

**UNECE**

# Albania

## Environmental Performance Reviews



Third Review



**UNITED NATIONS**

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## ALBANIA

### Third Review



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## *Foreword*

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The United Nations Economic Commission for Europe (ECE) Environmental Performance Review (EPR) Programme provides assistance to member States by regularly assessing their environmental performance. Countries then take steps to improve their environmental management, integrate environmental considerations into economic sectors, increase the availability of information to the public and promote information exchange with other countries on policies and experiences. Over two decades, these reviews have resulted in stronger institutions for environmental management, improved financial frameworks for environmental protection and greening the economy, advanced environmental monitoring and information systems, better integration of environmental concerns into sectoral policies, strengthened public participation and increased international cooperation across the ECE region.

This is the third EPR of Albania published by ECE. The review takes stock of the progress made by Albania in the management of its environment since the country was reviewed for the second time in 2012. During the review period, Albania reached an important milestone, when, in 2014, the European Council granted Albania candidate status. Membership of the European Union is the overarching goal pursued by Albania that has been and will continue to be the main driver of change, including in the environmental domain. Furthermore, the Government has progressed with aligning its national agenda, as set out in the National Strategy for Development and Integration for the period 2015–2020, with the 2030 Agenda for Sustainable Development, and has been among the frontrunners to ratify the Paris Agreement on Climate Change. These political priorities are at the heart of the changes highlighted in this EPR, which equips the Government and relevant stakeholders in Albania with recommendations to inspire future work on the achievement of the goals and targets of the 2030 Agenda and the national climate change commitments, within the process of the accession to the European Union.

I trust that this third review will serve as a powerful tool to support policymakers and representatives of civil society in their efforts to improve environmental management and achieve the Sustainable Development Goals in Albania. ECE wishes the Government of Albania further success in carrying out the tasks involved in meeting its environmental objectives, including through the implementation of the recommendations in the third review. I also hope that the lessons learned from the peer review process in Albania will benefit other countries throughout the ECE region.

Olga Algayerova



Executive Secretary  
Economic Commission for Europe



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# *Preface*

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This third Environmental Performance Review (EPR) of Albania takes stock of progress made by Albania in the management of its environment since it was reviewed for the second time in 2012 and assesses the implementation of the recommendations made in the second review. It covers legal and policy frameworks, greening the economy, environmental monitoring, public participation and education for sustainable development. Furthermore, the EPR addresses issues of specific importance to the country related to air protection, biodiversity and protected areas, as well as water, waste and chemicals management. It also examines the efforts of Albania to integrate environmental considerations into its policies in the transport, energy and industry sectors. The review further provides a substantive and policy analysis of the country's climate change adaptation and mitigation measures and its participation in international mechanisms.

The successes of Albania in the achievement of the Millennium Development Goals (MDGs) are highlighted, as are the challenges to be addressed by the country when implementing the globally-agreed Sustainable Development Goals (SDGs).

This EPR of Albania began in December 2016 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 31 January to 8 February 2017. In September 2017, the draft report was submitted to Albania for comments and to the ECE Expert Group on Environmental Performance Reviews for consideration. During its meeting on 23 October 2017, the Expert Group discussed the draft report with a delegation from Albania, 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-third session on 16 November 2017. A high-level delegation from Albania participated in the peer review and the Committee adopted the recommendations in this report.

The Committee and the ECE secretariat are grateful to the Government of Albania and its experts who worked with the international experts and contributed their knowledge and expertise. ECE would also like to express its appreciation to the German Federal Ministry for Environment, Nature Conservation, Building and Nuclear Safety and the German Federal Environment Agency for their support by providing funds through the Advisory Assistance Programme. Sincere thanks also go to Italy, Hungary, Portugal and the United Nations Environment Programme (UNEP) for having provided their experts and to the United Nations Development Programme (UNDP) for its support of this review.

ECE also takes this opportunity to thank Portugal and Switzerland for their general financial support to the EPR Programme in 2017 and expresses its deep appreciation to Belarus, Estonia, Georgia, Germany, Hungary, Italy, Montenegro, the Republic of Moldova, Romania and Switzerland for having provided their experts for the ECE Expert Group on Environmental Performance Reviews, which undertook the expert review of this report.

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## KEY ABBREVIATIONS

AQMP	air quality management plan
BAT	best available techniques
CBD	Convention on Biological Diversity
CEMSA	Consolidation of the Environmental Monitoring System in Albania
CFC	chlorofluorocarbon
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CSR	corporate social responsibility
DCM	Decision of the Council of Ministers
DPSIR	Driver–Pressure–State–Impact–Response
EBRD	European Bank for Reconstruction and Development
EE	environmental education
EIA	environmental impact assessment
ESD	education for sustainable development
EU	European Union
ForFITS	For Future Inland Transport Systems
GDP	gross domestic product
GEF	Global Environment Facility
GHG	greenhouse gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GMO	genetically modified organism
HCFC	hydrochlorofluorocarbon
HPP	hydropower plant
IBA	Important Bird Area
IBECA	Institution Building for Enforcing Environmental and Climate Acquis
IEMS	integrated environmental management system
INDC	Intended Nationally Determined Contribution
INSTAT	Institute of Statistics
IPA	Instrument for Pre-Accession Assistance
IPH	Institute of Public Health
IPMG	integrated policy management group
ISARD	Intersectoral Strategy for Agriculture and Rural Development
IUCN	International Union for Conservation of Nature
IWRM	integrated water resources management
LDV	light-duty vehicle
LGU	local government unit
LULUCF	land, land-use change and forestry
MARPOL	International Convention for the Prevention of Pollution from Ships
MEA	multilateral environmental agreement
MDG	Millennium Development Goal
MSW	municipal solid waste
NAMA	Nationally Appropriate Mitigation Action
NAPA	National Agency of Protected Areas
NBSAP	National Biodiversity Strategy and Action Plan
NEA	National Environment Agency
NGO	non-governmental organization
NO <sub>x</sub>	Nitrogen Oxides
NMVOC	non-methane volatile organic compound
NSDI	National Strategy for Development and Integration
NTFP	non-timber forest product(s)
ODS	ozone-depleting substance(s)
POP	persistent organic pollutant
PM	particulate matter
PPP	purchasing power parity
PRTR	Pollutant Release and Transfer Register
RAPA	regional administration of protected areas



RBMP	river basin management plan
REA	regional environmental agency
REC	Regional Environmental Center
RES	renewable energy source(s)
RIA	regulatory impact assessment
SAICM	Strategic Approach to International Chemicals Management
SDG	Sustainable Development Goal
SEA	strategic environmental assessment
SEETO	South East Europe Transport Observatory
SEIS	shared environmental information system
SELEA	Strengthening Environmental Law Enforcement in Albania
SoER	state of environment report
UNCCD	United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UWWTP	urban wastewater treatment plant
VOC	volatile organic compound
WFD	Water Framework Directive
WSS	water supply and sanitation

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**SIGNS AND MEASURES**

..	not available
-	nil or negligible
.	decimal point
€	euro
\$	dollar
cap	capita
eq.	equivalent
g	gram
Gg	gigagram
GWh	gigawatt-hour
ha	hectare
kg	kilogram
km	kilometre
km <sup>2</sup>	square kilometre
kt	kiloton
ktoe	kiloton of oil equivalent
kW	kilowatt
kWh	kilowatt-hour
l	litre
m	metre
m <sup>2</sup>	square metre
m <sup>3</sup>	cubic metre
Mg	megagram
MW	megawatt
pkm	passenger kilometre
t	ton (1,000 kg)
tkm	ton kilometre
toe	ton of oil equivalent
TWh	terawatt-hour

**CURRENCY CONVERSION**

Exchange rate (period average)  
Monetary unit 1 Albanian lek (ALL) = 100 Qindarkë

<b>Year</b>	<b>NCU/ US\$</b>	<b>NCU/Euro</b>
2007	90.43	123.72
2008	83.89	122.87
2009	94.98	132.09
2010	103.94	137.69
2011	100.90	140.28
2012	108.18	139.04
2013	105.67	140.30
2014	105.48	139.95
2015	125.96	139.71
2016	124.14	137.33
2017	119.10	134.16

*Source:* ECE Statistical database. Accessed on August 2017.

*Note:* NCU: national currency unit

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## *Executive summary*

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*The second EPR of Albania was carried out in 2012. This third review assesses the progress made by Albania in managing its environment since the second EPR and in addressing new challenges.*

### **Legal, policy and institutional framework**

*The Government has progressed with aligning its national agenda, as set out in the National Strategy for Development and Integration for the period 2015–2020 (NSDI-II), with the 2030 Agenda for Sustainable Development. The challenges include developing a national vision until 2030 and aligning the Sustainable Development Goal (SDG) implementation and monitoring efforts with the EU accession process. Knowledge about the SDGs among central government authorities is insufficient. Awareness of the SDGs among local government authorities, civil society, academia and the private sector is low.*

*Since 2011, Albania achieved significant progress in the adoption of new, modern environmental legislation. This process was driven by the efforts to approximate the EU environmental acquis, as the country was granted candidate status in 2014. However, some subsidiary acts due to be adopted are still lacking and the implementation of legislation lags behind. Sometimes the legislation is too advanced vis-à-vis the administrative, institutional and financial capacities in place.*

*The adoption of the new environmental cross-cutting strategy for the period 2015–2020 has been delayed. As of late 2017, although several issue-specific strategies on environment exist, Albania does not have a visionary umbrella policy framework for environmental protection.*

*The strategic environmental assessment (SEA) instrument is relatively new. The key challenge is to ensure proper application of the SEA instrument by key sectors of the economy. The proposing authorities often do not follow all the requirements and steps of the SEA procedure. There have been cases of sectoral documents bypassing the SEA requirements. The evaluation of the environmental effects of a plan or programme, especially with regard to cumulative effects, represents a challenge for staff in the Ministry of Tourism and Environment.*

*Progress was achieved in reforming the environmental enforcement system when, in 2014, the State Inspectorate of Environment and Forestry was established as a separate public institution subordinated to the then Ministry of Environment. The introduction of a risk-analysis-based approach to inspection planning has started. However, the related guidance materials are not yet in place and training is needed. Challenges include strengthening the transparency of inspectors' work and improving coordination among various inspectors at local level. Compliance promotion is part of the mandate but compliance promotion activities are not performed.*

*The country is pursuing a territorial reform accompanied by administrative and financial decentralization. Implementation of their environment-related functions, including the new functions assigned, represents a serious challenge for municipalities. Few municipalities have adopted local environmental action plans, despite the legal requirement to do so. The process of developing local integrated waste management plans has started. Preparation of air quality plans for zones and agglomerations is another challenge.*

### **Greening the economy**

*Governmental strategies provide policy declarations and some initiatives on renewable energy, energy efficiency and tourism, but these are not managed within a common framework referencing the principles of green economy. The measures related to green economy that are implemented in the country are scattered and no national policy document specifically refers to green economy as a target.*

*The implementation of the National Strategy for Integration and Development for the period 2015–2030 and several other documents in line with the SDGs of the 2030 Agenda for Sustainable Development requires investment in environmental infrastructure and services. To date, the Institute of Statistics has not adopted an international classification of environmental expenditures, which would facilitate the international comparability of national statistics. Another challenge is to develop statistics for the measurement of green growth indicators.*

*Environmental taxes provide only a soft incentive for pro-environment behaviour by individuals and organizations.* Mostly, tax rates have been set with no consideration of the impact and effects of emissions on the environment in terms of externalities or environmental damage to citizens and businesses. Environmental taxation and fiscal instruments are not subject to harmonized regulation or management at the central level and no specific unit within the central government is vested with direct responsibility for the environmental tax system.

*Albania does not earmark financial resources for environmental protection.* No national environmental fund or state budget line for an environment-related purpose has been established. Furthermore, the conditions for widening public and private environmental expenditure do not exist.

*Albania has recently made significant investments in the tourism sector.* However, the uncertainties over property ownership, lack of formalization and standardization of the services and poor access to basic infrastructure, energy and waste management remain the main obstacles to pronounced tourism development. No strategy specifically targeting sustainable tourism has been developed.

*A sound legal framework setting up the functions of local government units has been approved, which includes the possibility for them to collect local fees and indirect taxes.* However, fiscal decentralization has not yet been applied. Local governments lack appropriate financial resources or local revenues proportionate to their own, shared and delegated competences.

*A significant lack of appropriate infrastructure is evident in the public utilities sector.* It is considered responsible for some of the inefficiencies in this sector, including water leakage, inaccurate metering and poor waste management.

### **Environmental monitoring, information, public participation and education**

*There has been mixed progress regarding environmental monitoring since 2011.* Despite certain improvements, the annual national environmental monitoring programme is significantly underfunded: the National Environment Agency receives only 3 per cent of the budget needed to implement the programme and is required to prioritize activities. There are no accredited laboratories for analysing air quality.

*Albania has defined 160 national environmental parameters and indicators that are to be monitored.* However, only a subset of the most relevant parameters and indicators is being used for monitoring and annual reporting. The list of indicators is also outdated in relation to the continued process of transposing EU legislation into Albanian law.

*Each year, an indicator-based state of environment report is produced.* While these reports are important to keep track of the state of and trends in the environment, a regular, comprehensive state of environment report based on the Driver–Pressure–State–Impact–Response (DPSIR) framework is not being undertaken to complement the annual indicator reports. The link between the findings of the annual state of environment reports and policy-setting is not clear.

*Despite several international projects, there is no operational national integrated environmental management system (IEMS) in place in the country.* Databases and platforms exist but are neither integrated nor connected. IEMS, once functional, would require maintenance and further development.

*Information on the environment is accessible free of charge to the public through the websites of the governmental authorities.* The extent of environmental information available on the websites is ultimately limited by the amount of monitoring, and hence data and information, and this is reflected in Albania's relatively poor progress in implementing the shared environmental information system (SEIS) principles.

*Since 2011, there has generally been an increase in the number of requests for environmental information and greater participation in public consultations on significant issues.* Nearly all information requests are fulfilled within the 10-day limit. While access to information is fairly good at the central level, it remains more challenging at the municipal level.

*The 2015 National Programme for Environmental Education in High Schools for the period 2015–2017 is a good step to reach target 4.7 of the 2030 Agenda for Sustainable Development aimed at ensuring that all learners acquire, by 2030, the knowledge and skills needed to promote sustainable development.* However, no financial and human resources are dedicated to the implementation of this policy document. In many cases, environmental education (EE) and education for sustainable development (ESD) are still being carried out by international agencies and donors.

*There has been mixed progress on EE since 2011, yet, with current plans and initiatives, the future prospects look to be brighter.* ESD has yet to be integrated and delivered in the current educational system.

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

*The prompt ratification of recent multilateral environmental agreements (MEAs) is evidence of the political importance that the Government attributes to being an engaged participant in international cooperation in the environmental domain.* The aspiration of EU membership is the main driver for the adoption of environmental legislation in Albania, while the MEAs can be considered a second major impetus. Effective response to international agreements and commitments necessitates strengthened capacity and financial resources in all involved entities, in a way that is consistent with the responsibility of being a party to MEAs.

*While Albania continues to be supported by a number of bilateral and multilateral donors, the Instrument for Pre-Accession Assistance (IPA II) accounts for an increasingly large proportion of the external financial assistance received.* The Government continuously seeks to enhance coordination with the donor community. Information on environment-related projects supported by foreign assistance is collected but remains insufficient for adequate monitoring of the development and outputs of the projects.

*Efforts have been made by Albania to comply with its international reporting obligations.* However, the absence of monitoring data on species and habitats, air quality and GHG emissions has impacted on timely reporting in these fields.

*There is a general absence of information provided by the Albanian environmental authorities to the public on the status of Albania's participation in global, regional and bilateral agreements and on the implementation of those agreements.* With the recent exception of the Minamata Convention on Mercury, non-governmental organizations (NGOs) are not involved in the decision-making processes with regard to the country's participation in MEAs. NGOs are rarely involved in the preparation of national reports on the implementation of MEAs.

*Since 2011, several new designations under international conventions have been made.* Under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention), the country designated its fourth Ramsar site (Albanian Prespa Lakes). In 2014, the UNESCO International Coordinating Council of Man and the Biosphere (MAB) Programme declared the Ohrid-Prespa Transboundary Biosphere Reserve, the first in Albanian territory.

*Albania is clearly committed to preventing and combating air pollution and to accession to and implementation of international agreements in this domain.* Further joint work between Albania and the ECE secretariat of the Convention on Long-range Transboundary Air Pollution would allow the country to become a party to the Protocol on Heavy Metals and the Protocol on Persistent Organic Pollutants, as amended, and to undertake an in-depth assessment of the costs and benefits deriving from accession to the amendments to the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone.

### **Climate change mitigation and adaptation**

*Total GHG emissions are relatively low (9,036.8 Gg of CO<sub>2</sub> eq. in 2009).* However, the most recent official documents (such as the 2016 Third National Communication on Climate Change) are based on obsolete data up until 2009.

*Energy activities are the main source of GHG emissions in Albania, accounting for 39 per cent to 51 per cent of overall direct GHG emissions in the period 2000–2009.* Energy production is based mainly on hydropower, fuelwood and domestic and imported fuels used for electricity production, heat production and transport.



*The amount of GHGs emitted from industry increased from 1,118.00 Gg of CO<sub>2</sub> eq. in 2005 to 1,701.12 Gg of CO<sub>2</sub> eq. in 2009.* The main source of emissions was the cement industry, followed by metal production.

*The amount of GHGs emitted from agriculture decreased from 1,403.08 Gg of CO<sub>2</sub> eq. in 2005 to 1,130.86 Gg of CO<sub>2</sub> eq. in 2009.* This was due to a reduction in the total number of livestock during this period.

*Unlike in many countries, forests in Albania became a net CO<sub>2</sub> emitter.* This occurred due to the reduction in the volume of forest from 83.295 million m<sup>3</sup> in 2000 to 75.726 million m<sup>3</sup> in 2009.

*Albania lacks data and studies on the impact of climate change on different components of nature, including water resources, land and soil cover, forest and other natural vegetation, biodiversity and ecosystems.* Nor are studies and data available on the monetary impact of anthropogenic climate change on the country's economic sectors.

*Albania has set important targets in the area of climate change.* The Government committed to reduce CO<sub>2</sub> emissions in the period 2016–2030 by 11.5 per cent compared with the baseline scenario. Another target is to reduce energy consumption by 9 per cent by 2018 compared with average consumption in the period 2004–2008. In the area of renewable energy, Albania aims to achieve a 38 per cent share of renewable energy sources in gross final energy consumption in 2020.

*The country lacks policies on adaptation of different economic sectors and infrastructure to climate change, as well as to other natural and anthropogenic hazards.* At the same time, the country is vulnerable to impacts of natural and anthropogenic phenomena and hazards, such as floods, precipitation patterns, heat and cold waves, forest fires, landslides and erosion. Implementing policies that build and strengthen resilience to climate-related and natural hazards would be an important step in progress towards Albania's achieving targets 1.5, 13.1, 11.b and 13.2 of the 2030 Agenda for Sustainable Development.

*Albania lacks specific legislation to support and promote the reduction and stabilization of GHG emissions and carbon capture and storage.* A draft law on climate change was prepared to bring to the national legislation the principles, definitions and requirements of the United Nations Framework Convention on Climate Change (UNFCCC) and relevant EU directives. A draft national climate change strategy, which includes both the national climate change mitigation plan and the national climate change adaptation plan, is under development.

*To date, the only activities related to climate change awareness-raising were implemented in the framework of international projects.* The Government does not implement systematic measures to improve education and awareness-raising on climate change mitigation, adaptation, impact reduction and early warning, as advocated by target 13.3 of the 2030 Agenda for Sustainable Development.

## **Air protection**

*Air quality improved greatly in the course of the last 10 years.* Since 2005, emissions of sulphur oxides decreased some 35 per cent, and emissions of ammonia around 10 per cent, while emissions of NO<sub>x</sub>, NMVOC and PM<sub>10</sub> increased slightly. Albania reduced the use of fossil fuels in energy production and industrial processes and introduced European standards for fuel quality.

*The negative impact of transport on air quality has increased, due to the higher number of vehicles (e.g. the number of passenger cars increased by 94 per cent in the period 2009–2014).* Intensive urbanization that is not followed by adequate development of infrastructure (e.g., district heating systems and sustainable public transport) poses a major threat to air quality.

*The current network for air quality monitoring does not allow for providing a correct picture of air quality.* The number of monitoring stations is limited and the macro- and microlocations of existing monitoring stations are not accurate. There is no monitoring station in Fier where exceedances of air quality standards were recorded in the past. Monitoring in Elbasan is affected by the microlocation of the station. The current composition of the network does not cover air quality assessment in rural or rural background locations.

*The health impact of air pollution is not assessed.* In the absence of such an assessment, Albania is not able to measure its progress towards 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) in relation to air. The population, especially vulnerable groups, is not provided with sufficient and timely data on air quality accompanied by recommendations on health protection.

*The legal framework on air quality has been improved through the process of accession to the EU and is complemented by an adequate national policy framework.* Further efforts are needed to build capacity for development of air protection policies on the regional and local levels.

*Due to high fragmentation of the arable land, only a limited numbers of farms practise more intensive agriculture that allows them to produce for the market.* Organic farming, which can contribute not only to production of healthy organic food but also to the protection of air quality and other aspects of the environment, is not well promoted.

*Consumption of chlorofluorocarbons was phased out in 2008, so the country is now working on reducing the use of hydrochlorofluorocarbons (HCFCs).* The import of HCFCs is controlled by the import licensing system. The first phase-out step was successful, reducing the consumption of HCFCs in the period 2013–2015 by more than 50 per cent.

## Water management

*The current monitoring data on the quality and quantity of water resources are insufficient.* Water bodies have not been identified, delineated and characterized in accordance with the EU Water Framework Directive (WFD). WFD-compliant classification schemes are still to be developed.

*Available monitoring data and assessment criteria do not yet allow for a comprehensive assessment of the environmental state of water bodies.* Generally, most of the rivers are polluted in their middle or lower reaches. Most groundwater bodies appear to be still of good quality, although there are insufficient monitoring data to assess their possible pollution with pesticides or heavy metals.

*The first river basin management plan (RBMP) was prepared for the Mati River basin in 2010, but it has not yet been implemented.* RBMPs are under development for the Drini-Buna, Semani and Shkumbini River basins. The lack of RBMPs clearly prevents Albania from progressing towards achieving target 6.5 of the 2030 Agenda for Sustainable Development.

*The piped drinking water supply is monitored at both the abstraction sites and selected taps.* The quality of drinking water abstracted from private or local wells in rural areas is not monitored.

*Water supply coverage in rural areas increased from 57 per cent in 2011 to 63 per cent in 2015 but remained at the same level (about 90 per cent) in urban areas.* The coverage in both urban and rural areas in 2015 lags behind the objectives stipulated in the National Strategy of Water Supply and Sewerage for the period 2011–2017.

*Sewerage system coverage remained about 51 per cent throughout 2011–2015.* There is a significant difference in sewerage system coverage between urban and rural areas but no disaggregated data are available after 2010, when there was 83 per cent coverage in urban areas and 11 per cent in rural ones.

*By 2016, Albania had built – with donor support – eight urban wastewater treatment plants (UWWTPs), with a capacity covering around 25 per cent of the country's urban population.* However, the lack of financial capacities and limited technical capacities rendered three of them idle, with unclear long-term operational arrangements. More UWWTPs are under construction.

