanian Regulator for Public Services. The MSW tariff has changed since 2012 and is subject to overall caution in terms of its affordability. The NWMP introduces detailed analysis of costs linked to the then planned development of integrated waste management systems, assessed against affordability for each county individually. The affordability is calculated as 1.8 per cent of the available income of the population in the lowest income decile. The result is the maximum tariff per ton for each county (box 10.2).

The difference between estimated costs for new infrastructure development and affordable amount is

considerable. Minimum tariffs were not set. Current tariffs can be so low because of the substantial EU and national funds spent on investments. The calculation in the NWMP did not consider EU funds for future projections.

In comparison with the earlier practice, three possibilities for a waste tariff collection scheme have been put in place:

- The tariff is set out in a contract between the waste collection operator and service consumers – people/companies/public institutions;
- The municipality collects the tariff and pays it to the waste collection operator;
- A combination of these approaches in one municipality: for those people who do not have contracts signed with the operator, a tariff is charged, payable to the municipality, which then pays it to the operator.

The operators of waste collection systems (either public or private) prepare the calculation of the tariffs using background data according to the National Romanian Regulator for Public Services' methodology. The local councils analyse the calculation and approve the level of tariffs. Local councils on the municipality level have exclusive competences to establish, adjust and modify the tariffs and approve tariffs.

The new collection scheme does not guarantee that waste tariff collection will increase and move closer to full cost recovery. The introduction of contracts is enabled but not specifically supported by the current legal framework. Therefore, Recommendation 8.2 in the Second EPR of Romania urging the then Ministry of Environment and Forests, in cooperation with county councils and municipalities, to support and

widely introduce contracts for MSW collection services between municipalities and collection companies, is not implemented.

Recommendation 8.3 in the Second EPR of Romania, urging the Government to ensure that the competent authorities introduce waste tariffs based on the principle of full cost recovery, is not implemented.

#### Awareness, education and training for sound management of waste and chemicals

A 2014 study, "Knowledge, attitudes and behaviour regarding waste management options in Romania" revealed that the potential of recycling was well known to students, in contrast to their understanding of concepts related to waste management technologies. Also, waste separation habits were not generally practised, partly as a result of the lack of relevant infrastructure. According to the 2019 study "Community and School Education on the Subject of Waste Management", whether the topic is raised or not usually depends on the motivation of particular teachers. Community education often aims at the basic topics. There is no coordinated approach to education and awareness-raising on waste management in Romania.

NGOs in Romania play a role in awareness-raising in schools in the private sector and in civil society, promoting responsible behaviour and proper waste management habits. NGOs initiate or support education in schools, raise awareness in the private sector, assist in promoting proper behaviours, facilitate the technical and organizational aspects of waste management collection systems to current infrastructure, disseminate information on waste management issues and organize community activities, such as neighbourhood clean-ups.

#### **Box 10.2: Waste tariffs in Bistrita-Nasaud County**

In Bistrita-Nasaud County there is one SWIMS for the whole county, one tariff for urban areas and one for rural areas. In 2019, the tariff for urban areas was set at €1.40 per person/month and for rural areas at €0.45 per person/month, both without VAT. For public institutions and commercial operators, a single tariff was set at €52.70 per ton for both urban and rural areas. In recent times, the private sector and institutions integrated into the MSW collection system, as well as the urban population, had paid higher tariffs than those in rural areas, thus compensating for the lower income from rural areas.

Examples of tariffs in other municipalities range from €1.26 to €2.57 per person/month in urban areas and €0.63 to €1.20 per person/month in rural areas. Waste tariffs have not been collected satisfactorily; many people did not pay. The real practice in tariff setting is also a political issue. Some municipalities did not collect any tariffs at all from citizens, hampering the principle of full cost recovery. Nevertheless, tariffs collected are still lower than the real costs of investments in and operation of the system. Although the system is based on the polluter pays principle, the municipal sector seems to benefit from extended producer responsibility systems, companies and institutions involved in the MSW system and EU infrastructure funds.

The Ministry of Environment, Waters and Forests, NEG, NEPA, the LEPA's and others also organize training on waste and chemicals issues for their own staff, staff of other institutions and the public. The Environmental Fund launched the programme "Public awareness on waste management", which aims to grant funding for public awareness-raising on separate collection of various waste types, such as packaging waste, WEEE, bulky waste, and construction and demolition waste.

## 10.7 Assessment, conclusions and recommendations

### *Assessment*

As an EU Member State, Romania follows EU policies framing waste and chemicals management. Due to the evolving character of the EU environmental legislation and policy, Romania has been pushed to take on additional tasks, causing numerous challenges for the Government, municipalities, companies and individuals. Despite these difficulties, Romania has managed to introduce many of the principles of the modern waste management system since 2012. Principles of prioritization of waste generation prevention and its reuse or recovery from disposal are anchored in the legal system, though its sound implementation remains to be addressed.

The policy framework resulting from Romania's international commitments has been enacted on a national level. Within this process, waste management legislation was adopted in reaction to approaching national deadlines or to catch up with them or avert impending infringement procedures. Low performance in the management of some waste streams (e.g. biodegradable waste, construction and demolition waste, energy sector waste) can be attributed to the regulations not covering the whole life cycle of waste, the lack of standards for end-of-waste status and the lack of quality standards for products from waste (e.g. compost). Enabling and facilitating provisions (e.g. a list of waste codes referring to biodegradable waste) are also missing from the regulations.

There is some overlap in the institutional setting for municipal waste management. Responsibilities for licensing waste management operations are split between the LEPA's, which issue the environmental permits, and the National Romanian Regulator for Public Services, which licenses operators of waste collection and disposal services in the municipal sector. In principle, the waste management agenda of the Regulator could be merged with the agendas of the Ministry of Public Works, Development and

Administration, NEG (enforcement of environmental law) and the municipalities (tariff setting, monitoring of operators). Local administration staff are not yet fully prepared to manage the waste management agenda soundly. With new and widening demands on administrative apparatus, human resources in Romania are getting tight. While human resource competencies increased mainly on the national level, the necessary capacities are still not met.

Although 20 SWIMS are functional and operational, rates of separate collection and recycling in the municipal sector are low, which does not auger well for Romania in terms of SDG global indicator 12.5.1 (National recycling rate, tons of material recycled). With subsidies linked to the introduction of the SWIMS, the natural market conditions for waste management market development were somewhat disrupted and enabled the current low level of waste management tariffs, which make the market entry of the international waste management companies somewhat limited. This, together with limited demand for industrial clients – industries usually operate their own waste management facilities – and only emerging demand for treatment of waste resulting from remediation of contaminated sites, and a lack of other opportunities, indicate that the market might be lean for substantial foreign investments in waste management technologies and services.

Hence, the country failed to seize the opportunity to introduce the key element of an integrated waste management system, i.e. motivating a waste disposal tax applicable on all wastes disposed of in landfills. Operators of waste management facilities for other than municipal waste are thus not motivated to invest in new waste management technologies or outsource waste management services via progressive and specialized waste management companies. Industries are not led on a trajectory to invest in new technologies and operations, resulting in lower quantities of waste or more environmentally friendly materials and operations. All of this, and the shortage of specific legal, policy and technical standards enabling alternative and economically viable solutions for the prevention and utilization of waste, results in waste management systems undergoing the lengthy transitional process towards the integrated system.

To modernize the municipal waste management system, SWIMS were introduced and had a positive effect in increasing the coverage of urban and rural areas with waste collection services. Therefore, progress can be made towards achieving SDG target 11.6 (By 2020, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other



waste management) through reporting on global indicator 11.6.1 (Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities).

In terms of global indicator 12.4.2 ((a) Hazardous waste generated per capita; and (b) proportion of hazardous waste treated, by type of treatment), there is a decreasing trend of waste generated per capita, which results more from economic patterns than the effect of policy measures. Romania has not moved closer to the target on the amount generated and on hazardous waste treated. The reason for this is the failure to establish motivating financial schemes and a landfill tax. Management of PCBs in the country does not have focused institutional support.

The closure of hundreds of non-compliant landfills and their replacement with compliant installations is a key achievement of Romania and a prerequisite for improvement of water quality, its management and other environmental assets. This progress moved the country forward towards achievement of SDG 6. Nevertheless, many of these sites have not yet been rehabilitated according to the Landfill Directive.

Management of contaminated sites, especially those resulting from former state-owned companies, is a long-term process. The strategy is in place and the first results have been achieved. Investigation and inventory of the contaminated sites and potentially contaminated sites are the first steps taken under the strategy. The country made progress towards achieving SDG 3 (Ensure healthy lives and promote well-being for all at all ages). On the other hand, addressing all the liabilities might consume resources.

During the privatization process, the Government missed the opportunity to utilize the money from privatization on environmental purposes. Regarding the investment needs for waste management infrastructure and rehabilitation of contaminated sites (including mining waste objects and formerly non-compliant landfills), the collection of landfill tax and bank guarantees for restoration of future waste management installations after their lifetime provides a practical solution for the future.

The waste coding system and statistical data collection and reporting to the central, EU and international levels have been put into practice, with occasional delays in data delivery. Waste reporting schemes and obligations are not fulfilled consistently, lacking integration into a system enabling the cross-checking of data. This results in inconsistency or gaps in waste management data, for example, on construction and demolition waste.

Romania has implemented Recommendation 8.1 in the Second EPR of Romania urging the then Ministry of Environment and Forests and the Ministry of Administration and Interior to analyse possibilities to ensure full coverage of rural areas by waste collection services and draft a relevant plan of action, by developing the NWMP in 2017, which covers urban and rural areas of the entire country and integrates the concept of waste management systems. Recommendation 8.2 about the introduction of contracts for MSW collection services between municipalities and collection companies is not implemented, as the introduction of contracts was enabled but not specifically supported by the current legal framework. Therefore, it remains valid. Recommendation 8.3 urging the Government to ensure that the competent authorities introduce waste tariffs based on the principle of full cost recovery is not implemented. Recommendation 8.4 on the availability of detailed, verified background information for the development of a new integrated waste management strategy for the period 2014–2023 is not implemented and is still valid.

### *Conclusions and recommendations*

#### Secondary legislation

With Romania's membership of the EU, the waste management and chemicals sector gained access to an advanced environmental policy and legal framework, smoothing the path towards sustainable development. To achieve its commitments at the international level, the country endorsed efficient policies at the municipal level. This required an enabling framework to be set up and its components to be harmonized and linked to specific targets. Should regulations lack specific and targeted provisions or provisions not be economically viable, consistent and interlinked with other regulations, including cross-sectoral ones, their impact will miss their target.

#### *Recommendation 10.1:*

*The ministry or ministries in charge of the environment, waters and forests should complete and implement waste-related regulations that undergo regulatory impact assessment and be targeted and tailor made to achieve high recycling rates and standards in the construction and demolition waste and wastewater sludge treatment sectors.*

#### Solid waste integrated management systems

To modernize the municipal waste management system, Romania, with the support of EU funds, has been gradually introducing solid waste integrated management systems (SWIMS). These systems aim to

streamline waste management at the county level and apply sustainable financial schemes. With the support of EU funds, the implementation of SWIMS projects started in 2007 and, since then, 32 of the 42 counties, including Bucharest municipality, have taken part. By 2019, up to 20 systems were fully functional and successfully operated. Remaining municipalities outsource sanitation services, which results in longer transportation distances and higher costs.

Recommendation 10.2:

*The Government should encourage the remaining counties and Bucharest to implement and operate solid waste integrated management systems to substantially reduce the adverse impact of waste on human health and the environment and to achieve global SDG target 11.6 by 2030.*

Landfill tax

As at December 2019, Romania does not have a landfill tax. One of the key prerequisites of an integrated waste management system is a healthy market environment together with both motivating and discouraging policy instruments in place. The key instrument is a charge applied to all wastes sent to landfill. Provided that there is the necessary legal framework in place and law enforcement preventing littering and dumping, this instrument triggers spontaneous market economy processes towards sustainable waste management, including chemical waste disposal, and invites international competition. This instrument would support the country's efforts directed towards fulfilling SDG 12 (Ensure sustainable consumption and production patterns). The income from the landfill tax directed to the state budget may be used for environmental protection purposes.

Recommendation 10.3:

*The Government should introduce a comprehensive landfill tax, with a transitional period to announce and negotiate this intention to the public and for economic sectors to be able to make necessary arrangements, with a view to supporting the country's efforts directed towards fulfilling SDG 12.*

Liability for contaminated sites

The remediation of contaminated sites, which the country has set as a priority under SDGs 3 and 6, made progress in terms of policy making. The policy is aimed mostly at sites of former state enterprises that caused contamination of the environment. Some of the contaminated sites were privatized over the past 30 years. Because the early privatization contracts did not reflect on the emerging environmental standards in the

1990s, the present owners are now responsible for contamination that does not originate from their activities and was not adequately compensated for in the privatization contracts.

Recommendation 10.4:

*The Government should elaborate and implement programmes to remediate contamination caused by the State prior to privatization of enterprises and not addressed within privatization contracts, and act to rehabilitate the contaminated sites.*

Municipal waste collection service tariffs

Current levels of waste collection service tariffs for citizens appear to be sustainable as they are affordable, mainly thanks to EU funding of the necessary infrastructure. In a long-term perspective, there will be a need for infrastructure refurbishment, replacement, renewal and extension, but funds will not be available. Currently, citizens do not bear all the costs of the MSW management system. Direct participation and active contribution of citizens to the development of a sustainable waste management system is a precondition of their sense of its ownership. Therefore, waste management systems are aiming at full cost recovery. This includes waste collection service tariffs that are to be paid by citizens to cover all costs, but kept as low as possible by the implementation of all available measures to maximize incomes from waste sorting, recycling, material or energy use of waste, among other activities, and to minimize costs (e.g. waste prevention, separate collection and extended producer responsibility schemes).

Recommendation 10.5:

*The Government should progressively adjust the waste collection tariff for citizens within a medium-term horizon so that it gets closer to a full-cost-recovery scheme, while preserving its affordability by taking into account the need to protect poor and vulnerable parts of the population.*

Waste management data quality

Good quality, standardized data on waste management are a fundamental condition for monitoring, evaluation and planning of any waste management system on the national, local and enterprise levels. Some waste reporting systems exist and are managed by NEPA, the Environmental Fund and public administrations. However, these institutions do not share a common database. Data are publicly available through annual reports published on the institutions' websites, but an online database enabling systematic work with Eurostat-quality data is not in place.

Data on performance against development indicators are also needed. Reporting by waste generators is frequently conducted by untrained personnel. Moreover, Romania has been fulfilling its reporting obligation to the EU incompletely, not supplying data reports or reports on the progress made towards the implementation of the targets (e.g. on WEEE, waste batteries and accumulators and end-of-life-vehicles) of a quality compliant with EU reporting standards, or in a timely manner.

*Recommendation 10.6:*

*The Government should entrust the National Institute of Statistics and the National Environmental Protection Agency to ensure that waste management data are collected, enabling timely reporting to international institutions to the required reporting quality, and made publicly available in an online database.*



## Chapter 11

# BIODIVERSITY AND PROTECTED AREAS

### 11.1 Trends in species and ecosystems

#### *Species*

#### Species diversity

Romania is a country with rich biodiversity and a high percentage of natural ecosystems: 47 per cent of the land area is covered with natural and semi-natural ecosystems. Romania has five of the 10 biogeographic regions officially recognized by the EU (alpine, continental, panonic, pontic, steppe), making it the most biogeographically diverse country of the EU. The high level of geographic diversity in Romania and the consequence of its location as a place of biological confluence, has produced a rich flora and fauna diversity. The Fifth National Report to the Convention on Biological Diversity (CBD) in 2014 states that there are 3,795 species and subspecies of vascular plants, including: 979 species of bryophytes, of which 4 species are hornworts; 217 liverworts and 758 mosses; 8,727 species of fungi; and more than 600 species of algae, of which 35 are marine. The

characteristic grassland species represent approximately 37 per cent of the species found in Romania. As far as fauna is concerned, 33,802 species of animals have been identified so far, of which 33,085 are invertebrates and 717 vertebrates. Among vertebrates, 103 species of fish were identified, 19 species of amphibians, 23 species of reptiles, 364 species of birds (of which 312 are migratory species) and 102 species of mammals. As at December 2019, the Sixth National Report, which covers the period 2014–2018, is being finalized but it was not formally released.

In accordance with the European reporting document, Romania prepared its first report following its EU accession in 2013. The report was based on the general assessment matrix of the conservation status of species of community interest. The conservation status, by groups of species, according to the data in the final report made based on the Habitats Directive, December 2013, is presented in table 11.1 and has not been updated since.

**Photo 11.1: Chamois and two-year-old kid (*Rupicapra rupicapra*)**



*Photo credit: Mircea Verghelut*

**Table 11.1: Conservation status of plant and animal species for the period 2008–2012**

Species group	U2	U1	FV	XX	Not evaluated	Total
Plants	7	44	40	2	0	93
Invertebrates	4	114	13	13	3	144
Fish	17	73	5	0	1	95
Amphibians	0	34	3	17	0	54
Reptiles	3	44	7	1	0	55
Mammals	1	77	43	15	0	136

Source: Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora.

Note: U2: Unfavourable bad; U1: Unfavourable inadequate; FV: Favourable; X: Unknown.

**Photo 11.2: Heather cock (*Tetrao urogallus*), Piatra Craiului National Park**



Photo credit: Mircea Verghetș

The reporting on the basis of article 12 of the Birds Directive was carried out at the national level in 2020, and it took into account the distribution of species and their characteristics, such as migratory species and resident species.

With regard to SDG target 2.5 (By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed), measured by global indicator 2.5.1 (Number of plant and animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities), a slight (8 per cent) increase was observed in the number of plant breeds for which sufficient genetic resources are stored, from 2010 until 2016, followed by a decrease of 17 per cent from 2016

to 2018 and a slight (13.7 per cent) increase in 2020 (table 11.2). In 2020, Romania succeeded to reach and overpass the estimated value for 2010 (a target pursued by Romania). Out of 113 local breeds (including extinct ones), 6 are reported with genetic material stored, out of which 5 are reported with sufficient material stored to allow them to be reconstituted. Out of 93 local breeds, 100 per cent are of unknown status.

No data on global indicator 2.5.2 (Proportion of local breeds classified as being at risk of extinction) are available to enable an assessment of the situation in the country. Romania made progress in this area through the National Rural Development Programme 2014–2020, under the framework of which farmers who are breeding pure-breed adult reproductive females of local breeds in danger of abandonment were compensated for the income foregone as a result of assuming voluntary commitments over a five-year period for Package 8 – “breeding of farm animals of local breeds in danger of abandonment” within Measure 10 – “Agro-environment and climate” of the Programme. Breeds belonging to five animal species were selected for Package 8 as they have a cultural and historical importance due to their age, but they have lost the economic competition with commercial breeds and without financial support are threatened by abandonment.

Based on the dynamics of the number of female reproductive animals of local breeds (recorded in the breeds genealogical registers) in the period 2008–2013, the list of local breeds in danger of abandonment in Romania and the corresponding danger (risk level), according to Regulation (EU) No 807/2014, was established and certified. Livestock evolution for adult females of local breeds in danger of abandonment for which compensatory payments were granted through the Programme in the period 2015–2019 are shown in table 11.3.

**Table 11.2: Plant breeds for which sufficient genetic resources are stored, 2010–2020, number**

	2010*	2012*	2014	2016	2017	2018	2019	2020
Plant breeds	42 624	42 837	42 837	46 064	38 071	38 034	40 016	43 233

Source: FAO-WIEWS (<http://fao.org/wiews>) and EURISCO (<http://eurisco.ipk-gatersleben.de>).

Note: \* Estimate based on the acquisition date of each conserved accession as reported in 2014.

**Table 11.3: Adult females from local breeds in danger of abandonment, 2015–2019, number**

Species	Breed	2015	2016	2017	2018	2019
Sheep	Țigăie cu cap negru de Teleorman	3 382	3 954	3 968	2 256	2 161
	Rața (Valahă cu coarne în tirbușon)	3 811	4 085	4 600	4 059	4 365
	Karakul de Botoșani	2 761	3 093	3 476	4 156	7 633
	Merinos de Suseni	300	300	303	300	300
	Merinos Transilvănean	1 489	1 144	1 470	1 701	1 464
	Merinos de Cluj	203	277	297	283	286
	Merinos de Palas	4 552	5 813	4 124	3 335	3 433
	Țigăie - varietatea ruginie	802	947	1 045	1 223	1 691
Goats	Carpatina	3 171	529	529	351	561
	Alba de Banat	960	345	345	612	345
Bovines	Sura de Stepă	59	37	38	36	28
	Bivolul românesc	94	93	93	93	93
Equidae	Shagya arabă	50	50	54	52	58
	Lipițan	209	184	161	174	163
Pigs	Bazna	22	22	38	49	78
	Mangalița	36	283	453	784	890

Source: National Rural Development Programme 2014–2020.

Romania has made progress in establishing legal, institutional and policy frameworks for achieving SDG target 15.6 (Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed), measured by global indicator 15.6.1 (Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits). The country has adopted such legislative, administrative and policy frameworks. Romania has been party to the International Treaty on Plant Genetic Resources for Food and Agriculture since 2012 and ratified the Nagoya Protocol in 2019. This represents a step towards achieving one of the objectives of the CBD, to create a legal basis and greater transparency in support of users and providers of genetic resources.

#### Threatened species

According to the Fifth National Report to the CBD, Romania has 3,795 plant species, of which 5 species are extinct, 23 species have been declared natural monuments, 250 species are critically endangered, 100 species are endangered and 157 species are vulnerable.

The National Red Lists are yet to be developed. As mentioned in the National Strategy and Action Plan

for Biodiversity Conservation (NBSAP) for the period 2014–2020, due to differing views within the Romanian academic community, it was not possible to draft a normative act adopting national-level red lists. The red lists of the various authors, which are not adopted by normative acts, are used in research surveys. Following the 2011 IUCN guidelines, the conservation status of bryophytes was assessed, and newly recorded species of mosses, hornworts and liverworts were added to the list. The Checklist and Red List of Bryophytes of Romania (i.e. mosses, liverworts, hornworts) was published in 2012. The previous list, developed in 2007, identified 285 threatened species. The current Red List includes 374 threatened species (38 per cent of all bryophytes), of which 157 are critically endangered, 113 endangered and 104 vulnerable species.

The 2019 global IUCN Red List contains records of 1,831 species, including 1,271 animal, 534 plant and 26 fungi species in Romania (table 11.4). Classified as Critically Endangered (CR) are 18 animal species – 2 bird, 1 mammal, 8 fish, 5 insect and 2 mollusc species – and two plant species. Two fish species – Danube delta gudgeon (*Romanogobio antipai*) and Techirghiol stickleback (*Gasterosteus crenobiontus*) – are Extinct (EX).

