

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

ENVIRONMENTAL PERFORMANCE REVIEWS

ROMANIA

Third Review
Synopsis



UNITED NATIONS

Geneva, 2021

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Preface

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 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.

Executive summary

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 NO₂ 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 SO₂, 74 per cent for O₃, 30 per cent for NO₂, 32 per cent for PM₁₀ and 21 per cent for PM_{2.5}. 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, NO₂ and O₃. The major impact (23,400 premature deaths) derives from exposure to high concentrations of PM_{2.5}. Of the 148 air quality monitoring stations, only three have automatic analysers for PM_{2.5}. 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_{2.5} 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_{2.5} 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 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 m³/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 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.

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:¹

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:²

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.

¹ No ranking is implied.

² No ranking is implied.

Assessment, conclusions and recommendations

Chapter 1: Legal, policy and institutional framework

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

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*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 incentives 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*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 LEPAs, 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 PM₁₀ and PM_{2.5} 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's. 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

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;*
- (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.*

Chapter 6: Implementation of international agreements and commitments

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*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.*

Chapter 8: Air protection

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 NO₂ 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 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 SO₂, 74 per cent for O₃, 30 per cent for NO₂, 32 per cent for PM₁₀ and 21 per cent for PM_{2.5}. 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, NO₂ and O₃.

The major impact (23,400 premature deaths), as calculated by EEA, derives from exposure to high concentrations of PM_{2.5}. Of the 148 air quality monitoring stations, only three have automatic analysers for PM_{2.5}. 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_{2.5}, 35.2 per cent for O₃, 21.4 per cent for PM₁₀ and 1.1 per cent for NO₂.

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_{2.5} 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,³ 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.”

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.calitateair.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 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

³ www.nik.gov.pl/plik/id,19001.pdf.

mean levels of fine particulate matter (e.g., PM_{2.5} and PM₁₀) 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_{2.5} 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_{2.5} 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 LEPAs 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_{2.5} 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 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

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 m³/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 m³ 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.

Chapter 10: Waste and chemicals management

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, 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

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.*

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.

	 Not implemented	 Partially implemented	 In progress	 Implemented	 Still relevant to be implemented
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)	√				√
7.2 (a)			√		
7.2 (b)			√		
7.2 (c)			√		
7.2 (d)			√		

					
Rec. No.	Not implemented	Partially implemented	In progress	Implemented	Still relevant to be implemented
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 LEPA, 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.

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 m³ per capita in 2017 (an increase of 21.67 m³ in 5 years), water use efficiency reached US\$27.91/m³ 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 CO₂ emissions from fuel combustion by 12.5 per cent, and CO₂ 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_{2.5}, 2,600 premature deaths due to exposure to NO₂ and 490 premature deaths due to exposure to O₃ 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.