*Non-revenue water is a serious challenge: on average, 67 per cent of drinking water produced is non-revenue water.* Non-revenue water causes significant commercial losses that translate into budgetary imbalances and financial sustainability problems for the water service providers.

## Waste and chemicals management

*Waste management has undergone profound improvements during recent years in terms of legislative background: Albania has transposed the most important part of the EU acquis related to waste.* However, the implementation and enforcement of these laws is at a very low level. Albania still lacks the basic infrastructure for proper waste management.

*The financing of the costs of waste management is still unresolved, due to the lack of a comprehensive cost and tariff system that reflects the real costs of the services. The "polluter pays principle" is not functioning in the current municipal solid waste (MSW) management system.* This seriously hinders the willingness to further invest in the waste infrastructure. Much-needed capital investments have slowed down since 2011; only one new investment in facilities was completed between 2011 and 2016.

*Despite the legal and regulatory framework, separate waste collection is rarely done systematically.* Recycling companies fail to acquire enough raw material from the domestic market to operate at full capacity. Enforcing separate collection of waste and mandatory recycling and reuse of waste would help Albania achieve progress under target 12.5 (by 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse) of the 2030 Agenda for Sustainable Development.

*There are still numerous industrial and mining sites that present a potentially serious risk to the environment and human health.* From 2011 to 2016, there were no significant improvements or works on hotspot rehabilitation. Continuing to remediate these industrial and mining sites might reduce deaths and illnesses from contaminated sites and contribute to achievement of target 3.9 of the 2030 Agenda for Sustainable Development.

*The adoption of the new Law on Chemicals Management and related by-laws in 2016 is a significant legislative development.* However, there is a lack of knowledge and awareness about the newly-introduced rules and procedures, not only among the companies working in this field but also among the different stakeholders in the public administration.

*The amount and origin of generated hazardous waste is unknown, mostly due to the lack of data collection, which is partly due to the lack of separate collection of hazardous waste.* The lack of data hampers the establishment of sound management of hazardous waste. Albania is not able to measure progress against indicator 12.4.2 (hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment) to allow the tracking of progress towards the achievement of target 12.4 of the 2030 Agenda for Sustainable Development.

## Biodiversity, forestry and protected areas

*Since 2012, Albania has increased protected areas by 1.61 per cent. The country has 800 protected areas covering a surface of 477,566 ha or 16.61 per cent of the whole national territory.* The 2016 National Biodiversity Strategy and Action Plan envisages the expansion of the system of protected areas by increasing the combined surface of protected areas to 17 per cent of the total surface of land and internal waters and to 6 per cent of the coastal and marine areas.

*The institutional framework for the development and management of protected areas has improved with the creation of the National Agency of Protected Areas in 2015.* Furthermore, the Law on Protected Areas, adopted in 2017, paves the way for using the revenues generated by protected areas for their development, field work, communication and awareness, afforestation and fire prevention.

*Since 2011, there has been significant development in protected area management plans.* In the period 2011–2015, management plans were adopted for 11 protected areas.

*The Government has followed a "drastic" approach to combat illegal hunting and logging.* As illegal hunting has presented one of the major pressures on carnivorous mammals and migratory birds, in 2014, Albania declared a hunting moratorium and in June 2016 extended this moratorium for the next five years. Due to the large loss of forest cover in the past 25 years (an estimated 20 per cent), in early 2016, the Government imposed a 10-year moratorium on logging, with the exception of fuelwood used by local communities.

*Albania still does not have a national ecological network.* As part of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention), Albania has developed a proposal for Emerald sites. As of early 2017, neither the Standing Committee of the Bern Convention nor the Government has officially adopted it.

*Albania is the regional leader in the number of built and planned hydropower plants (HPPs).* However, no cumulative impact assessment of HPPs in the country, and in particular in protected areas, has been undertaken.

*Albania progressed with the establishment of the legal and institutional framework for monitoring and reporting on biodiversity and forestry.* However, implementation still lags behind, due to a lack of funds and overlap of monitoring responsibilities, impeding the analysis of trends.

*Municipalities face difficulties in meeting their new responsibility for forest management and establishing competent forest management structures.* Data on the state of forests reported by municipalities are scarce. This situation needs to be urgently addressed for Albania to be able to make progress towards sustainable forest management in line with target 15.2 of the 2030 Agenda for Sustainable Development.

*Some 8.2 per cent of all national forests are identified as high-nature-value forests.* However, the country still lacks a specific legal framework for the protection of these forests.

*The harvesting and export of non-timber forest products (NTFPs) have significantly increased over the past decade.* In 2015, 13,000 tons of NTFPs were exported, worth more than €27 million. The current legislation is inadequate to ensure the sustainable use of NTFPs. It does not cover all NTFPs exported and it does not set quotas for allowed harvesting per area.

## Transport and environment

*Albania has taken significant steps to improve its transport sector over recent years, with major investment projects and policy changes stimulating the growth of the sector.* The number of national investment projects in the road sector has improved connectivity in the country, as have investments in port facilities. However, to date, not enough efforts have been directed at facilitating the development of sustainable transport.

*The provision of public transport, especially rail services, remains low, even with an urban population that uses significant non-car modes of transport.* The lack of multimodal facilities is limiting the potential use of public transport and stifling the use of more sustainable modes of transport. Municipalities have yet to complete measures aimed at improving urban public transport services through the introduction and extension of bus and cycle lanes.

*With a share in the transport sector of no more than 1 per cent, rail transport has been falling dramatically in recent years.* The rail sector's performance is very poor, with maximum speeds significantly lower than road transport outside the city centres. Work continues on rehabilitating the rail network, and particularly its infrastructure, to improve the competitiveness of rail with other transport modes. There are not enough measures aimed at ensuring that the railways are made safe through improved signalling and the removal of unauthorized crossings.

*About 60 per cent of newly registered cars are second hand. This means that more polluting cars enter the Albanian market than would otherwise occur.* According to the National Inventory on Air Emissions, in 2015, road transport accounted for 73 per cent of NO<sub>x</sub> emissions.

*In the past two years, the significant fall in the number of deaths on the roads has plateaued and in 2016 the number has actually increased.* This calls into question whether target 3.6 (by 2020, halve the number of global deaths and injuries from road traffic accidents) of the 2030 Agenda for Sustainable Development can be achieved. A number of actions are currently being undertaken, with international support, to improve road safety through infrastructure and policy initiatives.

*Significant steps forward have been taken in greening the maritime sector through greater attention being placed on the disposal of waste from ships and the development of contingency plans in case of environmental incidents.*

However, although investments to install adequate equipment to gather and treat waste from vessels are ongoing, waste is carried by road vehicles to appropriate treatment facilities on land. Efforts to reduce the environmental impact of the sector are particularly important to help achieve target 14.1 (by 2025, prevent and significantly reduce maritime pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution) of the 2030 Agenda for Sustainable Development.

### **Energy, industry and environment**

*Albania is highly dependent on a single source of energy – hydropower – that does not guarantee constant production.* The renewable sources of energy other than hydropower, together with connection to natural gas following the implementation of the Trans-Adriatic Pipeline project, represent strategic opportunities for the country to reduce its vulnerability on a single source of energy, along with adopting cleaner solutions for the environment.

*Oil extraction activity has a long history in Albania.* The recent oil well blast event at the Patos-Marinza site in April 2015, with a leakage of oil onto the terrain, calls for closer attention to the pressures of oil extraction industry on land use, soil and water bodies.

*Albania inherited several industrial installations that operated until the early 1990s.* The current objective is to attract capital to reuse such industrial buildings and establish new and greener production activities on former industrial sites. However, the plan lacks specific support in terms of both economic and fiscal incentives and technical assistance on environmental protection.

*Industrial waste management in Albania is at a poor level.* The use of waste as a secondary raw material for manufacturing industry is not developed.

*There are no incentives to attract investment to the industrial sector, in particular for those willing to invest in new technology as a direct contribution to improving environmental protection.* This might hamper the implementation by Albania of target 8.2 (achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value-added and labour-intensive sectors) of Goal 8 of the 2030 Agenda for Sustainable Development.

*Albania participates in the Assistance Programme of the Convention on Transboundary Effects of Industrial Accidents and has prepared a self-assessment report in 2015 and an action plan in 2016.* However, the country currently lacks mechanisms for consultation with neighbouring countries on the identification of hazardous activities with possible transboundary effects and has not notified the neighbouring countries of such hazardous activities.



# Introduction

## I.1 Demographic and socioeconomic context

### *Economy*

#### *Population*

Albania's total population decreased between 2000 and 2010 but since 2010 the annual population figures have changed very little. At the end of 2016, the total population was only 1.27 per cent below the 2010 figure and it seems that the declining population trend has stopped and the level of total population has now been stabilized at about 2.9 million inhabitants, compared with 3.4 million in 2000.

Between 2010 and 2015, the life expectancies of male and female populations at birth increased, by 1.36 and 0.62 years, to 75.6 and 80.6 years respectively.

During the review period, the total fertility rate has been very steady; the latest available figure, for 2015, is 1.8. The infant mortality rate decreased from 14.8 per 1,000 live births in 2010 to 12.5 in 2015 – a 15.54 per cent decrease.

The urbanization rate has been rapid. As recently as 1989, the share of urban population was 36 per cent, but this had increased to 58 per cent in 2016. The average population density in 2015 was 100.4 inhabitants/km<sup>2</sup>. The population density, however, varies significantly within the country. The lowlands area between the capital, Tirana (2016 population 811,649 inhabitants) and the important port and manufacturing city of Durrës (278,775 inhabitants) is densely populated. The Durrës prefecture has the highest population density in the country, 824 inhabitants/km<sup>2</sup>, while the lowest density, 35 inhabitants/km<sup>2</sup>, is found in the mountainous northern Kukes region.

The European Union (EU) officially recognized Albania as a "potential candidate country" in 2000 and in 2003 Albania started negotiations on a Stabilisation and Association Agreement, which was signed on 12 June 2006, completing the first major step towards Albania's full membership in the EU. Albania applied for EU membership on 28 April 2009 and received EU candidate status in 2014. Albania has free trade agreements with the EU, the Western Balkans (CEFTA 2006), EFTA states and Turkey.

Over the review period from 2005 to 2015, Albania's annual average GDP growth was 3.75 per cent. From 2005 to 2008, the annual GDP growth rate was high, at 5.45 to 7.53 per cent, and on a continuously increasing path. After the 2008 international financial crisis, GDP growth halved to 3.35 per cent in 2009 and diminished until 2013, when it bottomed out at 1.11 per cent. Since then, annual GDP growth has increased somewhat, reaching 2.56 per cent in 2015.

Inflation, measured by the Consumer Price Index (CPI), has been very moderate throughout the review period. It reached its highest level, 3.55 per cent, in 2010. The CPI decreased to 1.63 per cent in 2014 and rose slightly to 1.89 per cent in 2015 (the latest available figure).

Albania's exports of goods and services more than doubled from 2005 to 2015, from US\$2.089 billion (in 2010 US dollars) in 2005 to US\$4.524 billion (in 2010 US dollars) in 2015. Measured in 2010 US dollars, exports increased by 116.54 per cent while imports increased by only 46.26 per cent during this period.

**Table I.1: Demographic and health indices, 2010–2016**

	2005	2010	2011	2012	2013	2014	2015	2016
Population (in millions)	3 011.0	2 913.0	2 905.2	2 900.4	2 895.1	2 889.1	2 880.7	2 876.1
Birth rate, crude (per 1,000)	12.4	11.8	11.8	11.9	11.9	11.9	11.9	..
Total fertility rate	1.7	1.7	1.7	1.7	1.7	1.7	1.7	..
Life expectancy at birth (in years)	76.1	76.7	77.1	77.4	77.7	78.0	78.2	..
Life expectancy at birth: female (in years)	79.4	79.2	79.5	79.7	79.9	80.1	80.3	..
Life expectancy at birth: male (in years)	72.9	74.4	74.9	75.3	75.7	76.0	76.2	..
Percentage of population under 15 years old	26.3	22.5	21.4	20.5	19.6	18.8	18.0	17.7
Percentage of population above 65 years old	8.6	10.7	11.1	11.4	11.8	12.1	12.5	12.8
Death rate, crude (per 1,000 people)	6.0	6.8	6.8	6.9	7.0	7.1	7.2	..
Mortality rate, infant (per 1,000 live births)	18.3	7.7	7.5	7.2	6.9	6.7	6.5	6.2

Source: World Bank database, accessed on 28.11.2016.



This caused a positive development in the trade balance, which in 2008 had been 26.8 negative as a percentage of GDP. In 2015, although still massive, the trade deficit had diminished to 17.16 per cent of GDP.

In 2005 Albania attracted US\$258 million worth of net foreign direct investment (FDI). The inflow of investment to the Albanian economy was worth 3.22 per cent of the country's 2005 GDP. The annual net FDI share of GDP peaked in 2009 at 11.15 per cent. After 2009 the share fluctuated between 7.5 and 9.8 per cent. The latest available FDI figure (for 2015) was 8.57 per cent of GDP, higher than that for neighbouring Greece, Serbia and the former Yugoslav Republic of Macedonia but lower than that for Montenegro.

At the beginning of the review period, in 2005, registered unemployment stood at 14.1 per cent. After decreasing to 13.1 per cent in 2008, it rose to 17.5 per cent in 2014. The unemployment figure of 17.1 per cent for 2015 is somewhat lower than the average of 20.4 per cent in the Western Balkan countries.

Even though Albania's GDP per capita (measured in purchasing power parity, PPP) increased by 47.91 per cent in the 10-year period 2005–2015, Albania still remains a poor country by Western European standards. The GDP per capita (PPP) stood at 32.35 per cent of the EU-28 average in 2015. Official GDP figures, however, may not give an accurate view of average living standards since the per-capita GDP figures do not fully capture either the informal economy or the remittance income from Albanians living abroad.

There are several methods for estimating the share of the informal economy in GDP. The electrical energy consumption method gave the highest, and the simple currency ratio the lowest, informal economy size estimates. Between 1996 and 2012, the informal economy of Albania was estimated to be somewhere between 13.6 per cent and 37.8 per cent of GDP.

Personal remittances from abroad form a significant part of Albania's GDP. According to the World Bank, remittances accounted for 15.81 per cent of GDP in 2005. They showed a declining trend until 2012 when they bottomed out at 8.34 per cent of GDP. Since then they have increased slightly, to 9.14 per cent of GDP in 2015.

In 2005, 18.5 per cent of the population lived below the national poverty line. The share of the population living in poverty diminished to 12.4 per cent in 2008 but then started to increase again, rising to 14.3 per

cent in 2012 (the latest figure available). During the review period from 2005 to 2015, the poverty level in urban areas increased from 11.2 to 13.6 per cent while that in rural areas diminished by 36.77 per cent, from 24.2 to 15.3 per cent.

## 1.2 Gender

Albania ratified the Convention on the Elimination of All Forms of Discrimination against Women on 11 May 1994 and submitted its fourth periodic report in 2014.

In the Social Institutions and Gender Index 2014, Albania's score was 0.2476, placing it among countries with a high level of discrimination in social institutions. It had low levels of discrimination in family code, medium levels in civil liberties, physical integrity, resources and assets, but very high levels in son bias.

Although the political representation of women in parliament is still at a relatively low level, there has been a continuous and rapid increase in the number of female parliamentarians since 2005. According to UNSTAT's Millennium Development Goal (MDG) indicators, the proportion of female legislators in parliament increased from 6.5 per cent in 2005 to 20.7 per cent in 2015. The number of women holding ministerial positions was at an even higher level. In 2016, almost one third (6 of 21) of ministerial positions were held by a woman, including Albania's first female Minister of Defence.

Overall, women remain underrepresented in public office, despite the Electoral Code's quota provision, which stipulates that, for each electoral zone, at least 30 per cent of the multi-member list must be of each gender and/or each gender must be represented among the first three names on the multi-member list. The 2015 local elections proved that, despite the candidate list requirement, representation of women in municipal councils varied from municipality to municipality, with an average of 35 per cent. The capital, Tirana, was the only municipality that had slightly more than 50 per cent women on its municipal council. Higher up in the local government hierarchy female representation becomes even more limited. Only 9 (14.75 per cent) of the 61 new mayors elected in the 2015 local elections were women, which was only a slight improvement on the 2011 local elections.

Albania's gender parity for school enrollment fluctuates between educational levels. According to the World Bank, the gender parity index (GPI) for Albania in 2015 was 0.97 at the primary education level, but was slightly poorer (0.94) at the secondary

level. At the tertiary education level it was 1.40, indicating female overrepresentation.

In international gender equality comparisons, Albania's position differs quite considerably depending on the indices used. On the UNDP Gender

Inequality Index, Albania scored 0.0.267 in 2015, ranking 51st among 195 countries and territories; in the World Economic Forum's 2015 Gender Gap Report, Albania scored 0.701, ranking 70th among 145 countries.

Map I.1: Administrative map of Albania



Source: United Nations Cartographic Section, 2016.

Note: The boundaries and names shown on this map do not imply official endorsement or acceptance by the United Nations.

***PART I***

***ENVIRONMENTAL GOVERNANCE AND FINANCING***



## Chapter 1

# LEGAL, POLICY AND INSTITUTIONAL FRAMEWORK

### 1.1 Legal framework and its implementation

The Stabilisation and Association Agreement has been in force since April 2009. In June 2014, the European Council granted Albania candidate status. The period since 2011 has therefore been characterized by intensive efforts to transpose the EU environmental acquis into the national legislation. Assistance with drafting the new pieces of legal and policy framework on the environment has been provided to the Government mostly through the EU-funded projects Strengthening Environmental Law Enforcement in Albania (SELEA, 2012–2014) and Institution Building for Enforcing Environmental and Climate Acquis (IBECA, 2015–2017). However, the number of acts in the environmental field transposed without external assistance, through the efforts of the ministry responsible for environmental issues alone, has recently increased.

#### *Environmental laws*

#### Law on Environmental Protection

The Law on Environmental Protection No. 10431/2011, replacing the 2002 Law, entered into force in 2013.<sup>2</sup> It sets the new framework for strategic planning on the environment, environmental assessments, permitting, environmental monitoring, information, liability for environmental damage and other issues. Since 2011, a large number of subsidiary acts were adopted and many EU directives were transposed on the basis of provisions of this Law. However, some subsidiary acts due to be adopted in accordance with the Law are still lacking, for example on the intentional release of genetically modified organisms (GMOs) into the environment, unpleasant odours and liability for environmental damage. The Environmental Fund, due to be established under the Law in order to support environmental protection activities, has not been created.

#### Environmental permitting

The Law on Environmental Permits No. 10448/2011, which entered into force in 2013, further developed the system of environmental permits introduced by the

Law on Environmental Protection. The Law puts the concept of best available techniques (BAT) at the centre of the permitting system. In 2014, amendments were introduced in Annex 1, which indicates the types of permit (A, B or C) for various types of activities, depending on the capacity threshold of installations, although the allocation of some activities to certain types of permit is arguable. Although type A permits are supposed to be integrated permits, no progress has been made on integrated permits and the authorities are still issuing multiple permits for a single technical installation.

#### Environmental assessments

The legal framework on environmental assessment has been enhanced with adoption of the Law on Environmental Impact Assessment No. 10440/2011, which entered into force in 2013, and the Law on Strategic Environmental Assessment No. 91/2013. Extensive subsidiary legislation has been developed for both laws, although the methodology for strategic environmental assessment (SEA) has yet to be adopted. The Law on Environmental Impact Assessment was amended in 2015. Previously, the National Licensing Centre was receiving environmental impact assessment (EIA) documentation as a one-stop-shop under the Law on Licences, Authorizations and Permits No. 10081/2009; since 2015, EIA documentation must be submitted to the ministry responsible for environmental issues, which forwards it to the National Environment Agency (NEA). The problematic issue is that the existing time frames do not give sufficient time to all parties to effectively participate in the EIA process. The EIA procedure is distinct from the environmental permit issuance procedure. The EIA report is to be submitted as a supporting document as part of the application for an environmental permit.

#### Air protection

The Law on Protection of Ambient Air Quality No. 162/2014, adopted in place of the 2002 Law, enters into force in December 2017. It provides for the designation of zones and agglomerations that are

<sup>2</sup> For laws adopted since 2011, the entry into force is specified only if deferred.

subject to air quality assessment in relation to certain pollutants. It requests the NEA to prepare annual reports on air quality assessment. The Law describes the system of air quality plans, which are the main vehicles for implementation of concrete measures to reduce emissions from stationary and mobile sources. Several Decisions of the Council of Ministers (DCMs) were adopted in furtherance of the Law, including on air quality assessments and requirements for certain pollutants (DCM No. 352 dated 29.04.2015) and on volatile organic compounds (DCM No. 1075 dated 23.12.2015).

### Climate change

In the context of the United Nations Framework Convention on Climate Change (UNFCCC), DCM No. 762 dated 16.09.2015 designated Albania's Intended Nationally Determined Contribution (INDC), which commits the country to reduce CO<sub>2</sub> emissions in the period 2016–2030 by 11.5 per cent compared with the baseline scenario. The draft law on climate change has been prepared and the drafting of a decision of the Council of Ministers on monitoring and reporting of greenhouse gases (GHGs) is ongoing with support from the IBECA project.

### Nature protection

In 2014, amendments were made to the Law on Biodiversity Protection No. 9587/2006 to introduce the Natura 2000 concept and increase the transposition of Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

The implementation of the Law on Protected Areas No. 8906/2002 (no longer valid) has progressed with the establishment of the National Agency of Protected Areas (NAPA) and the preparation of management plans. New protected areas have been proclaimed. One of the key issues for implementation is hydropower development in protected areas. There are more than 70 hydropower plants (HPPs) inside the protected areas network, most of them built since the 1990s in conformity with then-existing legislation and procedures. Some are still in the construction process. No cumulative impact assessment of HPPs in protected areas was made. There are also cases of licences having been issued for HPPs before the issuance of an EIA report or of the EIA report not having been taken into account when issuing a licence.

The new Law on Protected Areas No. 81/2017 has been adopted in place of the 2002 Law, mostly to reflect institutional reform and the creation of NAPA, address the reform in forestry and introduce the Natura

2000 concept. Amendments are also planned to the Law on Hunting No. 10253/2010 and the Law on the Protection of Wild Fauna No. 10006/2008.

In February 2016, the Law on the Moratorium in Forests No. 5/2016 introduced a 10-year ban on logging for industrial purposes and export. The Law is a drastic measure to address illegal logging, mostly logging in excess of the permitted timber quantities, which has been a common practice. The Law guarantees the supply of firewood to the population. The other exception refers to forest exploitation for the purposes of regeneration and sanitation. The existing forest exploitation rights are suspended and will be renegotiated only to allow for activities that fall within the scope of the exceptions.

In June 2016, the Law on the Moratorium on Hunting No. 61/2016 extended for another five years the ban on hunting initially introduced in 2014. In December 2016 hunting associations appealed this extension to the Constitutional Court, but unsuccessfully.

Some provisions on GMOs are present in the Law on Environmental Protection and the Law on Organic Production, Labelling of Organic Products and Their Control No. 106/2016 but subsidiary legislation is largely undeveloped. A draft DCM on deliberate release of GMOs into the environment has been postponed due to negative reaction during a public consultation process.