The Red List Index (SDG global indicator 15.5.1), based on the IUCN Red List of threatened species, has been adopted by the CBD as one of the indicators to measure progress towards reduction of the current rate of biodiversity loss at the global, regional and national levels and specifically to monitor changes in the threat status of species. This indicator measures progress in achieving SDG target 15.5 (Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species).

The Red List Index value ranges from 1 (all species are categorized as “Least Concern”) to 0 (all species are categorized as “Extinct”). Romania maintains a stable momentum and a very slight upward trend has been observed, i.e. the index has increased from 0.92913 in 2010 to 0.92976 in 2020. This means that the rate of species extinctions is abating or, in other words, the rate of biodiversity loss is decreasing.

Included in the list of species in appendices I, II and III of the Convention on International Trade in Endangered Species (CITES), valid as of November

2019, are 170 species of wild fauna and flora from Romania (table 11.5).

The EU Wildlife Trade Regulations (Council Regulation EC No 338/97 on the protection of species of wild fauna and flora by regulating trade therein), which goes beyond CITES with an additional annex D, lists species for which import levels are monitored and conditions of import are stricter than for species listed in CITES appendix II (table 11.6). Annexes A, B and C of the Regulations largely correspond to the three CITES appendices but also contain some non-CITES species protected under EU internal legislation.

Romania prepares triennial (previously biennial) national reporting to CITES; the last report, for the period 2015–2016 was submitted in 2018. Romania delivered 257 and 246 export and import permits, and 317 and 262 EU Certificates in 2015 and 2016, respectively. In 2016, the then Ministry of Environment placed a ban on commercial fishing for Danube sturgeon (*Acipenser gueldenstaedtii*) until 2021 (MO No. 545/715/2016).

**Table 11.4: Species recorded in the IUCN Red List, number**

	EX	CR	EN	VU	NT or LR/nt	LC	DD	Total
Fungi			1	7	3	15		26
Plants		2	8	6	10	462	46	534
Animals	2	18	30	76	81	988	76	1 271
<b>Total</b>	<b>2</b>	<b>20</b>	<b>39</b>	<b>89</b>	<b>94</b>	<b>1 465</b>	<b>122</b>	

Source: NIRDF, 2019.

Note: EX = Extinct, CR = Critically Endangered, EN = Endangered, VU = Vulnerable, NT or LR/nt = Near Threatened, LC = Least Concern, DD = data deficient .

**Table 11.5: Species listed in CITES appendices**

	Appendix			Total
	Appendix I	II	III	
Mammals	2	8	1	11
Birds	6	52	0	58
Reptiles	1	3	0	4
Amphibians	0	0	0	0
Fish	1	7	0	8
Invertebrates	0	2	0	2
<b>Fauna Total</b>	<b>10</b>	<b>72</b>	<b>1</b>	<b>83</b>
<b>Flora Total</b>		<b>87</b>		<b>87</b>
<b>Grand Total</b>	<b>10</b>	<b>159</b>	<b>1</b>	<b>170</b>

Source: NIRDF, 2019.



**Table 11.6: Species listed under EU Council Regulation EC No 338/97**

	Annex A	Annex B	Annex C	Annex D	Total
Mammals	9	1	1	0	11
Birds	63	2	0	0	65
Reptiles	4	0	0	0	4
Amphibians	0	0	0	0	0
Fish	1	7	0	0	8
Invertebrates	1	1	0	0	2
<b>Fauna Total</b>	<b>78</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>90</b>
<b>Flora Total</b>	<b>2</b>	<b>85</b>	<b>0</b>	<b>6</b>	<b>93</b>
<b>Grand Total</b>	<b>80</b>	<b>96</b>	<b>1</b>	<b>6</b>	<b>183</b>

Source: NIRDF, 2019.

No data on traded wildlife that was poached or illicitly trafficked are available to enable assessment of the state of affairs in Romania regarding SDG target 15.7 (Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products) and target 15.c (Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities), which are measured by global indicators 15.7.1 and 15.c.1 (Proportion of traded wildlife that was poached or illicitly trafficked).

National action plans have been developed and approved for several species, such as the brown bear (*Ursus arctos*), grey wolf (*Canis lupus*), Ferruginous duck (*Aythya nyroca*), Pygmy cormorant (*Phalacrocorax pygmaeus*), Dalmatian pelican (*Pelecanus crispus*) and Lesser Spotted Eagle (*Clanga pomarina*), and a Regional Action Plan for the management of bat species (*Rhinolophus ferrumequinum*, *Rhinolophus hipposideros*, *Myotis myotis*, *Myotis oxygnathus*, *Myotis bechsteinii*, *Barbastella barbastellus*, *Miniopterus schreibersii*) and sturgeon.

### Endemic species

Romania's biogeographical position, encompassing the Carpathian Mountains and the Black Sea, is reflected in its high level of endemic and subendemic species. As stated in the NBSAP for the period 2014–2020, more than 1,000 fauna species are considered endemic, but the geographical distribution of most of them is not well known and no comprehensive documented information is available on the status of endemic species.

Some endemic fauna species include freshwater fishes: loaches (*Sabanejewia romanica*, *Sabanejewia vallachica*), Petzea rudd (*Scardinius racovitzai*), sculpin-perch (*Arges Sculpin*), Banat sand gudgeon

(*Romanogobio banaticus*), Danube Delta gudgeon (*Romanogobio antipai*), and a Critically Endangered endemic genus, the asprete or Romanian darter (*Romanichthys valsanicola*). The Danube Delta dwarf goby (*Knipowitschia cameliae*) is known only in the Danube Delta and the Black Sea.

Of Romania's insects, 227 species are adapted to underground life, 97 per cent of these being endemic. Cave beetles unique to Romania include a ground beetle (*Clivina subterranean*), a rove beetle (*Decumarellus sarbui*), and the round fungus beetles *Pholeuon comani* and *Sophrochaeta reitteri*. Endemic invertebrates from Movile Cave include a water scorpion (*Nepa anophthalma*), the spiders *Agracina cristiani* and *Kryptonesticus georgescuae*, the isopod crustaceans *Armadillidium tabacarui* and *Trachelipus troglobius*, an amphipod crustacean (*Niphargus dancaui*), a leech (*Haemopsis caeca*) and a snail (*Helobia dobrogica*).

Other endemic snails include *Cochlodina marisi*, *Bythinella sirbui*, *Alopiacina maciana*, *Mastus venerabilis*, *Agardhiella tunde* and *Melanopsis parreyssi*. Other endemic invertebrates include the bush crickets *Isophya dobrogensis* and *Isophya dochia*, the grasshoppers *Zubovskya banatica* and *Podismopsis transsylvanica*, a ground beetle (*Carabus planicollis*), a longhorned beetle (*Xestoleptura nigroflava*), a click beetle (*Athous petronelae*), a tortrix moth (*Dichrorampha carpatalpina*), a picture-winged fly (*Otites kowarzi*), a scorpion (*Euscorpium carpathicus*) and the dwarf spiders *Anguliphantes silli* and *Scutpelecopsis loricata*.

More than 4 per cent of plant species are endemic (57 endemic taxa and 171 subendemic taxa). The endemic plant species include: the pinks *Dianthus callizonus* and *Dianthus spiculifolius*, the cornflowers *Centaurea pugioniformis* and *Centaurea pinnatifida*, a bellflower (*Campanula romanica*), a larkspur (*Delphinium simonkaianum*), the milk-vetches *Astragalus peterfii* and *Astragalus roemerii*, a whitlow-grass (*Draba*

*dorneri*), a mouse-ear chickweed (*Cerastium transsylvanicum*), Giant scabious (*Cephalaria radiata*), *Andryala levitomentosa*, *Galium baillonii*, the champions *Lychnis nivalis* and *Silene dinarica*, thyme (*Thymus comosus*), *Ferula mikraskythiana* and a feather grass (*Stipa danubialis*).

**Photo 11.3: Banatic black pine (*Pinus nigra*, ssp. *banatica*), Domogled–Valea Cernei National Park**



Photo credit: Romsilva, MoEWF

Widespread species

No data are available on the population numbers and trends of species widespread in the country.

Alien species

According to the 2017 study Alien Species in Romania, there were 982 alien species reported in Romania. The most abundant group are plants (490 species), followed by terrestrial animals (390 species, of which 90 per cent are invertebrates), and aquatic organisms (102 species, 44 freshwater and 58 marine). Most alien species originate from North America and South-East Asia and were introduced accidentally. Of alien plant species, 59 per cent are ornamental and were deliberately introduced, and their distribution is along the Black Sea harbours and the Danube Delta. As further noted by the study, 112 species and clones of alien tree species were introduced by foresters, the

majority with a restricted distribution. As for alien marine species, the largest group is crustaceans and the majority originated from the Atlantic Ocean. The cumulative rate of introductions shows a steady increase in the number of alien species.

There is no national list of alien species. For the record and status of alien species, the Pan-European Inventory of Alien Species is used as a reference. No assessment on the status of species present in Romania and which are included in the Pan-European Inventory has been conducted. However, a project financed by European funds is ongoing as at November 2020 and a national list of invasive alien species is expected to be adopted at the end of the project.

The invasive species can cause major losses of biodiversity, leading, in some cases, to the elimination of native species that occupy the same ecological niche. When the species that disappear have economic value, the loss of biodiversity is accompanied by substantial economic losses. A series of management measures is being considered at the national level, aimed at the prevention, early detection and response, and management of naturalized species.

A series of research programmes was conducted at the national level, including the Monitoring System and Rapid Detection of Invasive Species, the Identification of invasive alien plants and potentially invasive alien plants in Romania and the impact assessment on natural and seminatural habitats in order to initiate measures of prevention and control. The research programmes triggered publications on alien species and signalled a need to improve the legislative framework.

*Ecosystems*

Forests

As at 31 December 2019, forests covered 6,583,100 ha of Romanian territory, representing 27.6 per cent of the total territory of the country (compared with 6,529,100 ha or 27.3 per cent in 2012). Afforestation shows a decreasing trend from 11,026 ha in 2012 to 9,071 ha in 2018. Broadleaved trees are dominant in Romanian forest, covering 70 per cent of the total forested area. There is a slight increasing trend in the area in coniferous forests, from 1,744,700 ha in 2012 to 1,917,500 ha in 2018. The European beech (*Fagus sylvatica*) and Norway spruce (*Picea abies*) are the most dominant coniferous tree species.

The second National Forest Inventory, for the period 2014–2017, was completed in 2018–2019. The National Forest Inventory is designed as a continuous

forest inventory with a five-year inventory cycle. It is based on systematic sampling, combining repeated measurements of permanent plots with measurements of temporary plots, and is conducted in two stages (aerial photos and field forest measurements, and assessment). The National Forest Inventory covers the entire territory of the country and is based on a 4 × 4 km grid. It shows that forest coverage has increased since the first-cycle inventory for the period 2008–2012. The natural regeneration rate is stable.

Native steppe and steppe-associated wet meadows have been systematically converted to cropland and pastures. The extent of loss of steppe is not thoroughly documented; however, less than 10 per cent remains of some types of grassland and shallow marsh ecosystems that were once common in Romania, and there is an obvious trend of desertification on 20 per cent of the total arable land.

Through the research projects “Romanian forest ecosystem status – assessment and analysis in Level I and Level II monitoring networks”, and “Long-term dynamics of the status of representative forest ecosystems from protected areas (Long-Term Ecological Research (LTER) Retezat, Bucegi-Piatra Craiului and Lunca Mureşului Natural Park sites)” financed by the Romanian Ministry of Research and Innovation and under the coordination of NIRDF, annual assessments of vegetation biodiversity and forest health status are conducted. The research areas are located in representative forest ecosystems of Romania (as per the International Co-operative Programme on Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests) and LTER<sup>146</sup> networks). Thirty sites are monitored for air pollution impact.

The forest condition survey in Romania was carried out in 2018. Of the total number of 5,832 assessed trees in 245 permanent plots, 4,781 were broadleaves (82 per cent) and 1,051 were conifers (18 per cent). The field assessment recorded damage, particularly defoliation and discolouration of the foliage of the crown. The proportion of damaged trees (defoliation classes 2–4) was 13.7 per cent, which is 0.5 per cent lower than in 2017 but still higher than in the period 2013–2016.

Overall, the results of the evaluations carried out during the period 2013–2018 indicate that the forest health condition in Romania, evaluated within the pan-European network of permanent surveys, is relatively constant, with differences insignificant from year to year in terms of the percentage of trees with

defoliation of the crown greater than 25 per cent (damaged trees), which was registered at 12.9 per cent in 2013, 0.8 per cent lower than in 2018 (13.7 per cent).

The country is taking measures to conserve and restore forests. The forest area as a proportion of total land area (SDG global indicator 15.1.1) increased from 28.32 per cent in 2010 to 30.12 per cent in 2016, i.e. by 1.8 per cent, and remains at that level as at 2020. Global indicator 15.1.1 is used to measure achievement towards SDG target 15.1 (By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements).

**Photos 11.4 and 11.5: Establishing forest shelterbelts near A2 motorway (Highway of the Sun), Constanța County**



*Photo credit: MoEWF*

Though not designated World Heritage Sites, some adjacent forests have been identified as virgin and quasi-virgin, and are strictly protected and included in

<sup>146</sup> LTER = Harvard Forest Long Term Ecological Research.

the National Catalogue of Virgin and Quasi-virgin Forests.

### Mountains

Romania gives priority to the conservation and sustainable use of biological diversity in mountain ecosystems, which supports the achievement of SDG target 15.4 (By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development). Assessment of direct and underlying causes of degradation and loss of the biological diversity of mountain ecosystems was conducted before elaboration of the management plans of the natural protected areas in the mountain regions. Such assessment was made for the national and natural parks and Natura 2000 sites with administration units. The main threats for the mountain ecosystems are overgrazing, grazing, forest exploitation, hunting, unsustainable tourism, mining activities and natural hazards. Overgrazing and grazing lead to a reduction in the number of plant species and, indirectly, to the disappearance of the invertebrate species that use them as a food source or shelter. Not enough funding is available to carry out the activities for conservation and sustainable use of biological diversity in mountain ecosystems.

No data are available on the coverage by protected areas of important sites for mountain biodiversity (SDG global indicator 15.4.1). Based on spatial overlap between polygons for key biodiversity areas from the World Database of Key Biodiversity Areas ([www.keybiodiversityareas.org](http://www.keybiodiversityareas.org)) and polygons for protected areas from the World Database on Protected Areas ([www.protectedplanet.net](http://www.protectedplanet.net)), the proportion of mountain key biodiversity areas covered by protected areas was about 80.76 per cent in 2020. One of Romania's principal targets is to grow the contribution of state forests to the improvement of environmental conditions and to deliver timber and other specific products to the national economy with economic efficiency.

The Mountain Green Cover Index measures changes in the green vegetation in mountain areas (forest, shrubs, trees, pastureland and cropland) to provide an indication of the status of conservation of their environment. Romania applied the ecosystem approach in the conservation and sustainable use of biodiversity in the mountain ecosystems. Romania adhered to the Carpathian Ecoregion Initiative, which aims at the conservation and sustainable use of the

Carpathian Mountains area. Through the Initiative, the conservation measures are combined with actions targeted to supporting the local economy and culture. The management plans of national and natural parks include conservation measures for species and habitats. Some measures have been taken to protect the traditional knowledge, innovations and practices of local communities for the conservation and sustainable use of biological diversity in mountain ecosystems. Romania developed programmes for the protection of natural and cultural heritage in the mountains. For global indicator 15.4.2 (Mountain Green Cover Index), Romania reported 99.88 per cent in 2018.

### Marine and coastal

The Black Sea bioregion includes not only the coastal platform but also the Romanian territorial waters plus the exclusive economic area, under the Marine Strategy Framework Directive.

#### *Valuation of ecosystems and ecosystem services*

Romania launched the Mapping and Assessing Ecosystems and their Services (MAES)<sup>147</sup> process in March 2015 with the implementation of the project "Demonstrating and promoting natural values to support decision-making in Romania". The implementation of the project's first expected outcome, "awareness, education on biodiversity and ecosystem services, the link between biodiversity and climate change as well as economic assessment of ecosystems", and the development of a national database of ecosystems and their services, was ensured through the priority programme BIODIV of the Financial Mechanism of the European Economic Area and the Norwegian financial mechanism.

The project helped to identify the natural capital in Romania to be managed in a way conducive to effective decision-making in that area. The result was a collection of maps of ecosystems and ecosystem services, a national ecosystem and services assessment report, and an information system integrated into NEPA's Integrated Environmental Information System, which is expected to function as a national database of ecosystems and of their services, highlighting the key ecosystems that need better oriented policies. This project made it possible for Romania to play a leading role among the Balkan countries, by implementing the mapping process and evaluating ecosystem services.

<sup>147</sup> <http://maesromania.anpm.ro/index.php/>.

**Photo 11.6: Cheile Țâșnei, Domogled – Valea Cernei National Park**

*Photo credit: Mircea Vergheș*

The implementation of Recommendation 9.4 (b) in the Second EPR of Romania, urging the then Ministry of Environment and Forests to carry out a national valuation of ecosystems and ecosystem services with the assistance of the EU and other interested donors and institutions, was implemented through the MAES.

## 11.2 Pressures on species and ecosystems

### *Land uptake and habitat fragmentation*

According to the Ministry of Environment, Waters and Forests, the main pressure on and threat for biodiversity in the Natura 2000 sites is related to land use change. Among the Natura 2000 sites, 54.4 per cent of the area of sites of community importance (SCIs) and 40.3 per cent of the area of special protected areas (SPAs) is occupied by forests. After the inclusion of forest areas in the Natura 2000 network, the owners had to adapt their forest activities management, in particular by integrating and taking into consideration the conservation objectives of natural habitats and species of flora and fauna of conservation interest. This meant a reorientation towards biodiversity conservation rather than forest production.

Following forests, the next greatest extent of coverage is areas with shrub vegetation and grasslands (18.5 per cent of SCIs and 19.8 per cent of SPAs). In these areas,

pastoral use has great potential to conflict with conservation activities. This is also the case for arable land (5.4 per cent of SCIs and 14.5 per cent of SPAs), where the diversity of owners and the small size of the properties make it difficult to reconcile conservation objectives with those of production.

Other sectors, such as transport (development of highways, railways, fluvial and maritime infrastructure, and an obsolete fleet), construction (large agglomerations of houses but also isolated houses, including illegal residential houses), mining (rock, gravel and sand extraction, including from riverbeds and by open pit mining) and energy (coal, oil, wind farms and thermal water exploitation), put pressure on species and ecosystems, mainly by land uptake, fragmenting habitats, and by polluting air, water and soil.

### *Development of energy installations and infrastructure*

The large capacity Iron Gates Hydroelectric Power Station has a major negative impact on the migratory fish species that have reproduction places upstream, reducing by 50 times the number of sturgeons. After 1990, the number of installed hydropower plants declined, and by 2010, the installed capacity amounted to 838 MW, less than 14 per cent of what was in place before 1990. About 54 per cent of Romania's

hydropower potential is now restored, and there are plans to reach 63.5 per cent by 2025.

The hydropower development planning was done almost 40 years ago. No revision took place. No assessment and modelling that consider nexus aspects such as benefits and trade-offs between water, energy and ecosystems were introduced. In particular, for hydropower stations on the Danube River, the shore dams cause destruction of reproductive areas for fish species such as carp, resulting in a 10-fold reduction in their number.

#### *Industry*

No studies are carried out to measure the impact of industry on biodiversity. Rapid industrialization through the development of production infrastructure in large units, mostly in the sectors of ferrous and non-ferrous metallurgy, chemicals and petrochemicals, and machine manufacturing, caused increased consumption of non-renewable mineral and energy resources from autochthonous and external sources, massively contributing to the pollution of air, surface and ground waters and soil. The direct and indirect pollution caused by large-scale industrial production, including of concrete, chemical fertilizers and pesticides, exacerbates environmental conditions.

#### *Logging and illegal logging*

As confirmed by the Ministry of Environment, Waters and Forests, based on the results of the second National Forest Inventory (2014–2017), 38.6 million m<sup>3</sup> of wood is harvested each year in Romania, of which 20.6 million m<sup>3</sup> is illegally logged, mostly in privately owned forests. The volume of illegal logging has more than doubled since the first National Forest Inventory (2008–2012), which estimated 8.8 million m<sup>3</sup> of illegally cut trees annually. These figures are challenged by NGOs.<sup>148</sup> However, the Scientific Council of NIRDF and the Academy of Agricultural and Forestry Sciences named after Cheorghie Ionescu Șișești also challenged the veracity of the figures and demonstrated the errors in these results (chapter 2).

There is no official confirmation and documentation that the illegal logging happens in the core zone of national parks or the World Heritage Site “Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe”. Wood felling (one forest stand) occurred in the buffer zone adjacent to Domogled–Valea Cernei National Park, which was legal and undertaken according to the forest management plan.

#### *Acidification*

As noted in the State of the Environment Report of Romania for 2018, in recent decades, pollution has increased in several forest areas, greatly affecting tree health and regeneration ability. Industrial pollution, both domestic and transboundary, from industrial development such as manufacturing of construction materials (cement, ballast, etc.). generates acid rain.

#### *Eutrophication*

No data or studies on the impact of eutrophication are available in the country.

#### *Desertification*

The 2018 EU report “Combating desertification in the EU: a growing threat in need of more action” indicates that desertification will pose a significant problem and its effects will be particularly acute in several EU countries, including the areas in Romania bordering the Black Sea. According to EC climate change modelling, the risk of desertification will be high in the Danube Delta.

The Seventh National Communication on Climate Change, submitted in December 2017, indicated that the area subject to desertification, characterized by an arid, semi-arid or subhumid-dry climate, was approximately 30 per cent of the total area of Romania, and largely situated in Dobrogea, Moldavia, the south of the Romanian Plain and the Western Plain. These areas are mostly used for agriculture and water resources.

#### *Intensified agriculture*

Romania has 15 million ha of farmland, of which more than 9 million ha is devoted to arable crops. About 66 per cent of the country’s territory is taken up by agriculture and 46 per cent of the population lives in rural areas. The farm structure in Romania is dominated by small, subsistence and semi-subsistence family farms (approximately 3.66 ha each, on average). Excessive fragmentation of agricultural land, degradation of productive services for agriculture and land quality degradation are leading to the increased vulnerability of land to extreme climatic phenomena and a lower adaptation capacity.

In the 1980s, the draining of wetlands was promoted in order to create arable land for agriculture. A total of about 400,000 ha of wetland habitat, much of it (about 80,000 ha) along the Danube River and in the Danube

<sup>148</sup> [wwf.panda.org/wwf\\_news/?357022/debated-nfi](http://wwf.panda.org/wwf_news/?357022/debated-nfi).