### Chemicals

The Law on Chemicals Management No. 27/2016 replaced the Law on Chemical Substances and Preparations No. 9108/2003. The new Law enters into force in March 2018. It aims to transpose Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and creates the legal basis for further transposition of the *acquis*, including on asbestos and mercury. Subsidiary legislation on the classification, labelling and packaging of chemicals (DCM No. 488 dated 17.03.2016) and on the import and export of hazardous chemicals (DCM No. 665 dated 21.09.2016) was already adopted. The main priorities of the Ministry of Tourism and Environment are capacity-building of the sector that deals with chemicals and of the environmental inspectors tasked with enforcement of the new Law, and completion of the legal basis with subsidiary legislation.

Biocides are regulated by the Law on Biocidal Products and Services in Public Health No. 95/2015 and DCM No. 487 dated 29.06.2016 "On biocidal products classification".

Waste management

The Law on Integrated Waste Management No. 10463/2011 replaced the Law on Solid Waste Management No. 9010/2003 and the Law on Hazardous Waste Management No. 9537/2006. It aims to protect human health and the environment by preventing or reducing the negative impacts of waste generation and resulting from the management of waste. In 2013, the Law was amended to prohibit the import of hazardous and non-hazardous waste under all circumstances. In September 2016, the parliament adopted an amendment to allow for the import of waste, albeit only for recycling purposes. The amendment faced significant public protests and has not been signed off by the President.

The subsidiary legislation is quite developed, covering specific waste streams (batteries and accumulators (DCM No. 866 dated 04.12.2012), end-of-life vehicles (DCM No. 705 dated 10.10.2012), used oils (DCM No. 765 dated 07.11.2012), packaging waste (DCM No. 177 dated 06.03.2012), PCBs/PCTs disposal and equipment (DCM No. 387 dated 06.05.2015) and landfilling (DCM No. 452 dated 11.07.2012). The most recent development is the introduction of the legal basis for digital mapping of landfills (DCM No. 428 dated 08.06.2016). The main challenges for implementation of the Law are related to administrative capacity and institutional cooperation of the many actors at national and local levels, cooperation with municipalities and the private sector, and attracting investments to the sector, especially in order to close the existing dumpsites, which do not meet the sanitary requirements. The local waste management plans for most municipalities are still to be prepared as required by the 2011 Law.

Industrial pollution

No legislation to transpose the Seveso III Directive has been adopted. The draft law on the control of major accident hazards involving dangerous substances is under development.

The decision enabling the functioning of the Pollutant Release and Transfer Register (PRTR) (DCM No. 742 dated 09.09.2015) entered in force in June 2016. The PRTR requirements will apply to data on the emissions of about 230 companies. This includes routine, intentional and accidental release of pollutants, in addition to the transfer of waste and wastewater pollutants. In early 2017, the NEA launched an online reporting tool for the PRTR. The main challenge is to ensure the flow of information from the operators.

Water

The key laws include Law on Integrated Water Resources Management No. 111/2012 (in force since December 2013), Law on Protection of Transboundary Lakes No. 9103/2003 and Law on Protection of the Marine Environment from Pollution and Deterioration No. 8905/2002, which was amended in 2013 with regard to the institutional framework and the sanctions for administrative offences. The most recent achievements in the development of subsidiary legislation refer to adoption of the regulation on drinking water quality (DCM No. 379 dated 25.05.2016) and approval of territorial and hydrographic boundaries of basins (DCM No. 342 dated 04.05.2016). On water quality, the list of priority substances in aquatic environments (DCM No. 267 dated 07.05.2014) and the environmental quality norms for surface waters (DCM No. 246 dated 30.04.2014) were approved. A subsidiary act on the content, development and implementation of national water strategies, river basin management plans (RBMPs) and flood risk management plans is under development.

Environmental noise

The legal framework on environmental noise, which includes the Law on Evaluation and Management of Environmental Noise No. 9774/2007 and DCM No. 587 dated 07.07.2010 "On the monitoring and control of noise levels in urban and tourist centres", has been enhanced with adoption in January 2013 of two orders of the then Minister of Environment, on strategic noise mapping and on noise values assessment. In late 2014, a joint order of the then Ministers of Transport and of Environment laid down the rules for protection from aircraft noise. Implementation of noise legislation is a challenge in many cities.

Eco-labelling and EMAS

Some subsidiary legislation has been passed on eco-labelling (DCM No. 220 dated 11.03.2015) and eco-management and auditing schemes (DCM No. 633 dated 15.07.2015).

Environmental liability

The Law on Environmental Protection addresses environmental liability in a separate chapter; however, subsidiary legislation is still needed to make it work.

Environmental crimes

Since 2011, there have been several initiatives to amend the environmental chapter of the 1995 Criminal



Code. The Ministry of Tourism and Environment cannot initiate the amendments to the Code; this can only be done by the Ministry of Justice. Cooperation between these two ministries on the introduction of amendments to the Criminal Code has been insufficient for many years.

#### Law enforcement reports

Several environmental laws adopted since 2011 include a provision that the ministry responsible for environmental issues should prepare annual (Law on Strategic Environmental Assessment, Law on Environmental Impact Assessment) or three-year (Law on Environmental Permits) reports on the implementation of the law, to be published on the website of the ministry. As of early 2017, no such reports were ever prepared. Such a requirement is also present in the Law on Integrated Waste Management and the Law on Protection of Ambient Air Quality (in both cases, to prepare reports every three years) but, as of early 2017, these laws are not yet in force.

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

The Ministry of Tourism and Environment receives all draft laws and DCMs prepared by sectoral ministries, to enable it to comment. In this way, the Ministry can facilitate the integration of environmental protection requirements into sectoral legislation and policies. There are, however, cases when comments of the Ministry of Tourism and Environment are not fully taken into account. In addition, the integration of environmental requirements into lower level subsidiary legislation (e.g. orders by sectoral ministers) is not ensured through this mechanism. Overall, the integration of environmental issues into sectoral legislation is becoming stronger, largely due to the transposition of the EU legislation.

#### Energy

The Law on Energy Efficiency No. 124/2015 replaced its 2005 predecessor. It envisages establishment of the Agency for Energy Efficiency and the Energy Efficiency Fund. A national energy efficiency action plan shall determine the national energy efficiency target. The monitoring of the plan's implementation and the measures for energy saving will be carried out by the Agency. The Agency shall create and update the national database of energy, containing national data on final consumption of energy and the achievements related to energy saving. The Law envisages reporting requirements for energy consumers. Large energy consumers are obliged to

appoint an experienced energy manager and to undertake energy audits every three years. The audit obligation applies also to all natural persons and/or legal entities applying for programmes financed by the Energy Efficiency Fund. The Fund is to offer financial support for performance of investments to improve energy efficiency. The decision on the establishment of the new agency was approved in December 2016 (DCM No. 852 dated 07.12.2016). As of early 2017, the Fund is not yet established.

The Law on Energy Performance of Buildings No. 116/2016 provides for the energy performance certification of buildings and includes the minimum requirements for the energy performance of buildings. The methodology for calculating the energy performance of buildings is to be developed by the Ministry of Infrastructure and Energy.

In February 2017, the new Law on Promotion of the Use of Energy from Renewable Sources No. 7/2017 was adopted in place of a 2013 Law. The 2013 Law was not compliant with the renewable energy acquis, e.g. with reference to the system for certifying energy produced from renewable sources based on guarantees of origin. The draft of the new Law was challenged by the operators of small HPPs in the country, as it changes the regulatory regime and support scheme for small HPPs. At the centre of the dispute was the methodology of calculating the support schemes for existing producers. A decision on support schemes is still to be adopted in furtherance of the new Law. The new Law introduces a specific form of feed-in tariff called "contract for difference". The contract for difference is a sliding feed-in premium system, meaning that renewable energy producers will sell the electricity in the market and receive the variable difference between the auction price and the electricity market price (reference price) as a support measure. The Law also provides for a guarantee of transmission and distribution of electricity from renewable energy sources (RES) and priority access to the transmission and distribution grids. The main concern is whether the subsidiary legislation to be developed for the implementation of the new Law will promote the development of wind energy, solar energy, biomass and geothermal resources, which had so far been "left outside" compared with hydropower.

#### Transport

The Law on the Transport of Dangerous Goods No. 118/2012 provides for the legal framework to improve the safety of dangerous goods transportation by road and rail.

Road safety is regulated by two guidelines issued by the then Minister of Public Works and Transport (Guideline No. 2 of 11.02.2010 "On technical inspection of road vehicles" and Guideline No. 9 of 03.07.2012 "On audit and inspection of road safety"). As acknowledged by the 2016 National Transport Strategy and Action Plan for the period 2016–2020, to date the Government has primarily focused on enforcing road safety laws and regulations rather than giving attention to incorporating safety standards into road design and construction.

A new law on biofuels is in preparation to replace the Law on the Production, Transportation and Trade of Biofuels and Other Renewable Fuels, for Transport, No. 9876/2008 and to enable the country to achieve one of the policy objectives of the 2016 National Action Plan on Renewable Energies for the period 2015–2020, namely, to increase the share of biofuels and other fuels from RES to 10 per cent of total fuel consumption in the transport sector by 2020.

#### Agriculture

The Law on the Use of Fertilizers for Plants No. 10390/2011 lays down rules on fertilizer evaluation, categorization, production monitoring, packaging, labelling, transport, storage and trading. The legal framework for organic farming is provided by the Law on Organic Production, Labelling of Organic Products and Their Control No. 106/2016, which replaced the Law on the Production, Processing, Certification and Marketing of "Bio" Products No.

9199/2004. Detailed rules for organic plant production and organic livestock production are still to be developed. The Law on Plant Genetic Material No. 10416/2011 lays down the rules intended for guaranteeing the quality of the plant genetic material used for agricultural production, and environmental and consumer protection. DCM No. 127 dated 11.02.2015 "On requirements for the use of sewage sludge in agriculture" aims to prevent harmful effects on soil, vegetation, animals and humans from the use of sewage sludge in agriculture.

#### Fisheries

The Law on Fisheries No. 64/2012 and the Law on Aquaculture No. 103/2016 are supplemented by subsidiary legislation, including regarding inspection (DCM No. 407 dated 08.05.2013), sustainable exploitation of fishery resources in the Mediterranean Sea (DCM No. 402 dated 08.05.2013) and fish catch certification (DCM No. 302 dated 10.04.2013). The current priorities include the administrative strengthening of fisheries administration, including inspection and control services, as well as fishery data collection.

#### Tourism

The Law on Tourism No. 93/2015, replacing the 2007 Law, aims to increase the competitiveness of the tourism sector. It enables the provision of state-owned land to large investors through lease contracts for a symbolic price of €1.

**Photo 1: Tourism infrastructure**



The novelties of the Law also include the creation of a national system for the classification of accommodation facilities in touristic areas and standardization of tourism services. The Law provides for the establishment of local tourism development committees. It requires that tourism development planning takes into consideration the necessary infrastructure for water, sanitation and power supply. The practical implementation of these provisions is particularly important, since, until recently, the rapid development of tourism facilities on the coast had not been accompanied by simultaneous developments in water supply and sewerage and wastewater infrastructure, therefore resulting in environmental pressures.

### Forestry

The key law for the forestry sector is the Law on Forests and the Forestry Service No. 9385/2005. This Law now includes the legal obligation of municipalities to establish structures for the management of the forest fund (which had not been implemented by five municipalities as of early 2017). No forest certification is in place.

In line with the Law on the Moratorium in Forests No. 5/2016, the criteria and rules of forest exploitation and sale of timber and other forestry and non-forestry products (DCM No. 438 dated 08.06.2016) were approved to regulate the sale of timber to satisfy the public demand for fuelwood. DCM No. 215 dated 16.03.2016 created a Green Guard task force, which brings together representatives of the State Police, Military Police, environmental inspectors, forestry inspectors and tax investigation authorities to enforce the moratorium.

### Other

According to the Law on Licences, Authorizations and Permits No. 10081/2009, the National Licensing Centre acts as a so-called one-stop-shop for issuing permits and licences. The Law provides for tacit approval (silent consent) as one of the principles governing the licensing, authorization and permitting process. The Law on Concessions and Public–Private Partnership No. 125/2013 foresees, for the first time, rules on public–private partnerships.

The Law on Strategic Investments No. 55/2015 provides for preferential treatment of investors who have received the status of strategic investor. Such status can be obtained by companies intending to invest amounts above certain thresholds in the energy, mining, transport, urban waste, tourism, agriculture and fisheries sectors (e.g. in the energy sector the

investment must be at least €30 million). Strategic investors are entitled to preferential treatment in obtaining licences, permits and authorizations, and in cases when expropriation of privately owned real estate is needed in the public interest. The minister responsible for environmental issues is part of the Strategic Investment Committee tasked to review applications for this status.

### *Towards a Regulatory Impact Assessment*

The elements of the regulatory impact assessment (RIA) system are present in the law-making process. Two documents – an explanatory memorandum and a budgetary assessment – are to be developed for all draft laws. Their content is prescribed by the legislation (DCM No. 584 dated 28.08.2003). The system is further enhanced by the public information and consultation requirements as part of the law drafting process. However, the current system is criticized for its primary focus on financial implications and insufficient attention to social, environmental, economic and other issues, as well as non-inclusion of monitoring and evaluation as part of the cycle.

Efforts to expand this system into a fully fledged RIA were applied in the period 2009–2014 in the framework of the World Bank's Business Environment Reform and Institutional Strengthening (BERIS) project. Several training programmes and three pilot RIAs were conducted and new legislation to support the introduction of a more comprehensive RIA methodology was developed. In 2014, the final report on the BERIS project proposed to the Government the adoption of a more simple method, so-called "RIA light", which could be completed in several stages. No further progress has been made, however.

## **1.2 Policy framework**

### *Planning system*

The Integrated Planning System was introduced in 2005. The key processes that make up the Integrated Planning System are: the National Strategy for Development and Integration (NSDI), Medium-Term Budget Programme (MTBP), Government Programme, European Integration and Foreign Assistance.

Albania has no national strategy for sustainable development as such. The NSDI is considered to be de facto the instrument of planning for sustainable development, coordinating the objectives of development and those of integration into the EU. The

NSDI is prepared along with sectoral (e.g. transport, agriculture) and cross-cutting (e.g. environment, decentralization and local governance) strategies. Every sectoral or cross-cutting national strategy should feed into the NSDI and should be in line with the NSDI priorities.

The development of the NSDI for the period 2013–2020 (NSDI-II) was commissioned by Order of the Prime Minister No. 12 dated 02.02.2012 describing the methodology, phases and responsibilities in the drafting process. The development of the national sectoral and cross-cutting strategies for the period 2013–2020, as well as other strategic sectoral documents, in the framework of preparation of the NSDI-II, was also commissioned by the Order of the Prime Minister (No. 93 dated 07.08.2012). It defined the list of sectoral and cross-cutting strategies to be developed, the lead ministries and the methodology. There are rules in place for monitoring the implementation of the sectoral and cross-cutting strategies (Order of the Prime Minister No. 139 dated 01.07.2010).

In general, the rules with regards to the planning system are followed. However, there is a backlog in the adoption of strategic documents; some delayed documents, when finally adopted, include outdated information; the adoption of action plans on the basis of strategies is often significantly delayed; the regular preparation of implementation reports for sectoral and cross-cutting strategies is an issue; the need for some sectoral documents can be questioned; and the system for costing the strategic documents is still at a basic level. Another issue is that, until 2013, the Government maintained a website with detailed information on the Integrated Planning System, NSDIs, sectoral and cross-cutting strategies and their implementation reports, but this website is no longer updated. The Support for Improvement in Governance and Management (SIGMA) Programme, a joint initiative of the Organisation for Economic Co-operation and Development (OECD) and EU, is now working with the Government to strengthen the public administration and planning system.

#### First National Strategy for Development and Integration

The implementation of the first NSDI (NSDI-I), approved in 2008 for the period 2007–2013, was extended to 2014. Progress reports for the NSDI-I were regularly prepared and are publicly available, together with reports on some sectoral or cross-cutting strategies. In the environmental area, the 2012 NSDI-I progress report notes progress in strengthening the

regulatory framework and better linking sectoral policies on environmental issues.

The NSDI-II points out the lessons learned through implementation of the NSDI-I. In particular, the NSDI-II acknowledges that the NSDI-I failed to sufficiently address the aspect of capacities required for the implementation of policies and absorption of considerable financing. Also, measuring performance had proved to be a difficult and complex task, while the systems and procedures for monitoring and reporting on the NSDI-I and the sectoral strategies in many instances were not effective. It also acknowledges that, during the period 2007–2013, the approach followed in water-related sectors was fragmented, while efforts to ensure progress in the waste management sector have been insufficient to address the many challenges.

#### Second National Strategy for Development and Integration

The NSDI-II, initially drafted for the period 2013–2020, was approved for the period 2015–2020 in May 2016. The NSDI-II represents a synthesis of sectoral and cross-cutting strategies and other planning documents drafted in the period until the end of 2015.

The vision of the NSDI-II is based on the delivery of the main objective, which is integration with the EU, and four strategic policy pillars: (1) ensuring economic growth through macroeconomic and fiscal stability; (2) ensuring growth through increased competitiveness and innovation; (3) investing in human capital and social cohesion; and (4) ensuring growth through connectivity, the sustainable use of resources and territorial development. The six priorities of the Government are: (1) innovative and citizen-centred public services (good governance); (2) recovery and financial consolidation of the energy sector (energy); (3) fostering innovation and competitiveness (FDI and domestic investments); (4) integrated water management; (5) integrated land management; and (6) financial structural reform.

The strategic objectives of the NSDI-II on environmental protection are presented in box 1.1. Some other environment-related objectives are presented in sectoral chapters of the document, especially on agriculture and energy. It is regrettable, however, that the NSDI-II does not include a single quantitative target related to the environment. Such targets existed for most of the strategic objectives in the draft versions of the NSDI-II (e.g. to reduce hydrochlorofluorocarbons (HCFCs) by 40 per cent or to reduce illegal logging by 40 per cent, by 2020). However, they did not remain in the final version.

**Box 1.1: Strategic objectives on environmental protection in the NSDI-II****1. Achieving measurable results in air quality by 2020 through:**

- 1.1 Reducing pollution levels in urban areas;
- 1.2 Reducing the impact of air pollution on human health.

**2. Reaction towards climate change and the contribution to protect the ozone layer by 2020 through:**

- 2.1 Reducing greenhouse gas emissions, compared to a baseline scenario for reduction of CO<sub>2</sub> emissions, by 2030;
- 2.2 Reducing the amount of HCFCs.

**3. Intensifying and strengthening nature protection by:**

- 3.1 Increased surfaces of protected areas through growth and integrated management of protected areas;
- 3.2 Establishment of Natura 2000 ecological network;
- 3.3 Ensuring conservation status of endangered/threatened species and habitats.

**4. Strengthened management and conservation of forestry and pasture resources through:**

- 4.1 Reduction of illegal logging in forests by 2020;
- 4.2 Formulation of management plans for all forestry economies in the country;
- 4.3 Rehabilitation of degraded areas.

**5. Strengthened water resources management and preservation through:**

- 5.1 Adoption of the National Strategy on Integrated Water Resources Management;
- 5.2 Establishment of a national cadastre of water resources;
- 5.3 Introduction of a water resource inventory;
- 5.4 Formulation and implementation of water basin management plans;
- 5.5 Meeting water quality levels;
- 5.6 Rehabilitation of damaged riverbeds;
- 5.7 Aligning national legislation with EU legislation.

Source: NSDI-II, 2016.

National Plan of European Integration

The National Plan of European Integration serves as a planning tool for measures to meet the obligations arising from the Stabilisation and Association Agreement. It includes medium- and long-term measures, extending to 2020, in order to reach full legal approximation of the national legislation with the EU acquis and align all its sectors with standards set by the acquis chapters, including Chapter 27 - Environment. The Plan is revised annually.

*Strategic documents on environment*

The Law on Environmental Protection requires the preparation by the ministry responsible for environmental issues and adoption by the Council of Ministers of the national environmental strategy and plan, as well as the national environmental strategies and plans for each environmental component.

Draft environmental cross-cutting strategy for the period 2015–2020

The new environmental cross-cutting strategy for the period 2015–2020 has been drafted to replace the 2007 Environmental Cross-cutting Strategy. However, as of early 2017, it has not been adopted. The delay has been caused by a combination of factors, including difficulties with the costing of measures in the draft document and the development and/or adoption in the

meantime of national strategic documents for various environmental components, which reduced the urgency of the adoption of the cross-cutting strategy.

The draft sets out policy goals and medium- and long-term objectives in the areas of air quality, noise, chemicals, climate change, nature protection, forestry and pasture, and water management, and includes a list of indicators for all objectives. In the current circumstances, when many of these issues are covered by recently adopted or soon-to-be-adopted policy documents, the main argument in favour of the adoption of the new environmental cross-cutting strategy would be the need for a visionary umbrella policy framework for environmental protection. In order to serve as such, the document would need to cover, in addition, the issues that are not covered by the strategies on environmental components, for example, horizontal issues (SEA, EIA, etc.), priorities of environmental compliance assurance and enforcement, environmental education (EE) and education for sustainable development (ESD), and integration of environmental considerations into sectoral policies. However, as of early 2017, these issues are not covered by the draft.

Air protection

The National Strategy for Air Quality was adopted in 2014. It defines national air quality objectives for each air pollutant. The Strategy identifies policy objectives

for the monitoring of air quality and for sectors contributing to air pollution (road transport, industrial sources, agriculture and households). It includes an assessment of financing required for the implementation of these measures, which was prepared taking into account the experiences of EU countries. The draft national air quality management plan (AQMP) is expected to be approved in 2017. The draft attaches high priority to such measures as management and control of traffic flows, promotion of the use of public transport, revision of permit conditions for existing installations, modernization and upgrading of the monitoring network and a public information campaign on the health and environmental risks associated with backyard burning. Further work will focus on the drafting of local plans.

### Climate change

The work to develop a national strategy on climate change and a corresponding action plan is ongoing with support from the IBECA project.

### Waste management

The National Waste Management Strategy and Action Plan, approved in 2011, provide for the rehabilitation of industrial contaminated sites, monitoring and closure of landfills that do not comply with the requirements, increased recycling of waste, transposition of relevant EU directives, improvement of legislation including the adoption of a new law on waste management and subsidiary legislation, gradual introduction of the integrated pollution prevention and control legislation, establishment of systems for hazardous waste management and prevention of hazardous waste generation through the use of economic instruments. The main progress that has been made on implementation of the Strategy is the significant expansion and improvement of the legal framework in the area. However, there is insufficient progress on the rehabilitation of industrial contaminated sites, monitoring and closure of landfills that do not comply with the requirements and increasing the recycling of waste. As of early 2017, the Strategy is under revision in order to take into account the new territorial and administrative reform and to review the targets, which appeared to be too ambitious.

### Water

The strategic framework on water management includes the National Strategy of Water Supply and Sewerage for the period 2011–2017, which aims at expanding and improving the quality of water supply and sewerage services, orienting the water utilities

towards principles of full cost recovery. The Regulatory Authority of the Water Supply and Waste Water Disposal and Treatment Sector publishes annual reports (e.g. 2015 Report on the Performance of the Water Supply and Sewerage Companies) that provide a comprehensive picture of the implementation of the Strategy. The river basin management plan (RBMP) for the Mati River basin was prepared in 2010. As of early 2017, in accordance with the Law on Integrated Water Resources Management, RBMPs are being developed for the Drini-Buna, Semani and Shkumbini River basins.

Two strategic documents on water management are under preparation. The draft national strategy for integrated water resources management, designed for the period 2017–2027, has been developed by early 2017 under the leadership of the then Ministry of Agriculture, Rural Development and Water Administration. The second draft document – the national sector programme for water, also for the period 2017–2027 – is aimed to cover the entire water sector (including water supply and sanitation, water for agriculture, water for industry, hydropower development and dam safety) and is more oriented towards defining specific measures.