Delta, has been permanently or partially lost as it was converted to agricultural use. The flood plains of the main rivers, and especially the Danube alluvial plain, were dammed and between 20 per cent and 80 per cent of the plain transformed into intensive agricultural ecosystems; thus, a large part of the pastures with steppe vegetation and lands with excessive humidity were transformed into arable lands. Furthermore, the shelter belts and many forested parts of the land or river plains were cleared. With the designation of Natura 2000 sites, combined with the projects implemented with EU funding, in the past decade, some of these areas have been restored into their natural wetland state and reconnected to the region's network of channels and lakes. However, as indicated in the Fifth National Report to the CBD, the drainage of wet meadows and change to arable land or grazing meadows were still practised, sometimes even with support from the Environment Fund.

The continuous deterioration of grasslands has been caused by increasing the number of grazing animals without consideration of the carrying capacity or organization of grazing cycles and rotations. A 2019 assessment of the grazing livestock density and carrying capacity, which covered an area of 34,000 km<sup>2</sup> (3.3 million ha) within and outside Natura 2000 sites, indicates that more than half of the assessed area is subject to major degradation and overgrazing. Overgrazing causes the decrease of vegetal biomass and the number of species with nutritional value.

According to the 2019 study “Deviation from Grazing Optimum in the Grassland Habitats of Romania Within and Outside the Natura 2000 Network”, of the national grassland area, 17.34 per cent is under the designation of Natura 2000 sites, which indicates the overlapping of agricultural and nature protection activities. Therefore, it implies that some parts of the Natura 2000 network suffer from pasture degradation and overgrazing, which negatively affects biodiversity and ecosystems. The grazing and forestry activities are identified as the most frequently occurring threats in the territory of Natura 2000 sites, followed by hunting and urbanization, i.e. construction of housing and expansion of urban areas (table 11.7).

In addition to the above, the Fifth National Report to the CBD indicated the following problems:

- Afforestation of grasslands with low productivity and of steppe habitats, sometimes considered by the authorities as “degraded” land;
- Destruction of shrub vegetation to extend the areas of pasture or for the purpose of developing tourism;
- Ploughing of natural grasslands for the expansion of arable land;
- Abandoning meadows and pastures, especially in the hardest-to-reach areas, which will be invaded by forest vegetation.

**Table 11.7: Annual average frequency of threats in Natura 2000 sites in Romania**

Threat	Number
Grazing	247
Forestry activities	247
Hunting	189
Urbanized areas, human housing	151
Traps, poisoning, poaching	146
Roads, highways	141
Household waste/wastes from recreational bases	138
Forestry exploitation without replanting or natural cultivation	107
Cultivation	102
Use of biocidal products, hormones and chemicals	72
Removal of dry or drying trees	71
Pollution of surface waters (terrestrial, marine and brackish)	69
Forest clearance	67
Fire and combating fire	62
Erosion	58
Motor vehicles	57
Mowing/cutting of pastures	56
Sand and gravel exploitation	53
Livestock breeding	52
Sand and gravel extraction	51
Other impacts caused by tourism and recreation not mentioned above	50

Source: Ministry of Environment, Waters and Forests, 2019.

Although the change of different types of habitat into monocrop farmlands is no longer widely practised, in areas such as Dobrogea or Bărăgan, monocultures and intensive agricultural activities still prevail and this has led to the destruction of landscape and grassland habitats, with a negative impact on species.

#### *Land degradation*

For SDG global indicator 15.3.1 (Proportion of land that is degraded over total land area), Romania reported that, according to United Nations statistics, 2 per cent of its total land was degraded (as first estimated by the United Nations in 2018, for the period of 2000–2015). The next cycle of reporting will cover 2019–2022 and the report is expected to be published in 2023. Therefore, in the absence of adequate data for comparison, it is hard to assess progress towards the achievement of SDG target 15.3 (By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world).

#### *Hunting and fishing*

About 92 per cent of the total territory of Romania is under the hunting fund (21,966,355 ha of a total 23,839,700 ha). The hunting fund is further divided into 2,151 hunting grounds that are managed by state-owned forestry units and hunting associations. Romsilva manages 243 hunting grounds on the basis of a contract with the Ministry of Environment, Waters and Forests. Hunting in Romania is permitted for 18 species of mammals and 39 species of birds. According to Law No. 407/2006 on hunting and the protection of hunting resources, the main game species are European hare (*Lepus europaeus Pallas*), red deer (*Cervus elaphus L.*), common pheasant (*Phasianus colchicus L.*), European roe deer (*Capreolus capreolus L.*), wild boar (*Sus scrofa L.*), fallow deer (*Dama dama L.*), quail, geese, ducks, etc.

Following the accession of Romania to the EU and the country's adoption, as of 2007 on the basis of MOs, of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, derogations for three species, the brown bear (*Ursus arctos*), grey wolf (*Canis lupus*) and wildcat (*Felis silvestris*), were approved. Between 2011 and 2015, the hunting of 10,789 animals was permitted (table 11.8).

Since 2016, the Government has decided not to issue hunting quotas for brown bear and grey wolf. This has led to enormous conflict between humans and wildlife in Romania. In 2017 and 2018, the annual quota was lower than in previous years. In 2019, three human lives were lost due to bear attacks.

Following GO No. 1679/2008, LEPA's register damage by bears and wolves and, together with the Forest Guard, report to the Biodiversity Directorate of the Ministry of Environment, Waters and Forests and the CITES Management Authority. Thereafter, the Economic and Financial Directorate of the Ministry of Environment, Waters and Forests pays compensation to persons who were attacked or whose property was damaged.

**Table 11.8: Hunting quotas for brown bear, grey wolf and wildcat, 2011–2015, number**

	Brown bear	Grey wolf	Wildcat
2011	365	498	402
2012	365	520	430
2013	436	495	420
2014	550	520	440
2015	540	598	460
<b>Total</b>	<b>2 256</b>	<b>4 552</b>	<b>3 981</b>

Source: Enescu, C., Aureliu-Florin, H, 2017.<sup>149</sup>

In Braşov County alone, 150 cases were reported in 2019. In April 2019, an assessment of large carnivore populations was carried out, which estimated that there were 1,287 brown bears in Braşov County. The optimum number is 338.

To improve the management of large carnivore populations, the Ministry of Environment, Waters and Forests has developed action plans for brown bears and grey wolves through a consultative process with various stakeholders.

The Piatra Craiului National Park Administration indicated several factors giving rise to the brown bear issues, such as bears becoming accustomed to being fed by people and thus descending closer to settlements to look for food, including in domestic waste containers. In the past, hunting units were placing feed at designated sites. Bear attacks are also triggered by disturbing human behaviour, such as photographing them.

Warm climate affects the brown bear's living pattern, i.e. the hibernation period is now delayed and shortened by the longer autumn season.

<sup>149</sup> [www.researchgate.net/publication/320184959](http://www.researchgate.net/publication/320184959).



**Photo 11.7: Breeding season clash between two male fallow deer (*Dama dama*),  
Lunca Mureşului Natural Park**



*Photo credit: Gabi Herlo, Romsilva, MoEWF*

A survey of the brown bear population was conducted by the park administrations. As at October 2020, the brown bear population is estimated at around 12,000, but data seem inaccurate as many stakeholders do not agree with the number.

Fish poaching takes place along the Danube and other rivers, and from the Danube Delta. Of the methods used, the most dangerous is electric fishing, which, besides the fact that it destroys a significant number of young specimens, causes the sterility of mature specimens that survive. Illegal fishing is still a problem, affecting both the fish populations and nearby communities. NGOs have started a campaign to stop poaching in the country.

*Collection of non-wood forest products*

Data from 2012–2018 show a decrease in the quantity of non-wood forest products collected, except for “other non-wood products” and beekeeping products (table 11.9). There is no specific study or monitoring with a focus on the impact of the collection of non-wood forest products on biodiversity and ecosystems. In addition, there is no clear explanation for the reduction in the quantity collected over the past years.

This could be either the result of overharvesting or due to other factors such as weather change or drought.

*Tourism and leisure*

Local tourism is promoted through the implementation of Law No. 94/2014 and the national programme of holiday vouchers for public employees. Local tourists mostly visit natural protected areas for hiking, kayaking and birdwatching. For instance, the Danube Delta was visited by more Romanians than foreigners and the total number of tourists to the area is increasing steadily (table 11.10).

Very significant pressure is exercised on biodiversity in natural protected areas situated in coastal and mountain areas from the construction of seasonal facilities in addition to residential constructions.

DDBRA conducted a study evaluating the carrying capacity of tourism (hotels, boats, campsites). A set of recommendations was proposed, to be applied while taking into account ecological, socioeconomic and visitor capacity. To minimize the negative impact of tourism on the environment, “slow tourism”<sup>150</sup> is promoted. Furthermore, the study recommends

<sup>150</sup> An alternative tourism form, slow travel is typically associated with sustainable practices, taking into consideration the impacts of travel on the environment, society and economy. <https://tourismteacher.com/slow-tourism/>.

developing a recreation and tourism zoning model for protected areas.

#### *Climate change*

The Seventh National Communication on Climate Change and First Biennial Report to the UNFCCC identified several threats of climate change to biodiversity, such as: modifications of species behaviour as a result of the stress induced on their adaptation strategy (e.g. shorter hibernation period); modification of habitat distribution and composition as a result of changes in the species structure; increased invasion of exotic species into natural habitats and their potential to become invasive; threats to wild animals, especially species with low moving capacity and/or low populations, due to increased forest fire risk in the Carpathian Mountains; and the extinction of certain species of fauna and flora.

Climate change also results in the drying of trees. Frequent weather events in recent years, such as early and late frosts and, in some years, droughts, weaken young trees and they become susceptible to insect attacks.

#### *Use of genetically modified organisms*

In Romania, no GMOs have been cultivated for the last five years, and for GMO crops prior to 2015, following the monitoring and post-monitoring process, no negative effects on human health and the environment (species and ecosystems) were observed. According to the national legislation, no GMOs are cultivated in natural protected areas. Monitoring of GMOs is carried out by the companies that cultivate GMOs and the impact assessment is conducted through the questionnaire developed by EU standard reporting formats for presenting the monitoring results of the deliberate release into the environment of GMOs or in products for the purpose of placing on the market. In 2019, one site for testing a plum variety was notified. NEPA's website contains detailed information on the cultivated site between 2007 and 2020.

### **11.3 Performance and gaps in biodiversity and forest monitoring networks**

Romania does not have a holistic system and developed methodology for biodiversity monitoring. No standard guidelines on monitoring protocols and unitary methodologies for monitoring the conservation status of species and habitats of community interest, and standard guidelines for the monitoring of the bird species of community interest in accordance with the provisions of the Habitats

Directive and Birds Directive respectively, are approved. Moreover, the methodology for monitoring has not yet been developed and monitoring is conducted individually by each protected area's own administrative body following its own monitoring methodology.

#### *Species*

To improve the reporting under the Habitat and Bird Directives and the monitoring of species, several projects have been developed and implemented at the national level:

- Monitoring of the conservation status of species and habitats in Romania under article 17 of the Habitats Directive (2011–2015), led by the Institute of Biology, Romanian Academy of Sciences;
- Completing the level of knowledge of biodiversity by implementing the monitoring system for the conservation of species and habitats of community interest in Romania and reporting based on article 17 of the Habitats Directive/EEC-SMIS 120009 (FEDR), led by the then Ministry of Environment;
- Development of an ecological corridor for habitats and species in Romania (COREHABS) in the period 2015–2017, by University Transilvania Braşov in partnership with five other institutions, including NIRDF (financed by the European Economic Space (SEE) 2009–2014). The project supported identification, analysis and promotion of ecological corridors at the national, regional and local levels by using modern spatial analysis. This project developed methodologies for establishing ecological corridors (designation criteria), identifying critical areas, and provided training for specialists for better management and monitoring (<http://corehabs.ro/en/>). NIRDF's Wildlife Department is engaged in COREHABS, with a focus on the brown bear as an umbrella species.

In the period 2015–2020, NIRDF, in partnership with the ministry in charge of the environment and four other entities, developed the project LIFE FOR BEAR – Conservation of Brown Bear (*Ursus arctos*) population in Romania. The project's main objectives include: updating the brown bear population management plan in Romania, taking into account the new socioeconomic environment; enhancing the brown bear population conservation status in the conflict area Braşov-Valea Prahovei; optimizing waste management activities, in order to reduce the human-bear conflicts in the Braşov-Valea Prahovei area; developing innovative techniques for bear population management and conservation and for

transferring good practice techniques to stakeholders; and improving local and national stakeholders' attitudes towards conserving the brown bear population (<http://forbear.icaswildlife.ro/en/>). The action plan for the conservation of the brown bear population in Romania, elaborated as a result of activities developed by this project, was approved by the then Ministry of Environment and enacted in 2018. The LIFE FOR BEAR.<sup>151</sup> activities have included making anti-bear trash bins, relocating bears and monitoring bears by installing tracking collars on them. However, this last strategy was only partly satisfactory as some collars were lost and could not transmit location data, so the monitoring was not complete.

#### *Natural protected areas*

As at December 2019, monitoring of natural protected areas is done on a voluntary basis. Before the creation of NANPA, the Institute of Biology was responsible for reporting and monitoring under the Habitats Directive. The reporting responsibilities have now been shifted to NANPA, which has very limited capacity to undertake this work. Full scale monitoring of all protected areas managed by NANPA is expected

to be in place once the recruitment of staff to all territorial units is completed. In natural protected areas, every park administration has a five-year monitoring plan, which is part of its management plan. It contains information on the species and habitats to be monitored, monitoring protocols of flora, fauna and habitats, frequency of monitoring reports and persons responsible for implementation of the monitoring plan.

The monitoring data on species and habitats are entered in the GIS database. Based on the monitoring data, the park administrations assess the effectiveness of measures implemented under their management plans. The park administrations use programmes such as QGIS and Qfield, which, together with an ArcGIS licence, allow the creation and management of databases (e.g. of flora and fauna and habitat distribution maps). In the case of Vânători–Neamţ Natural Park, the monitoring and inventory of the habitats and species are achieved with Avenza Maps, installed on mobile phones. The collected data are being transposed on thematic maps using ArcGIS. Free bison are monitored by the use of GPS tracking collars and the data can be downloaded from <https://webservice.lotek.com/>.

#### **Photo 11.8: Garofița Pietrei Craiului (*Dianthus callizonus*), Piatra Craiului National Park**



*Photo credit: Mircea Vergeheț*

<sup>151</sup> [https://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n\\_proj\\_id=5110&docType=pdf](https://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5110&docType=pdf).

Table 11.9: Collection and production of non-wood forest products, 2012–2018

Forestry product category	2012	2013	2014	2015	2016	2017	2018	Change
Forest and ornamental nursery seedlings (1,000)	25 491	24 874	17 880	15 166	13 631	10 477	8 986	35
Other wood products (1,000 lei)	3 261	2 820	2 697	2 702	1 729	1 187	1 050	32
Forest seeds (tons)	22	12	11	7	8	9	17	79
Berry species ( <i>Rubus idaeus</i> , <i>Vaccinium myrtillus</i> , <i>Rubus</i> )	4 471	5 398	3 909	3 482	2 442	3 183	3 104	69
Tuffles and other edible mushrooms from the spontaneous	771	609	521	543	461	495	523	68
Other non-wood products (1,000 lei)	2 958	4 642	3 448	3 247	2 790	3 256	5 585	189
Hunting products (1,000 lei)	6 377	5 709	6 998	5 903	5 229	5 170	5 040	79
Fishing products (1,000 lei)	8 302	9 330	10 478	11 094	8 993	9 061	8 607	104
Beekeeping products (honey) (1,000 lei)	43	37	29	10	40	64	97	225
Other sales (1,000 lei)	26 122	46 087	56 607	48 433	27 961	5 768	8 659	33

Source: National Institute of Statistics, 2020.

Table 11.10: Tourists visiting the Danube Delta Biosphere Reserve, 2015–2019, number

	2015	2016	2017	2018	2019
Domestic	50 741	52 325	73 279	70 772	70 939
Foreign	36 950	22 097	18 223	21 782	36 880
<b>Total</b>	<b>87 691</b>	<b>74 332</b>	<b>91 502</b>	<b>92 554</b>	<b>107 819</b>

Source: DDBRA, 2020.

Photo 11.9: Paragliding in Cozia National Park

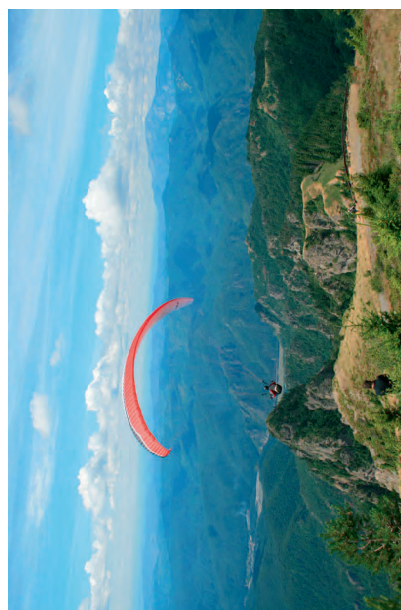


Photo credit: Pavel Prundurel, MoEWF

Photo 11.10: View from Curmătura Builei, Buila-Vânturarița National Park

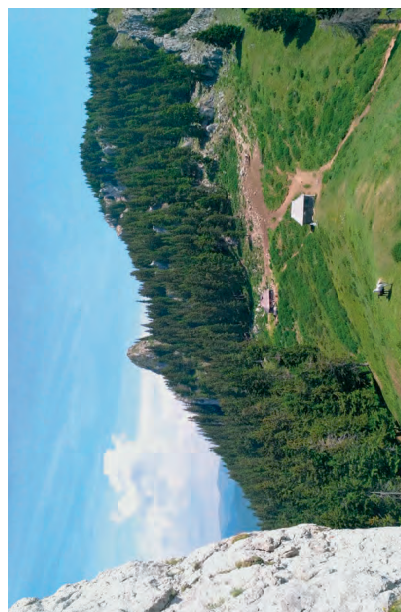


Photo credit: Romsilva, MoEWF

Photo 11.11: Rhododendrons (*Rhododendron myrtifolium*), Căliman National Park

Photo credit: Romsilva, MoEWF

The monitoring data on species and habitats are entered in the GIS database. Based on the monitoring data, the park administrations assess the effectiveness of measures implemented under their management plans. The park administrations use programmes such as QGIS and Qfield, which, together with an ArcGIS licence, allow the creation and management of databases (e.g. of flora and fauna and habitat distribution maps). In the case of Vânători–Neamţ Natural Park, the monitoring and inventory of the habitats and species are achieved with Avenza Maps, installed on mobile phones. The collected data are being transposed on thematic maps using ArcGIS. Free bison are monitored by the use of GPS tracking collars and the data can be downloaded from <https://webservice.lotek.com/>.

#### *Danube Delta Biosphere Reserve*

Monitoring of biodiversity in the Danube Delta Biosphere Reserve is carried out in the 20 strictly protected areas: Lake Nebunu, Chituc Grind, Istria Grind, Wolves Grass, Ceaplace Island, Bird Prund, Periteaşa-Leahova, Roşca-Buhaiova, Letea Forest, Sacalea Meleaua-Zătoane, Potcoava Lake, Răducu Lake, Vătafu-Lunguleţ, Roşca-Buhaiova, Murighiol Jumps, Caraorman Forest, Erenciuc Arinişul, Rotundu Lake, Popina Island and Cap Doloşman.

In addition, bird colonies are monitored in: Purcelu Lake, Nebunu, Martinca, Hreşişca-Buhaiova, Ivanova Canal, Little Cuzmintii, Birds' Pond, Liteni Colony, Big Zaton, Ceaplace Island, Buhaz-Zăton and Murighiol Salt. Regular monitoring is also conducted in the ecological reconstruction areas: Ostrov Babina-Cernovca, A.P. Popina, Ostrov Ivancea, Fortuna, Old Danube Mm. 8 + 600, Carasuhat, Holbina II, Dunavăţ III and Zaghen.

DDBRA takes action to identify and delimit the breeding, nesting, feeding or sheltering areas of the wildlife in the Delta, in order to establish the appropriate monitoring and actions regarding diseases or mortality in fish, birds and wild animals.

Starting in 2016, DDBRA updated the management plan approved by GO No. 763/2015, in order to apply the provisions of the relevant EU directives and, in particular, the inventory and mapping of habitats and species of community interest.

In June 2019, funding was obtained for the project "Revision of the management plan and the Danube Delta Biosphere Reserve regulation" through the Large Infrastructure Operational Programme (POIM/9/4/1/Increasing the degree of protection and conservation of biodiversity and restoration of

degraded ecosystems for the period 2019–2023). Through project activities, the database on the area occupied by habitats and species of community interest is expected to be updated and problems and threats are planned to be identified in accordance with the requirements specified in MO No. 304/2018 regarding the approval of the Guide for the elaboration of the management plans of the protected natural areas.

#### **11.4 Trends in development and management of protected areas**

##### *Protected areas*

The management of protected natural areas in Romania is conducted under a differentiated protection, conservation and use regime established to ensure the "in situ" special protection and conservation measures for the assets in the natural patrimony (table 11.11). National and natural parks are established by a GD and each has an administration contract.

According to the European Environment Agency (EEA), 23.4 per cent of the total territory of the country is under the protected area system, 4.74 per cent is areas where national designated areas overlap with Natura 2000 sites and 18 per cent is Natura 2000 sites. Currently, delineation of boundaries of protected areas is being revised. NANPA is leading a project on boundaries and a 1:5000 map is expected to be produced and corrections will be introduced. Most of the protected areas are located along the Carpathian Chain and in the Danube Delta (map 11.1). The Carpathian Mountains and the Danube Delta are among the most important 200 ecoregions identified by WWF.

With accession to the EU, Romania has put forward an objective to increase the extent of protected areas through establishing new protected areas, expanding the boundaries of existing protected areas and, in particular, designating areas for protection under the Natura 2000 European network (table 11.11).

Since 2011, several protected areas were designated. Proposals for the establishment of the protected natural area regime may be made at the initiative of any natural or legal person and are submitted to NANPA for approval.

Danube Delta and Razim-Sinoe Complex (ROSPA0031), Danube Delta (ROSCI0065) and Danube Delta – the marine area (ROSCI0066) were modified in 2011, 2016 and 2017, respectively. The marine area of Danube Delta (ROSCI0066) has been

extended from 123,374 ha in 2011 to 336,200 in 2016–2017.

As at December 2019, due to a lack of data, it was impossible to evaluate Romania's efforts to achieve SDG target 14.2 (By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans), which is measured by global indicator 14.2.1

(Number of countries using ecosystem-based approaches to managing marine areas).

A periodic evaluation of the conservation value of the natural protected areas is not carried out. Natural protected areas of national interest in the nature reserves category were designated based on summary templates without the support of scientific studies, which, in some cases, led to predominantly common species being included in protected areas while vulnerable species were left in adjacent areas.

**Photo 11.12: Carpathian newt (*Lissotriton montandoni*), Piatra Craiului National Park**



Photo credit: Mircea Vergheteș

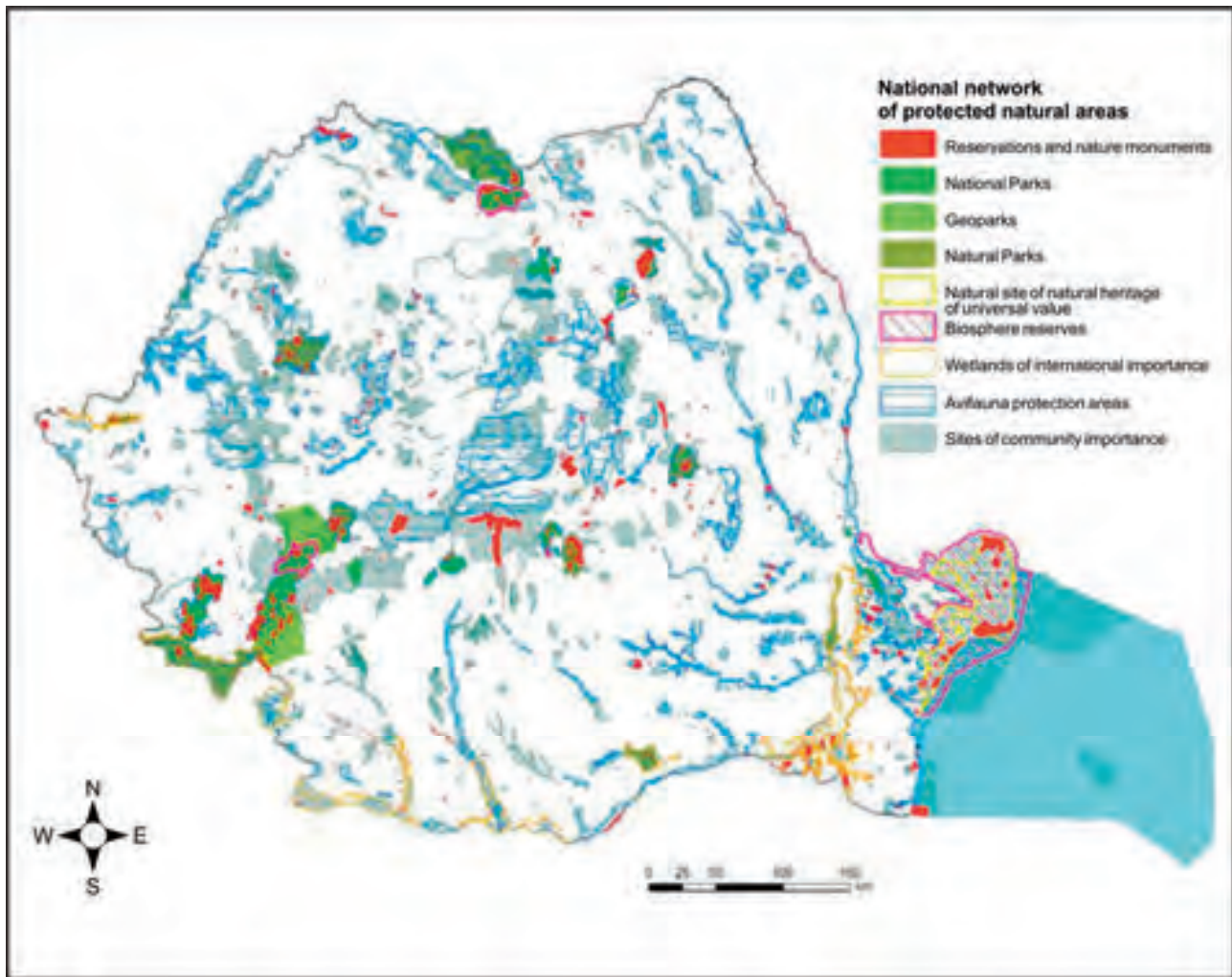
**Table 11.11: Areas covered by protected area network, 2012–2019, ha**

	2012	2013	2014	2015	2016–2019
Biosphere reserves	664 446	664 446	664 446	661 939	661 939
National parks	316 872	316 872	316 872	317 419	317 419
Natural parks	772 810	772 810	772 810	769 842	770 027
Scientific reserves	24 654	24 654	24 654	..	..
Natural monuments	15 413	15 413	15 413	..	..
Natural reserves	347 320	324 182	324 182	..	..
Scientific reserves, natural monuments and natural reserves	..	..	..	307 973	307 973
Natural sites of universal natural heritage	..	..	..	311 916	311 916
Wetlands of international importance	804 497	1 089 448	1 089 448	1 096 640	1 096 640
Special avifauna protection area	3 698 732	3 698 732	3 698 732	3 702 474	3 875 298
Sites of community importance	4 147 368	4 147 368	4 147 368	4 147 368	4 650 970

Source: National Institute of Statistics, 2019.

Note: Since 2015, scientific reserves, natural monuments and natural reserves have been merged as NEPA is in the process of classification and mapping of the boundaries of protected areas.

Map 11. 1: Protected areas



Source: NANPA, 2019.

According to the EEA 2015 State of the Environment Report – Black Sea Region, fish stocks in the Black Sea have deteriorated dramatically over the last three decades, while the diversity of commercial catches has fallen to 18 species, of which 16 are fish species and 2 are species of molluscs. This is the result of eutrophication, the introduction of exotic species and illegal, unregulated and unreported fishing.

Romania made some progress towards achieving SDG target 14.4 (By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics), which is measured by global indicator 14.4.1 (Proportion of fish stocks within biologically sustainable levels). For example, Romania took measures to prevent the diminishing of fish stocks, such as sturgeon – a species of migratory fish, of which Romania is making substantial efforts to protect

fish stocks. Romania took measures to restore and preserve the population of wild sturgeon in natural habitats, including the banning of commercial fishing for a period of five years (2016–2021). Romania agreed with Bulgaria in 2017 and Ukraine in 2018 that the period of prohibition on the Danube would be the same in the shared border area. These measures also targeted the development of sturgeon fisheries in order to reduce, in future, the pressure exerted by commercial fishing on stocks of wild sturgeon.

Romania continues to work towards achievement of SDG target 14.5 (By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information) as measured by global indicator 14.5.1 (Coverage of protected areas in relation to marine areas). Since 2007, about 88.6 per cent of marine key biodiversity areas are covered by protected areas. This development is linked to the accession to the EU and increase of areas under protected status. In 2020, the coverage of protected areas in relation to marine areas (exclusive economic

zones) was 23.10 per cent, which corresponds to an area of 6,866.38 km<sup>2</sup>. Thus, the country is successful in achieving Aichi Target 11.

Romania is in the process of implementing the Marine Strategy Framework Directive and is a signatory to the Black Sea Convention. Romania has designated within its coastal area both protected areas of national interest (nature reserves) and protected areas of European (Natura 2000) and international (biosphere reserves, wetlands of international importance) interest. The amount of marine area protected under the Birds and Habitats Directives has increased in Romania by a factor of 4.7, from 1,252 km<sup>2</sup> in 2008 to 6,362 km<sup>2</sup> in 2016. The sufficiency of marine SCIs is measured by Eurostat for the entire EU using a sufficiency index. In 2013, values of this index ranged from 7 per cent for Spain to 100 per cent for Germany, Estonia and the Netherlands, 95 per cent for Denmark, 88 per cent for Belgium and 75 per cent for Romania. As at December 2019, the sufficiency index for marine SCIs in Romania has exceeded the threshold of 100 per cent.

#### Sites for terrestrial and freshwater biodiversity covered by protected areas

Romania is also making progress towards achieving SDG target 15.1 (By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements). For global indicator 15.1.2 (Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type), the proportion of freshwater key biodiversity areas covered by protected areas has increased from 57.43 per cent in 2010 to 60.82 per cent in 2020, and the proportion of terrestrial key biodiversity areas covered by protected areas has increased from 65.03 per cent to 75.97 per cent over the same period. Thus, the country is successful in achieving Aichi Target 11.

In the European context, according to Eurostat, the indicators for the surface of terrestrial sites designated under Natura 2000 and the number of protected species in Romania, as per the EU Habitats Directive, was 93 per cent in 2013 (slightly above the EU average of 92 per cent), indicating a high degree of conformity. After the designation of new Natura 2000 sites in 2016, the indicator for the surface of terrestrial sites designated under Natura 2000 was close to 100 per cent.

However, according to the most recent evaluation report by the EC on the conservation status of habitats

and species in Romania as per the Habitats Directive, 63 per cent of the biogeographical assessments of habitats were “favourable” in 2013 (compared with the EU average of 16 per cent), 28 per cent were “unfavourable – inadequate” (compared with the EU average of 47 per cent) and 7 per cent were “unfavourable – bad” (compared with the EU average of 30 per cent). In terms of species, 19 per cent of the assessments were “favourable” in 2013 (compared with the EU average of 23 per cent), 67 per cent were “unfavourable – inadequate” (compared with the EU average of 42 per cent) and 6 per cent were “unfavourable – bad” (compared with the EU average of 18 per cent). It was therefore concluded that the habitats in Romania have the best conservation status across the EU.

#### *Management plans*

At the national level, 249 management plans were approved in 2016 and are in different stages of implementation. The approved management plans are realized in the context of the spatial overlap of the respective protected natural areas. These management plans cover 9 national parks, 9 natural parks, 88 avifauna SPAs and 196 SCIs.

More management plans have to be approved to ensure the timely implementation of measures and of monitoring and assessment, which are essential activities for the long-term management of protected areas. Funding for the implementation of the management plans started in 2016 with funding from the Ministry of European Funds, improving Romania’s absorption capacity of EU funds, which, as at December 2019, is rather low (chapters 3 and 6).

Of the 1,574 protected natural areas of different categories, 760 operate with management plans and 1,094 without management plans (table 11.12); 277 management plans have been submitted and are at different stages of approval process. However, some protected areas have two management plans, i.e. when they also have Natura 2000 status.

**Table 11.12: Protected areas with or without management plans**

	With	Without
Nature reserves and nature monuments	434	783
National parks, natural parks, geoparks	18	11
Special protection areas	90	81
Sites of community importance	218	219
<b>Total</b>	<b>760</b>	<b>1 094</b>

Source: NANPA, 2019.



As at December 2019, four management plans were elaborated, and they are under evaluation within the Large Infrastructure Operational Programme, and 12 management plans have been elaborated and submitted for approval to the Ministry of Environment, Waters and Forests. To ensure they are in line with the management plans, 74 forest architectural landscaping plans have been modified and necessary measures have been taken to conserve the biodiversity of the site, pastoral arrangements have been established for 24 territorial administrative units and 50 urban plans have been modified and contain minimum conservation measures established by NANPA.

The Management Plan and the Regulations for the Danube Delta Biosphere Reserve were approved by GD No. 763/2015. Under the projects “Revising the management plan and the Danube Delta Biosphere Reserve regulation” and “Measures to ensure a favourable status of protection and conservation of habitats and endangered species in the Danube Delta” through the Large Infrastructure Operational Programme (POIM/9/4/1/Increasing the degree of protection and conservation of biodiversity and restoration of degraded ecosystems for the period 2019–2023), the management plan of the Danube Delta Biosphere Reserve is planned to be revised and will integrate a biosphere reserve, 3 Natura 2000 sites, 3 national parks and 20 strictly protected areas.

Thirteen of the 22 national and natural parks managed by Romsilva have management plans. The management plans for Pietra Craiului National Park, Călimani National Park, Grădiştea Muncelului–Cioclovina Natural Park and Munţii Măcinului National Park were revised in 2015 and await their approval by the Ministry of Environment, Waters and Forests. For eight parks, the management plans are in the final stage of approval at the Ministry of Environment, Waters and Forests. The management plan of Apuseni Natural Park is in the approval procedure at NANPA. In the case of Defileul Jiului National Park and Semenic–Cheile Caraşului National Park, the management plans are in the approval procedure at the County Agencies for Environmental Protection.

To support the development of management plans, in May 2018, the ministry in charge of the environment published the Guide for developing management plans of protected natural areas (MO No. 304/2018) making mandatory the new template for preparing management plans for protected areas. In the process of reviewing the management plans, Romsilva found

several information overlaps and a series of statistical data cumbersome to collect by the administrators of protected areas and irrelevant from the perspective of natural protected area management, resulting in plans that were lengthy (e.g. 1,400 pages for the management plan of the Iron Gates Natural Park, and of the natural protected areas overlapping with the park) and difficult to use. In 2019, Romsilva submitted its comments to the ministry in charge of the environment, waters and forests and to NANPA asking to be involved in a process of revising and simplifying the 2018 Guide. The two public authorities responded positively to Romsilva’s request. The process of revising the 2018 Guide was not initiated as at October 2020.

Although GD No. 447/2017 for the approval of the Methodological Norms for granting, using and controlling the compensations representing the equivalent value of the products that the owners do not harvest, due to the protection functions established by forest arrangements that determine restrictions on wood harvesting was developed according to Law No. 49/2011, as at October 2020, no such compensation was made.

#### *Management of protected areas*

There is no system of self-assessment conducted in protected areas. The management effectiveness of the protected area system at the national level is not assessed systematically. Assessment of the custodial management was done in 2013, which concluded that Romania has a participatory and progressive management of protected areas.

Until 2018, Romania had various options for the management of protected areas that involved various legal entities in the management, including NGOs, county councils, hunting and fishing associations, private forest owners, regional development organizations and research institutions. Most NGOs participated in the initial establishment of Natura 2000 sites. This type of management was built on participatory and collaborative management and, in the majority of cases, the protected areas (except the Danube Delta Biosphere Reserve) have been managing the sites without funds from the state budget by mobilizing resources from a variety of donors, including the EU. As at December 2019, the protected area system is managed by NANPA, Romsilva, DDBRA, county councils and private legal entities (table 11.13).

Table 11.13: Institutions for protected area management, December 2019

	NANPA		Romsilva		DDBRA		County councils		Private legal entities	
	No.	ha	No.	ha	No.	ha	No.	ha	No.	ha
Nature reserves and monuments	646	95 435	192	89 596	22	52 594	34	14 315	21	28 752
National parks			12	309 547			1	8 396		
Natural parks	4	23 568	10	511 553						
Biosphere reserves			2	85 518	1	576 422				
Wetlands of international importance	18	520 129			1	576 518				
Natural sites of universal natural heritage					1	311 916				
Special protection areas	142	2 180 844	22	878 110	1	508 302	5	236 840	1	71 202
Sites of community importance	400	2 520 763	24	868 166	2	789 846	5	270 899	4	201 145
Geoparks	1	102 392					1	106 000		
<b>Total</b>	<b>1 211</b>	<b>5 443 131</b>	<b>263</b>	<b>2 751 229</b>	<b>28</b>	<b>2 815 598</b>	<b>46</b>	<b>636 451</b>	<b>26</b>	<b>301 099</b>

Source: NANPA, 2019.

Photo 11.13: View of Poiana Pelegii, Retezat National Park



Photo credit: Claudia Dănaș, Romsilva, MoEWF

Photo 11.14: Oak sapling (*Quercus robur*)

Photo credit: MoEWF

Photo 11.15: View of Cozia National Park

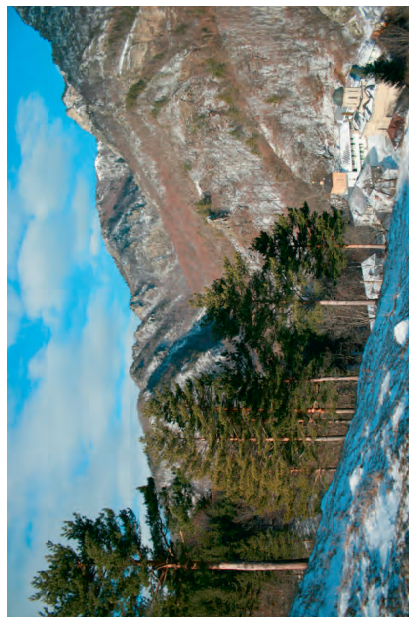


Photo credit: Pavel Prundurel, Romsilva, MoEWF

**Photo 11.16: Cârșa waterfall, Cheile Nerei-Beusnita National Park**

*Photo credit: Romsilva, MoEFW*

All protected areas are required to report to NANPA on an annual basis. Before 2016, reporting was submitted to the then Ministry of Environment and NEPA. Since NANPA was established, a new approach has been introduced to harmonize the structure of reporting, with a uniform template developed for the reporting.

Scientific councils operate at all national and natural parks. The management bodies of protected areas involve stakeholders through consultative councils consisting of representatives of the local public administration, local agencies, business, forest owners associations, farmers and NGOs. They all participate in the development of management plans. The management plan is subsequently approved by the scientific councils and forwarded to the Ministry of Environment, Waters and Forests for its final approval, including the budget.

The approval of management plans is slow and some of the management plans have been awaiting approval since 2015. In 2018, the guidelines for designing management plans became very detailed as it requires very detailed description of each species and detailed socioeconomic data. These factors create complications for protected areas management bodies in developing management plans and, consequently, in applying for project funding.

Based on the above, the implementation of Recommendation 9.3 in the Second EPR of Romania, urging the then Ministry of Environment and Forests to provide: (a) resources and capacity-building necessary to produce protected area management plans for all protected areas for which these are required, and (b) necessary tools and better capacity to access the available EU funds to the management authorities of protected areas in order to set up required activities for their management and develop mechanisms to support the livelihoods of the surrounding communities, is ongoing but at a slow pace.

For small protected areas, local forest directorates sign custodial contracts with the LEPA. Under the management of 22 national and natural parks, these administrations are also managing the smaller Natura 2000 sites. However, with the shift of custodianship to NANPA, management of the Natura 2000 sites, which were managed by the custodians (NGOs, forestry directorates) has now moved to NANPA.

According to Romsilva, environmental authorities with responsibilities for natural protected areas – the Ministry of Environment, Waters and Forests and NANPA – did not re-evaluate the conservation value of natural protected areas of national interest, in particular the conservation objectives that formed the basis of their designation.

In support of its statement, Romsilva demonstrated that the designation of nature reserves was made exclusively on the basis of summary sheets completed by county agencies for environmental protection, which are not supported by scientific studies. Also, no public consultations were organized for the designation of the natural protected areas. Romsilva noted that most of the sheets contain summary lists of species, some of which are common species (e.g. *Lepus europaeus*, *Sus scrofa*, *Capreolus capreolus*, *Meles meles*, etc.) with wide distribution throughout the country, not being characteristic exclusively of the areas designated as nature reserves, which makes it difficult or even impossible to identify the specific objectives that formed the basis for the designation of these natural protected areas.

### 11.5 Trends in development and management of ecological networks

#### *UNESCO World Heritage Sites and Biosphere Reserves*

Romania joined other 11 European countries in 2007 in the joint nomination of “Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe”.<sup>152</sup> The site was inscribed in 2007 and the boundaries of the site were extended in 2011 and 2017. The core zone covers about 24,000 ha – 26 per cent of the entire site – and the buffer zone covers 64,500 ha. Since the inscription, two Decisions of the World Heritage Committee have been issued (Decision 42 COM 7B.71 in 2018 and Decision 43 COM 7B.13 in 2019) concerning the logging operations undertaken in the buffer zones of the Romanian components of the property, and confirming that no logging operations are allowed in the buffer zones of the property if they could negatively impact natural processes and the property’s Outstanding Universal Value. In this respect, a joint World Heritage Centre/IUCN Reactive Monitoring mission was undertaken to Romania in 2019 (chapter 6).

Romania’s Danube Delta Biosphere Reserve is the third largest biosphere reserve in Europe and home of Europe’s second largest wetland. It contains the greatest expanse of reed beds in the world and one of the world’s largest wet habitat zones. The hydrological network of Romania has a total length of 65,000 km. The aquatic ecosystem is rich in diversity and includes the Black Sea, rivers, floodplains, glacial lakes, subterranean karst cavities and caves, coastal wetlands, bogs and mountain rivers. The bogs produce rich topsoil and provide unique habitat for different

species. Romanian caves provide an invaluable record of quaternary geology in this part of the world. Today, more than 10,000 caves are known, 8,000 of which are located in the south-west. In spite of the poor conditions offered by a cold, dark climate, life is flourishing in many Romanian caves that possess, for instance, a high level of bat diversity. Also, a part of the Danube Delta has been inscribed on the UNESCO World Heritage List since 1991.

**Photo 11.17: Grey heron (*Ardea cinerea*), Danube Delta Biosphere Reserve**



*Photo credit: Mircea Vergheteș*

Retezat and Pietrosul Mare Biosphere Reserves were both recognized under the MAB Programme of UNESCO in 1979. Romania received a request from UNESCO to update the information on them according to the Sevilla Strategy. The periodic review forms for both sites were sent to UNESCO in 2019, and updated information was sent in September 2020, including the proposal to change the name of Pietrosul Mare Biosphere Reserve to Rodnei Mountains (Munții Rodnei) Biosphere Reserve. A decision regarding maintaining these two reserves in the World Network of Biosphere Reserves is expected to be taken at the 32nd session of CIC-MAB.

<sup>152</sup> <http://whc.unesco.org/en/list/1133>.

While no data are available for assessment of achievement of SDG target 11.4 (Strengthen efforts to protect and safeguard the world's cultural and natural heritage), as measured by global indicator 11.4.1 (Total per capita expenditure on the preservation, protection and conservation of all cultural and natural heritage, by source of funding (public, private), type of heritage (cultural, natural) and level of government (national, regional, and local/municipal)), type of expenditure (operating expenditure/investment) and type of private funding (donations in kind, private non-profit sector and sponsorship)), Romania is concentrating its efforts and resources for preserving beech forest sites and DDBRA is doing so for the Danube Delta World Heritage Site.

#### *Ramsar sites*

Romania ratified the Ramsar Convention in 1991. Romania designated the Danube Delta as its first Ramsar site and, as at July 2020, has 20 sites with a total area of 1,175,880 ha. Since 2012, 12 sites have been designated and the area covered by the Ramsar sites has increased by 252,283 ha. The Directorate for Biodiversity of the Ministry of Environment, Waters and Forests is the Designated Ramsar Administrative Authority.

While national awareness of the importance of wetlands and greater concern for their conservation have increased, as indicated in the COP13 National Report, 2018, the difficulties in implementing the Ramsar Convention lie in the increasing pressure from development activities on all types of wetlands and lack of stable and secured funding to support the wetlands.

Furthermore, the report highlighted the priorities for future implementation of the Convention, including support for regional initiatives and cooperation, coordination and harmonization with other multi-environmental agreements, and implementation of the Natura 2000 network by developing site-specific management plans in line with the Water Framework and Marine Strategy Framework Directives, alongside with NBSAP. The requirements of the Ramsar Convention play a decisive role within the context of implementing Natura 2000 and biodiversity strategies.