The 2012 National Emergency Plan for Responding to Marine Pollution defines the roles and responsibilities of various organizations involved in emergency response, depending on the level of accident. It includes training requirements for personnel engaged in response and clear-up operations, as well as requirements for public communication in the event of emergencies.

### Environmental noise

The 2011 National Action Plan for the Management of Environmental Noise evaluates the impact of noise pollution from transport (road, air, rail), social service activities (nightclubs and discos, bars, restaurants) and equipment and machinery (metal processing, cutting metals, saws, generators, electric motors, compressors, pneumatic hammers, etc.) and proposes relevant measures. In particular, it envisages preparation of national noise mapping, study and assessment of the state of road signs, and evaluation of areas with strict noise requirements (hospitals, schools, nursing homes, kindergartens, nurseries, etc.) with a view to proposing measures to minimize noise. It also provides for development of local environmental noise plans for the 12 regions and the establishment and operation of the monitoring system of environmental noise. The draft environmental cross-cutting strategy for 2015–2020 includes an objective to reduce noise pollution by 30 per cent in

major urban areas, compared with 2014 (average values of noise during the day shall be reduced from 70 dB (A) to 56 dB (A) and average values of noise during the night shall be reduced from 55 dB (A) to 45 dB (A)).

### Biodiversity

The 2016 Document of Strategic Policies for Protection of Biodiversity for the period 2016–2020 is in fact the country's new National Biodiversity Strategy and Action Plan (NBSAP). It lists the following key achievements in implementation of the 2000 Strategy and Action Plan on Biodiversity:

- Enhancement of the legal framework;
- Increase in the size of protected areas (since 2005, the number of protected areas has more than doubled, and their combined area has increased from 5 per cent to 16.61 per cent of the territory of the country, including coastal territories);
- Adoption of action plans for the protection of the brown bear (*Ursus arctos*), Eurasian lynx (*Lynx lynx*), pygmy cormorant (*Phalacrocorax pygmeus*), cetacea, neptune grass (*Posidonia oceanica*) and sea turtle;
- Drafting of an IPA framework project (2013) for kick-starting the process of Natura 2000 in the country;
- Regular reporting to the Convention on Biological Diversity (CBD) and its Cartagena Protocol on Biosafety.

The 2016 NBSAP envisages the expansion of the system of protected areas by increasing surfaces of protected areas to 17 per cent of the land surface and internal water areas of the country and to 6 per cent of the coastal and marine areas, and names concrete territories to be proclaimed as protected areas. It also envisages the development of management plans for five protected areas and implementation of the 12 plans already adopted. Various measures are envisaged for the protection and conservation of habitats, promoting natural regeneration and regeneration with autochthonous species of forest trees, and conservation of marine and freshwater habitats. Particular emphasis is placed on monitoring, education and awareness-raising.

### *Sectoral development with a possible impact on the environment*

The integration of environmental requirements into sectoral strategic documents has progressed in all sectors, although the degree of such integration varies. Sometimes, environment-related provisions are part of the vision or objectives of a sectoral document but not

present in measures or actions envisaged by the document. The use of SEA is expected to lead to stronger integration of environmental requirements in sectoral policies.

### Energy

The National Action Plan on Renewable Energies for the period 2015–2020 was approved in January 2016. By 2020, Albania aims to generate 38 per cent of overall consumption from RES, compared with 31.2 per cent in 2009. The plan includes measures to promote the use of RES.

The first National Energy Efficiency Action Plan was approved in 2011 with a time frame of 2011–2018. The second national energy efficiency action plan is under preparation. The first Plan sets up targets for energy efficiency: energy saving of 9 per cent by 2018 compared with average consumption in 2004–2008, or a reduction in energy consumption of 168 ktoe. This target should be achieved by means of sector-specific measures in the industry, housing and transport sectors and cross-cutting measures. The public sector is expected to implement stricter energy efficiency standards in its buildings (more stringent standards than for the private sector). Other measures for the public sector relate to the promotion of energy performance contracting and procurement for public buildings and municipal lighting. Awareness-raising campaigns, education and training of energy auditors and energy certification of buildings are among cross-cutting measures.

The draft of the national energy strategy, originally meant for the period 2013–2020, is not yet approved.

### Transport

Until 2016, the main policy framework for the transport sector has been the First Five-year Review of Albanian National Transport, which was released in 2010 and has been updated annually since then.

The strategic priorities of the 2016 National Transport Strategy and Action Plan for the period 2016–2020 include developing co-modal solutions by optimization of individual transport modes and the focus on energy-efficient and environmentally friendly transport modes, introducing measures for reducing energy consumption and costs per unit of transport service and increasing the use of intelligent transport systems. The desired environmental outcomes include increased use of more sustainable materials and reduction of the contribution of transport to GHG emissions, adaptation to the impacts of climate change and reduction of the contribution of

transport to air pollution. The document lists strategic priorities and actions for all transport modes (road, rail, maritime, air, intermodal and combined).

The vision of the 2011 National Strategy on Road Safety 2011–2020 is achieving a level of road safety and creating positive trends in reducing the number of accidents based on the experience of the EU countries. The objective of the Strategy is the reduction by 50 per cent of accidents with deaths and injuries by 2020, compared with 2009.

A sustainable transport plan is under development with support from the European Bank for Reconstruction and Development (EBRD). It focuses on road infrastructure optimization measures, traffic demand management and behavioural demand management measures, land-use strategy and logistics/transport efficiency, and vehicle fleet renewal and management.

#### Agriculture and forestry

In the area of agriculture, the NSDI-II includes a strategic objective of ensuring sustainable management of natural resources. It provides for better management of forests and water, and the application of agricultural production methods for environmental protection. It also makes references to mitigation of climate change in the agricultural sector.

The Agriculture and Food Sector Strategy for the period 2007–2013 emphasized the need to increase the efficiency of the use of water in irrigation but provided no targets and indicators in this respect.

The 2014 Intersectoral Strategy for Agriculture and Rural Development (ISARD), designed for the period 2014–2020, includes specific objectives for restoring, preserving and enhancing ecosystems dependent on agriculture and forestry. Support for the introduction of environmentally friendly agricultural production methods (organic farming) is among the envisaged measures. Other measures focus on the extension of forest resources. The Strategy also provides for fostering innovation and knowledge transfer to the agricultural sector and rural areas by developing advisory services and agricultural technology transfer centres to support farmers and aquaculture producers. The Strategy recognizes that organic farming is in the initial stage of development. Certification of organic producers started for both medicinal and aromatic plants and cultivated plants but there is limited awareness of and support for using organic inputs, which is indispensable for the development of the organic sector.

The draft of the strategy for irrigation, drainage and flood protection has been developed in 2015 but as of early 2017 is not approved. It is planned to develop a new 10-year strategy on forests and pastures in place of that which covered the period 2004–2014.

#### Industry and mining

The 2014 Business and Investment Development Strategy for the period 2014–2020, which replaced the Business and Investment Development Strategy 2007–2013, lists among its principles resource efficiency and clean production. Its strategic objectives include increasing the range of ecological products that are based on the effective use of resources. One of the main directions of the small and medium-sized enterprises (SME) development policy is promotion of "green SME" models. As Albania seeks to increase greenfield investments, the Strategy aims to improve location selection procedures (identification and acquisition of land, registration of land ownership, building permits, utility connections, inspections) and to ease the policy of long-term lease of public land.

According to the 2011 Mining Strategy for the period 2010–2025, one of the three directions for sustainable development of the mining industry is the development of mining activities friendly to the environment, through the implementation of mitigation measures, the process of environmental rehabilitation and the strengthening of supervision and monitoring to prevent and minimize environmental damage. The action plan provides for such measures as monitoring the rehabilitation of mining areas, completing the closure of ineffective mines, the realization of control and continuous supervision of the performance of mining facilities in accordance with mining legislation by the mining institutions, and technical review of documentation for obtaining mineral rights by the ministry responsible for environmental issues.

#### Tourism

The 2007 Sector Strategy on Tourism for the period 2007–2013 focused on positioning Albania in the tourism market and creating the necessary infrastructure and institutional support for tourism development. The draft Strategy for Tourism Development for the period 2015–2020 was developed but as of early 2017 is not approved. The draft focuses on the development of selected strategic types of tourism, such as coastal tourism, cultural tourism, and nature and rural tourism (including mountain tourism, tourism in protected areas, cycling



tourism, and tourism in rural destinations and on traditional farms).

### Housing

The 2016 Social Housing Strategy for the period 2016–2025, accompanied by an action plan, aims to provide low- and middle-income households that cannot afford to buy a house on the open market with available, accessible, affordable and quality housing solutions. The need for energy efficiency in social housing is recognized. The Strategy envisages that work will focus on improving the living conditions of the Roma and Egyptian communities and that targeted housing will be rehabilitated through the implementation of the energy efficiency projects.

### Territorial planning

In 2013 the Government initiated the process of drafting three national spatial planning documents: the General National Territorial Plan, the Integrated Cross-sectoral Plan for the Coast and the Integrated Cross-sectoral Plan for the Economic Zone Tirana–Durrës. These documents were approved by the National Territorial Council in June 2016. The General National Territorial Plan makes references to the EU Water Framework Directive (WFD). Protection of the natural areas is also recognized as an important factor. Reference is also made to Natura 2000 and the European Green Belt. The Integrated Cross-sectoral Plan for the Coast makes a reference to the principles of integrated coastal zone management and to the Barcelona and Ramsar Conventions. The Plan is criticized for having no direct references to marine spatial planning.

### Health

Albania does not have a standalone public health strategy. A national health strategy for the period 2016–2020 has been drafted but as of early 2017 is not approved. The draft of December 2016 emphasizes cross-sectoral cooperation for health.

The 2011 Strategy for Health System Adaptation to Climate Change aims to strengthen health services and intersectoral cooperation in order to improve response to the impacts of climate change, as well as to encourage healthy, energy-efficient behaviours and provide information on opportunities for mitigation and adaptation, with a particular focus on vulnerable groups. The Strategy includes an action plan with timelines, responsibilities and costs. As of early 2017, no implementation report has been produced.

### Education

The vision of the 2016 Strategy for Development of Pre-University Education for the period 2014–2020 includes creating conditions and opportunities for students to develop responsible attitudes towards the environment. However, no specific measures and targets are envisaged in this respect. Although the ministry responsible for environmental issues is listed among institutions in charge of implementation, it has no assigned tasks under the Strategy.

The 2015 National Programme for Environmental Education in High Schools for the period 2015–2017, including an action plan, was approved by the then Ministers of Environment and of Education and Sports. The Programme refers to high schools only. It provides for the training of teachers on environmental issues and outlines steps to include environmental issues in the curriculum.

### *Green economy policy framework*

Green economy is not an expressed priority of the Government, although various elements of a green economy approach are present in legal and policy documents. Prior to the United Nations Conference on Sustainable Development (Rio+20) in 2012, a stocktaking report, *A New Path for the Sustainable Development: A Green Economy for Albania*, was prepared with the support of the United Nations Department of Economic and Social Affairs and United Nations Development Programme (UNDP). However, the report does not appear to have had an impact on policy development.

### *Strategic documents at regional and local level*

Prior to the administrative-territorial reform of 2014, in the period 2011–2013 only about one tenth of 373 municipalities and communes managed to draft their general local territorial plans. Currently, all 61 local government units are engaged in the process of developing the general local territorial plans. These plans are to serve as a strategic development framework for a municipality. The plans must include an inventory of municipal assets, vision for the future, and objectives and actions to achieve the vision. The Law on Environmental Protection No. 10431/2011 requires that the general local territorial plans include measures for the protection of land, water, sea, air, forests, climate, ecosystems and natural landscapes, waste management measures, and measures for protection against noise, vibrations, unpleasant odours and fires. All general local territorial plans are subject to SEA.

According to the Law on Environmental Protection, local government units are required to have local environmental action plans. Prior to 2011, several local government units, assisted and supported by non-governmental organizations (NGOs) and international organizations, have designed and approved their local environmental action plans. However, few municipalities currently have such plans.

The Law on Integrated Waste Management No. 10463/2011 requires the development of regional and local integrated waste management plans by local government units or their groups. Regional waste management plans were developed for all 12 regions but are not yet adopted. Local waste management plans are developed but not yet adopted for Lezhë, Pukë, Malësi e Madhe and Shijak, and are still under preparation for Shkodër and Dibra.

The Law on Protection of Ambient Air Quality No. 162/2014 requires the preparation of air quality plans (in case exceedances of the limit values or intended values of air pollutants occur) or short-term action plans (when there is a risk of exceedances for one or more of the alert thresholds as defined in DCM No. 352 dated 29.04.2015) for zones or agglomerations. To date, only Tirana Municipality has developed an air quality plan, in 2012, but this plan was not adopted.

### 1.3 Strategic environmental assessment

The legal framework for SEA has been enhanced with the adoption of the Law on Strategic Environmental Assessment No. 91/2013. SEA procedure for both national and local-level plans and programmes is conducted at the national level, and includes the following stages:

- Notification of the Ministry of Tourism and Environment by the proposing authority;
- Consultation with stakeholders on the issues that shall be addressed in the SEA report (scoping);
- Drafting of and public consultations on the preliminary SEA report;
- Drafting of the final SEA report;
- Review of the final SEA report and issuance of the Minister's declaration (i.e. official position of the Ministry);
- Decision of the proposing authority for adoption of the plan or programme;
- Monitoring of effects of the plan or programme on the environment, and reporting.

A detailed list of plans and programmes that are subject to SEA has been approved, to ensure the consistent application of SEA (DCM No. 507 dated 10.06.2015). While the 2013 Law refers to "plans and

programmes" only, DCM No. 507 extends SEA requirements to "strategies, plans, programmes and other planning documents". The enumeration of sectors in DCM No. 507 is adapted to the national economy.

Subsidiary legislation has been adopted to establish rules for consultation with stakeholders and public hearings during the SEA process (DCM No. 219 dated 11.03.2015) and procedures for SEA in a transboundary context (DCM No. 620 dated 07.07.2015). The national methodology on SEA still has to be approved.

#### *Procedures and capacity*

Prior to the institutional restructuring of September 2017, in the former Ministry of Environment, four staff dealt with both EIA and SEA issues. In the new Ministry of Tourism and Environment, established as a result of the restructuring, three staff deal with both EIA and SEA issues. Other staff in the Ministry are involved in evaluation of final SEA reports as needed. The evaluation of the final SEA report as a step towards the preparation of the Minister's declaration is placed entirely on the shoulders of staff in the Ministry, since the Law does not provide an opportunity to establish an evaluation committee or hire independent experts when expertise in a particular field is required.

Overall, there has been an increase in the number of SEAs since the adoption of the 2013 Law. However, since the Ministry does not keep a consolidated database or register of SEAs, it is not possible to gauge the number of SEAs conducted by year. From May to December 2016, 26 SEA procedures were conducted. Most SEA procedures conducted in 2015–2016 related to municipal development plans.

Observance of time frames stipulated by the Law has increasingly been a challenge for staff dealing with SEA issues in the Ministry. Other challenges include difficulties with evaluation of the environmental effects of the plan or programme, especially with regard to cumulative effects. Also, due to capacity issues, the Ministry's staff is often not able to attend the consultations with stakeholders at the scoping stage and public hearings on the preliminary SEA report. The quality of SEA reports is also an issue, even though the legal requirement is that the reports be prepared by natural and legal entities, certified by the Ministry and licensed for EIA by the National Licensing Centre.

The key challenge, however, is to ensure proper application of the SEA instrument by key sectors of

the economy. As the SEA instrument is rather new, the proposing authorities often do not follow all the requirements for SEA procedure, e.g. they tend to skip consultations with stakeholders at the scoping stage. Therefore, the Ministry of Tourism and Environment has to make extra efforts to ensure that SEA procedures are followed by proposing authorities.

Moreover, there have been cases when strategic documents have been adopted without an SEA. For example, no SEA has been done for the 2014 Intersectoral Strategy for Agriculture and Rural Development for the period 2014–2020 (ISARD), 2016 National Action Plan on Renewable Energies for the period 2015–2020, and 2016 Social Housing Strategy for the period 2016–2025. As of early 2017, no SEA was initiated for the drafts of the national energy strategy for the period 2013–2020 and the strategy for tourism development for the period 2015–2020, both not yet adopted. The SEA was done for the 2016 National Transport Strategy and Action Plan for the period 2016–2020, but the Minister's declaration on SEA was issued five days after the adoption of this document by the Council of Ministers. In many cases, SEA procedures are followed as part of donor-funded projects, which support the development of a strategic document, and it is donors who insist on the observance of SEA requirements.

#### *Public participation*

The opportunities for public participation in SEA are in place. Consultations with stakeholders and the public are required both at the stage of scoping and following the preparation of the preliminary SEA report. The Ministry of Tourism and Environment may request the proposing authority to organize public hearings.

Prior to the institutional restructuring of September 2017, the minutes of some public hearings organized as part of SEA procedures in 2015 and 2016 were available on the website of the then Ministry of Environment. From mid-2016, that Ministry started publishing the Minister's declarations on its website, as required by the 2013 Law. In early 2017, the Ministry was not aware of any administrative appeals by stakeholders of the Minister's declarations issued as part of the SEA process.

#### *Monitoring and follow-up*

Following the adoption of the plan or programme, the proposing authority, which implements or supervises the implementation of the plan or programme, is required to submit to the Ministry of Tourism and

Environment an annual report on measures taken to protect the environment during the time period of the plan or programme. In fact, no such reports have been submitted. This prevents proper follow-up (e.g. taking preventive measures or even changing the plan or programme) in the event that the plan or programme is not implemented in accordance with the approved terms or in the event that the effects on environment and health exceed those expected.

#### *Transboundary context*

Under the Protocol on SEA Albania has reported seven transboundary SEA procedures initiated in 2013–2015. These included, for example, the SEA for the draft energy development strategy for the period until 2030 of Montenegro, and the SEA for the proposed amendments to the National Park Management Plan "Galichica" for the period 2011–2020 of the former Yugoslav Republic of Macedonia. Albania also has experience as a party of origin, for example for the SEA for the Gas Master Plan Project of Albania conducted in 2016.

It is the ministry responsible for environmental issues that announces to the proposing authority that the proposed plan or programme should be subject to the SEA procedure in a transboundary context. DCM No. 620 dated 07.07.2015 defines in detail the procedures to be followed for SEA in a transboundary context initiated by Albania. It establishes the format of notification and procedures for consultations with the affected party and for public participation. It also defines the mandatory information to be included in the final SEA report following the SEA procedure in a transboundary context. All correspondence with the affected party shall be in English, and the translation costs are to be covered by the proposing authority. Monitoring of transboundary environmental impacts from an implemented plan or programme can take place upon request from an affected party.

### **1.4 Sustainable Development Goals**

#### *Millennium Development Goals*

The Government has been regularly monitoring progress towards the achievement of the Millennium Development Goals (MDGs). A baseline report was prepared in 2002. A revision of national MDG targets was carried out in 2009. With the support of the United Nations Country Team, the Government prepared implementation reports in 2005, 2010 and 2015 (box 1.2). Also, the NSDI-II includes a short assessment of MDGs implementation.

**Box 1.2. MDGs implementation**

According to the 2015 MDG implementation report for 2000–2015:

- Albania has virtually fulfilled the expectations for reducing child mortality (MDG 4), improving maternal health (MDG 5) and combating HIV/AIDS and tuberculosis (MDG 6);
- Apart from the target concerning access to safe drinking water, Albania has, overall, reached all the environment-related targets under MDG 7;
- Mixed results have been obtained in eradicating extreme poverty and reducing the risk of social exclusion (MDG 1), ensuring high quality basic universal education (MDG 2) and promoting gender equality and empowerment of women (MDG 3);
- Less progress has been achieved in addressing the challenges of developing a global partnership for development (MDG 8) and improving governance for all citizens and particularly for most disadvantaged groups (MDG 9).

The 2015 MDG implementation report for 2000–2015 includes information and official data supporting the above conclusions.

A slightly different assessment is contained in the NSDI-II, adopted in 2016: Albania reached five goals (health – MDG 5, education – MDG 2, infant mortality – MDG 4, poverty – MDG 1 and gender equality – MDG 3), and is close to achieving the other four. The assessment in the NSDI-II is not supported by any explanatory text, so it is not possible to verify or explain these differing conclusions.

### *Institutional set-up for coordination of SDGs implementation and monitoring*

The National Committee on SDGs established in May 2017 (Order of the Prime Minister No. 63 dated 12 May 2017) is a political-level body mandated to guide implementation of the SDGs in the country. The Committee includes governmental representatives, as well as representatives of civil society and academia.

Coordination of SDGs implementation and monitoring is done by the Department of Development and Good Governance (prior to the institutional restructuring of September 2017, the Department of Development Programming, Financing and Foreign Aid) in the Prime Minister's Office, through its Development and Good Governance Policies Unit (previously, the Policy Development and Strategic Planning Unit). The Department of Development and Good Governance serves as a technical secretariat of the National Committee on SDGs. Coordination of SDGs implementation and monitoring is additional to the other responsibilities of few staff dealing with the whole national strategic planning system in this Unit. For its activities, including those on the SDGs, the Department liaises with line ministries that have their coordinators for these purposes.

An informal United Nations–Institute of Statistics (INSTAT) Group has been established to advance the work on SDG indicators, in particular to identify data providers and data sources for SDG indicators, as well as data and methodological gaps. The draft Official Statistical Programme for the period 2017–2021 provides for an obligation on relevant institutions to collect and provide data for indicators included in the Programme.

The United Nations Country Team has been strongly supporting the activities related to the SDGs. The United Nations Resident Coordinator has appointed an SDG Focal Point who worked from 2016 to early 2017 in close cooperation with the Government and the United Nations agencies in the country. Later, the United Nations and the Government of Albania established a joint SDG task force to guide cooperation on SDGs implementation.

### *SDGs in the national policy framework*

Albania has progressed with nationalization of the SDGs. The important achievement is that the NSDI-II – the main visionary and planning document of the country – is explicitly aligned to the SDGs. The NSDI-II declares that the Government is committed to the implementation of the 2030 Agenda for Sustainable Development and that the SDGs are compatible with and complementary to Albania's strategic goals associated with European integration and national development. Its Annex 3 presents linkages between the SDGs and the main NSDI-II components. SDGs are being integrated in some sectoral documents under preparation, e.g. the draft national health strategy for the period 2016–2020.

In July 2016, a stocktaking exercise was carried out, using the United Nations Rapid Integrated Assessment tool, to assess the level of integration of all goals and targets into the NSDI-II and sectoral programmes. The analysis involved the assessment at the goal, target and indicator levels of the NSDI-II and over 50 other national strategies, plans and policy documents. It showed that, despite certain overlap, a substantial number of SDG targets and indicators are not covered by the current policy framework of the country. In 2015–2016, the country implemented a pilot project to develop and test SDG 16 targets and indicators.

In 2017, the Government, with the assistance of the United Nations, drafted a baseline report, collecting available data against the SDG indicators, and a national action plan on the SDGs.