#### *Natura 2000*

According to the EEA (2020), Romania has 171 SPAs and 435 SCIs, thus, 606 sites designated as part of the Natura 2000 network. At February 2020, the Natura 2000 sites cover 60,577 km<sup>2</sup>, including 54,214 km<sup>2</sup> of land area (22.7 per cent of the land area) and 6,362 km<sup>2</sup> of marine area.

Between 2012 and 2020, an additional 4,902 km<sup>2</sup> were designated. According to the 2007 study Natura 2000 in Romania – A decade of governance challenges, the Romanian Natura 2000 network protects 88 natural and semi-natural habitats, 236 rare, threatened species or endemic plants, mammals, reptiles, amphibians, fish, and invertebrate species under the Habitats Directive and 108 birds species under the Birds Directive. More than 2.6 million ha of forest area in Romania is included in the Natura 2000 network, equivalent to 11 per cent of the total Romanian territory.

#### Natura 2000 sites in the Danube Delta

ROSPA0031 Danube Delta and Razim-Sinoe Complex, ROSCI0065 Danube Delta, and ROSCI0066 Danube Delta – the marine area, overlap and partially exceed the boundaries of the Danube Delta Biosphere Reserve; they were designated in 2007 for the protection of species and habitats of community interest and their Standard Forms were updated in 2011, 2016 and 2017.

ROSPA0031 Danube Delta was designated for the protection of 97 species of birds in 2007. In 2016, by updating the Form, the site was designated for the protection of 220 species of birds listed in annex I to Council Directive 2009/147/EC, of which 13 are permanent, 95 reproduce, 38 species winter over and 137 species are concentrated in the site during the migration period.

ROSCI0065 Danube Delta has been designated for the conservation of 29 types of habitats of community interest, of which 7 are of priority interest, and 5 species of plants, 9 species of invertebrates, 15 species of fish, 2 species of amphibians, 3 species of reptiles and 7 species of mammals. ROSCI0066 Danube Delta – the marine area was designated for the conservation of 4 types of habitats of community interest, and 2 species of fish and 2 species of mammals listed in annex II of Council Directive 92/43/EEC.

Between 2019 and 2023, the inventory and mapping of all habitats and species in the protected areas of the Danube Delta will be carried out through the project “Revision of the management plan and the Danube Delta Biosphere Reserve regulation” funded by the Large Infrastructure Operational Programme (POIM/9/4/1/Increasing the degree of protection and conservation of biodiversity and restoration of degraded ecosystems for the period 2019–2023).

## 11.6 Legal, policy and institutional framework

### *Legal framework*

Law No. 57/2016 established NANPA as a public institution with legal personality, financed from the state budget and from its own revenues and subordinated to the ministry in charge of the environment. It provides provisions related to the contractual arrangements between NANPA and other institutions or legal entities, such as NGOs, city councils and research institutions. The Law specifies that the ministry in charge of the environment will ensure the integration of the management strategy of the Danube Delta Biosphere Reserve with the policies of NANPA.

Law No. 220/2019 amended GEO No. 57/2007 and Law No. 95/2016. The main legislative amendments were related to the administration of natural protected areas, which were managed by custodians that have now been taken over by NANPA, through its local structures. Therefore, the concept of “custodian of natural protected area” was eliminated and replaced in the wording of the Law with the “National Agency for Natural Protected Areas”. In addition, according to GEO No. 57/2007 on the Regime of Protected Natural Areas, Conservation of Natural Habitats, Wild Flora and Fauna, as amended in 2011, the central public authority in charge of the environment and forests had to initiate for governmental approval in 2011 the establishment of modalities of requesting, calculating and granting compensations to the owners or concessionaires of lands in protected natural areas for the observance of the restrictive provisions of the management plan of the protected natural area or for the conservation measures. As at December 2019, such modalities have not been established. Nonetheless, GD No. 447/2017 approving the Methodological Norms for granting, using and controlling the compensations representing the equivalent value of products that owners do not harvest, due to the protection functions established by forest arrangements that determine restrictions in wood harvesting, offers private forest owners the possibility of seeking compensation for forests located in protected natural areas, including those where logging is prohibited.

Law No. 407/2006 on hunting and the protection of hunting resources provides the legal framework for hunting.

GEO No. 23/2008 on fisheries and aquaculture (Law No. 317/2009) gives authority to DDBRA to manage fish resources from the Danube Delta Biosphere Reserve. It was also modified many times, one of the

changes clarifying the use of the fish and agricultural polders inside the reserve.

GEO No. 127/2010 for the adoption of some measures foreseen for the economic-social development of the Danube Delta area was approved by Law No. 216/2013. Law No. 216/2013 has amended Law No. 82/1993 regarding the establishment of the Danube Delta Biosphere Reserve to support DDBRA in its activity. Law No. 136/2011 modified and completed Law No. 82/1993 and established the Administrative Advisory Council and the Scientific Council. By Law No. 136/2011, the local population has the right of exclusive use of the renewable natural resources in the delta area through traditional economic activities.

According to the Forest Code, Law No. 46/2008, virgin and quasi-virgin forests are strictly protected and included in the National Catalogue of Virgin and Quasi-virgin Forests established as an instrument to identify, register and protect valuable forests. As of May 2019, an area of 29,060 ha is officially included in the Catalogue and further identification and mapping of virgin forests is ongoing. The obligation to preserve “virgin and quasi-virgin forests” is enshrined in the Forest Code, in MO No. 3397/2012 and MO No. 2525/2016 regarding protection of virgin forests, and in the EU Birds and Habitats Directives.

GD No. 538/2015 approved the Rules on the access and movement of ships and boats on internal canals and lakes in the perimeter of the Danube Delta Biosphere Reserve. GD No. 763/2015 provides for approval of the Management Plan and the Regulations for Danube Delta Biosphere Reserve.

GD No. 447/2017 regulates the approval of the Methodological Norms for granting, using and controlling the compensations representing the equivalent value of the products that the owners do not harvest, due to the protection functions established by forest arrangements that determine restrictions on wood harvesting. Compensation from the state budget is granted to the forest owners for the losses incurred because of the restrictions imposed on logging and capitalization of the wood, due to the priority fulfilment of the protective functions by the forest owners.

In 2009, MO No. 979/2009 was adopted on the introduction of alien species, the interventions on invasive species and the reintroduction of native species provided in annexes No. 4A and 4B to GEO No. 57/2007, approved with amendments by Law No. 49/2011, as amended. However, neither the national list of alien species nor any assessment on

such species (e.g. those included in the Pan-European Inventory of Alien Species which is reported to be used as a reference) had been developed in Romania, as of 2020. The concrete implementation of the Order would support the achievement of SDG target 15.8 (By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species), measured by global indicator 15.8.1 (Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species).

Recommendation 9.2 (a) in the Second EPR of Romania, urging the Government to evaluate the current system of compliance and enforcement related to the existing legislation on protected areas and take necessary steps to correct its shortcomings, is partially implemented. While Romania has established a solid network of protected areas and the legislation on protected areas provides a framework for their management, there are obstacles to implementation in terms of compliance and enforcement, public awareness and communication with local communities, and availability of adequate funding for their management. Specifically, capacity for enforcing the laws regarding hunting and other illegal activities (such as illegal construction) within the protected areas is insufficient.

### *Policy framework*

#### Strategy for Sustainable Development

SDS 2030 provides the overall framework for implementation of SDGs 14 and 15, which concern the conservation of biodiversity and ecosystems. Under its Goal 14, the Strategy specifies measures such as implementation of marine protected areas management plans and rehabilitation of the coastal area in order to reduce marine pollution, minimize the effects of acidification, manage sustainable fishing and preserve, within reasonable limits, the viability of traditional activities including recreational and sports fishing. Under its Goal 15, the Strategy stipulates objectives such as to eradicate illegal logging through development of an integrated digital system for the monitoring of the exploitation and transport of timber and measures such as afforestation and reforestation of forest land or degraded land. Furthermore, the Strategy gives an emphasis to wetland management and conservation of mountain biodiversity and outlines the objective to support research and development in the study, management, protection and preservation of the diversity of natural heritage.

#### National Strategy and Action Plan for Biodiversity Conservation for the period 2014–2020

The 2013 NBSAP for the period 2014–2020, updated in 2017, sets the general strategic framework for biodiversity and nature protection in the country, identifying strategic objectives and corresponding actions to be implemented by 2020. Four general action directions were identified as priority areas to be achieved by 2020: stopping the decline of biodiversity and recovery of the degraded systems; integration of biodiversity issues in all sectoral policies; promoting traditional innovative methods, practices and knowledge and clean technologies to support biodiversity conservation; and improving communication and education in the field of biodiversity. The Action Plan includes objectives, actions, responsible institutions, time frame, degree of priority and performance indicators for each action, and the estimated total budget of 6.5 billion lei and financing sources. The overall matrix includes 10 objectives, 15 sub-objectives and a total of 170 actions.

No reports are available on the status of the implementation of the Strategy and Action Plan. While government expenditures on the protection of biodiversity and landscape amounted to 26.6 million lei in 2015 (€5.9 million), they amounted to only 2.1 million lei (€0.5 million) in 2018. However, it is difficult to assess the share of biodiversity-related expenditures against those related to landscape protection. Moreover, no activities related to biodiversity conservation were financed from the Environment Fund.

A number of actions for natural protected areas management were planned but never implemented, such as: to establish legal procedures for purchasing private lands included in the category of natural protected areas (50,000 ha) and pay compensation to land and forest owners who comply with the restrictions under Natura 2000 site requirements; to assess, by 2014, natural habitats and wild species of community interest in order to finalize the designation of the Natura 2000 network; to establish a national monitoring system for biodiversity and natural protected areas according to the provisions of Birds and Habitats Directives; and to develop and adopt the Red List.

With regard to achieving SDG target 15.9 (By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts), measured by global indicator 15.9.1 ((a) Number of countries that have established national targets in accordance

with or similar to Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011–2020 in their national biodiversity strategy and action plans and the progress reported towards these targets; and (b) integration of biodiversity into national accounting and reporting systems, defined as implementation of the System of Environmental-Economic Accounting), according to United Nations statistics and the CBD Secretariat website, Romania has not yet developed national targets reflecting Aichi Biodiversity Target 2 and hence no progress has been reported. However, Romania reported in 2017 that it is among the countries that have integrated biodiversity values into national accounting and reporting systems, defined as implementation of the System of Environmental-Economic Accounting.

Integration of policies on biodiversity conservation in all sectoral policies has been identified as one of the four main action directions of the National Strategy for Biodiversity Conservation. The document further states that sustainable use of biodiversity components presupposes the ecosystem approach of the integrated management of resources and the integration of biodiversity conservation priorities in sector policies and strategies.

To date, these goals are not found in a coherent and unified form in sectoral policies, the main reason being the lack of a monetary value given to services offered by natural ecosystems, services which are now considered public goods with no market value. The Strategy further states a need to assess the value of natural resources, renewable and non-renewable, and of services offered by the normal functioning of ecological systems and calls for integration of the costs of conservation and restoration of biodiversity into the assessment of the costs of policies and sector strategies. Based on the fact that intersectoral activities were included in the Strategy, it can be concluded that Recommendation 9.4 (a) in the Second EPR of Romania, urging the then Ministry of Environment and Forests to include intersectoral activities and consultations in the NBSAP in order to mainstream the values of nature into national planning and financing and avoid further biodiversity losses and the degradation of ecosystem services, is implemented. However, full implementation of the NBSAP remains a challenge to be overcome.

#### Rural Development Programme 2014–2020

The Rural Development Programme 2014–2020 sets out rural development priorities with a focus on the indicative budget for focus areas, selected measures and expected targets. The Programme outlines three main objectives: (i) restructuring and increasing farm

viability; (ii) sustainable management of natural resources and tackling climate change; (iii) diversification of economic activities, creation of jobs, improvement of infrastructure and services for improving the quality of life in rural areas. The latest Programme also integrates biodiversity conservation issues.

The objectives were planned to be achieved through six EU priorities. Of these, priority no. 4 is on restoration, preservation and enhancement of ecosystems related to agriculture and forestry. The total budget to support measures under priority no. 4 is €27 million. The main measures are directed to support preservation of the biological diversity of agricultural and forestry lands, as well as to the protection and improvement of water and soil resources. The Programme encourages the maintenance of extensive agriculture practices with a low impact on the environment. Two defined target indicators are: the percentage of forest/other wooded area under management contracts supporting biodiversity, and the percentage of agricultural land under management contracts supporting biodiversity and/or landscapes.

Thus, by reducing the periodicity of silvicultural interventions outside these areas, optimal conditions for wildlife development, shelter, feeding and nesting are secured. Also, by maintaining the density of forest stands, the forest's capacity to adapt to the effects of climate change and runoff retention will be improved. Support is provided for forest owners included in the national forest fund who join the forest environment commitments, thus contributing to the conservation of biological diversity and soil protection.

Romania is taking measures to provide an enabling framework to promote organic agriculture, with the aim to improve environmental conditions and to supply consumers with high quality organic products. The financial support for organic farmers provided through the Programme is around €236 million. In the Programme for 2014–2020, organic farming is a main tool for minimizing water pollution in the sustainable land management systems to control nutrients and manage crop protection, water and erosion. The Ministry of Agriculture has offered a special package in the National Rural Development Programme 2014–2020, dedicated to certified organic meadows and pastures. No analysis was carried out to assess the implementation of this measure. However, organic production is expected to support the main objective of the Agrifood Sector Development Strategy for Medium- and Long-Term Horizon 2020–2030 of increasing production and exports of organic products.



Starting from 2017 and based on GD No. 447/2017, compensation is being paid from the funds foreseen under the National Rural Development Programme. In 2018, around €5.5 million for approximately 500 forest owners and in 2017 around €3.2 million for approximately 210 forest owners was paid. Recommendation 9.1 in the Second EPR of Romania, urging the then Ministry of Environment and Forests to explore the development of innovative financing mechanisms to compensate private forest landowners for the restrictions imposed on them to support the protective functions of forests, is implemented.

#### National Eco-Tourism Strategy 2011–2015

The main aim of the National Eco-Tourism Strategy 2011–2015 was to promote tourism with a less negative impact on the environment. Under this Strategy, Romania has taken measures to establish wildlife and nature tourism products in conformity with the European Ecotourism Labelling Standard. Furthermore, 10 ecotourism destinations were established. This development helps generate income for local communities, creates additional socioeconomic value in protected areas and increases awareness about nature conservation and its important contribution to local development.

#### Other

Biodiversity conservation and protected area management have been included in several national strategies and policy documents:

- Large Infrastructure Operational Programme 2014–2020;
- Multiannual National Strategic Plan for Aquaculture;
- Operational Programme for Fisheries and Maritime Affairs 2007–2013 and 2014–2020;
- Master Plan for the Protection and Rehabilitation of the Romanian Black Sea Coast;
- National Tourism Development Master Plan 2007–2026;
- River basin management plans 2010–2015.

#### *Institutional framework*

The Ministry of Environment, Waters and Forests is responsible for developing and implementing policies and strategies for biodiversity conservation, forest management and protected areas at the national level. The Ministry is in charge of drafting, updating, coordinating and monitoring the NBSAP for the period 2014–2020, the integrated management strategy of the coastal zone and the Strategic Action Plan for the rehabilitation and protection of the Black

Sea, and the National Forestry Strategy 2018–2027 and the Forest Action Plan. It elaborates draft normative acts and ensures the harmonization of national legislation in its fields of activity. The Ministry coordinates the implementation of measures for the protection and conservation of sturgeon in the Danube Basin and the Action Plan for the conservation of sturgeon. The Ministry approves guidelines for monitoring protocols and unitary methodologies for monitoring the conservation status of species and habitats of community interest. The Ministry approves guidelines for the elaboration of the management plans of the protected natural areas. Together with NANPA, it establishes, develops and updates databases on the national network of natural protected areas. In the case of new proposals for establishing protected areas, the Ministry notifies landowners and administrators and organizes consultations with all stakeholders. The Ministry conducts monitoring, evaluation and control in administering natural protected areas of national interest. The Ministry, through the Department for Wildlife Resources Management, is responsible for game management and each year establishes the hunting quota for the game species of interest.

#### National Environmental Protection Agency

NEPA coordinates and monitors implementation of environmental legislation in the sector of nature conservation and biodiversity. The main tasks of NEPA are designing and hosting the databases designated for biodiversity and preparing the reports for international organizations. NEPA is responsible for annual reporting for the EEA's Common Database on Designated Areas. Due to problems with delineation of borders of protected areas designated at the national level, some of the reporting still lacks precise information. NEPA coordinates the accurate analysis of the monitoring reports on biodiversity and the procedure for issuing environmental permits for harvesting activities/capture and/or purchase and/or marketing of plant and animal fossils, vertebrates and invertebrates, as well as flora and fauna.

The Ministry of Environment, Waters and Forests is responsible for reporting to the EU on Natura 2000 sites; NEPA provides technical support and hosts the Natura 2000 database. Information gathered as part of the protected area management plans is collected, summarized and submitted to the EU, including information on species populations and their conservation status. NEPA reports to the Common Database on Designated Areas and EEA and is responsible for the implementation of the Nagoya Protocol. It also analyses the biodiversity-related parts of environmental assessments of proposed plans and

projects, and information and relevant evaluation studies within the framework documentation for projects and plans of activities that may have significant negative effect on protected natural areas, natural habitats and species of wild fauna and flora of community interest.

The LEPAs coordinate environmental activities at the local level by running the procedures of SEA, EIA and appropriate assessment for plans, programmes and projects that may have a negative impact on protected areas and biodiversity and implement nature conservation legislation at the local level. The LEPAs have management attributions for protected areas without custodians or administrators.

#### National Environmental Guard

NEG controls: the compliance of any activity with legislation regarding protected areas, conservation of natural habitats, flora and fauna and aquaculture; the compliance of activities with the conditions of an environment permit; activities with impact on the natural habitat areas, conservation of ecosystems, flora, wildlife and aquaculture; and the compliance of management measures taken in order to maintain or restore certain terrestrial and aquatic surfaces, with particular emphasis on the Danube Delta Biosphere Reserve.

The implementation of Recommendation 9.2 (b) in the Second EPR of Romania, urging the Government to ensure that adequate financial resources are made available for training environmental guards and increasing their numbers to control illegal hunting in protected areas, is partially implemented. On training environmental guards, the annual budget of NEG contains a budget line dedicated to in-service professional training. Though it is not entirely targeted to the control of illegal hunting in protected areas, it could be assumed that changes in the budget line for training would indicate the overall trend. Between 2016 and 2019, the budget for training has been steadily decreasing: 2015 – 10,000 lei (€2,250); 2016 – 70,000 lei (€15,587); 2017 – 50,000 lei (€10,944); 2018 – 40,000 lei (€8,595); and 2019 – 0 lei. However, in addition, NEG implemented a project between 2015 and 2017 on developing a methodology for establishing ecological corridors and training guards for the protected area management funded by the Programme “Environment, Climate Adaptation and Ecosystems” (Financial mechanism of the European Economic Area), with a budget of more than €1 million. Within this project, 300 employees of the protected areas’ administrative units, including environmental guards, were trained in efficient monitoring of ecological corridors.

**Photo 11.18: Eastern view of Piatra Craiului National Park**



*Photo credit: Mircea Vergheș*

### National Agency for Natural Protected Areas

NANPA was established pursuant to Law No. 95/2016 as a public institution with legal personality, subordinated to the Ministry of Environment, Waters and Forests, financed from both the state budget and its own revenues. While the main budget of NANPA is provided by the Ministry, approximately 2–3 per cent is generated from the income from services provided by the protected areas and other taxes, for example, fees for permits to use cameras in protected areas.

Before the establishment of NANPA, 40 per cent of designated protected areas were not managed by any institution. Its establishment was initially welcomed by custodians as it was expected that NANPA would provide coherence to the protected areas system, provide management of the orphan sites through its local structure, lobby for funding from the state budget and provide guidance and oversight to all protected areas. However, the shift of custodianship was done abruptly, resulting in custodians losing their commitment to the protected areas. Several discussions have been held between the former custodians and the Ministry of Environment, Waters and Forests and, as at December 2019, it was expected that a draft methodology and proposal for partnership between them would be developed.

In order to strengthen the institutional capacity of NANPA, legislative changes have been approved over the last two years regarding the management of protected natural areas, for example: MO No. 1447/2017 on the Methodology of assigning administration and custody of the protected natural areas was amended; GEO No 75/2018 on areas from the national network that are managed by NANPA through territorial structures from the county level and through specially established structures (taking over the management of the areas from the custodians); GEO No. 13/2018 on ensuring the management of the unallocated protected natural areas by NANPA and its territorial structures; and GD No. 867/2018 on the amendment of the organizational chart and functional structure of NANPA in order to establish territorial structures with area management tasks at the county level.

NANPA has branches in each county. As at December 2019, 30 of the 40 county services are operational. In total, 180–190 people are working in NANPA, including 1–12 people in each county office and 50 in the headquarters. According to the approved organigram of NANPA, 5–15 people should be recruited for each county office, bringing the total to 490 filled posts. Law No. 95/2016 specifies the

number of posts allocated to NANPA – a minimum of 90 and maximum of 400 for the central structure, but no more than 30 for each subordinate public institution with the role of administration of protected natural areas. This means that, as at December 2019, NANPA and its county offices are working with less than half the approved number of staff. The staff shortage is significantly hindering the full implementation of its duties.

Starting in 2019, NANPA set the territorial structures into operation by selecting specialized personnel and establishing premises. Since then, 30 county-based territorial services have been operationalized. The training guidelines for managers and staff have been produced, which include themes such as: assessing the impact of plans, projects and activities on protected natural areas; developing and implementing management plans' conservation measures; monitoring the conservation status of natural habitats, and the populations of the species that are the subject of the designation of the protected natural areas; and controlling the application of legal provisions on the management of the protected natural areas.

### Danube Delta Biosphere Reserve Administration

DDBRA was established as a management authority mandated to conserve, protect, regulate, control and manage the Danube Delta Biosphere Reserve (Law No. 216/2013, which amended Law No. 82/1993 regarding the establishment of the Danube Delta Biosphere Reserve). The Administration is subordinated to the ministry in charge of the environment and is led by a governor, appointed by the Romanian Government on the proposal of the ministry. The Governor participates in meetings of the Scientific Council and Advisory Council. The Scientific Council includes representatives of DDBRA and all other entities involved in the activities of the Reserve, such as local authorities, representatives of relevant ministries, health services, research institutions, the Academy of Science and business.

The Administration is a unique institution as it performs a double function, being an administrator of the Danube Delta Biosphere Reserve and an environmental authority for the Danube Delta Romanian region. One city and 21 villages are located in the territory of the Reserve. While economic activities are permitted and ongoing in the Reserve, the Administration's primary goal is to maintain the ecological balance. The number of full-time employees of DDBRA has been increased from 114 in 2012 to 124 in 2019. DDBRA receives an annual

budget from the ministry in charge of the environment, which varies from year to year (table 11.14). However, the funds received from international projects have increased multiple times.

In 2010, the Administration had an ecological warden and inspection department with a total of 56 staff and a mobile control unit with six staff. The mobile unit was focused mainly on surveying tourism activity. In 2015, the Danube Delta Integrated Control Commissariat was established in the Authority, mainly to combat fish poaching, and the total number of staff increased to 68. In 2018, the Commissariat was split into small departments, subordinated to the Governor, with a total of 38 staff, including two mobile monitoring and control units of 13 members each.

Fees and revenues from the activities carried out on the territory of the Reserve are used for conservation measures, including restocking of fish and annual assessment of the value of natural resources. Based on results assessment, the Administration establishes quotas, for example, for fishing, logging and hunting. A socioeconomic study is carried out as part of the updating of the management plan.

### Romsilva

Romsilva implements sustainable forest management principles in the state forests (which occupy 48 per cent of Romania's total forested area) in accordance with the forest management plans, in order to increase the contribution of forests to improving environmental conditions and supporting the national economy. It is also responsible for the implementation of the national programme for genetic improvement of horses. Romsilva also manages 243 hunting grounds. According to the provisions of GEO No. 23/2008 regarding fishing and aquaculture, with subsequent amendments and completions, Romsilva administers

resources and applies measures for sustainable management and use to improve the natural habitats of salmonids. Romsilva has a special unit dedicated to providing methodological guidance to national and natural parks under its jurisdiction. Romsilva has 41 forest directorates.

A 10-year agreement is issued between NANPA and Romsilva for the management of national and natural parks. Romsilva has agreements signed with the Ministry of Environment, Waters and Forests for national and natural parks.

Law No. 57/2007 stipulates that the funding for protected areas should come from the state budget, but this is not the case for protected areas managed by Romsilva. During the period 2012–2019, park administrations of areas managed by Romsilva did not receive any funding from the state budget. Funding for the management of protected areas is allocated exclusively from Romsilva, which provides funds generated from its forestry operations. The annual budget allocated by Romsilva to its park administrations has been steadily increasing in the past seven years (table 11.15).

Own revenues of park administrations constitute approximately 10 per cent of their total combined budgets. The annual budget allocated to park administrations has increased over the years. It is foreseen that more than 30 million lei will be spent in 2019 (table 11.15). From this budget, 75–80 per cent is used for staff costs and the rest is used for maintenance and infrastructure. Romsilva is not eligible to receive funds from the Environment Fund. This is linked to the fact that Romsilva is not exclusively a state organization, but more like a state-owned enterprise with self-sufficient financial mechanism. Romsilva can invest initial funding into management plan activities but retroactive reimbursement is not guaranteed.

**Table 11.14: Budget allocated for the Danube Delta Biosphere Reserve, 2010–2019, million lei**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
National budget	14.657	8.661	9.137	7.491	8.508	13.009	12.376	11.003	10.592	10.060
Projects	15.111	13.076	10.706	2.158	4.202	19.003	15.326	9.967	3.767	35.108

Source: DDBRA, 2019.

**Table 11.15: Annual budget allocated by Romsilva to its parks administration, 2012–2019, million lei**

	2012	2013	2014	2015	2016	2017	2018	2019
National parks	6 488	6 817	7 470	8 200	9 296	11 633	14 480	16 829
Natural parks	5 598	6 135	6 666	7 675	8 588	11 054	14 044	15 322
<b>Total</b>	<b>12 086</b>	<b>12 952</b>	<b>14 137</b>	<b>15 874</b>	<b>17 884</b>	<b>22 687</b>	<b>28 524</b>	<b>32 151</b>

Source: Romsilva, 2019.

The budget allocated for natural parks managed by Romsilva was adequate at the beginning of the establishment of natural parks. But in order to fully implement their management plans, the park authorities need to apply for external funding. In total, 151 projects (overall funding of US\$47.3 million) implemented between 2012 and 2019 were funded by external sources, mostly from ESIF. This has significantly improved the quality and scope of activities implemented by the park administrations.

However, recent regulations on accessing funding prescribe stricter requirements, such as that 40 per cent of the project funding should be spent for active management measures (i.e. ecological reconstruction, artificial bird netting). Some of the parks' activities, such as biodiversity monitoring, are not considered active measures. Furthermore, in order to receive funding for projects to be implemented in the protected areas, the management plan should be approved in advance.

Romania is on track towards achieving SDG target 15.2 (By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally), measured by global indicator 15.2.1 (Progress towards sustainable forest management).

The annual net rate of change in forest area was 0.23 per cent in the period from 2000 until 2010 and 0.62 per cent in during 2010–2020, showing a three-fold increase, which slows down the country in achieving a rate of 0.

Changes in the above-ground biomass stock in forests indicate the balance between gains in biomass stock due to forest growth and losses due to wood removals, natural losses, fire, wind, pests and diseases. In Romania, the change indicates an increase from 107.00 tons/ha in 2010 to 207.50 tons/ha since 2016, meaning a positive trend.

The proportion of forest area located within legally established protected areas increased from 2.22 per cent in 2000 to 37.98 per cent in 2015, where it remains, which shows a positive trend. In 2000, Romania reported that 86.71 per cent of its forest area was under a long-term management plan; in 2010, this was at 81.92 per cent and since 2015 it has been at 80.97 per cent.

Forest area certified under an independently verified certification scheme has increased from 914,680 ha in 2010 to 2,728,310 ha in 2018, indicating positive progress towards sustainable forest management.

### Other institutions

Local governments have a mandate for the management (including designation) of protected areas of local interest. Besides this, one of the most important achievements of the current reporting period is the strengthening of the administrative system in Natura 2000 sites, resulting from the establishment of management structures.

Romanian Waters manages the infrastructure for hydrological surveillance and monitoring of water quality, including monitoring of species and habitats associated with water.

The Ministry of Agriculture and Rural Development has a mandate in relation to biodiversity, by making policy for protection of conservation and/or sustainable use of species and habitats associated with agricultural activities.

The most active public research institutes on biodiversity issues are: Forestry Research and Management Institute, Danube Delta National Institute for Research and Development, National Institute for Biology, "Grigore Antipa", National Museum of Natural History, and other universities.

The National Agency for Cadastre and Land Registration ensures implementation of the INSPIRE Directive. The Ministry of Environment, Waters and Forests is acquiring spatial datasets for protected natural areas, including Natura 2000 sites, with a view to optimizing their management.

As result of amendments done to biodiversity framework law, in 2011, the Commission for Speleological Patrimony was established by MO No. 1044/2012 for the regulation of activities in caves and karst areas.

### Non-governmental organizations

NGOs play a vital role in the biodiversity sector in Romania. They have access to some external funding. NGOs are flexible, and often work in partnership with the public sector. Most of the NGOs focused on biodiversity conservation are associated on a common platform named the Natura 2000 Coalition (Coaliția Natura 2000). Some of the key NGOs actively engaged in biodiversity-related matters include: Milvus Group; Romanian Hunting Association, affiliated with FACE Romanian Ornithological Society affiliated with Bird Life International; World Wide Fund for Nature – Danube and Carpathians Programme; and local IUCN members (Earth Voice, UNESCO Pro Natura and Exploratorii Reșița). Since

2013, Fauna and Flora International has had an active presence in Romania and has been implementing a LIFE+ project in cooperation with the then Ministry of Environment and Climate Change, Romanian Gendarmerie and Zarand Association.

Romsilva's cooperation with NGOs has been oriented mainly towards environmental protection, such as enforcing legislation related to illegal cutting of wood, and identification and establishment of a protection regime for valuable forest ecosystems, for example, those included in the National Catalogue of Virgin and Quasi-virgin Forests and the sites included in the UNESCO World Heritage List.

#### *Cooperation on biodiversity conservation issues*

Cooperation also takes place as under written collaboration agreements, such as:

- Collaboration protocol signed 25 February 2014 by the then Ministry of Environment and Climate Change (Department of Water, Forests and Fisheries) and WWF Association Danube–Carpathians Romania Programme on protection of virgin and quasi-virgin forests and preventing and combating the trade in illegally harvested timber. This protocol resulted in the development of the Good practice guide for national operators in view of proper implementation of the provisions of Regulation (EU) No 995/2010 laying down the obligations of operators who place timber and timber products on the market. Another result was the elaboration of risk maps concerning illegal logging in Romania.
- Collaboration protocol signed 3 July 2014 by the then Ministry of Environment and Climate Change (Department of Water, Forests and Fisheries), Romsilva, the Institute of Forest Research and Management Planning, WWF Association Danube–Carpathians Romania Programme and Greenpeace CEE Romania on developing and completing in good condition the nomination process of candidate sites for the registration of the virgin and ancient beech forests on the UNESCO World Heritage List. As a result, eight sites with 12 components, covering 24,000 ha and 64,500 ha area of buffer zone, were included in July 2017 as part of “Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe”.

#### Neighbouring countries

Romania is actively participating in the area of cross-border cooperation affecting biodiversity protection and ecological connectivity. GEO No. 195/2005 on environmental protection sets out the principle of developing international collaboration for environmental protection. By means of bi- and multilateral agreements, Romania collaborates with neighbouring countries for transboundary management of sites.

The European Union Strategy for the Danube Region<sup>153</sup> is the major transborder cooperation initiative of which Romania is part. Officially launched in 2011, the Strategy is one of the four EU macrostrategies, having been co-initiated by Romania and Austria and representing a mechanism for cooperation among the Danube basin countries for the economic, social and territorial development of the wider Danube region.

The Republic of Moldova, Romania and Ukraine collaborate for consolidated ecological management and for the creation of a cross-border protected area, through a framework under the trilateral agreement signed by the three countries under the auspices of the Council of Europe. In 2018, the International Coordinating Council of UNESCO's MAB Programme added 24 new sites to the World Network of Biosphere Reserves, among them the first biosphere reserve in the Republic of Moldova, the Lower Prut Biosphere Reserve. Bearing in mind the existing transboundary biosphere reserve between Romania and Ukraine, as well as the Danube Delta Transboundary Biosphere Reserve consisting of the Romanian Danube Delta Biosphere Reserve and the Ukrainian Danube Biosphere Reserve, the Romanian Parliament initiated discussions for the establishment of a trilateral biosphere reserve, the Danube Delta – Lower Prut. Romania is considering modifying the Agreement signed in Bucharest in 2000 by the three ministers in charge of the environment to declare the trilateral protected area and to define new common policies on environmental protection, culture, education, research and a common management to apply these in the three transboundary biosphere reserves.

In 2019, an international project was begun, led by Rewilding Europe, a Cambridge Conservation Initiative, under the Endangered Landscapes Programme. The Project Restoring the Danube Delta, Europe's largest wetland, involving the Republic of Moldova, Romania and Ukraine, will be implemented during the period 2019–2024.

<sup>153</sup> <https://danube-region.eu/>.

Cooperation under the MoU between DDBRA and the Joint Union for the Management of the Natural Regional Park of Camargue was signed in 2016. Within the framework of the MoU, mutual visits have been organized in 2017 and 2018 to exchange experiences and develop joint projects.

*Regulatory, economic, fiscal and information measures*

#### Fishing permits in the Danube Delta Biosphere Reserve

According to the MO on approval of conditions for recreational/sport fishing, the regulations regarding recreational/sport fishing and models of permits for recreational/sport fishing in protected natural areas, issued jointly by the Ministry of Agriculture and Rural Development (MO No. 159/2011) and the then Ministry of Environment and Forests (MO No. 1266/2011), recreational/sport fishing in natural fish habitats is allowed on the Danube Delta Biosphere Reserve territory only on the basis of having a valid recreational or sport fishing permit issued by DDBRA.

#### Entrance fees

MO No. 3836/2012 provides the methodology and establishes the unitary framework to determine tariffs for (i) entry into protected areas, (ii) photographing and filming in protected areas, and (iii) analysing documentation and issuing opinions on EIA, permits and harvesting activities. Accordingly, each administrator and custodian of a protected area was expected to determine the tariff by considering the specificity of the tourist's stated objective, the services offered, security measures, tourist routes, campsites arranged and maintained and other aspects, such as the infrastructure and duration of the visit.

MO No. 1433/2017 amended the previous methodology by establishing the maximum price for analysis and verification of documentation for EIA, permits and harvesting activities. The MO also specified that each administrator or custodian of a protected area can propose the amount of the entrance fee and the fee for filming and photographing by considering the aspects mentioned in MO No. 3836/2012. Under the MO, certain groups of visitors, such as members of local communities, persons conducting research, persons with disabilities, as well as other categories of persons, are exempt from paying the entrance fees.

Therefore, the amount of entrance fee varies for each protected area and varies from 5 lei to 15 lei (equivalent to €1 to €3). Fees are not a significant

source of funding for management and operations of the protected areas. They constitute 5 per cent, on average, of the overall budget of protected areas and are mainly used for the maintenance of infrastructure, such as improvement of walking trails and signage.

#### Financing for biodiversity, forest and ecosystems

Romania does not collect data on SDG target 15.a (Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems), measured in part by global indicator 15.a.1 (b) (revenue generated and finance mobilized from biodiversity-relevant economic instruments), and the country does not report on this indicator.

Governmental expenditures on natural resources and biodiversity amounted to 5.5 million lei (€1.2 million) in 2012, peaked at 111.1 million lei (€25 million) in 2015 and then decreased to 2.1 million lei (€0.4 million) in 2017. However, these expenditures represent 0.03 per cent of the total governmental environmental expenditures (table 3.10).

### **11.7 Assessment, conclusions and recommendations**

#### *Assessment*

Romania has a rich biodiversity and a high proportion of intact natural ecosystems. Almost half of the country's land area is covered with natural and semi-natural ecosystems. The high density of large carnivores and the extensive forests covering the Carpathian Mountains are the best-known aspects of the biodiversity richness. Romania possesses the largest areas of virgin forests in the EU, undisturbed by human activities. It is remarkable that the country has been able to preserve this unique ecosystem, which is one of the last remaining virgin forests in Europe. According to the second National Forest Inventory, the forest coverage has increased since the first-cycle Inventory and the natural regeneration rate is stable. Most of the 29 national and natural parks are located on forest land and more than 2.6 million ha of forest area is included in the EU Natura 2000 network.

With accession to the EU, Romania became subject to and has fully transposed the Habitats and Birds Directives, which are the main legal tools to halt biodiversity loss. Romania has put forward an objective to increase the surface of protected areas through establishing new protected areas, expanding the boundaries of existing protected areas and, in particular, by designating 606 sites under the Natura

2000 network. Currently, 23.4 per cent of the total territory of the country is under the protected area system, of which 0.66 per cent represents protected areas of national interest, 4.74 per cent represents areas where national designated areas overlap with Natura 2000 sites and 18 per cent represents Natura 2000 sites.

Despite the positive trends, biodiversity in Romania is threatened by overgrazing, expanded urbanization, desertification, overexploitation of natural resources, illegal logging, and the impacts of climate change and extreme events. Moreover, financing for biodiversity conservation remains at a low level, at about 0.03 per cent of total governmental environmental expenditures.

Recommendation 9.1 in the Second EPR of Romania, urging the ministry in charge of the environment to explore the development of innovative financing mechanisms to compensate private forest landowners for the restrictions imposed on them, is implemented by GD No. 447/2017 that establishes compensation to be paid to forest owners from the funds foreseen under the Rural Development Programme. Recommendation 9.2 (a), urging the Government to evaluate the system of compliance and enforcement related to the existing legislation on protected areas and take necessary steps to correct its shortcomings, is not implemented as there are still obstacles to implementation. Also, Recommendation 9.2 (b) to ensure that adequate financial resources are made available for training environmental guards and increasing their numbers to control illegal hunting in protected areas is partially implemented.

The implementation of Recommendation 9.3, urging the ministry to provide resources and capacity-building necessary to produce protected area management plans for all protected areas for which these are required, and the necessary tools and better capacity to access the available EU funds to the management authorities of protected areas in order to set up required activities for their management and develop mechanisms to support the livelihoods of the surrounding communities, is ongoing but at a slow pace. By including intersectoral activities in the NBSAP, Recommendation 9.4 (a), urging the ministry to include intersectoral activities and consultations in the new National Strategy and Action Plan for Biodiversity Conservation in order to mainstream the values of nature into national planning and financing, and avoid further biodiversity losses and the degradation of ecosystem services, is implemented. Similarly, Recommendation 9.4 (b), urging the ministry to carry out a national valuation of ecosystems and ecosystem services with the assistance

of the EU and other interested donors and institutions, was implemented through the MAES.

Concerning the implementation of SDG targets relevant to biodiversity and protected areas (2.5, 15.1, 15.5, and 15.6) Romania has made progress and is mostly on track, although measurements of some indicators are lacking. No data are available for global indicators 2.5.2, 11.4.1, 14.2.1, 15.4.1 and 15.a.1. In 2018, Romania reported 98.39 per cent for the Mountain Green Cover Index (indicator 15.4.2). The Red List Index (indicator 15.5.1) indicates that, in 2020, biodiversity loss is decreasing in Romania. Romania has not yet developed a national target reflecting the Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011–2020 and, hence, no progress has been reported on the implementation of global indicator 15.9.1.

### *Conclusions and recommendations*

#### Biodiversity conservation

The NBSAP for 2014–2020, which was approved in 2013 and updated in 2017, sets the general strategic framework for biodiversity and nature protection in the country, identifying strategic objectives and corresponding actions to be implemented by 2020. An ambitious action plan was also approved, which is expected to be implemented through different sources of funding, mostly from the EU.

The national Red Lists are yet to be developed due to differing views within the Romanian academic community. NBSAP proposes the implementation of measures to improve ecological connectivity. Several projects have been implemented in that regard to maintain species migration corridors and thus improve connectivity in protected areas. The inventory and monitoring of species and habitats to support decision-making on measures for effective maintenance and improvement of species conservation is carried out individually by protected areas, but there is no national-level monitoring system.

In Romania, the majority of funding to implement biodiversity conservation and conduct research monitoring comes from external sources, for example, ESIF.

#### Recommendation 11.1:

*The Government should:*

- (a) *Assess the results of implementation of the National Strategy and Action Plan for Biodiversity Conservation (NBSAP) for 2014–*



- 2020 and draft a new NBSAP for the coming period;
- (b) *Develop national-level Red Lists and ensure their adoption by the ministry in charge of the environment;*
  - (c) *Ensure the elaboration and approval of the list of invasive alien species;*
  - (d) *Develop a methodology for the designation of ecological corridors to ensure coherence of conservation actions taken in neighbouring protected areas;*
  - (e) *Establish, in cooperation with academia and relevant institutions, a national-level system to elaborate studies on species and habitats and monitor their trends;*
  - (f) *Increase and secure a dedicated budget for biodiversity conservation.*

#### Protected areas network

The protected area management system is comprehensive and unique. As at December 2019, more than 1,600 natural protected areas are managed by different institutions, including NANPA, Romsilva, DDBRA, local councils and private legal entities. Before NANPA was established in 2016, 40 per cent of all designated protected areas did not have any park administration; hence, no management activities were implemented on those sites. The establishment of NANPA led to coherence in the protected areas system in the country, the management of orphan sites through local structures of NANPA, lobbying for funding from the state budget and guidance to and oversight of all protected areas. However, due to the limited capacity of NANPA, not all planned measures are being implemented.

As at December 2019, not all protected areas have management plans. Some management plans are not approved in sufficient time to ensure the implementation of measures and carry out monitoring and assessment, which are essential activities for the long-term management of protected areas. In the absence of approved management plans and without implementing monitoring and assessment, it is hard to assess the impact of economic activities on the state of protected areas. Funding for the implementation of the management plans started in 2016, with funding from the Ministry of European Funds.

The 2018 Guide for developing management plans of protected natural areas (MO No. 304/2018), making mandatory the new template for preparing management plans for protected areas, was found by Romsilva to result in lengthy and cumbersome management plans that were difficult to prepare and to

use by the administrations of protected areas and other users.

Law No. 49/2011 approving GEO No. 57/2007 on the Regime of Protected Natural Areas, Conservation of Natural Habitats, Wild Flora and Fauna requests the ministry in charge of the environment to develop and approve the methodology for requesting, calculating and granting compensation to landowners or tenants to compensate for restrictions on land-use imposed in the management plans of the natural protected areas. As at October 2020, no such compensation had been made.

Public participation in decision-making on natural protected areas is implemented during public hearings and public opportunity for commenting on draft legal documents is organized by the ministry in charge of the environment in line with Law No. 52/2003 on Transparency in Decision-making in Public Administration. As at October 2020, a coordination mechanism for consulting and involving all relevant stakeholders, including Romsilva and environmental NGOs, at the early stages of drafting and decision-making in the area of natural protected areas management is lacking.

As at October 2020, the country had neither carried out an assessment of ecosystem services nor developed a methodology for conducting such an assessment with a view to providing such services for the local communities who live in protected areas and are affected by the restrictions imposed on their land use.

The current legal framework does not require periodic re-evaluation of the conservation value of the natural protected areas of national interest. At the same time, natural protected areas of national interest in the nature reserves category were designated based on summary templates completed by the LEPAs without the support of scientific studies, which, in some cases, led to predominantly common species being included in protected areas while vulnerable species were left in the adjacent areas.

#### Recommendation 11.2:

*The Government should:*

- (a) *Develop a comprehensive long-term strategy for protected area management with a view to providing coherence to the protected area system;*
- (b) *Introduce a system for timely approval of management plans of protected areas;*
- (c) *Introduce a system of regular self-assessment of the effectiveness of management of protected areas, including economic analysis*

- of the impact of economic activities on protected areas;
- (d) Re-evaluate the conservation value of the natural protected areas of national interest and, if necessary, revise the conservation objectives that were set at their designation;
  - (e) Revise the Guide for developing management plans of protected natural areas, approved by Ministerial Order No. 304/2018, in line with national legislation and best international practice (e.g. IUCN, CBD, EU directives), to enable the effective and straightforward use of protected area management plans by protected areas administrations and other stakeholders;
  - (f) Ensure real effective involvement of Romsilva, other relevant stakeholders (such as land tenants, natural resource managers and environmental NGOs) and the public in the decision-making process regarding the management of natural protected areas;
  - (g) Mobilize resources to strengthen the territorial units of the National Agency for Natural Protected Areas to provide management of protected areas under the responsibility of the Agency;
  - (h) Develop a dedicated budget for the management of protected areas, especially in Natura 2000 sites;
  - (i) Develop a national system of ecosystem services assessment that quantifies their value and establish effective mechanisms for granting payments to the landowners or tenants concerned;
  - (j) Develop effective mechanisms for compensating the economic losses of landowners or tenants in protected areas due to the restrictions imposed by protected area management plans, in line with Law No. 49/2011 approving the Government Emergency Ordinance No. 57/2007 on the Regime of Protected Natural Areas, Conservation of Natural Habitats, Wild Flora and Fauna.