### *Cross-cutting issues*

#### Vision for 2030 and measurable indicators

The current challenge for the process of nationalization of the SDGs is to propose the vision for 2030, since the current planning documents in the country have the horizon of 2020 or, in a few cases, 2025. The available sectoral policy documents and assessments do not include projections or vision for 2030. The challenge is also that the targets to be proposed for Albania need to be not only meaningful for the country but also measurable in the short term, to allow the monitoring of progress and to inform policymaking. As demonstrated by the stocktaking exercise in July 2016, only 12 of the 50 indicators in the NSDI-II and 14 additional indicators included in other national strategic documents are also part of the global SDGs indicators framework. While the intention is to maximize the utilization of indicators adopted at the global level, the vision is also to maximize the use of indicators that would be most relevant to Albania.

#### Aligning SDGs implementation and monitoring with the EU accession process

The EU accession is an overarching priority for the country and is already absorbing considerable efforts and resources. It is important that SDGs implementation is aligned as much as possible with the EU accession process, in terms of both content and process. Mechanisms established as part of the EU accession process, such as the integrated policy management groups (IPMGs) and the Interministerial Working Group for Chapter 27, can also be involved in SDGs implementation and monitoring.

#### Awareness

In early 2017, awareness of the SDGs within the then Ministry of Environment and the line ministries was insufficient. Government officials have heard about the 2030 Agenda for Sustainable Development but did not know what their institution was doing on the SDGs and how their work could contribute to their achievement. The United Nations Country Team organized several events for the general public, including in schools, to draw attention to the SDGs, and some awareness-raising events were organized by individual international partners. The 2015 corporate social responsibility (CSR) report of the Albanian

Association of Banks presents the CSR activities of its members in relation to each of the SDGs. Still, awareness of the SDGs among civil society, academia and the private sector is low.

### *Sustainable Development Goals and targets relevant to this chapter*

Albania's current position vis-à-vis target 17.14 is described in box 1.3.

## **1.5 Institutional framework**

### *Ministry of Tourism and Environment*

The ministry responsible for environmental issues existed as the Ministry of Environment (figure 1.1) until September 2017, when the institutional restructuring was implemented by the new Government, resulting in the creation of the Ministry of Tourism and Environment (figure 1.2).

The Ministry of Tourism and Environment is responsible for the development of policies and legislation on tourism and on a large number of environmental issues, including air quality, climate change, waste management, biodiversity, nature protection, sustainable management of forests and pastures, industrial pollution prevention and chemicals. The Ministry is also responsible for water monitoring. It coordinates the integration of environmental and climate change issues into agriculture, tourism, health, energy, transport, forestry and water policies.

Since 2011, other significant changes to the mandate of the ministry responsible for environmental issues included:

- In February 2015, the competences of the then Ministry of Environment in the field of sustainable use of water resources and protection of water quality were transferred to the then Ministry of Agriculture, Rural Development and Water Administration. From the institutional point of view, the Department of Water Resources Policy, which has been part of the General Directorate of Environmental Policies and Delivery of Priorities in the then Ministry of Environment, passed to the administration of the then Ministry of Agriculture, Rural Development and Water Administration, together with six river basin agencies and the State Water Inspectorate;
- In April 2014, the role of the then Ministry of Environment as technical secretariat to the National Water Council was abolished;



### Box 1.3: Target 17.14 of the 2030 Agenda for Sustainable Development

#### **Goal 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development** **Target 17.14: Enhance policy coherence for sustainable development**

This target covers one of the systemic issues for the achievement of SDGs. It addresses how the country works across policy sectors and coordinates them to achieve joint objectives of sustainable development, and the extent to which policies in various sectors are coherent and aligned with sustainable development. The global indicator for target 17.14 refers to the existence in the countries of mechanisms to enhance policy coherence for sustainable development.

If judged solely by this indicator in the ordinary meaning of its words, Albania does have the mechanisms to enhance policy coherence for sustainable development. Even though no national council for sustainable development is in place, the recently established IPMGs and various interministerial working groups serve as consultation and integration mechanisms aimed at increasing policy coherence. However, building such institutions to enable integrated approaches to decision-making and policymaking is one thing, while making them effective is another.

Policy coherence for sustainable development is the very purpose of the Integrated Planning System introduced in the country. The system is well designed, with clear rules in place, but it does not yet function smoothly, with delays occurring in the development and adoption of strategic planning documents and the lack of reporting on some strategic documents. The link between reporting and designing future policies on the basis of lessons learned in implementation of previous ones is not always present.

Future efforts to enhance policy coherence for sustainable development could therefore focus on: (i) ensuring the effectiveness of the IPMGs, to be demonstrated by the results they deliver; and (ii) improving the functioning of the Integrated Planning System, in particular the aspects of timely planning and delivery, reporting and transparency.

- In 2015, competences in the field of forest and pasture management were transferred from the central level to municipalities, although the then Ministry of Environment maintained competences on policy development in forestry. From the institutional point of view, this resulted in the dissolution of the 12 regional forestry directorates, and entrusting the Forest Cadastre and Municipal Forestry Sector in the then Ministry of Environment to assist municipalities with their new tasks.

With regard to the mandate and set-up of subordinated institutions of the ministry responsible for environmental issues, important changes included:

- Establishment in 2014 of the State Inspectorate of Environment and Forestry as a separate institution subordinated to the then Ministry of Environment. This allowed clear separation of permitting and inspection functions that have previously been closely related, especially at the local level;
- Operationalization, as of 2014, of the NEA, in line with the Law on Environmental Protection No. 10431/2011;
- Establishment in 2015 of NAPA.

In early 2017, the then Ministry of Environment (without subordinated institutions) had 104 staff, whereas, in 2011, 120 staff worked in the then

Ministry of Environment, Forests and Water Administration. The Ministry of Tourism and Environment, formed in September 2017, has 132 staff to cover tourism and environmental issues (Order of the Prime Minister No. 165 dated 05.10.2017).

Job descriptions for civil servant posts in the Ministry are in place. Terms and conditions of work and descriptions of the functions of each directorate, sector and unit were defined for the then Ministry of Environment in the Internal Rules for the Organization of the Ministry of Environment approved by the Minister's Order No. 105 dated 19.05.2016.

As of early 2017, the website of the then Ministry of Environment included a lot of information but was not systematically updated and was not straightforward to navigate. As of November 2017, no website of the Ministry of Tourism and Environment was operational.

#### National Environment Agency

In 2014, the former Environment and Forestry Agency was reorganized into the National Environment Agency (NEA). The NEA is a regulatory authority in the environmental sector and the main institution responsible for monitoring and reporting on the environment. Its core functions include to:

- Prepare environmental permits;
- Prepare the National Programme on Environmental Monitoring and monitor the state of the environment;
- Develop and publish the annual state of environment report (SoER);
- Establish and maintain the Environmental Information System;
- Establish and maintain the PRTR;
- Provide environmental information to the public;
- Provide information to the public related to the decision-making process on environmental matters;
- Ensure the implementation of the environmental liability principle for all operators;
- Manage the forests information system.

Twelve regional environmental agencies (REAs) are part of the NEA's structure (figure 1.3). The NEA (at central level) considers EIA applications, which are first received by the Ministry of Tourism and Environment and then forwarded to the NEA, and sets conditions for permits of types A and B. The REAs issue environmental permits of type C, maintain the registers of installations of type C and verify self-monitoring reports, which are to be submitted every six months by installations of type C. The REAs also provide their opinion on EIA applications for installations of types A and B. In the REAs, the vast majority of staff deal with permitting, and a smaller number of staff are tasked with providing opinion on EIAs and verification of self-monitoring reports.

In 2011, 60 people worked in the Environment and Forestry Agency. In 2014, 62 staff worked in the NEA and 104 staff were employed by the REAs. Since May 2016, there are 58 staff in the NEA and 97 in the REAs.

In accordance with the Law on Environmental Protection, the NEA is financed from the state budget and its own resources. In practice, "own resources" are not in place, but the state budget funds are complemented with donor funding (grants). The operational budget (salaries and social security payments not included) of the NEA in 2015 was €228,332. The operational budget of the REAs is rather low, e.g. for Elbasan REA it was €1,850 in 2016.

The NEA's website is well organized. Each REA has a web page on the NEA website but there is no information on those web pages.

### State Inspectorate of Environment, Forestry and Water

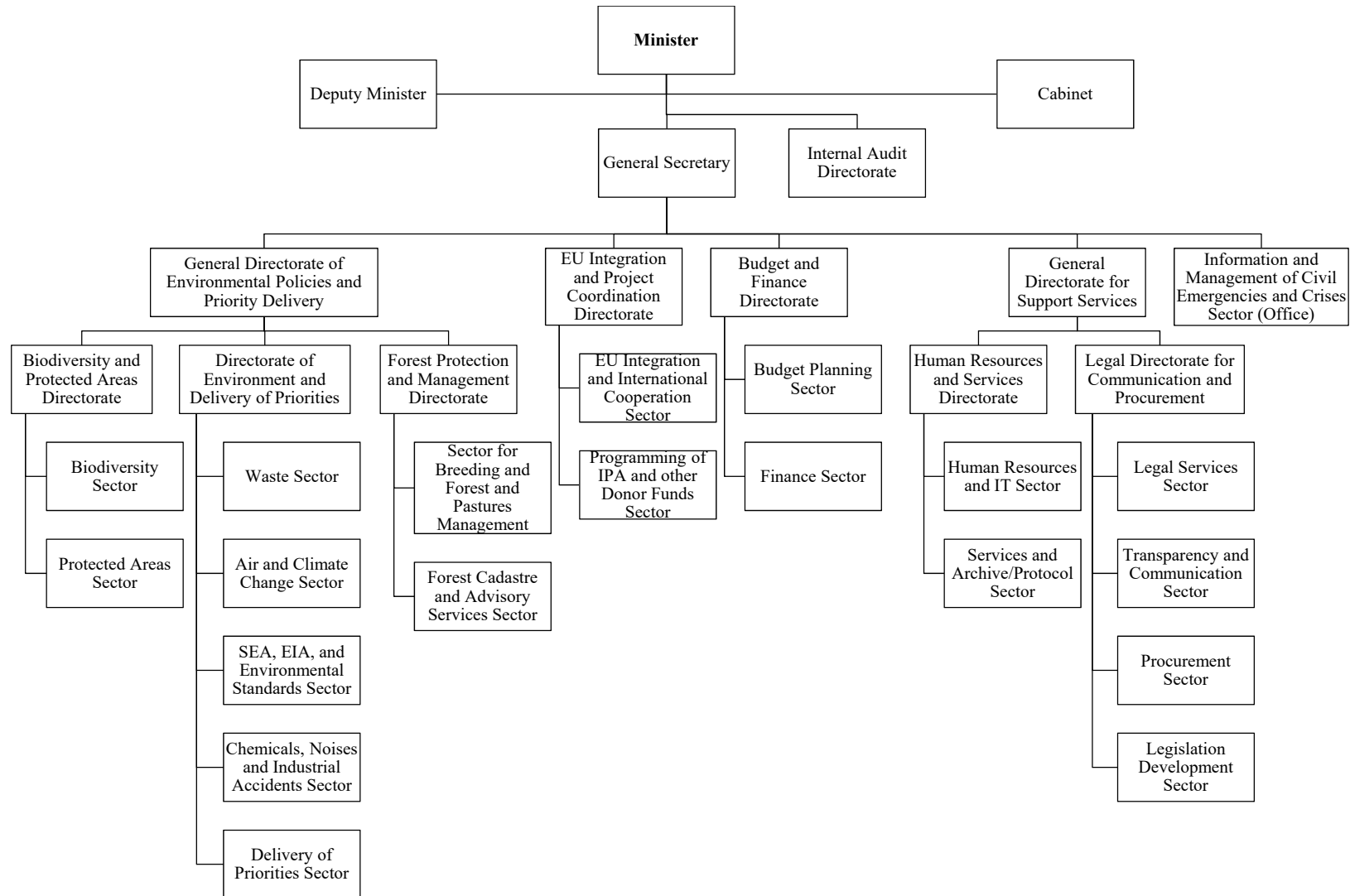
In February 2014, the State Inspectorate of Environment and Forestry was established as a separate public institution subordinated to the then Ministry of Environment. Previously, there was a Directorate at the Ministry that dealt with control activities, while at local level the inspectors were attached to the REAs. The State Inspectorate was tasked with assuring compliance and enforcement in the field of environment and forestry. It had two major directorates: the Directorate of Forest Police Inspectorate and the Directorate of Environmental Inspectorate (Order of the Prime Minister No. 49 dated 29.03.2016). There were also 12 regional inspectorates of environment and forestry. According to the Order, there were 404 staff in both the central office and regional inspectorates. Of these, 64 staff worked at the central level and 340 in the regional inspectorates. There were 142 forest inspectors and 92 environmental inspectors.

As a result of the institutional restructuring of September 2017, the State Water Inspectorate was added to the State Inspectorate of Environment and Forestry (DCM No. 659 dated 10.11.2017), transforming it into the State Inspectorate of Environment, Forestry and Water. It is foreseen that the inspectorate responsible for tourism issues will also be added to this enlarged body. As of November 2017, no organization chart of the State Inspectorate of Environment, Forestry and Water is approved.

Forest inspectors control the enforcement of forest and nature protection legislation. Their priorities currently include the enforcement of two bans: the moratorium on hunting and the ban on the harvesting of timber. Forest inspectors cover the entire forest fund of the country.

Environmental inspectors check operators' compliance with legal requirements and permit conditions, monitor compliance with environmental quality standards, verify operators' self-monitoring reports and make other documentation checks. The environmental inspectors from the regional inspectorates inspect type C installations. While central inspectors inspect type A and B installations, inspectors from the regional inspectorates participate in these inspections of installations located in their territory. About 80 per cent of inspections are planned inspections. Selected data on environmental and forestry inspections are reflected in table 1.1.

**Figure 1.1: Organization chart of the Ministry of Environment, 1 August 2017**

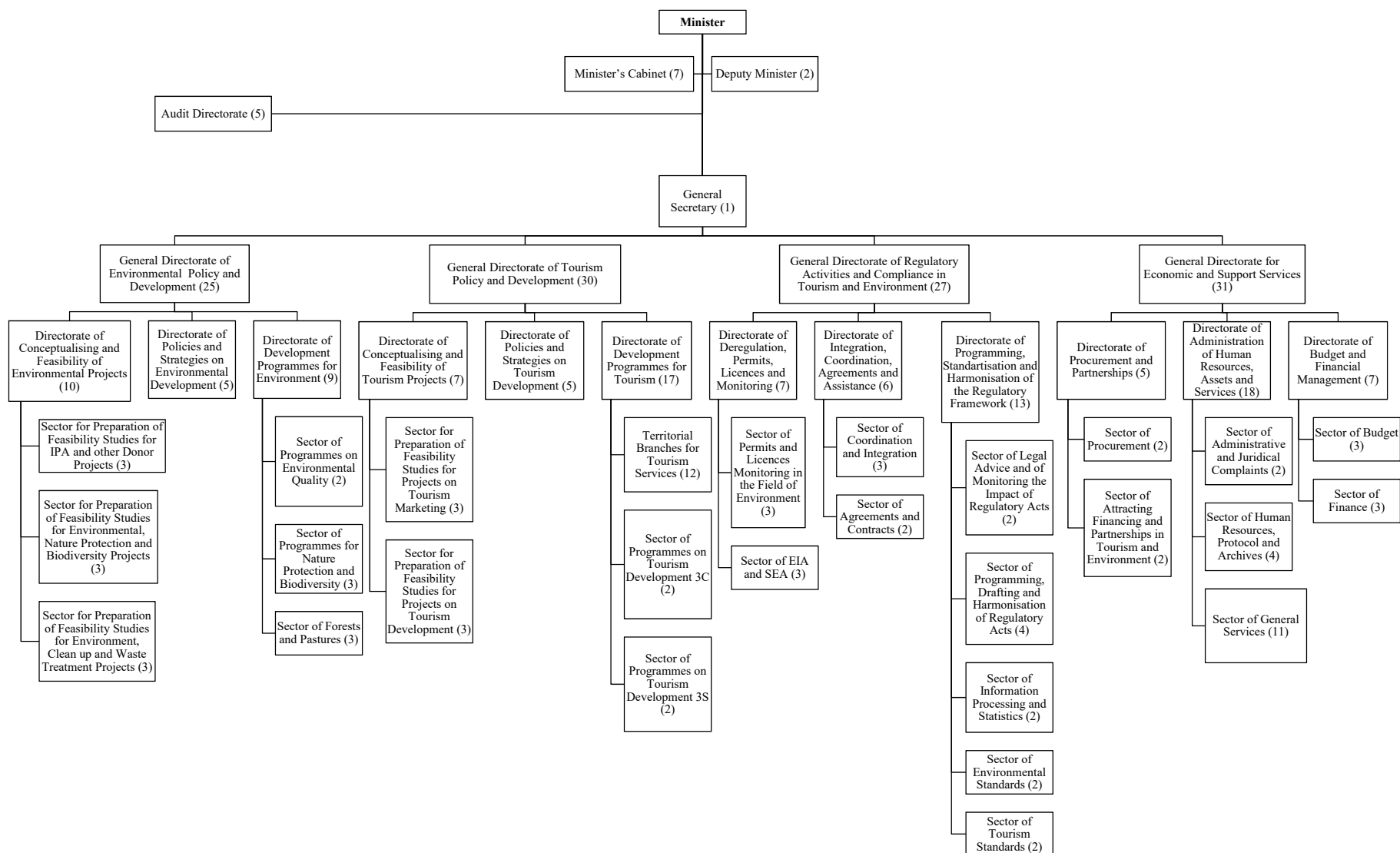


Source: Order of the Prime Minister No. 119 dated 22.07.2016.

Note: The Ministry of Environment was dissolved with the institutional restructuring of September 2017, when environmental competences were transferred to the new Ministry of Tourism and Environment.

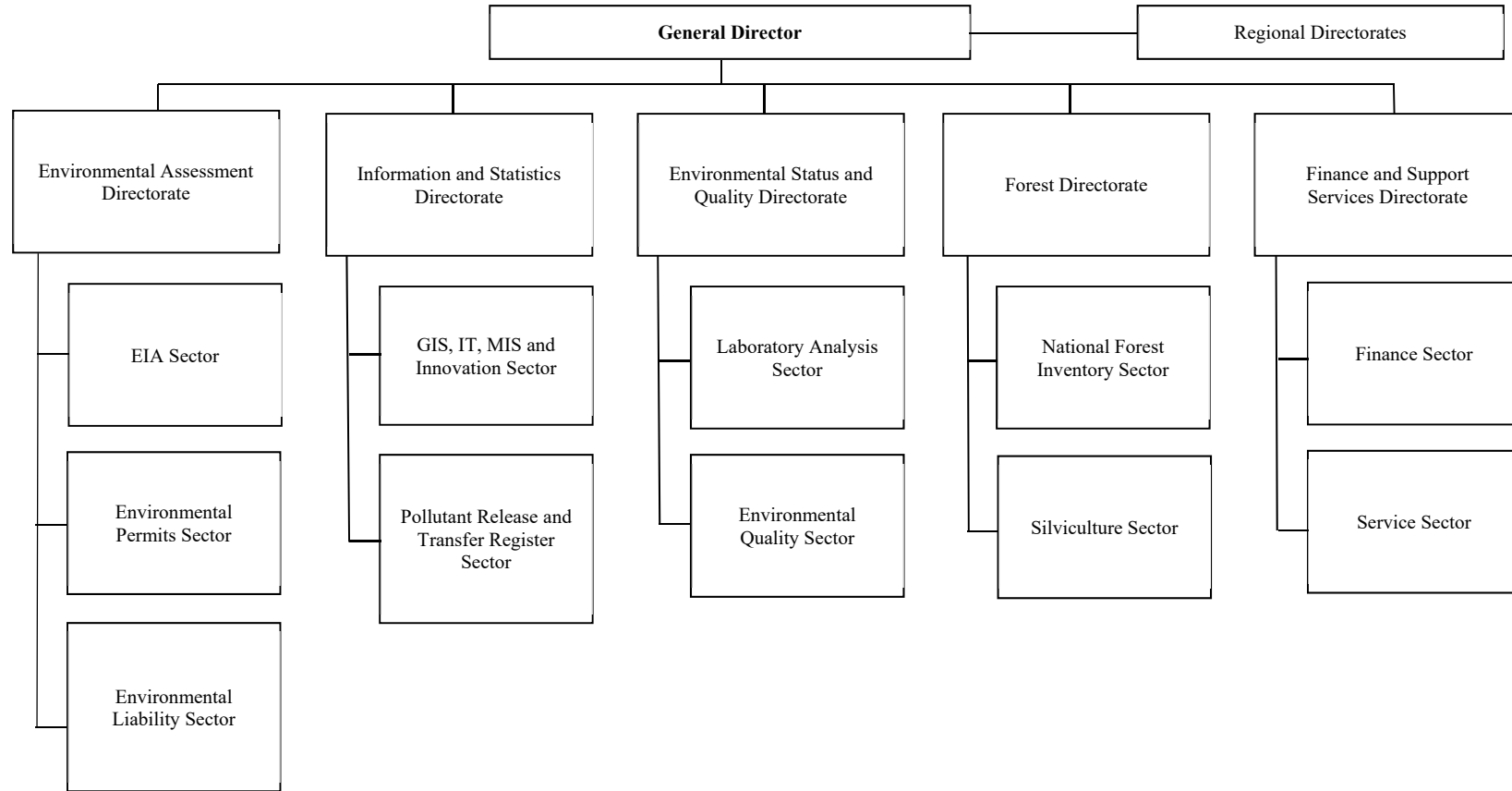


**Figure 1.2: Organization chart of the Ministry of Tourism and Environment, 1 November 2017**



Source: Ministry of Tourism and Environment, November 2017.

**Figure 1.3: Organization chart of the National Environment Agency**



Source: Order of the Prime Minister No. 50 dated 29.03.2016.

Notes: GIS: geographic information system; IT: information technology; MIS: management information system.

**Table 1.1: Environmental and forestry inspections, 2012–2016**

	2012	2013	2014	2015	2016
<b>Environmental inspections</b>					
Number	6 800	7 000	7 670	6 600	7 350
Violations (number)	287	135	321	196	239
Installation temporarily closed (number)	76	69	126	85	124
<b>Forestry inspections</b>					
Number	..	..	2 850	4 500	8 204
Violations (number)	..	..	524	475	336
Seizure of timber (m <sup>3</sup> )	..	..	2 370	1 741	2 207
Criminal proceedings (number)	..	..	36	44	32

Source: State Inspectorate of Environment and Forestry, February 2017.

The inspectors, especially at regional level, are poorly equipped (lack of vehicles, no computers, no protective clothing and equipment for special inspections). The introduction of a risk-analysis-based approach to inspection planning has started; however, the related guidance materials are not yet in place and training needs are huge. In general, the inspectors are not yet equipped with manuals and instructions and are not well aware of Recommendation 2001/331/EC providing for minimum criteria for environmental inspections in the Member States. Checklists for type A and B environmental permit inspections and for hospital waste management were prepared with support from the IBECA project but are still to be formally introduced.

A complaints commission functions at the State Inspectorate to review complaints on decisions of inspectors. In 2015, this commission examined 124 complaints: 119 decisions were left in force and five were annulled. In 2016, it examined 121 complaints: 118 decisions were left in force and three were annulled.

The State Inspectorate of Environment, Forestry and Water does not have a website. It publishes an annual report with aggregated information on inspections, which is presented to the mass media and thus shared with the general public. According to the Law on Environmental Protection, compliance promotion is part of the mandate of the State Inspectorate; however, the State Inspectorate does not perform the compliance promotion activities.

#### National Agency of Protected Areas

NAPA was established in February 2015 to strengthen efforts on biodiversity conservation and management of the protected areas network. The significance of this step is determined by the fact that the new institution is not subordinated to forest management authorities. Previously, 12 forestry directorates at local level included some staff in charge of protected areas.

NAPA's functions include the management of protected areas, including the development and implementation of management plans, monitoring and environmental education (EE).

NAPA has 274 staff: 21 employees in its central office and 253 staff in its 12 regional administrations of protected areas (RAPAs). The 12 RAPAs are organized in accordance with the division of the country into regions, not by protected areas, but the number of staff is balanced between RAPAs depending on the number and significance of protected areas in each region. Protected areas do not have their own staff. Although training has been organized for staff of the new agency, the qualification of staff remains an issue.

The RAPAs do not have any operational budgets; it is expected that they will attract project funding. Some RAPAs are successful in attracting funds for the preparation of management plans and improvement of infrastructure in protected areas. However, such an approach cannot be sustainable for long-term planning of activities.

Some RAPA staff are rangers tasked with law enforcement. According to the Internal Regulation for the Organization and Operation of the National Agency of Protected Areas and regional administrations of protected areas, rangers have to prevent violations, block illegal activities and confiscate equipment used for illegal fishing or hunting. However, the rangers do not carry firearms and do not have the powers of inspectors, so their capacities to prevent violations are rather limited. Rangers are poorly equipped with cars and motorcycles. It is expected that they will soon receive uniforms.

NAPA has a Short and Midterm Strategic Programme for the period 2015–2020, which aims at effective management and governance of protected areas and

includes a detailed plan of work. NAPA has its own website.

### *Sectoral ministries*

#### Transport and infrastructure

Prior to the institutional restructuring of September 2017, the then Ministry of Transport and Infrastructure was responsible for legislation and policy formulation in the field of transport, water supply and sewerage infrastructure, and waste treatment and disposal infrastructure. It was responsible for the transport of dangerous goods. The Ministry was also responsible for attracting finance for the sectors, including through public-private partnerships. Its subordinated organizations included, among others, the General Directorate of Water Supply and Sewerage, which was specialized in the field of drinking water supply, sewerage and wastewater treatment and supports at technical level the implementation of policies developed by the Ministry. After the institutional restructuring, the new Ministry of Infrastructure and Energy is responsible for these issues. The General Directorate of Water Supply and Sewerage does not exist any more. Its competences are with the National Agency for Water Supply and Sewerage under the Ministry of Infrastructure and Energy.

#### Urban development and housing

Prior to the institutional restructuring of September 2017, the then Ministry of Urban Development was responsible for legislation and policy development in the field of territorial planning, urban development, and land management and housing. It was responsible for solid waste and the management of the urban infrastructure as they related to territorial planning. Development of construction standards and the issues of legalization and integration of informal settlements were also among the competences of this Ministry.

After the restructuring of September 2017, all competences that were covered by the former Ministry of Urban Development were relocated to new ministries. Territorial planning, land management, urban development and construction standards are now covered by the Ministry of Infrastructure and Energy. The housing sector is with the Ministry of Finance and Economy. The issues of legalization and integration of informal settlements are the responsibility of the Ministry of Justice.

#### Energy and industry

Prior to the institutional restructuring of September 2017, the then Ministry of Energy and Industry was in

charge of drafting regulations on industrial and mineral waste, as well as on the rehabilitation of related dumpsites. The Ministry of Energy and Industry also managed HPP infrastructure. It was also responsible for chemicals as industrial raw materials. The Albanian Geological Service under the Ministry was responsible for the monitoring and assessment of groundwater bodies. The National Agency of Natural Resources under the Ministry was responsible for implementation of policies in the field of mining, oil and energy, and dealt with negotiation and monitoring of the implementation of agreements in mining, renewables and hydrocarbon exploitation and use. After the restructuring of September 2017, these issues belong to the competences of the new Ministry of Infrastructure and Energy. The Albanian Geological Service and the National Agency of Natural Resources are also subordinated to the new Ministry.

#### Health

The Ministry of Health became the Ministry of Health and Social Protection as a result of the institutional restructuring of September 2017. It manages drinking water quality through its Institute of Public Health (IPH). The latter has an Environment and Health Department, which deals with water and sanitation, environmental epidemiology and air quality control, nutrition and food safety, occupational health and toxicology. The Ministry is also responsible for drafting regulations on healthcare waste management and on biocides. The State Health Inspectorate, subordinated to the Ministry, oversees compliance with hygiene and sanitary requirements and other public health legislation. The Radiation Protection Commission under the Ministry is a regulatory authority in the nuclear field.

#### Agriculture and water

As a result of the institutional restructuring of September 2017, the Ministry of Agriculture, Rural Development and Water Administration was transformed into the Ministry of Agriculture and Rural Development.

As of November 2017, the competences on water stayed with this Ministry. The Ministry continues to have a Department of Water Resources Policy and, as subordinated institutions to the Ministry, the river basin agencies. In November 2017, the State Water Inspectorate was integrated into the new State Inspectorate of Environment, Forestry and Water. It is envisaged to establish an agency for water resources management in 2018 and to transfer the competences on water management from the Ministry of

Agriculture and Rural Development to the new agency.

The Ministry of Agriculture and Rural Development also manages the irrigation and drainage infrastructure. It is responsible for issuing permits on plant protection products and fertilizers. GMOs in food and fodder are also within the competence of the Ministry. The Ministry is also responsible for fisheries. It is in charge of drafting regulations on agricultural and animal waste.

#### Other

Prior to the institutional restructuring of September 2017, the then Ministry of Economic Development, Tourism, Trade and Entrepreneurship was responsible for economic analyses and investments in the field of environmental management and environmental services, for tourism development and for public–private partnerships. Its National Licensing Centre dealt with the licensing procedures and the issuance of authorizations and permits. The National Coastal Agency, set up in 2014, was a subordinated institution in charge of developing and implementing policies on integrated coastal zone management, promoting the development of tourism and monitoring the implementation of spatial planning instruments in coastal areas. Another subordinate organization, the National Agency of Tourism, promoted the country as a tourism destination. After the institutional restructuring, the competences of the former Ministry of Economic Development, Tourism, Trade and Entrepreneurship were transferred to the new Ministry of Finance and Economy and to the new Ministry of Tourism and Environment. The National Coastal Agency and the National Agency of Tourism are now with the Ministry of Tourism and Environment. The National Licensing Centre is now under the Ministry of Finance and Economy.

The Ministry of Defence has the main responsibility for explosives. The responsibilities of the Maritime Operational Centre under the Ministry include coordination of operations for the preservation of the marine environment.

The Customs Administration of the Ministry of Finance and Economy is responsible for customs controls with regard to international trade in endangered species.

#### *Other institutions*

The Department of Development and Good Governance (prior to the institutional restructuring of September 2017, the Department of Development

Programming, Financing and Foreign Aid) in the Prime Minister’s Office is responsible for coordination of strategic planning, including the preparation of the NSDI and monitoring of NSDI implementation, participation in the preparation of other strategic documents in line with the NSDI, and coordination of monitoring and reporting on the country’s strategic documents.

The Public Procurement Agency under the Prime Minister’s Office is the key public institution responsible for the public procurement system, concessions/public–private partnerships and public auctions, including the organization of training for central and local government officials. The Agency does not deal with green procurement.

The National Water Council is an interministerial body chaired by the Prime Minister. It offers a high-level forum where water resources planning and administration issues can be discussed in an integrated way. Since 2014, the technical secretariat of the Council is part of the Prime Minister’s Office.

The Regulatory Authority of the Water Supply and Waste Water Disposal and Treatment Sector is the independent regulator, which licenses natural and legal persons delivering water and/or wastewater services, regulates service tariffs and monitors the performance of service providers. The actual water supply and sewerage service is delivered by 131 utilities, of which 57 are licensed.

Four regional development agencies (Tirana, Shkodër, Korçë and Vlorë) under the umbrella of the Agency for Regional Development have been established in 2015. They are expected to focus on common areas of interest among municipalities, to support project applications for EU funds.

The NGO Albanian Association of Municipalities assists the involvement of local government units in decision-making and policymaking and has been involved in public consultations on draft strategic and legal documents on the environment, including forest management, water and waste issues.

#### *Vertical coordination*

The country is pursuing a fundamental reform of its government system, with territorial reform accompanied by administrative and financial decentralization. The key strategic document in the field is the National Cross-cutting Strategy on Decentralization and Local Governance for the period 2015–2020. The Law on the Territorial and Administrative Division of Local Government Units

No. 115/2014 determined the administrative-territorial division of the country into 12 regions and 61 municipalities, in place of the previous 12 regions and 373 local government units (65 municipalities and 308 communes). The new division is meant to overcome high fragmentation of local government units to enable the provision of more efficient investments in public services, including public transport, water supply and urban waste management.

The Law on Local Government No. 139/2015 defined the functions of local government units and transferred some of the functions from the national government to local governments. The following functions, both own (exclusive) and shared, of the municipalities are connected with the environment:

- Drinking water supply;
- Wastewater treatment;
- Collection and disposal of rainwater and flood protection in residential areas;
- Local public transport;
- Parks, gardens and public green spaces;
- Collection, disposal and treatment of municipal solid waste (MSW);
- Construction and management of social housing;
- Implementation at local level of measures to protect air, soil and water;
- Implementation at local level of measures for protection from noise pollution;
- Management of the public forest and pasture fund;
- Protection of nature and biodiversity;
- Educational activities at local level on environmental protection.

The reform has enlarged the land area and population in the newly formed municipalities. Some formerly urban municipalities gained rural agricultural lands. Some formerly inland municipalities now have sea coast and tourist destinations. These changes represent important challenges for the municipal governments in terms of capacity, training and financing. Financial decentralization reform is still under way, with the draft law on local government financing not yet adopted. The main concerns for the new municipalities are their inherited debt and having the financial ability to cope with the new functions.

The management of transferred forests and pastures is among the new functions assigned to municipalities. Implementation of this function is a challenge: the municipalities would need to deal not only with sanitary cuttings of timber and its sale to the population but also with afforestation and other activities requiring knowledge and investment. As of early 2017, according to the then State Inspectorate of Environment and Forestry, 42 municipalities have

established forest management structures, 12 municipalities were in the process of forming forest management structures, five municipalities have not started this work and for the remaining two municipalities the situation was not clear. The municipalities, along with the central government, are jointly responsible for enforcement of the Law on the Moratorium in Forests No. 5/2016.

While the municipalities have their own environmental inspectors, who currently deal primarily with waste and noise issues, the inspectors may not be able to cope with the expanded responsibilities in enlarged territories.

Consultation with local government representatives has so far been limited in regard to the drafting of many important legal and policy documents. In 2017, a Consultative Council of the Central Government and Local Self-Government was established as a dialogue platform for the two levels of government.

The reform did not change the division of the country into 12 regions, each headed by a prefect (representative of the Council of Ministers at regional level). Prefects have no environment-related responsibilities as such but they verify the legality of acts issued by local government units and monitor the implementation of functions delegated by the central government.

#### *Horizontal coordination*

##### National level

Albania continued to rely on the interministerial working groups as a key mechanism for horizontal coordination. The Interministerial Working Group for Chapter 27 is a mechanism for coordination of the process of approximation of the EU environmental acquis. In fact, this group is used for broader coordination on environmental issues than those connected with the EU accession process. The group is led by the Ministry of Tourism and Environment and brings together representatives of various institutions at a technical level. The Interministerial Working Group on Waste brings together deputy ministers from various ministries involved in waste issues. The Ministry of Tourism and Environment provides the technical secretariat of this group. There is a similar set-up for the Interministerial Working Group on Climate Change, for which the technical secretariat is also provided by the Ministry of Tourism and Environment. The National Biosafety Council has been set up in line with the requirements of the Law on Biodiversity Protection, although it has not yet received any applications for import/export of GMOs

or for release of GMOs into the environment. Interministerial working groups are also regularly created during the preparation process for draft laws and decisions of the Council of Ministers.

The integrated policy management groups (IPMGs) that have been established under the Strategic Planning Committee in September 2015 are designed to manage cross-cutting and complex sector policies which require a substantial degree of horizontal cooperation. IPMGs were established on a pilot basis in four areas: Integrated Water Management; Employment and Social Sector; Competitiveness and Innovation; and Good Governance and Public Administration. For all IPMGs, the frequency of meetings is not determined; meetings are decided upon as needed. All IPMGs have thematic groups, which meet more frequently. As of early 2017, an assessment of existing IPMGs and their effectiveness is ongoing, with a view to improving and potentially expanding this instrument to other areas.

#### Local level

As of early 2017, the exchange of information and documentation and overall cooperation between the REAs and the local inspectors of the then State Inspectorate of Environment and Forestry seemed to function well. However, this was not always the case with regard to cooperation between the REAs and the municipal authorities. For example, there were cases in which the municipal authorities were late in providing their opinion to an REA on a type C permit application (required within a three-day time frame) and the permits were issued without their opinion being taken into consideration.

As of early 2017, there were cases of poor coordination at the local level between the environmental inspectors of the then State Inspectorate of Environment and Forestry and the water inspectors of the State Water Inspectorate, and between the environmental and forestry inspectors of the then State Inspectorate of Environment and Forestry and the environmental inspectors of municipalities. Since the new State Inspectorate of Environment, Forestry and Water was formed in November 2017 by bringing together the State Water Inspectorate and the State Inspectorate of Environment and Forestry, the issue of coordination between environmental, forestry and water inspectors is likely to be overcome in the future.

The RAPAs closely cooperate with the environmental and forestry inspectors and with the police, especially since rangers do not have the full powers of inspectors. They cooperate with the municipal authorities in

relation to pastures in protected areas and collection of medicinal plants.

Joint inspections are undertaken by the environmental and forestry inspectors and the building inspectors (on illegal construction issues), police (on noise) and food inspectors (on cattle treatment). Most joint inspections are not planned but take place following complaints or in the event of civil emergencies.

In general, the communication between various institutions with environmental responsibilities at the local level is not defined in any communication protocols and is not otherwise formalized.

#### *Training and in-service training*

Each public servant undertakes mandatory training on general issues of civil service in the Albanian School of Public Administration one year after the commencement of employment in a public institution. After this step, training and in-service training of civil servants is encouraged but no mandatory requirements exist.

There is no comprehensive approach to systematic training and in-service training of civil servants on the environment and sustainable development. Training and in-service training of staff of the Ministry of Tourism and Environment and its subordinated institutions takes place sporadically as part of international projects, seminars, workshops and other events. Significant work to train staff of the Ministry, NEA and the environmental, forestry and water inspectors has been done by the SELEA and IBECA projects. Furthermore, there is no system of training and in-service training on environmental issues of staff in other ministries and in the private sector.

## **1.6 Assessment, conclusions and recommendations**

### *Assessment*

Since 2011, Albania achieved significant progress in the adoption of new, modern environmental legislation – the process driven by the efforts to approximate the EU environmental acquis. However, the implementation of legislation lags behind, and sometimes the legislation is too advanced vis-à-vis the administrative, institutional and financial capacities in place. For example, the country already has modern waste management legislation, but the daily reality is waste being dumped into rivers not only by the population but also by waste collection trucks. Often, new legislation is developed with a clear understanding that it will not be implemented in the

years to come but with a purpose to increase the transposition or create the legal basis for further transposition of the acquis.

A developed strategic planning system with clear rules and methodologies is in place. The system is rightly oriented towards achieving strong coherence between the strategic documents. Yet it does not yet function smoothly, as there is a clear backlog in the adoption of strategic documents. Progress has been made with integration of environmental considerations into sectoral policies but much more needs to be done, including through enhanced and improved use of SEA, in order to achieve such integration.

The Government has progressed with aligning its national agenda, as set out in the NSDI-II, with the 2030 Agenda for Sustainable Development and is working on developing a national action plan on the SDGs. The challenges include developing a national vision until 2030 and aligning the SDGs implementation and monitoring efforts with the EU accession process.

The system of institutions with environment-related responsibilities has seen many changes since 2011. Notable achievements include the creation of NAPA and a clear separation of inspection activities from policy development and permitting. Still, much more needs to be achieved to ensure the coherent functioning of the system at both the national and local levels, with efficient vertical and horizontal coordination.

### *Conclusions and recommendations*

#### Environmental legislation

Implementation of environmental legislation faces delays, partially due to delayed adoption of subsidiary legislation. Several environmental laws have been adopted with deferred entry into force, to ensure that the necessary subsidiary legislation is in place at the time of the entry into force of a law. Regular analysis of transposition of the EU environmental acquis is conducted but not of implementation and enforcement of national legislation. Several environmental laws require the development of regular law enforcement reports; however, these have never been prepared.

#### Recommendation 1.1:

*The Ministry of Tourism and Environment should:*

- (a) *Prioritize the development and adoption of subsidiary legislation;*
- (b) *Ensure that law enforcement reports are prepared when required by legislation.*

#### Regulatory Impact Assessment

Some elements of the RIA system are present in the lawmaking process; in particular, an explanatory memorandum and a budgetary assessment are to be developed for all draft laws as part of the lawmaking process. However, the current system pays insufficient attention to social, environmental, economic and other issues, and does not include monitoring and evaluation as part of the cycle. Progressive strengthening of the current system towards a fully fledged RIA is a way to bridge the legislation under development with the implementation capacities in place and therefore improve implementation and enforcement.

#### Recommendation 1.2:

*The Government should gradually move towards applying the fully fledged Regulatory Impact Assessment tool for laws and subsidiary legislation.*

#### Strategic planning

Albania has a developed strategic planning system. However, there are delays in the adoption of strategic documents; some delayed documents when finally adopted include outdated information; the implementation reports for sectoral and cross-cutting strategies are an issue; and the system for costing the strategic documents is still at a basic level. The governmental website with detailed information on the Integrated Planning System, NSDIs, sectoral and cross-cutting strategies and their implementation reports has not been updated since 2013. Improving the functioning of the Integrated Planning System, in particular the aspects of timely planning and delivery, reporting and transparency, is important for progress in achieving SDG Target 17.14: Enhance policy coherence for sustainable development.

#### Recommendation 1.3:

*The Government should further improve the quality of strategic planning, and in particular ensure:*

- (a) *Timely preparation and adoption of strategic documents;*
- (b) *Regular preparation of implementation reports;*
- (c) *Online accessibility of information on the Integrated Planning System, National Strategies for Development and Integration (NSDIs), sectoral and cross-cutting strategies and implementation reports on all of the foregoing.*

#### Strategic planning in the environmental field

The adoption of the new environmental cross-cutting strategy for the period 2015–2020 has been delayed,



and, as of early 2017, the existing draft would require significant updating in order to be adopted. However, it is important for the country to have a visionary umbrella policy framework for environmental protection. Such a document could cover both environmental media and the horizontal issues, the priorities of environmental compliance assurance and enforcement, environmental education (EE) and education for sustainable development (ESD), as well as the integration of environmental considerations in sectoral policies.

Recommendation 1.4:

*The Government should strengthen strategic planning in the environmental field by the timely development and adoption of a cross-cutting environmental strategy for the next (post-NSDI-II) planning period.*

Strategic environmental assessment

Since 2011, the integration of environmental requirements into sectoral strategic documents has progressed in all sectors, although the degree of such integration varies. The SEA instrument is relatively new for the country and the key challenge is to ensure its proper application by sectoral authorities. The proposing authorities often do not follow all the requirements and steps of the SEA procedure. There have been cases of sectoral documents bypassing the SEA requirements. Despite the requirement of the Law on Strategic Environmental Assessment No. 91/2013, no monitoring and follow-up reports are submitted to the ministry responsible for environmental issues following the adoption of a plan or programme. The evaluation of the environmental effects of the plan or programme, especially with regard to cumulative effects, represents a challenge for staff in the Ministry, and the Law does not provide an opportunity to establish an evaluation committee or hire independent experts when expertise in a particular field is required.

Recommendation 1.5:

*The Government should ensure:*

- (a) *That all documents subject to strategic environmental assessment (SEA) undergo an SEA;*
- (b) *The observance by the proposing authorities of all stages and requirements of the SEA process, including monitoring and follow-up;*

- (c) *Opportunities to bring in broader expertise for evaluation of environmental effects when needed.*

Implementation and monitoring of SDGs

Coordination of SDGs implementation and monitoring is done by the Department of Development and Good Governance in the Prime Minister's Office through its Development and Good Governance Policies Unit. Coordination of SDGs implementation and monitoring is additional to the other responsibilities of few staff dealing with strategic planning in this Unit. The important achievement of the Government is that the NSDI-II is explicitly aligned to the SDGs. SDGs are being integrated in some sectoral documents under preparation. The Government is working to prepare a national action plan on the SDGs. The challenge is to propose the vision for 2030, since the current planning documents in the country have the horizon of 2020. Knowledge about the SDGs in the ministries is insufficient. Awareness of the SDGs among local government authorities, civil society, academia and the private sector is low.

Recommendation 1.6:

*The Government should:*

- (a) *Strengthen the Development and Good Governance Policies Unit within the Department of Development and Good Governance in the Prime Minister's Office and formalize its coordination role on the SDGs;*
- (b) *Identify the political body to guide efforts to achieve the SDGs and the monitoring of progress towards them;<sup>3</sup>*
- (c) *Proceed with the preparation of the national plan on SDGs and the setting up of aspirational and measurable national targets, including interim targets until 2020 and 2025;*
- (d) *Ensure the preparation of reports monitoring progress towards the achievement of the SDGs;*
- (e) *Ensure that the SDGs are integrated into future planning documents;*
- (f) *Raise awareness of the SDGs among local government authorities, civil society, academia and the private sector in order to involve them in efforts towards attaining the SDGs, and ensure public participation in such efforts.*

<sup>3</sup> The National Committee on SDGs was established in May 2017 as a political-level body to guide efforts to achieve the SDGs. This was not known to the ECE Secretariat when the

Committee on Environmental Policy approved the recommendations of the EPR report.

### Inspection

In 2014, the State Inspectorate of Environment and Forestry was established as a separate public institution subordinated to the Ministry of Environment. Following the institutional restructuring of September 2017, the State Water Inspectorate was integrated into the State Inspectorate of Environment and Forestry, resulting in one State Inspectorate of Environment, Forestry and Water. The introduction of a risk-analysis-based approach to inspection planning has started; however, the related guidance materials are not yet in place and training needs are enormous. Checklists for type A and B environmental permit inspections and for hospital waste management were prepared with support from the IBECA project but are still to be formally introduced. The State Inspectorate does not have a website. It publishes an annual report with aggregated information on inspections, which is presented to the mass media and thus shared with the general public. Compliance promotion is part of the mandate of the State Inspectorate; however, the State Inspectorate does not perform the compliance promotion activities. There are cases of poor coordination at the local level between the environmental and forestry inspectors of the State Inspectorate and the environmental inspectors of municipalities.

#### Recommendation 1.7:

*The State Inspectorate of Environment, Forestry and Water should:*

- (a) *Intensify efforts to apply a risk-analysis-based approach to inspection planning through provision of guidance materials and training;*
- (b) *Endorse checklists for types A and B environmental permit inspections and for hospital waste management;*
- (c) *Ensure regular publication of compliance and enforcement data;*
- (d) *Operate a website to increase the transparency of its activities and to stimulate the engagement of the public in the detection of violations;*
- (e) *Initiate, step by step, compliance promotion activities;*
- (f) *Strengthen its coordination with the environmental inspectors of municipalities by initiating communication protocols or cooperation agreements.*

### Environment-related responsibilities at local level

The country is pursuing a territorial reform accompanied by administrative and financial decentralization. The Law on Local Government No.