#### Forest ecosystem

Virgin and quasi-virgin forests are strictly protected and included in the National Catalogue of Virgin and Quasi-virgin Forests established as an instrument to identify, register and protect the valuable forest. As at May 2019, an area of 29,060 ha is officially included in the Catalogue and further identification and mapping of virgin forests are ongoing. There is no official confirmation and documentation of illegal logging in the core zone of national parks, including the World Heritage property “Ancient and Primeval

Beech Forest of the Carpathian and Other Regions of Europe”. Wood felling occurred in the buffer zone of Domogled–Valea Cernei National Park in the adjacent area of the World Heritage property, which was legal and applied according to the forest management plan. Some adjacent forests have been identified as virgin and quasi-virgin but are not included in the national catalogue.

#### Recommendation 11.3:

*The Government should:*

- (a) Ensure the integrity of the forest ecosystem by including, to the extent possible, virgin and quasi-virgin forests adjacent to the designated World Heritage Sites in the National Catalogue of Virgin and Quasi-virgin Forests;
- (b) Ensure that, within Romania, logging is and remains strictly prohibited within the World Heritage property “Ancient and Primeval Beech Forest of the Carpathian and Other Regions of Europe”, and that no logging operations are allowed in the buffer zones of the site components if they could have a negative impact on the natural processes of the World Heritage property;
- (c) Develop an adequate legal framework on building ecological reconstruction of degraded forest ecosystems, including due to illegal logging, and take measures and allocate funds for its implementation.

#### Financing for biodiversity, forests and ecosystems

The country does not compile data on total expenditures related to biodiversity, forests and ecosystems conservation and is not in position to report this value for SDG global indicator 15.a.1 (b) “revenue generated and finance mobilized from biodiversity-relevant economic instruments”. The governmental expenditures on natural resources and biodiversity represent 0.03 per cent of total governmental environmental expenditures.

#### Recommendation 11.4:

*The Government should:*

- (a) Increase expenditures related to biodiversity, forests and ecosystems conservation;
- (b) Ensure that data on expenditures related to biodiversity, forests and ecosystems conservation are collected in order to report on the SDG global indicator 15.a.1 (b) and to use them for decision-making processes related to these topics.

## ***ANNEXES***

*Annex I: Status of implementation of  
recommendations of the Second EPR of Romania*

*Annex II: Highlights of 54 SDG targets  
addressed in the Third EPR of Romania*

*Annex III: Participation of Romania in multilateral  
environmental agreements*

*Annex IV: List of major environment-related legislation*






*Annex V: Sources*








## Annex I

### Status of implementation of recommendations of the Second EPR of Romania

The matrix below presents an overview of the status in implementing the recommendations of the Second EPR of Romania (2012). A detailed assessment of the status of their implementation is integrated in relevant chapters. A summary of the assessment of their implementation is also provided below.

	 <b>Not implemented</b>	 <b>Partially implemented</b>	 <b>In progress</b>	 <b>Implemented</b>	 <b>Still relevant to be implemented</b>
Rec. No.					
1.1 (a)		√			
1.1 (b)				√	
1.2 (a)	√				√
1.2 (b)	√				√
1.3 (a)	√				
1.3 (b)		√			
2.1 (a)				√	
2.1 (b)		√			
2.2 (a)		√			√
2.2 (b)	√				√
2.2 (c)	√				√
2.2 (d)	√				√
2.3 (a)				√	
2.3 (b)				√	
2.3 (c)				√	
2.3 (d)				√	
2.4	√				√
3.1 (a)		√			√
3.1 (b)	√				√
3.2 (a)	√				√
3.2 (b)	√				√
3.3 (a)		√			√
3.3 (b)				√	
4.1	√				√
4.2			√		
4.3 (a)	√				√
4.3 (b)	√				√
4.4				√	
5.1 (a)	√				√
5.1 (b)	√				√
5.2 (a)	√				√
5.2 (b)			√		
5.2 (c)				√	
5.3			√		
5.4		√			√
5.5 (a)				√	
5.5 (b)	√				√
5.5 (c)				√	
5.6 (a)				√	
5.6 (b)	√				√
5.6 (c)	√				√
6.1	√				√
6.2	√				√
6.3 (a)	√				√
6.3 (b)	√				√
7.1 (a)	√				√
7.1 (b)	√				√

					
Rec. No.	Not implemented	Partially implemented	In progress	Implemented	Still relevant to be implemented
7.2 (a)			✓		
7.2 (b)			✓		
7.2 (c)			✓		
7.2 (d)			✓		
7.3			✓		
7.4				✓	
8.1				✓	
8.2	✓				✓
8.3	✓				✓
8.4	✓				✓
9.1				✓	
9.2 (a)	✓				✓
9.2 (b)		✓			✓
9.3 (a)			✓		
9.3 (b)			✓		
9.4 (a)				✓	
9.4 (b)				✓	
10.1 (a)				✓	
10.1 (b)				✓	
10.1 (c)				✓	
10.2				✓	
10.3 (a)				✓	
10.3 (b)	✓				✓
10.3 (c)	✓				✓
10.4 (a)		✓			
10.4 (b)	✓				✓
73*	32	9	10	22	36
100%	44%	12%	14%	30%	49%

Note: \* Recommendations, including sub-recommendations.

The Second EPR of Romania made 39 Recommendations comprising of 73 sub-recommendations, of which 31 were implemented (30 per cent) or partially implemented (12 per cent), 10 are in progress of being implemented (14 per cent) and 32 were not implemented (44 per cent). The country has an implementation rate (recommendations implemented, partially implemented or in progress) of 56 per cent.

Of 73 sub-recommendations, 36 (49 per cent) are still relevant for the country to pursue their implementation. The substance of these recommendations has been addressed in the recommendations of the Third EPR.

### *Legal, policy and institutional frameworks*

Recommendation 1.1 (a) is partially implemented with the adoption of SDS 2030. The current lack of a financial solution to ensure implementation of SDS 2030 hampers the implementation of this recommendation. Recommendation 1.1 (b) is implemented. The country established in 2020 the Advisory Council for Sustainable Development.

Recommendations 1.2 (a) and (b) are not implemented. There is still lack of coherence in policy planning and implementation status reporting to readjust related targets.

Recommendation 1.3 (a) is not implemented. Recommendation 1.3 (b) is partially implemented. Interministerial cooperation mechanisms are established in numerous legal acts, detailing the functions of different interministerial bodies such as committees, commissions, and steering bodies. However, overregulation in this context prevents ad hoc cooperation.

### *Regulatory and compliance assurance mechanisms*

Recommendation 2.1 (a) is implemented. The country repealed the act that listed plans and programmes subject to SEA. Recommendation 2.1 (b) is partially implemented through GD No. 1000/2012 regarding the reorganization and functioning of NEPA and of the public institutions that are subordinated to it.

Recommendation 2.2 (a) is partially implemented. Annual activity reports are not always available on the NEPA and NEG websites. According to the law, inspection reports are to be published, though personal data about operators are redacted in line with the EU General Data Protection Regulation. Recommendations 2.2 (b), (c) and (d) are not implemented.

Recommendations 2.3 (a), (b), (c) and (d) are all implemented. MO No. 256/2014 revised the procedures for carrying out environmental inspections, resulting in a decrease in the frequency of inspection for each class of installation. The risk methodology was also revised.

#### *Greening the economy and financing environmental protection*

Recommendations 5.1 (a) and (b) are not implemented. The general framework for pollution taxation, as well as tax rates for air and water pollution, have remained the same.

Recommendation 5.2 (a) is not implemented. Evidence of systematic use of impact assessment methods to evaluate the welfare and/or environmental impact of the implemented waste management policies, is lacking. The implementation of Recommendation 5.2 (b) is in progress. More ambitious targets for recycling were set in the 2017 NWMP, the implementation of which is expected to ensure more homogeneous policy implementation across the country. Recommendation 5.2 (c) is implemented. Efforts have been made to decrease municipal waste through waste charges and a new landfill tax.

The implementation of Recommendation 5.3 is in progress. Although the ANRSC methodology to define tariffs that ensures cost recovery for operators has not been revised since its adoption in 2007, the ANRSC is in the process of modifying this methodology.

Recommendation 5.4 is partially implemented. The road user charges have been updated in 2018 and some values have been increased, while fuel taxes have been reduced. However, no assessment on how these taxes contribute to decreasing road transport pollution was carried out.

Recommendation 5.5 (a) is implemented. Romania applies excise duties on energy products and has set them at the minimal levels to comply with EU regulations. Recommendation 5.5 (b) is not implemented. There is no plan to phase out regulated electricity and gas prices. Recommendation 5.5 (c) is implemented. Support is maintained to vulnerable households via utilities' social tariffs for vulnerable households as well as the minimum income for inclusion.

Recommendation 5.6 (a) is implemented. The green certificates and quota obligations are monitored by the energy regulation agency and revised periodically. Recommendation 5.6 (b) is not implemented. There is no mention in the different environment-related plans and strategies of intentions to phase out support for RES. Recommendation 5.6 (c) is not implemented. A concrete timetable regarding coal subsidies is missing.

Recommendations 6.1, 6.2 and 6.3 (a) and (b) are not implemented. There is no systematic monitoring of the implementation of different programmes, making it difficult to assess results, and the country does not efficiently manage available EU funds.

#### *Environmental monitoring and information*

Recommendation 3.1 is partially implemented. Information and data reported in corporate environmental reports are generally incomplete and largely irrelevant for users. The current level of environmental reporting by Romanian listed companies is low. Some enterprises do not submit information to LEPAs, although raw data are available.

#### *Environmental democracy*

Recommendation 3.3 (a) is partially implemented. One representative of an environmental NGO was included on the Advisory Committee, the decision-making body of the Environment Fund Administration. However, there are no Environment Fund Administration programmes for financing that specifically target environmental NGO

participation. Recommendation 3.3 (b) is implemented. The Environment Fund Administration posted on its website information about the funding opportunities for NGOs, and the 2015 Communication Strategy of the Environment Fund Administration aims to increase transparency and improve public communication on the Fund's activities.

Recommendation 2.4 is not implemented. The capacity to address environmental cases was not increased within existing judicial authorities nor by organizational adjustments. There are no dedicated environmental courts or environmental divisions within existing courts. Environmental cases are tried in normal courts and there are no specialized judges and experts.

#### *Education for sustainable development*

Recommendations 3.2 (a) and (b) are not implemented. The Government did not adopt a national strategy on education for sustainable development supported by a national implementation plan; and did not ensure that adequate funding is made available for its implementation.

#### *Implementation of international agreements and commitments*

Recommendation 4.1 is not implemented. The draft of a strategy for international cooperation was not prepared.

The implementation of Recommendation 4.2 is in progress. Significant investment was made with the support of the European Cohesion Fund in the training of civil servants during the 2014–2020 programming cycle.

Recommendations 4.3 (a) and (b) are not implemented. A mechanism to promote dialogue with the private sector and facilitate its participation in international cooperation on the environment and the green economy was not developed.

Recommendation 4.4 is implemented. The country amended GEO No. 195/2005 to identify budget sources which will be devoted to complying with the financial obligations under the EMEP.

#### *Climate change*

Recommendations 10.1 (a), (b) and (c) are all implemented. The National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2030 and the National Action Plan for the Implementation of the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions for the period 2016–2020 were approved in 2016 (GD No. 739/2016).

Recommendation 10.2 is implemented. The ministry in charge of the environment approved the National GHG Inventory; NEPA is the competent authority to administrate the Inventory's arrangements and system, and to submit the Inventory to the UNFCCC Secretariat.

Recommendation 10.3 (a) is partially implemented. While the National Commission on Climate Change was strengthened, its activity level remains low as at December 2019. Recommendations 10.3 (b) and (c) are not implemented. The capability of the secretariat serving the Commission was not strengthened and working groups in relevant areas have not been established.

Recommendation 10.4 (a) is partially implemented for the waste sector but not for the transport sector because of the increase in the number of cars. Recommendation 10.4 (b) is not implemented.

#### *Water management*

Recommendations 7.1 (a) and (b) is not implemented. Future drinking water needs have not been assessed in order to consider exploring additional water resources; the impact of the degradation of water reservoirs on water management was also not assessed.

The implementation of Recommendations 7.2 (a), (b), (c) and (d) is in progress. The country takes steps to support the implementation of the Urban Wastewater Treatment Directive.



The implementation of Recommendation 7.3 is in progress. The Government is working to identify options for the safe handling of sludge from wastewater treatment with a view to diminish the amount of sludge landfilled.

Recommendation 7.4 is implemented. The capacity of the IDAs was strengthened.

#### *Waste and chemicals management*

Recommendation 8.1 is implemented. The NWMP was developed in 2017 covering urban and rural areas of the entire country and integrates the concept of waste management systems.

Recommendation 8.2 is not implemented. Although the introduction of contracts for MSW collection services between municipalities and collection companies was enabled, it is not specifically supported by the current legal framework.

Recommendation 8.3 is not implemented. Waste tariffs based on the principle of full cost recovery have not been introduced.

Recommendation 8.4 is not implemented. Detailed, verified background information is not available, neither an integrated waste management strategy was developed.

#### *Biodiversity and protected areas*

Recommendation 9.1 is implemented. GD No. 447/2017 establishes compensation to be paid to forest owners from the funds foreseen under the Rural Development Programmes.

Recommendation 9.2 (a) is not implemented. Obstacles to implementation in terms of compliance and enforcement, public awareness and communication with local communities, and availability of adequate funding for their management, remain to be addressed by the country. Recommendation 9.2 (b) is partially implemented. Between 2016 and 2019, the budget for training has been steadily decreasing reaching zero resources in 2019. In addition, capacity for enforcing the laws regarding hunting and other illegal activities (such as illegal construction) within the protected areas is insufficient.

The implementation of Recommendation 9.3 (a) is in progress. Some of the management plans have been awaiting approval since 2015. In 2018, the guidelines for designing management plans became very detailed creating complications for protected areas management bodies in developing management plans and, consequently, in applying for project funding. The implementation of Recommendation 9.3 (b) is also in progress. The Government is providing necessary tools and better capacity to access the available EU funds to the management authorities of protected areas in order to set up required activities for their management and develop mechanisms to support the livelihoods of the surrounding communities; however, at a slow pace.

By including intersectoral activities in the NBSAP, Recommendation 9.4 (a) is implemented. Similarly, Recommendation 9.4 (b) was implemented through the MAES.



## *Annex II*

### *Highlights of 54 SDG targets addressed in the Third EPR of Romania*

The Third EPR of Romania includes an assessment of 54 SDG targets, including nine targets being reviewed in several chapters from different perspectives. In some cases, a comprehensive analysis of SDGs and targets is hindered by the lack of data and information.

*To achieve SDG target 1.5, Romania established a National Platform for Disaster Risk Reduction and adopted several policies on risk management* with the intention to consolidate by 2030 a unified national system of emergency intervention, rehabilitation and compensation service in the event of natural disasters, industrial accidents or extreme weather events caused by climate change effects and other environmental shocks and disasters. However, the 3,181 local governments have yet to adopt and implement local disaster risk reduction strategies.

*With regard to SDG target 2.5, Romania had progressed* from 42,624 in 2010 to 43,233 accessions of plant genetic resources secured in conservation facilities under medium- or long-term conditions in 2020, with a pick of 49,616 accessions in 2016 (Table 11.2). Since 2020, out of 113 local breeds (including extinct ones), 6 are reported with genetic material stored, out of which 5 are reported with sufficient material stored to allow them to be reconstituted.

*Romania has a mixed progress in attaining the SDG target 3.9 based on WHO data.* Mortality rate attributed to unintentional poisoning (per 100,000 population) was 1.77 in 2018 and 1.89 in 2019, i.e. 345 persons in 2018 and 366 persons in 2019 died due to unintentional poisoning. In 2016, mortality rate attributed to household and ambient air pollution was 123.4 per 100,000 population (59.31 per 100,000 population age-standardized), i.e. 24,406 persons died due to air pollution. Mortality rate attributed to exposure to unsafe WASH services (per 100,000 population) was 0.4, i.e. 71 persons died in 2016 due to unsafe WASH services.

*Romania has a mixed progress in ensuring quality education for all.* From 2010 to 2018, the enrolment ratio for tertiary education went down by 20.3 per cent. In 2017, the country's enrolment ratio in tertiary education (49.4 per cent) was between the global ratio (38 per cent) and the ratio in high-income countries (77 per cent). The country will be expected to take action to redress the situation towards achieving SDG target 4.3. With regard to SDG target 4.5, gender parity has remained steady; since 2000 until 2018 the gender parity index ratio for participation in organized learning was basically 1.0. The gender parity index ratio for participation in formal and non-formal education and training was 1.15 in 2016 demonstrating a slightly higher rate of female participation in formal and non-formal education than male. Romania has made limited progress in attaining SDG target 4.7. The country promotes ESD mostly based on optional approaches, while a coherent strategic and policy framework and a mechanism to monitor, report and assess progress in embracing ESD in the education system are yet to be developed.

*Concerning ensuring clean water and sanitation for all, although progress has been achieved, Romania is not on a track to achieve SDG 6 by 2030, especially on access to adequate and affordable water supply and sanitation services.* In 2018 about 12 per cent of the population is reported to rely on unsafe and non-potable water sources according to the World Bank. According to the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, the proportion of the population using safely managed drinking water services (SDG target 6.1) remained stable at 82 per cent in the period 2010–2020 (an increase of 0.1 per cent in 10 years) and, at this pace, it will remain at 82 per cent by 2030 (an increase of 0.2 per cent in 20 years). Since 2000 the country achieved 100 per cent of the population using at least basic drinking water services. The proportion of the population using safely managed sanitation services (SDG target 6.2) in all areas increased from 62 per cent in 2010 to 83 per cent in 2020, an increase of 33.3 per cent in 10 years, enabling the country to reach 100 per cent by 2030 by keeping up this rate of progress. The proportion of population using at least basic sanitation services increased by 10.2 per cent in 10 years reaching 87.07 per cent in 2020. At this pace, the country will be able to

reach nearly 96 per cent of population by 2030. The proportion of domestic and industrial wastewater flows safely treated was 56.71 per cent in 2018, and 83.70 per cent of bodies of water in Romania were of good ambient water quality in 2020 (SDG target 6.3). Data are not available to show trends. Concerning SDG target 6.4, the rate of freshwater abstraction was 344.22 m<sup>3</sup> per capita in 2017 (an increase of 21.67 m<sup>3</sup> in 5 years), water use efficiency reached US\$27.91/m<sup>3</sup> in 2018 (an increase of 42.2 per cent in 10 years), and the water stress level had decreased to 6 per cent in 2018 from 6.8 per cent in 2008, i.e. by 11.8 per cent in 10 years. In terms of SDG target 6.5, Romania scored 77 per cent on implementation of integrated water resources management in 2020, and 100 per cent of transboundary water bodies with an operational arrangement for water cooperation. Concerning SDG target 6.6, lakes and rivers permanent water area change varied from 2.7 per cent in 2012 to 4.9 per cent in 2020, i.e. an increase of 81.5 per cent in 8 years.

*In the area of affordable and clean energy, Romania almost attained the SDG target 7.1 in 2019*, having ensured access to electricity for 100 per cent of the country, and with more than 95 per cent of the population relying on clean fuels and technology. The country's renewable energy share in the total final energy consumption increased from 21.55 per cent in 2012 to 23.05 per cent in 2019, which is not yet enough substantial to achieve SDG target 7.2. The country is well on track to reach SDG target 7.3; by maintaining the current trend of an average of 4.9 per cent annual decrease in energy intensity, Romania would reach the target 7.3 by 2026.

*Concerning decent work and economic growth, in the area of green job creation, the achievement of SDG target 8.3 is supported by the adoption of the Action Plan for the implementation of the National Strategy for Green Jobs.* Performance regarding SDG target 8.4 indicates that domestic material consumption has increased by 15.59 per cent in the period 2010–2017. However, no data are available to measure material footprint, material footprint per capita, and material footprint per GDP.

*Romania progressed in the area of industry, innovation and infrastructure (SDG 9).* It made good progress towards attaining SDG target 9.1. While Romania does not measure the proportion of the rural population who live within 2 km of an all-season road, the country had a sharp increase in total kilometres of roads leading to increased accessibility for rural areas. For instance, modernized roads at the county and communal level have increased by almost 40 per cent in the period 2012–2018. The shares of passenger and freight volumes by mode of transport, have been stable in the period 2012–2017. The share of passenger transport by road has been continuously increasing and most of the investments in the transport network and made for roads (around 71 per cent in 2017). However, the decrease in using public transport at the national level led to an increase in GHG emissions from fuel combustion in the transport sector, with road transport accounting for around 96 per cent of these emissions. Concerning SDG target 9.4, during 2011–2017 Romania succeeded to decrease CO<sub>2</sub> emissions from fuel combustion by 12.5 per cent, and CO<sub>2</sub> emissions per unit of GDP by 31.4 per cent.

*Romania has made some progress in making sustainable cities and communities (SDG 11).* Romania's action to strengthen efforts to protect and safeguard the world's cultural and natural heritage (SDG target 11.4), include the elaboration of a strategic framework for culture comprising two strategic documents (a sectoral strategy for culture and national heritage for the period 2014–2020 and a national strategy for culture and national heritage for the period 2016–2022) both of which are still pending governmental approval. In addition, Romania is concentrating its efforts and resources for preserving beech forest sites and DDBRA is doing so for the Danube Delta World Heritage Site. To reduce by 2030 the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management (SDG target 11.6), Romania introduced SWIMS to modernize the municipal waste management system, which had a positive effect in increasing the coverage of urban and rural areas with waste collection services. Improving air quality in cities remains to be addressed, which on the basis of the exposure data, accounts for 23,400 premature deaths due to exposure to high concentrations to PM<sub>2.5</sub>, 2,600 premature deaths due to exposure to NO<sub>2</sub> and 490 premature deaths due to exposure to O<sub>3</sub> concentrations above EU standards, as presented in the EEA report on air quality in Europe 2019. Based on air quality data for 2012, WHO estimates a total of 14,497 premature deaths or 73 per 100,000 inhabitants due to exposure to bad air quality and a total 314,939 years of life lost or 1,579 years lost per 100,000 inhabitants. However, no data are available to assess the achievement of SDG targets 11.4 and 11.6 based on global indicators. Regarding resilience to disasters, Romania has in place a policy framework on risk management and, since 2015, the Government has been working to establish a national platform for disaster risk reduction (SDG target 11.b). However, the country should address the lack of local disaster risk reduction strategies, given that none of the 3,181 local governments had adopted and implemented such strategies (as at February 2021).

*In the area of responsible consumption and production, Romania is progressing.* Implementing the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns (SDG target 12.1) is under way; while the country does not have a specific action plan on sustainable consumption and production (SCP), its SDS 2030 includes a set of ambitious objectives for 2020 and 2030 that, if achieved, would allow the country to make a giant leap in terms of performance in SCP. Romania's domestic per capita material consumption is still increasing, but at a diminished rate since 2015. Decoupling of this measure from GDP took place in 2011. Romania's GDP increased by 29.96 per cent from 2010 to 2017 and, while the absolute level of material consumption is still rising, the country's economy is able to create more value out of the raw materials used. The path to reach 2030 fulfilling all the objectives and targets will, however, be very demanding, because in 2021, Romania is a long way from the scenario envisaged for 2030. Romania's performance in achieving sustainable management and efficient use of natural resources (SDG target 12.2), indicates that domestic material consumption has increased by 11.3 per cent in the period 2010–2017 and was much higher than in the neighbouring EU countries Bulgaria and Hungary, while resource productivity in 2018 was much lower than the EU average. There is a decreasing trend of waste generated per capita, which results more from economic patterns than the effect of policy measures (SDG target 12.4). Romania has not moved closer to the target on the amount generated and on hazardous waste treated, because of the failure to establish motivating financial schemes and a landfill tax. Regarding substantially reducing waste generation through prevention, reduction, recycling and reuse (SDG target 12.5), although 20 SWIMS are functional and operational, rates of separate collection and recycling in the municipal sector are low. Romania is on track towards the achievement of SDG target 12.6 by the adoption of SDS 2030. since 2017, but only 24 of 1,789 large companies (with more than 250 employees) had submitted non-financial reports by 2018. Romania has established legal provisions for green public procurement, thereby promoting sustainable public procurement practices (SDG target 12.7). The country is yet to develop national guidelines that would help civil servants apply the legal provisions into practice when setting conditions for goods or service contracts. Romania is integrating environmental protection and sustainable development themes in some subjects of the compulsory curricula of primary and secondary education as well as at the initiative of individual teachers (SDG target 12.8). ESD is mainly addressed in the optional curriculum and in non-formal and informal education, mostly within project-based activities. Romania does not publish subsidies or tax breaks given to fossil fuels (SDG target 12.c), however, fossil fuels play an important role in Romania's energy mix (in 2019, around 38.8 per cent of electricity in the country was produced using fossil fuels). Also, an aid to decrease energy poverty, including a social tariff for electricity, was in place until 1 January 2018 along with an aid for heating and subsidies for heat, applying directly to the energy price.

*Romania has made progress in taking action to combat climate change,* including strengthening resilience and adaptive capacity to climate-related hazards and natural disasters (SDG target 13.1). Progress was also made in integrating climate change measures into national policies, strategies and planning (SDG target 13.2) by adopting the National Strategy on Climate Change and Economic Growth Based on Low Carbon Emissions 2016–2030, the National Action Plan for the implementation of the Strategy and other sectoral strategic documents. Romania started to improve education, awareness-raising on climate change mitigation and adaptation (SDG target 13.3) by means of occupational training, national ecological and environmental contests, and information and media campaigns to inform the general public and special campaigns for target groups.

*Romania progressed at policy level in sustainably managing, protecting and restoring marine and coastal ecosystems (SDG target 14.2) through SDS 2030.* However, data are lacking to enable an evaluation of whether the country is using ecosystem-based approaches to managing its marine areas. Romania made some progress through the Multiannual National Strategic Plan for Aquaculture and an Operational Programme for Fisheries and Maritime Affairs 2014–2020 (SDG target 14.4). Romania took measures to prevent the diminishing of fish stocks, such as sturgeon, and agreed with Bulgaria and Ukraine to have the same period of prohibition on the Danube in the shared border area. Regarding conserving at least 10 per cent of coastal and marine areas by 2020 (SDG target 14.5), the country continues to work towards increasing the coverage of protected areas in relation to marine areas (exclusive economic zones), having reached 23.10 per cent in 2020. Also, about 88.6 per cent of marine key biodiversity areas are covered by protected areas.

*Romania made progress towards SDG 15 (life on land),* including ensuring the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services (SDG target 15.1). The forest area as a proportion of total land area increased since 2010 by 1.8 per cent and constituted 30.12 per cent in 2020. In 2010–2020, the proportion of freshwater key biodiversity areas covered by protected areas has increased from 57.43 to 60.82 per cent, and of terrestrial key biodiversity areas – from 65.03 to 75.97 per cent. The country's

annual net rate of change in forest area was 0.23 per cent in the period from 2000 until 2010 and 0.62 per cent in during 2010–2020, showing a three-fold increase, which slows down the country in achieving a rate of 0 (SDG target 15.2). Romania's land degradation (SDG target 15.3) constituted 2 per cent in the period 2000–2015; the next assessment to be released in 2023, will cover 2019–2022. The proportion of mountain key biodiversity areas covered by protected areas was about 80.76 per cent in 2019; the Mountain Green Cover Index was 99.88 per cent in 2018 (SDG target 15.4). Romania is progressing in protecting and preventing the extinction of threatened species (SDG target 15.5) having a Red List Index value that has increased from 0.92913 in 2010 to 0.92976 in 2020 signifying that the rate of biodiversity loss is decreasing. Romania has established legal, policy and institutional frameworks for ensuring fair and equitable sharing of benefits from utilising genetic resources (SDG target 15.6) and is party to related international agreements. No significant seizures, confiscations or forfeitures of specimens under CITES have been reported; neither have there been any criminal prosecutions of significant CITES-related violations in Romania. Nonetheless, the lack of data on the value of legal and illegal trade hinders the assessment of progress towards ending poaching and trafficking of protected species of flora and fauna (SDG target 15.7) and increasing the capacity of local communities to pursue sustainable livelihood opportunities (SDG target 15.c). Romania regulates the prevention and control of invasive alien species (SDG target 15.8); nonetheless the country is yet to develop a national list of alien species and conduct their assessment. Romania reported in 2017 that it has integrated biodiversity values into national accounting and reporting systems, defined as implementation of the System of Environmental-Economic Accounting (SDG target 15.9). However, the country is yet to develop national targets reflecting Aichi Biodiversity Target 2. The governmental expenditures on natural resources and biodiversity represent 0.03 per cent of total governmental environmental expenditures, therefore the country is lagging behind in attaining SDG target 15.a.

*Romania is progressing well towards achieving the SDG targets relevant to environmental democracy.* The country progressed in promoting the rule of law at the national and international levels and ensuring equal access to justice for all (SDG target 16.3) on environmental matters, by establishing the premises necessary for the public, including environmental NGOs, to challenge a decision or omission on environmental matters by the public authorities. Romania is progressing well in its efforts to ensure responsive, inclusive, participatory and representative decision-making at all levels (SDG target 16.7) through enabling public participation in decision making on environmental matters. Also, the country is on a good path towards ensuring public access to information and protecting fundamental freedoms, in accordance with national legislation and international agreements (SDG target 16.10). Moreover, the ministry in charge of the environment developed the Public Authorities Guide for Access to Environmental Information and disseminated it widely across all public authorities, as part of its efforts to improve access to information. Nonetheless, there are several challenges to be addressed by Romania to achieve a good performance by 2030.

*Romania advanced in strengthening the means of implementation and revitalizing the Global Partnership for Sustainable Development (SDG 17).* Concerning official development assistance (SDG target 17.2), although the country does not report on its net official development assistance, total and to least developed countries, Romania spent between 0.09 and 0.11 per cent of its GNI in development aid between 2012 and 2018, and, in 2016, has established an Agency for International Development Cooperation. Romania progressed in enhancing policy coherence for sustainable development (SDG target 17.14), through the adoption of SDS 2030 and creation of the Department for Sustainable Development within the Prime Minister's Office. The role of PPPs in Romania is still relatively small, mainly because, in the public utilities sector, the main operators remain public entities (SDG target 17.17). In 2018, the Government approved 16 PPP projects, mainly concerning transport infrastructure construction. There is also room for improvement in NGOs' and civil society participation.

*Annex III**Participation of Romania  
in multilateral environmental agreements*

<b>Year</b>	<b>Multilateral environment-related agreements</b>	<b>Year</b>	<b>Status</b>
1957	(GENEVA) European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)	1994	Ac
1958	(GENEVA) Convention on the Continental Shelf	1961	Ac
1958	(GENEVA) Convention on Fishing and Conservation of the Living Resources of the High Seas	-	-
1958	(GENEVA) Convention on the Territorial Sea and the Contiguous Zone	1961	Ra
1958	(GENEVA) Convention on the High Seas	1961	Ra
1960	(GENEVA) Convention concerning the Protection of Workers against Ionising Radiations (ILO 115)	-	-
1958	(GENEVA) Agreement - Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts	1976	Ac
1961	(PARIS) International Convention for the Protection of New Varieties of Plants	2001	Ac
1963	(VIENNA) Convention on Civil Liability for Nuclear Damage	1992	Ac
	1997 (VIENNA) Protocol to Amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage	1998	Ra
1968	(LONDON, MOSCOW, WASHINGTON) Treaty on the Non-Proliferation of Nuclear Weapons (NPT)	1970	Ra
1968	(PARIS) European Convention - Protection of Animals during International Transport (revised in 2003)	2006	Ra
1969	(LONDON) European Convention on the Protection of the Archaeological Heritage (revised in 1992, Valletta Convention)	1997	Ra
1971	(RAMSAR) Convention on Wetlands of International Importance Especially as Waterfowl Habitat	1991	Ac
	1982 (PARIS) Amendment	2000	Ac
	1987 (REGINA) Amendments to articles 6 and 7	-	-
1971	(GENEVA) Convention on Protection against Hazards from Benzene (ILO 136)	1975	Ra
1969	(BRUSSELS) International Convention on Civil Liability for Oil Pollution Damage	1970	Si
	1992 (LONDON) Protocol to amend the International Convention on Civil Liability for Oil Pollution Damage	2000	Ac
1971	(BRUSSELS) Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage	-	-
1971	(LONDON, MOSCOW, WASHINGTON) Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea-bed and the Ocean Floor and in the Subsoil thereof	1972	Ra
1972	(PARIS) Convention concerning the Protection of the World Cultural and Natural Heritage	1990	Ap
1972	(LONDON) Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter		
	1978 (TORREMOLINOS) Amendments (incineration)		
	1980 Amendments (list of substances)		
1972	(LONDON, MOSCOW, WASHINGTON) Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons, and on their Destruction	1979	Ra
1972	(LONDON) International Convention on the International Regulations for Preventing Collisions at Sea	1975	Ac
1972	(GENEVA) International Convention for Safe Containers	1989	Ac
1973	(WASHINGTON) Convention on International Trade in Endangered Species of Wild Fauna and Flora	1994	Ac
	1979 (BONN) Amendment		
	1983 (GABORONE) Amendment	2007	Ac
1973	(LONDON) International Convention for the Prevention of Pollution from Ships (MARPOL, 73/78)	-	-
	1978 (LONDON) Annex I on Prevention of Pollution by Oil		
	1978 (LONDON) Annex II on Control of Pollution by Noxious Liquid Substances in Bulk		
	1978 (LONDON) Annex III on Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form	2015	At/Ap
	1978 (LONDON) Annex IV on Prevention of Pollution by Sewage from Ships	2011	At/Ap
	1978 (LONDON) Annex V on Prevention of Pollution by Garbage from Ships	2006	At/Ap

Year	Multilateral environment-related agreements	Year	Status
	1978 (LONDON) Protocol (segregated ballast)	1993	Ac
	1997 (LONDON) Annex VI on Prevention of Air Pollution from Ships		
1974	(GENEVA) Convention concerning Prevention and Control of Occupational Hazards caused by Carcinogenic Substances and Agents (ILO 139)	-	-
1976	(STRASBOURG) European Convention for the Protection of Animals Kept for Farming Purposes	-	-
1977	(GENEVA) Convention on Protection of Workers against Occupational Hazards from Air Pollution, Noise and Vibration (ILO 148)	-	-
1979	(BERN) Convention on the Conservation of European Wildlife and Natural Habitats	1993	Ac
1979	(BONN) Convention on the Conservation of Migratory Species of Wild Animals		
	1991 (LONDON) Agreement on the Conservation of Populations of European Bats (EUROBATS)	2000	Ac
	1992 (NEW YORK) Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS)	-	-
	1995 (THE HAGUE) Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA)	1999	Ra
	1996 (MONACO) Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS)	2000	Ra
1979	(GENEVA) Convention on Long-range Trans-boundary Air Pollution	1991	Ra
	1984 (GENEVA) Protocol - Financing of Co-operative Programme (EMEP)	2003	Ac
	1985 (HELSINKI) Protocol - Reduction of Sulphur Emissions by 30%	-	-
	1988 (SOFIA) Protocol - Control of Emissions of Nitrogen Oxides	-	-
	1991 (GENEVA) Protocol - Volatile Organic Compounds	-	-
	1994 (OSLO) Protocol - Further Reduction of Sulphur Emissions	-	-
	1998 (AARHUS) Protocol on Heavy Metals	2003	Ra
	1998 (AARHUS) Protocol on Persistent Organic Pollutants	2003	Ra
	1999 (GOTHENBURG) Protocol to Abate Acidification, Eutrophication and Ground-level Ozone	2003	Ra
	2009 (GENEVA) Amendments to the Text and to Annexes I, II, III, IV, VI and VIII to the 1998 Protocol on Persistent Organic Pollutants	2012	At
	2012 (GENEVA) Amendment of the text and annexes II to IX to the Protocol to the 1979 Convention on Long-range Transboundary Air Pollution to Abate Acidification, Eutrophication and Ground-level Ozone and the addition of new annexes X and XI	2018	At
	2012 (GENEVA) Amendments to the Text of and Annexes Other than III and VII to the 1998 Protocol on Heavy Metals	2018	At
1980	(NEW YORK, VIENNA) Convention on the Physical Protection of Nuclear Material	1993	Ra
1981	(GENEVA) Convention Concerning Occupational Safety and Health and the Working Environment (ILO 155)	-	-
1982	(MONTEGO BAY) Convention on the Law of the Sea	1996	Ra
	1994 (NEW YORK) Agreement related to the Implementation of Part XI of the Convention	1996	Ac
	1995 (NEW YORK) Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks	2007	Ac
1985	(GENEVA) Convention Concerning Occupational Health Services (ILO 161)	-	-
1985	(VIENNA) Convention for the Protection of the Ozone Layer	1993	Ac
	1987 (MONTREAL) Protocol on Substances that Deplete the Ozone Layer	1993	Ac
	1990 (LONDON) Amendment to Protocol	1993	Ac
	1992 (COPENHAGEN) Amendment to Protocol	2000	At
	1997 (MONTREAL) Amendment to Protocol	2001	Ra
	1999 (BEIJING) Amendment to Protocol	2005	At
	2016 (KIGALI) Amendment to Protocol	2020	At
1986	(GENEVA) Convention Concerning Safety in the Use of Asbestos (ILO 162)	-	-
1986	(VIENNA) Convention on Early Notification of a Nuclear Accident	1990	Ac
1986	(VIENNA) Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency	1990	Ac
1989	(BASEL) Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal	1991	Ac
	1995 Ban Amendment	2002	At
	1999 (BASEL) Protocol on Liability and Compensation	-	-
1990	(GENEVA) Convention concerning Safety in the use of Chemicals at Work (ILO 170)	-	-



Year	Multilateral environment-related agreements	Year	Status
1990	(LONDON) Convention on Oil Pollution Preparedness, Response and Cooperation		
1991	(ESPOO) Convention on Environmental Impact Assessment in a Transboundary Context	2001	Ra
	2001 (SOFIA) First Amendment (Amendment to the Convention on Environmental Impact Assessment in a Transboundary Context)	2006	At
	2003 (KIEV) Protocol on Strategic Environmental Assessment	2010	Ra
	2004 (CAVTAT) Second Amendment (Amendment to the Convention on Environmental Impact Assessment in a Transboundary Context)	2016	At
1992	(HELSINKI) Convention on the Protection and Use of Transboundary Watercourses and International Lakes	1995	Ra
	1999 (LONDON) Protocol on Water and Health	2001	Ra
	2003 (MADRID) Amendments to Articles 25 and 26	2006	At
1992	(HELSINKI) Convention on the Transboundary Effects of Industrial Accidents	2003	Ac
	2003 (KIEV) Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters	2003	Si
1992	(RIO DE JANEIRO) Convention on Biological Diversity	1994	Ra
	2000 (MONTREAL) Cartagena Protocol on Biosafety	2003	Ra
	2010 (NAGOYA) Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization	2019	Ra
	2010 (NAGOYA - KUALA LUMPUR) Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety	2013	Ra
1992	(NEW YORK) United Nations Framework Convention on Climate Change	1994	Ra
	1997 (KYOTO) Kyoto Protocol	2001	Ra
	2012 (DOHA) Doha Amendment to the Kyoto Protocol	2016	At/Ap
	2015 (PARIS) Paris Agreement	2017	Ra
1993	(OSLO and LUGANO) Convention - Civil Liability for Damage from Activities Dangerous for the Environment	-	-
1993	(ROME) Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas	-	-
1993	(PARIS) Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction	1995	Ra
1994	(LISBON) Energy Charter Treaty	1996	Ra
	1994 (LISBON) Protocol on Energy Efficiency and Related Environmental Aspects	1996	Ra
	1998 Amendment to the Trade-Related Provisions of the Energy Charter Treaty	-	-
1994	(PARIS) United Nations Convention to Combat Desertification	1998	Ac
1994	(SOFIA) The Convention on Co-operation for the Protection and Sustainable Use of the River Danube	1998	Ra
1994	(VIENNA) Convention on Nuclear Safety	1995	Ra
1997	(VIENNA) Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management	1999	Ra
1997	(NEW YORK) Convention on the Law of Non-navigational Uses of International Watercourses	-	-
1997	(VIENNA) Convention on Supplementary Compensation for Nuclear Damage	1999	Ra
1998	(AARHUS) Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters	2000	Ra
	2003 (KIEV) Protocol on Pollutant Release and Transfer Registers	2009	Ra
	2005 (ALMATY) Amendment on GMOs	2008	Ra
1998	(STRASBOURG) Convention on the Protection of Environment through Criminal Law	1999	Si
1998	(ROTTERDAM) Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade	2003	Ac
2000	(FLORENCE) European Landscape Convention	2002	Ra
2001	(STOCKHOLM) Convention on Persistent Organic Pollutants	2004	Ra
2001	(LONDON) Convention on Civil Liability for Bunker Oil Pollution Damage	2009	Ac
2003	(GENEVA) WHO Framework Convention on Tobacco Control	2006	Ra
2003	(Kyiv) Framework Convention on the Protection and Sustainable Development of the Carpathians	2006	Ra
	Protocol on Conservation and Sustainable Use of Biological and Landscape Diversity to Framework Convention on the Protection and Sustainable Development of the Carpathians (Biodiversity Protocol)	2011	

<b>Year</b>	<b>Multilateral environment-related agreements</b>	<b>Year</b>	<b>Status</b>
	Protocol on Sustainable Forest Management to Framework Convention on the Protection and Sustainable Development of the Carpathians (Forest Protocol)	2013	
	Protocol on Sustainable Tourism to Framework Convention on the Protection and Sustainable Development of the Carpathians (Tourism Protocol)	1014	
	Protocol on Sustainable Transport to Framework Convention on the Protection and Sustainable Development of the Carpathians (Transport Protocol)	2019	
	Protocol on Sustainable Agriculture and Rural Development to the Framework Convention on Protection and Sustainable Development of the Carpathians (Sustainable Agriculture and Rural Development Protocol)	2020	
	(2017) New Article on Climate Change 12bis to the Carpathian Convention		
2004	(LONDON) Convention for the Control and Management of Ships' Ballast Water and Sediments	-	-
2013	(KUMAMOTO) Minamata Convention on Mercury	2017	Ra

Ac = Accession; Ad = Adherence; Ap = Approval; At = Acceptance; De = Denounced; Si = Signature; Su = Succession; Ra = Ratification.

## Annex IV

### List of major environment-related legislation

Law No. 82/1993 regarding the establishment of the Danube Delta Biosphere Reserve. Available at <https://lege5.ro/Gratuit/gu4donjt/legea-nr-82-1993-privind-constituirea-rezervatiei-biosferei-delta-dunarii>

Law No. 107/1996 on Waters. Available at <https://lege5.ro/Gratuit/ge3demru/legea-apelor-nr-107-1996>

Law No. 111/1996 on the Safe Deployment, Regulation, Licensing and Control of Nuclear Activities

Law No. 114/1996 on Housing. Available at <https://lege5.ro/Gratuit/ge3dgmru/legea-locuintei-nr-114-1996>

GEO No. 34/2000 on organic food products and establishment of measures in the field of green agri-food products.

Available at [www.srac.ro/files/documente/OUG%2034\\_2000.pdf](http://www.srac.ro/files/documente/OUG%2034_2000.pdf)

GD No. 964/2000 on the approval of the Action Plan for the protection of waters against pollution by nitrates from agricultural sources. Available at <https://lege5.ro/Gratuit/gi2dmms/hotararea-nr-964-2000-privind-aprobarea-planului-de-actiune-pentru-protectia-apelor-impotriva-poluarii-cu-nitrati-proveniti-din-surse-agricole>

Law No. 350/2001 on Spatial Planning and Urbanism

Law No. 544/2001 on Free Access to Information of Public Interest

Law No. 458/2002 on the Quality of Drinking Water

GEO No. 107/2002 on the National Administration of Romanian Water

GEO No. 107/2002 on establishment of the Romanian Water National Administration. Available at

<https://lege5.ro/Gratuit/gm4tmobu/ordonanta-de-urgenta-nr-107-2002-privind-infiintarea-administratiei-nationale-apele-romane>

GD No. 313/2002 on the establishment of the Commercial Company “Conversmin” SA for conservation and closure of mines. Available at <https://lege5.ro/Gratuit/gqztamrw/hotararea-guvernului-nr-313-2002-privind-infiintarea-societatii-comerciale-de-conservare-si-inchidere-a-minelor-conversmin-sa-publicata-in-monitorul-oficial-al-romaniei-partea-i-nr-264-din-19-aprilie-?dp=gezdanrxg44di>

Law No. 52/2003 on Transparency of Decision-Making in Public Administration

Law No. 85/2003 on Mining. Available at [www.namr.ro/wp-content/uploads/2018/04/LM85\\_2003modif2016.pdf](http://www.namr.ro/wp-content/uploads/2018/04/LM85_2003modif2016.pdf)

Law No. 217/2003 on the Prevention of and Fight Against Domestic Violence

Law No. 52/2003 on Transparency in Decision-making in Public Administration

Law No. 238/2004 on Oil

Law No. 554/2004 on Administrative Litigation

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