139/2015 transferred some of the functions of the national government to local governments. The management of transferred forests and pastures is among the new functions assigned to municipalities. As of early 2017, all municipalities are developing their general local territorial plans, which should include measures for the protection of land, water, air, forests, climate and natural landscapes. According to the Law on Environmental Protection, local government units are also required to adopt local environmental action plans, but few municipalities have such plans. The process of developing local integrated waste management plans in accordance with the Law on Integrated Waste Management No. 10463/2011 has started. Preparation of air quality plans for zones or agglomerations under the Law on Protection of Ambient Air Quality No. 162/2014 is another challenge.

#### Recommendation 1.8:

*The Government should:*

- (a) *Intensify efforts to assist municipalities in the implementation of their environment-related functions;*
- (b) *Assist municipalities in drafting environment-related plans required by legislation.*

### Training of staff at the Ministry of Tourism and Environment

There is no comprehensive approach to systematic training and in-service training of staff of the Ministry of Tourism and Environment and its subordinated institutions on the environment and sustainable development issues. Such training takes place sporadically as part of international projects, seminars, workshops and other events.

#### Recommendation 1.9:

*The Ministry of Tourism and Environment should establish a training system, including for in-service training, for staff in the Ministry and subordinated institutions to ensure regular and comprehensive coverage of environmental and sustainable development issues.*

### Training of staff in sectoral ministries

There is no system of training and in-service training on environmental issues of staff in sectoral ministries.

#### Recommendation 1.10:

*The Government should establish training schemes, including for in-service training, for civil servants in sectoral ministries on environmental issues.*



## Chapter 2

# GREENING THE ECONOMY

### 2.1 Greening the tax and tariff system

General government revenues, both tax and non-tax, are lower in Albania than in neighbouring countries. Consequently, public spending is rather parsimonious. Notwithstanding a significant evolution in the number and size of taxes over the last 15 years, the level of taxation and revenues in Albania is not yet in line with that in neighbouring countries. The tax burden is lower in Albania than in most other Balkan economies, with modest tax collections for most of the main tax sources, including property taxes. Efforts have been made by the Government to increase direct and indirect taxation, even though the share of revenues from each type is comparable (49 per cent from VAT and excise duties) and also given the size of remittances to households by Albanians working abroad, which support consumer spending, i.e. the VAT base.

#### *Pollution charges*

There are no direct environmental taxes in Albania. Albanian authorities do not use this instrument even for the most common types of pollution. Albania does not have pollution charges on emissions of air pollutants, discharges of wastewater into water bodies or generation and disposal of waste. The only exception is carbon tax. Carbon tax is levied on the fuels and other goods deriving from petrol (petrol, solar and diesel, kerosene, petroleum coke, diesel) with a rate between 1 and 3 leks/litre.

#### Taxes and excise duties

Excise duties are paid on several materials and resources that are considered harmful to the environment. However, in Albania the level of these duties is still low by international comparison and, as is the case with fees for public services, hardly delivers significant behavioural results. Apart from those on packaging, fuels and incandescent lightbulbs, excise duties do not include significant environmental dimensions and apply to goods such as coffee, energy drinks, beer, wine, other alcoholic beverages, tobacco and fireworks. The level of excise duties on fuels is lower than the EU average (51 per cent for gasoline and 87 per cent for diesel), as in other non-environmental fields (e.g. alcohol), while, in the field

of packaging, regulations on fees seem more aligned with EU standards.

Indirect environmental taxes (i.e. those levied on specific products or inputs) are used in Albania. They include taxes on gasoline and petrol, vehicles and plastic bottles.

The tax on plastic packaging for liquids is 1 lek per piece for packages with a capacity of 1.5 litres or less, and 2 leks per piece for packages with a capacity greater than 1.5 litres.

#### Property taxes

Property taxes include a building tax and an agricultural land tax that is levied on all individuals and legal persons owning real estate (either agricultural land or a building). The use of the property is disregarded for purposes of tax calculation.

#### Land tax

Real estate tax on agricultural land is levied per hectare and varies depending on the district where the land is located and on the land productivity categorization.

For calculating tax on agricultural land, Albania is divided into four areas, each of which is further divided into 10 categories, based on which the respective property tax is defined, within a range between 1,400 leks per ha per year in small towns and up to 5,600 leks per ha per year in the major cities (urban land).

Municipal or local councils determine the tax base level applicable on the local level by a measure of +/- 30 per cent of the prescribed indicative tax rate for the relevant category (with minor benefits for small businesses).

#### Building tax

The rate of the building tax depends on several factors, such as the municipality where the building is located (Tirana and Durrës; all other cities fall into another two categories, depending on their size) and the category (residential, used for commerce, services and other purposes; and buildings situated in tourist sites).

In rural areas, the rate is half the level of the lowest building category situated in the centre of the main municipality of the corresponding administrative region. The tax rate for a building varies from 5 leks/m<sup>3</sup>/y in rural areas, up to 400 leks/m<sup>3</sup>/y in the capital.

#### Vehicle-related and petrol/diesel taxes

In the transportation sector, the long-term issue with imported used vehicles remains. No special taxation has been imposed on imported cars with unsatisfactory emission standards, mainly to avoid regressive effects on income and increased expenditure for residents and the national economy.

Consumption fees are paid on fuels through a circulation tax levied on petrol and gasoline (27 leks/litre). A carbon tax on petrol has been introduced in Albania (ranging from 1.5 to 3 leks/litre depending on the type of fuel) (table 2.1).

The level of taxation has been gradually increasing from a particularly low level. However, some of the fees remain particularly low in comparison with the regional average in the Balkans.

**Table 2.1: Carbon tax on petrol and circulation tax on petrol and gasoline, leks/litre**

<b>Carbon tax on petrol</b>	
Petrol	1.5
Gasoline	3.0
Coal	3.0
Solar	3.0
Coal tar	3.0
Oil coke	3.0
<b>Circulation tax on petrol and gasoline</b>	
Petrol	27.0
Gasoline	27.0

Source: Ministry of Finance, 2016.

#### *Fees for use of natural resources*

Albania does not impose fees for water abstraction, logging and hunting. On the other hand, some economic activities requiring the harvest of biological resources are subject to a permit and the payment of a fee (such as sea and sport fishing in the sea and inland waters, as well as aquaculture).

Albania recognized the scale and potential of fisheries as a resource for the national economy following the substantial growth in fish exports, and introduced a tax on fish harvests. However, the tax rate has been doubled for foreign vessels fishing in Albanian

territorial waters, creating a comparative advantage for domestic businesses.

The extraction fees for mineral resources are related to the wholesale value of the minerals sold (mining rent is determined by multiplying the total wholesale value of the product by the percentage of rent, ranging from 4 to 10 per cent). All the companies operating in the oil and mining sectors are obliged to obtain individual licences based on separate contracts with the Government.

The State mainly derives its revenue in the oil and gas sector through a share of oil, bonuses, royalty tax, profit tax and revenue from direct investments in the sector. In 2014, government income from the oil and gas sector amounted to €110.5 million, divided as follows: €32.25 million as a share of oil production, €35 million in bonuses, €57.9 million in royalties, €9.83 million as profit tax and €5.71 million in dividends. Some 25 per cent of royalties are allocated to local governments in proportion to their contribution.

#### *Tariffs*

The development of public utilities and services to citizens relates to both the decentralization of competences and financial management and progress in resource efficiency in Albania. A significant amount of economic data concerning profit and loss accounts, performance indicators, underbilling and non-revenue services is available through studies and reports. This data provides an overview of the current situation concerning the performance of public utilities and allows the tracking of progress towards the goal of attaining full cost recovery in the sector, a problem that is common to both waste and water utilities.

#### Water supply and wastewater discharge

Public utilities such as waste and water services are also subject to the payment of user fees, though they are mainly aimed at covering the costs of running the services. These utilities often need to steadily increase their effectiveness and achieve financial sustainability as necessary conditions for supplying services to citizens (box 2.1).

#### Energy

The energy sector underwent a significant transformation over recent years supported by targeted legal initiatives on energy efficiency in 2015, and on energy performance of buildings and renewable energy production (RES) in 2017. Thematic action

plans for energy efficiency and RES have not yet been approved and require the establishment of an agency and a fund on energy efficiency. In terms of RES, support schemes are currently applied only to hydropower. The European Energy Community highlighted the need for further capacities in energy efficiency and RES development in the country. No assessment was carried out on the impact of the investments in energy facilities on landscape, water resources, fauna or flora.

### Natural gas

Albania has no natural gas production and the country is not connected with any of the regional gas networks. However, natural gas reserves have been estimated at approximately 5.7 billion cubic metres. The Trans-Adriatic Pipeline (TAP), the construction phase of which started in 2016, is expected to provide market

opportunities to the oil and gas sector in Albania. TAP is envisaged to connect with the Trans-Anatolian Pipeline (TANAP) at the Greek—Turkish border, and to cross Northern Greece, Albania and the Adriatic Sea before coming ashore in Southern Italy to connect to the Italian natural gas network.

### Waste collection

The major source of financing of municipal waste management services are the local fees on municipal waste and the grant financing provided as subsidies from the state budget and/or funds that LGUs receive through foreign-funded programmes.

Waste collection fees are set by the local government. They are charged annually by the municipalities to households and businesses as payments for handling the municipal waste they generate.

#### **Box 2.1: Financing the water service sector: non-revenue water**

The new local government units (LGUs) set up as part of the decentralization reform own water supply and sewerage companies and the related assets and infrastructure formerly assigned to the municipalities (chapter 1). The new administrative organization of the country reduced the number of LGUs from 373 to 61. The open challenge for LGUs in the sector is the mandatory restructuring of water utilities as joint stock companies, under the new institutional framework.

The main policy objectives in the National Strategy of Water Supply and Sewerage for the period 2011–2017 include quality and quantity concerns but also cost control and full cost recovery as conditions for delivering universal and better quality services. However, the implementation of the Strategy showed that Albania did not manage to achieve the Strategy's goals in 2015 (table 7.3).

Non-revenue water (NRW) is a challenge in Albania. On average, 67 per cent of the produced drinking water produced is non-revenue. Between 2007 and 2014, the share of NRW in total abstracted water was always higher than 62 per cent, peaking at 70 per cent. NRW causes significant commercial losses that translate into budgetary imbalances and financial sustainability problems for the water service providers. The main causes have been identified in underbilling (responsible for an estimated 60 per cent of commercial losses), bypassing of water meters and illegal connections (24 per cent) and inappropriate working of metering devices (16 per cent). Reducing the volume of NRW could help finance the water sector without burdening consumers with excessive costs, while also addressing cost issues and full cost recovery needs in particular.

The average collection rate has improved in the country and is around 90 per cent, of water invoices totalling 6 billion leks (€44.2 million).

Current tariffs do not cover the costs incurred by water companies. Studies and the experience with electricity bills demonstrate that there is room for increasing current levels of water tariffs within a threshold of affordability for local households as well as taking account of a realistic evolution of demand for water services at increasing prices. In 2014, the average tariffs for consumers were quite low (€0.40/m<sup>3</sup>), notwithstanding a gradual increase that has been observed since 2007.

Different prices are paid by different users, which causes a cross-subsidy to be paid by private companies and public institutions to households enjoying lower fees. However, the large number of, mostly poor, households not paying even the low water bills and the problems with metering water consumption make the cross-subsidies likely to be misdirected, if their aim is to cut the bill for lower income households or increase their relative consumption. The public and business sectors pay the highest tariff rates. As a result, they risk being overburdened with perverse economic effects, especially if the resource is abundant (but relatively expensive to them) and the tariff affects the cost function of the firm (by increasing the final goods' prices). Water provision is still perceived as a social and political issue, which caused authorities to control water tariffs. The available figures and information on the willingness to pay of households and firms suggest that setting higher, but affordable, tariffs would not reduce collection rates, but would rather dramatically improve the quality and efficiency, as well as the financial and environmental sustainability, of water services.

*Source:* Regulatory Authority of the Water Supply and Waste Water Disposal and Treatment Sector, 2016.

Fees differ in each municipality and are not defined according to the local financial needs for implementing national policy on waste management. They are usually very low and their collection rate is lower than 50 per cent on a national basis. Waste tariffs cover only the cleaning of the city (collection, transport and disposal of urban waste at the respective dumpsites), and almost half of the financial need is subsidized by other local revenues or government transfers. The tariffs do not cover any recovery of waste (including the recovery of plastics), supervision or aftercare of disposal sites/landfills. No extended producer responsibility principle is in place.

Given the shortage of financing resources at the local level, the current municipal tariff system is not sufficient for the financing of separate collection and sorting activities. By law, non-municipal waste streams are the responsibility of the producer itself, and therefore there is no tariff/fee allocated to these types of waste.

#### *Market-based instruments*

Market-based instruments, such as an emission cap and tradable permit scheme, are not used in Albania.

## **2.2 Environmentally harmful and friendly subsidies**

No subsidies or support schemes to environmentally friendly measures and behaviours by individuals and companies have been set up to date, due to the low income levels and the objective difficulties in financing further public expenditure in the field.

In the road transport sector, no actual policies aiming at renewing the car fleet have been put into practice due to a lack of financial resources. The relatively low income level in the country until now has not allowed for a strong push towards the introduction of newer, low-emission vehicles. Although there are no data on the split between new and second-hand, newly registered vehicles, the draft sustainable transport plan estimates that 60 per cent of newly registered cars are actually second-hand cars and the remainder are new, where new is considered based on the likely emission level of Euro 4 and above (chapter 11).

Direct government support for aquaculture continued in 2016. Subsidies cover up to 25 per cent of operating

expenditures (such as fingerlings and feed), up to 70 per cent of the interest rate or 50 per cent co-financing of the investment costs.

## **2.3 Investing in environmental protection and green economy**

### *Implementation costs for environment-related strategies, programmes and plans*

According to the laws on budget of 2016–2018, investments totalling 74,355 billion leks are to be mobilized on environmental protection and environment-related infrastructure (table 2.2).

Projects financed through the ministry responsible for environmental issues with national and international support are shown in table 2.3.

### *Green procurement*

Albania has no programmes envisaging any form of green public procurement.

The country has some level of preparation in public procurement, especially in compliance with procedures and prevention of corruption. There is room for improving the efficiency, review and monitoring procedures of procurement practices. More detailed rules on concessions and a formal registry of concessions and public–private partnerships would align the framework with EU standards and foster the development of the sector.

### *Public expenditure and investments on environment*

Environment-related tax data by economic activity are partially in line with the EU standards and developed in the framework of the environmental accounts. However, data on environmental expenditure are not yet being produced due to the lack of information and proper collection and analytical methods.

The environmental protection expenditures have doubled since 2014 and, according to the Albania's Economic Reform Programme 2016–2018 (DCM No. 52 dated 27.01.2016), they are planned to increase further, up to a 0.3 per cent share of GDP. In addition, investments in the environment have been growing significantly and are expected to stabilize in 2017.

**Table 2.2: Budget of public administrations involved in environmental management, 2016–2018, million leks**

	2016	2017	2018	
Ministry of Environment (Environmental Protection Programme)				Ministry of Tourism and Environment (Environmental Protection Programme)
Current expenditure	438 900	415 300	477 300	Current expenditure
Capital expenditure (with state budget funds)	1 730 478	1 768 503	207 583	Capital expenditure (with state budget funds)
Capital expenditure (with foreign funds)	207 700	303 000	310 000	Capital expenditure (with foreign funds)
<b>Total</b>	<b>2 377 078</b>	<b>2 486 803</b>	<b>994 883</b>	<b>Total</b>
Ministry of Environment (Forestry Management Programme)				Ministry of Tourism and Environment (Forestry Management Programme)
Current expenditure	416 600	422 100	459 100	Current expenditure
Capital expenditure (with state budget funds)	241 152	185 497	104 417	Capital expenditure (with state budget funds)
Capital expenditure (with foreign funds)	163 000	185 000	230 000	Capital expenditure (with foreign funds)
<b>Total</b>	<b>820 752</b>	<b>792 597</b>	<b>793 517</b>	<b>Total</b>
Ministry of Urban Development (Urban Development and Housing Programme/Waste Management)				Ministry of Infrastructure and Energy (Urban waste management)
Current expenditure	1 023 400	975 300	..	Current expenditure
Capital expenditure (with state budget funds)	948 000	529 600	2 064 272	Capital expenditure (with state budget funds)
Capital expenditure (with foreign funds)	180 000	193 000	500 000	Capital expenditure (with foreign funds)
<b>Total</b>	<b>2 151 400</b>	<b>1 697 900</b>	<b>2 564 272</b>	<b>Total</b>
Ministry of Urban Development (Local and Regional Infrastructure)				Albanian Development Fund (Local and Regional Infrastructure)
Capital expenditure (with state budget funds)	..	9 500 000	700 000	Capital expenditure (with state budget funds)
<b>Total</b>	<b>..</b>	<b>9 500 000</b>	<b>700 000</b>	<b>Total</b>
Ministry of Transport and Infrastructure (Waste)				
Capital expenditure (with state budget funds)	100 000	189 200	..	
Capital expenditure (with foreign funds)	300 000	500 000	..	
<b>Total</b>	<b>400 000</b>	<b>689 200</b>	<b>..</b>	
Ministry of Transport and Infrastructure (Water Supply and Sewerage Programme)				Ministry of Infrastructure and Energy (Water supply and Sewerage)
Current expenditure	524 200	1 059 000	1 062 780	Current expenditure
Capital expenditure (with state budget funds)	2 999 630	3 432 000	3 686 000	Capital expenditure (with state budget funds)
Capital expenditure (with foreign funds)	4 313 000	4 505 000	5 871 800	Capital expenditure (with foreign funds)
<b>Total</b>	<b>7 836 830</b>	<b>8 996 000</b>	<b>10 620 580</b>	<b>Total</b>
Ministry of Industry and Energy (Support for Natural Resources Programme/Monitoring Report)				Ministry of Infrastructure and Energy (Support for Natural Resources Programme)
Current expenditure	156 500	146 500	159 500	Current expenditure
Capital expenditure (with state budget funds)	306 350	137 000	393 700	Capital expenditure (with state budget funds)
Capital expenditure (with foreign funds)	33 000	25 000	..	Capital expenditure (with foreign funds)
<b>Total</b>	<b>495 850</b>	<b>308 500</b>	<b>553 200</b>	<b>Total</b>
Ministry of Industry and Energy (Support for Industry Programme/Industrial Pollution)				Ministry of Infrastructure and Energy (Support for Industry Programme)
Current expenditure	249 740	240 740	253 740	Current expenditure
Capital expenditure (with state budget funds)	52 650	200 380	153 000	Capital expenditure (with state budget funds)
<b>Total</b>	<b>302 390</b>	<b>441 120</b>	<b>406 740</b>	<b>Total</b>
Ministry of Industry and Energy (Support for Energy Programme)				Ministry of Infrastructure and Energy (Support for Energy Programme)
Current expenditure	89 000	88 000	93 900	Current expenditure
Capital expenditure (with state budget funds)	91 000	1 621 600	1 844 000	Capital expenditure (with state budget funds)
Capital expenditure (with foreign funds)	377 000	615 000	4 160 000	Capital expenditure (with foreign funds)
<b>Total</b>	<b>557 000</b>	<b>2 324 600</b>	<b>6 097 900</b>	<b>Total</b>
Ministry of Agriculture, Rural Development and Water Administration (Support for water)				Ministry of Agriculture and Rural Development (Water Management)
Current expenditure	104 900	105 000	82 000	Current expenditure
Capital expenditure (with state budget funds)	42 618	20 000	29 000	Capital expenditure (with state budget funds)
Capital expenditure (with foreign funds)	284 350	187 657	140 830	Capital expenditure (with foreign funds)
<b>Total</b>	<b>431 868</b>	<b>312 657</b>	<b>251 830</b>	<b>Total</b>
Ministry of Agriculture, Rural Development and Water Administration (Support for Drainage and Irrigation)				Ministry of Agriculture and Rural Development (Support for Drainage and Irrigation)
Current expenditure	539 900	685 000	732 000	Current expenditure
Capital expenditure (with state budget funds)	2 585 682	661 400	700 000	Capital expenditure (with state budget funds)
Capital expenditure (with foreign funds)	739 000	1 030 353	776 122	Capital expenditure (with foreign funds)
<b>Total</b>	<b>3 864 582</b>	<b>2 376 753</b>	<b>2 208 122</b>	<b>Total</b>
<b>Grand total</b>	<b>19 237 750</b>	<b>29 926 130</b>	<b>25 191 044</b>	<b>Grand total</b>

Sources: Law on 2016 Budget No. 147/2015; Law on 2017 Budget No. 130/2016; Law on 2018 Budget No. 109/2017.



Support for environmentally friendly development of the private sector may partially derive from the increasing actions for corporate social responsibility (CSR) related to support for private expenditure and investment in new businesses, and particularly SMEs, in a few sectors, particularly energy, agriculture and tourism. For instance, private investment by SMEs in pro-environment fields such as agribusiness has been supported by the EU European Investment Fund managed in association with ProCredit Bank; special loans for energy efficiency, renewable energy and environmentally friendly investment have been set up since 2009 (ProCredit Bank); energy efficiency loans amounting to some €200 million have been introduced since 2009 (Sekerbank EKOcredi); and other facilities have also been provided for remote areas across the whole country (Intesa SanPaolo Bank) (Albanian Association of Banks, 2015 CSR Report, 2016).

Environment-related investments have been increasing substantially between 2012 and 2016, including at the local level (table 2.4). The significant developments in some fields, including hydropower, account for the lion's share of the impressive pace of growth registered in the country, which demonstrates the increasing attention by the Government to environmental protection and enhancement.

There are no financial sources earmarked to protected areas or to nature and biodiversity conservation. Limited financial resources are available in the state budget to cover the costs of management and maintenance of equipment and infrastructure of the protected areas. The income-generation mechanisms are therefore sought-after for protected areas that may support local economic development, particularly tourism.

**Table 2.3: Projects financed with national and international support through the ministry responsible for environmental issues, 2017–2019, billion leks**

Project financed	Total cost (billion lek)	Period	Funding source	Investment (billion lek)
Elbasan incinerator	3.693	2015-2019+	State budget	1.985
Construction of factory to produce energy from waste in Fier	4.704	2015-2019+	State budget	2.223
Construction of cleaning plant in the delta of the Ishëm River	530.000	2015-2019+	State budget	250.000
IPA- 2013, Natura 2000	607.200	2015-2020	EU	110.000
IPA- 2013, Climate Change	303.600	2015-2020	EU	40.000
IPA- 2013, Waste	303.600	2016-2020	EU	140.000
Lake Ohrid	258.060	2017-2019	EU	240.000
Kune-Vain	258.300	2017-2019	UNEP/GEF	100.000
Bio-energy	120.540	2015-2017	GEF	23.000
Information management and monitoring system	119.310	2016-2020	UNDP	50.000
Biosphere Park Prespa	483.000	2016-2020	KFW	120.000
Agro-biodiversity preservation in rural areas	289.800	2015-2020	GIZ	10.000
Conservation and Sustainable Use of Biodiversity in Lakes Ohrid, Prespa and Shkodër	22.000	2015-2017	GIZ	10.000
Adaptation to climate change in the field of cross-border management of flood risk in the Balkans	119.310	2017-2020	GIZ	34.000
Waste in the context of climate change	414.000	2017-2020	Germany	60.000

Source: EU Delegation, 2017.

**Table 2.4: Environmental investment, 2012–2017, million leks**

	2012	2013	2014	2015	2016	2017 *	Growth 2012-2016
Investment	..	..	5 920	559 966	1 974 149	1 606 019	
Local level	23 105	26 403	51 502	48 684	34 003	85 144	268.5
VAT	1 955	16 217	12 762	14 622	12 024	77 340	3 856.0
<b>Total</b>	<b>25 060</b>	<b>42 620</b>	<b>70 184</b>	<b>623 272</b>	<b>2 020 176</b>	<b>1 768 503</b>	<b>6 957.1</b>

Source: Ministry of Environment, February 2017.

Note: \* planned.

**Photo 2: Durres**

Sustainable tourism is a promising sector. However, no specific strategy targeting sustainable tourism has been developed. Albania has recently made significant investments in the tourism sector, which is often mentioned in strategies issued by different ministries, particularly those responsible for industry and the environment. However, the uncertainties over property ownership, lack of formalization and standardization of the services and poor access to basic infrastructure, energy and waste management remain the main obstacles to pronounced tourism development in the country.

Ecotourism is one of the topics covered by NAPA's Short and Midterm Strategic Programme for the period 2015–2020, which envisions protected areas as territories that can promote many values (including sustainable tourism/recreational values), support the sustainable development of the country and positively affect the well-being of local communities. It mentions eco-friendly sustainable tourism as a potential income-generation mechanism for protected areas – which are in need of alternative sources of finance. The Programme includes among its objectives the establishment and implementation of a sound and sustainable financial management system in protected areas, including a special fund for protected areas that may collect the contributions from income generated by protected areas, donors and the state budget. The fund is seen as a way to increase support for effective management of protected areas.

#### *Environmental funds and state budget line*

No national environmental fund or state budget line for an environment-related purpose has been established in Albania. According to the Law on Environmental Protection, the income from permit fees and fines for not complying with the environmental legislation should be used to finance environmental protection activities, such as mitigation of pollution sources or promoting projects for rehabilitation of damaged zones. Revenues from environmental taxes and fines are redistributed to other institutions and not allocated properly to the environmental protection or management purposes. The Government has not worked on arranging an environmental fund or a budget line until now, which is also due to the need to keep more flexibility for the Ministry of Finance and Economy in managing public expenditure and finance for macroeconomic stability purposes.

#### *Foreign direct investment*

Increasing inflows mainly represented by FDI were observed during the 2000s boom era and remained quite stable in the post-crisis period (figure 2.1). EU countries have been playing a substantial role in achieving such a result. In 2016, FDI was estimated at US\$1.124 billion, i.e. some 30 per cent of total investment in Albania, which ranks as one of the highest rates in the region. Particularly relevant were investments made by large companies such as the

Trans-Adriatic Pipeline (TAP) and Devoll Cascade in 2015–2016.

Even though the energy sector has received significant investment from abroad, joint initiatives can be found in other environmental fields such as waste management, where large foreign-owned utilities have started to show a concrete interest in entering the Albanian market at the municipal level. The most promising sectors where FDI might allow for more significant pro-environment innovation include sustainable and eco-friendly tourism, agriculture and quality food, due to the potential of these developing fields for the country's economy and also having regard for the increasing success and revenues from tourism in the national economic balance.

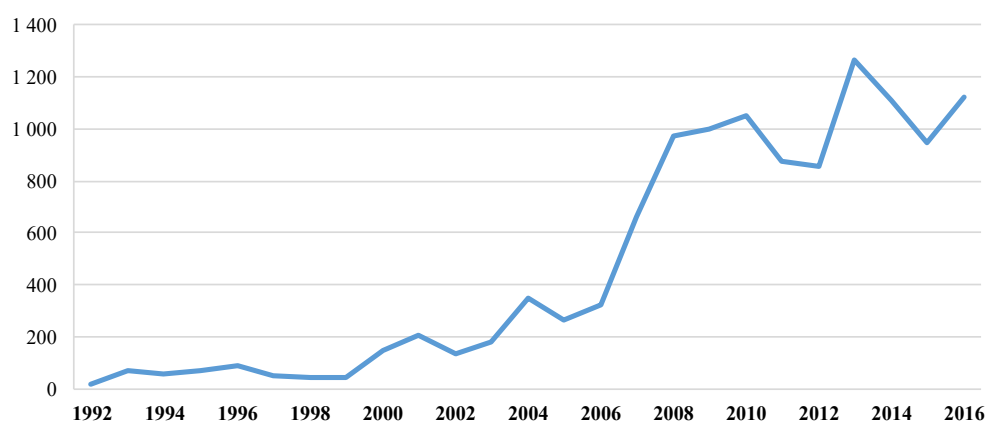
#### *Development assistance*

Net official development assistance (ODA) includes disbursements of loans made on concessional terms

(net of repayments of principal) and grants by official agencies of the members of the OECD Development Assistance Committee (DAC), by multilateral institutions and by non-DAC countries to promote economic development and welfare. Net official aid refers to aid flows (net of repayments) from official donors to countries and territories in part II of the DAC list of recipients: more advanced countries of Central and Eastern Europe, the countries of the former Soviet Union and certain advanced developing countries and territories.

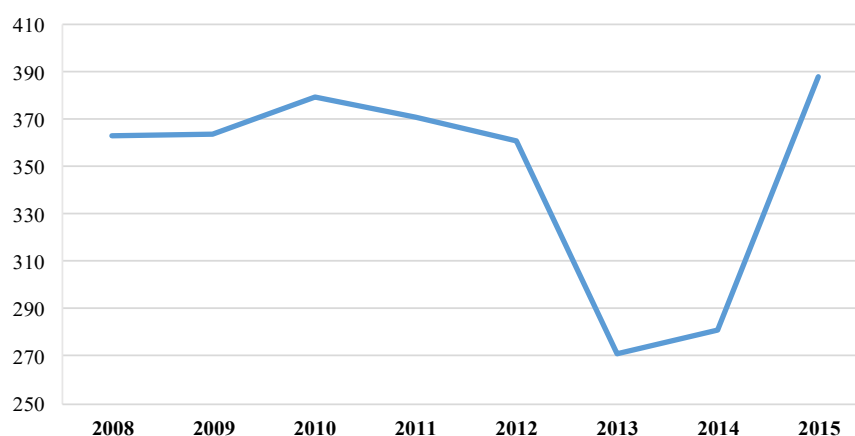
From 2008 to 2015, an average of US\$347 million per year (net ODA) was received in Albania with US\$388 million in 2015, in total representing some 4.73 per cent of all ODA receipts in Europe (figure 2.2). ODA has been partially focused on environmental projects, including reforms, but particularly in the energy sector. However, funds have been allocated to several projects with a significant environmental dimension, as demonstrated in the table 2.3.

**Figure 2.1: Foreign Direct Investment, 1992–2016, US\$ million at current prices**



Source: United Nations Conference on Trade and Development, 2017.

**Figure 2.2: Official Development Assistance, 2008–2015, 2014 US\$ million**



Source: OECD International Development Statistics 2016, vol. 2016, issue 2 ([www.oecd-ilibrary.org/development/oecd-international-development-statistics/volume-2016/issue-2\\_dev-v2016-2-en](http://www.oecd-ilibrary.org/development/oecd-international-development-statistics/volume-2016/issue-2_dev-v2016-2-en)), 2017.

## 2.4 Eco-innovations in major economic sectors

SMEs in Albania play an important role in terms of employment, turnover and value added. Driven by trade, SMEs have developed across sectors, a few of which have the potential to grow, such as agriculture, tourism, hydropower generation and ICT. Despite a number of reforms launched by the Government to simplify doing business in Albania, traditional bottlenecks remain. Albanian firms have a weak technological capacity to upgrade by absorbing existing advanced technologies. The private sector is lacking research and development investments, which at the moment make up only 0.4 per cent of GDP. However, governmental programmes to support innovation have gradually improved the supporting environment for SME innovation.

While data on innovation for Albanian firms are not collected, firms are generally recognized as having a weak technological capacity to upgrade by absorbing existing advanced technologies. Some SMEs introduce product, process, marketing or organizational innovations, although their number is believed to be rather low. Consequently, eco-efficient business and eco-innovation are poorly embedded in the national policy framework. The National Business and Investment Strategy refers to the need to ensure environmental sustainability but does not provide for any concrete measures. Information on environmental issues and tools is limited and the Government plays a minor role in providing environment-related information to businesses, which tend to lack expertise on environmental issues.

Businesses remain largely unaware of environmental management systems and standards, and no incentivizing measures are in place, although, as of 2016, 111 ISO 14001 certificates were issued in the country (figure 11.4). The supporting environment for SME innovation is gradually improving. Aside from governmental support, several organizations actively support innovative startups and existing SMEs are supported by donors. Moreover, SMEs still lack access to finance and credit. Total demand for SME loans is estimated at €1.4 billion, which is about 14 per cent of GDP and 34 per cent of the total loans in the financial system. This figure was derived using the loan volume breakdowns collected from SME lenders, data from INSTAT and the Business Register, and World Bank estimates of firms not needing a loan. From this perspective, increasing lending opportunities for new enterprises operating in environmentally friendly fields is central for achieving better levels of specialization, innovation and competitiveness.

## 2.5 Green markets

Small developments are perceivable in markets for quality food and agricultural products. The most significant green market in the country is the hydropower sector, but the environmental content of the energy sold looks minimal in the consumers' perception. Albanian consumers still seem to show an inelastic demand for green goods and services and more price-sensitive behaviour. The relative abundance and low price for hydropower as well as the low prices of agricultural products seem to drive consumption decisions in the fields of energy and foods. The very limited use of certification schemes and other environmental labelling initiatives confirms the early stage of development of green habits and markets in Albania.

## 2.6 Green jobs

According to the general classification of green jobs, no specific categories of jobs have been defined as such. As with "green economy", "green jobs" is not a term particularly used in formal documents. It is certainly true that the huge investments in major power plants and renewable energy production has delivered jobs. Some preliminary attempts have been made to highlight the potential offered to job creation by some environmental sectors such as waste management, especially concerning specific types of processing and waste flow treated, with special reference to the recycling market. According to a preliminary study, in Albania about 80 private companies recycle, collect and process various types of waste, scrap, paper, plastic, textiles and used tyres.

## 2.7 Public-private partnerships in support of green economy

Official and complete information is not available on public-private partnerships in Albania. However, voluntary actions exist across various sectors. Attention has been devoted to the potential of CSR in Albania, which has been recognized as an opportunity for a growing share of the country-based companies. The National Action Plan on CSR 2011–2014 promoted CSR in ways that could develop the sustainable competitiveness of companies operating in Albania, creating social value for the long-term prosperity and welfare of Albanian citizens and protecting the environment for future generations. The mission of the Government was basically to create the best possible enabling environment for the adoption of CSR practices in companies operating in Albania.

A Multi-Stakeholder Forum on CSR and the Albanian CSR Network were established in 2011. The 2014

Business and Investment Development Strategy 2014–2020 identifies the national policies for the promotion of business investments in 2014–2020 in line with the EU industrial policy and the European Strategy "Europe 2020" (smart, sustainable and inclusive growth), of which CSR is a key part. One focus for Albania, among others, is a strong focus on SMEs and sustainable and environmentally friendly mining.

There are some examples of market-driven voluntary actions that involve companies engaged in CSR or which are adopting eco-certification schemes.

The 16 commercial banks that have joined the Albanian Association of Banks, with assets worth around €9 billion and about 6,800 employees, quite regularly engage in CSR practices. They are committed to adopting self-regulatory mechanisms aimed at promoting responsible business and contributing with investment, innovation and cooperation to sustainable development. Sustainability awards have been organized in 2014 and 2015 for companies in partnership by the CSR Network, the then Ministry of Economic Development, Tourism, Trade and Entrepreneurship, and UNDP.

## 2.8 Legal, policy and institutional framework

### *Legal framework*

All fiscal regulations are set up according to the Law on Tax Procedures No. 9920/2008 and the Law on National Taxes No. 9975/2008, which determine the types of taxation applicable in the country. The Law on Tax Procedures sets the principles for sharing fiscal revenues among levels of government – following the still-ongoing reform of decentralizing functions, organizational and financial capacities at the municipal level.

The 2016 Law on Energy Performance of Buildings No. 116/2016 incorporates the use of renewable energy technology in new and renovated buildings to transform them into nearly zero-energy buildings.

The 2017 Law on Promotion of the Use of Energy from Renewable Energy Sources No. 7/2017 ensures compliance with EU acquis on energy and the settlement of disputes between the Government and producers; it is expected to drive investment on energy. As at 2017, the subsidiary legislation on renewable energy is not strong enough to provide sound regulation of the production and market for RES.

### *Policy framework*

Economic policy in the period 2015–2020 is almost entirely focused on economic growth, which has been considered as the goal and success indicator for the country to pursue.

### National Strategy for Development and Integration for the period 2015–2020

The NSDI-II, adopted in 2016, presents a vision for the social and economic development of Albania between 2015 and 2020 and sets out steps towards EU accession. It recognizes the main economic achievements of the country: growth in GDP driven by external demand; an increase in human development with progress in health, schooling and standard of living; improved capacities in public expenditure; a strengthened balance of payments, also due to remittances and FDI; progress in domestic revenues; and increased competitiveness and a better business climate. In general terms, the vision aims at strong, sustained and environmentally friendly economic growth and at establishing greater well-being among citizens by the wise use of enhanced wealth. The goal concerning GDP per capita relative to the EU-27 average is to have it increase every year to reach 35 per cent of the EU average by 2020. This figure is 30 per cent in 2016 (Eurostat 2017).

The NSDI-II sets priorities for some economic sectors and industries that rely significantly on natural resources. Simultaneously, it recognizes a few major environmental targets to be met, while supporting economic goals such as resource efficiency, a shift towards a low-carbon economy and adaptation measures in the climate-sensitive sectors of agriculture, food and forestry, and tourism development.

Among the "green sectors", the Strategy recognizes a favourable environment for investment in hydropower and green energy and aims at exploiting the related substantial opportunities of small and medium HPPs as well as at easing the generation of wind and solar electricity by the private sector, through the management of concessions. The goal for renewable energy use is 38 per cent in the national energy mix in 2020 (34.3 per cent in 2015). Goals are also set in the field of energy efficiency (9 per cent by 2018 for all economic sectors); a specific fund is envisaged as the use of innovative economic mechanisms, as clarified by the respective sectoral strategies.

Agriculture is a strategic economic sector. The NSDI-II's objectives include the development of bigger farms and higher quality products, together with

increased agricultural and labour productivity, higher added value, more commercial investment in the sector, water efficiency and minimization of losses (particularly in irrigation) and overconsumption. This should be achieved also on the basis of a sound legal framework for price-setting and cost recovery. As a result, viable, high-quality food production should be achieved and the products sold in the domestic and EU markets by a competitive and innovative agrifood sector that is able to sustain the competitive pressure and meet EU standards and market requirements.

The NSDI-II anticipates the development of EU-export-oriented, sophisticated, value-added and innovative products as well as the attraction of FDI across all economic sectors. The declared goal is increasing the share of export services and finished goods in total exports by 3 per cent every year, and increasing FDI by an average of 6.3 annually, with the FDI target of 9 per cent of GDP by 2020.

Tourism is considered to be deserving of further development due to its regional potential and its contribution to the growth of the country; it already accounts for more than the goal of 8 per cent of GDP set for 2020 (8.4 per cent in 2016, according to the World Travel and Tourism Council). Infrastructure, local public services and environmental law development (on waste, wastewater, construction and property rights) are key to strengthening the tourism industry. Regional, cultural, cuisine-based and high-end non-traditional tourism in areas where environmental quality has been maintained or improved are noted as segments to be incentivized and requiring appropriate marketing strategies. Season expansion is one of the proposed measures. A national register of tourist resources, improved training of tourist operators and workers and the creation of new tourist routes in rural areas rich in natural and cultural resources are foreseen. Low price levels in the sector are considered a potential source of competitive advantage.

Cross-cutting issues addressed by the NSDI-II include gaining the confidence of investors by making the economic environment of the country more stable, attractive and predictable. This would include providing access to capital and long-term investment for businesses through banking and the non-bank financial sector, as well as through microfinance initiatives, and by addressing the structural problem with non-performing loans.

Achieving balance between economic activities and the preservation of non-renewable resources is an overarching goal for the environmental sector. However, the measures envisaged for implementation are considered costly. They include supporting sustainable development of the natural environment for recreation purposes and ecotourism and stimulating development of innovative businesses that are less reliant on intensive use of natural resources. Interestingly, the cost-effectiveness of the implementation of national environmental priorities is a primary concern of the NSDI-II. The benefit-to-cost ratio of the investments involved and efficiency are expected to drive the environmental reform agenda, envisaging the use of market mechanisms for pollution mitigation and greater private sector participation to alleviate the fiscal burden of environmental protection.

Life quality is a goal to be achieved through higher personal incomes and national GDP, a safe environment and better opportunities for recreation; it is also offered by environmental quality and green open spaces in urban areas, which are to be safeguarded and improved.

#### National Action Plan on Renewable Energies for the period 2015–2020

The 2016 National Action Plan on Renewable Energies for the period 2015–2020 envisages an indirect support scheme to energy production from RES, working as a sliding feed-in premium, where the total support will be determined through auctions. The RES producers receive a set price, a part of which is a variable premium defined as the difference between the auction price and the market price of energy. The sliding feed-in premium foreseen by the National Action Plan is expected to work as an incentive to further increase efficiency and investment (box 2.2).

#### Draft strategy for tourism development for the period 2015–2020

A draft strategy for tourism development for the period 2015–2020 was developed; however, as of early 2017 it was not yet approved. It includes the identification of opportunities offered by the sector that has shown steady growth over recent years. The draft includes provisions for increasing infrastructure, quality, promotion and marketing of the tourist sector. It may further increase this sector's potential and involve environmental authorities, especially NAPA.

### Box 2.2: Energy reforms in Albania

The energy sector has made important progress over the last few years, prompted by targeted legal initiatives such as that on energy performance of buildings, and in particular on energy efficiency and renewable energy production, a law on which was passed by the parliament in February 2017. Decrees are expected to stimulate the installation of photovoltaic (PV) systems and investments in households. The sector has benefited from FDI for large projects, which, coupled with an increase in household consumption, have supported Albania's economic recovery (International Monetary Fund, 2017).

The electricity sector reforms have been quite successful in strengthening the sector's financial sustainability by adjusting and gradually liberalizing tariffs, improving bill collection, cutting distribution losses from 45 to 28 per cent between 2014 and 2016 and repaying arrears to private companies. Together, these factors have reduced the energy sector's budget allocations from 0.4 to 0.1 per cent of GDP from 2014 to 2017. The energy sector reform is a good example of successful macrocritical reform bringing about a structural reduction in fiscal risk and a net improvement in sector performance. A positive domestic energy balance is due to the increase in production from private HPPs and the reduction of distribution losses due to the investment made possible by increased liquidity.

#### *Institutional framework*

Prior to the institutional restructuring of September 2017, the then Ministry of Finance used to oversee overall state budget execution and was responsible for the national tax system and its development, management of public debt, macroeconomic stability and implementation of market-oriented reforms. The then Ministry of Economic Development, Tourism, Trade and Entrepreneurship was responsible for setting up the framework conditions for the economy within the framework of the structural regulatory package and maintaining the macroeconomic balances required by the then Ministry of Finance. The then Ministry of Economic Development, Tourism, Trade and Entrepreneurship was also responsible for national tourism development, which is seen as a driver of Albanian economic growth. After the institutional restructuring of September 2017, a single Ministry of Finance and Economy was formed, while the competences on tourism were entrusted to the new Ministry of Tourism and Environment.

The new Ministry of Infrastructure and Energy is responsible for the national energy strategy and the concessions granted for the use of natural resources stored underground and beneath the seabed. The Ministry manages energy and extraction contracts with other countries and private companies based on individual contracts setting the amount paid for the concessions (release of licences) on a case-by-case basis. Royalties are paid in the amount of 50 per cent of revenues from the resources extracted net of extraction and exploration costs incurred by the licensee firms.

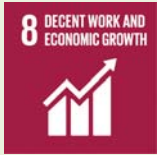
From the fiscal point of view, the Ministry of Tourism and Environment has limited capacities. Its budget and expenditure depend on the clearance of the Government and specifically the Ministry of Finance and Economy. Nevertheless, the Ministry of Tourism and Environment collects revenues from environmental fines through the State Inspectorate of Environment, Forestry and Water. The Ministry is also responsible for issuing environmental permits. Currently, environment-related revenues are still very modest but the environmental fines form a significant share of the total.

Until recently, fiscal capacities and independent financial management of parks were not assigned to NAPA – the Agency in charge of the organization and management of the protected area system and Natura 2000 network in the country. The Agency develops a registry of HPPs across the protected areas as a first step towards an assessment of their pressure on biodiversity assets. Until 2017, no financial sources were earmarked for nature, biodiversity conservation or ecotourism, even within NAPA. This is expected to change with the adoption in May 2017 of the new Law on Protected Areas No. 81/2017. There is anticipation of the need to finance the envisaged increase of the protected area surface to comply with EU standards, which require 20 per cent of national surface to be protected (16.61 per cent of the national territory is currently protected), as well as the implementation of management plans in the existing protected areas.

#### *Sustainable Development Goals and targets relevant to this chapter*

Albania's current position vis-à-vis targets 8.3, 8.4, 12.7 and 12.c is described in box 2.3.





**Box 2.3: Targets 8.3, 8.4, 12.7 and 12.c  
of the 2030 Agenda for Sustainable Development**



**Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all**

**Target 8.3: Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services**

The most significant challenge to access to financial services for the private sector and for medium to micro-sized enterprises remains to widen access to credit for the domestic private sector in Albania in order to create an attractive business environment in which investments may continue to grow and FDI can support innovation, especially in energy, tourism and agribusiness.

Private expenditure and FDI in the energy sector will continue, especially on RES fostered by feed-in tariffs and due to the planned liberalization of the energy market. Appropriate public policies can accelerate the implementation of the policy documents on energy and of the new legal framework for RES and energy efficiency.

Innovative instruments, including voluntary schemes and dedicated funds and special programmes of banks jointly developed in public-private agreements, may simplify access to finance, especially for the private sector.

International guidelines recommend that loans be classified as non-performing when payments of principal and interest are 90 days or more past due or when future payments are not expected to be received in full. High shares of non-performing loans can affect bank health and efficiency by identifying problems with asset quality in the loan portfolio, and may limit access to credit for private companies, which is on a decreasing trend in Albania.

To support sustainable economic growth, Albania should:

- (a) Implement the needed reforms in the fields of property rights and the financial sector and implement the measures envisaged by the energy reforms;
- (b) Address the underinvestment linked to the still-significant, medium-term issue with non-performing loans, which have fallen from above 25 per cent in 2015 to 18.5 per cent in 2016 against a world average of less than 4 per cent in 2016.

**Target 8.4: Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead**

Increasing resource efficiency at the country level is a consistent target that can be quantified in terms of domestic material footprint and consumption both as an absolute value and relative to figures on population and GDP.

Resource efficiency indicators are not regularly collected, nor are they reported in national statistics. Available figures can be used for environmental accounting of the major natural resources of the country, such as timber, land and water. Figures are also available concerning waste management and landfills, even though more accuracy in data survey is required.

The national statistical framework is of good quality and includes all major metrics that can be used to assess domestic resource efficiency in consumption and production and show the level of decoupling achieved between economic growth and environmental degradation.

The indicators used to assess the coverage and cost-efficiency of water utilities across the country (total cost coverage, staff efficiency, non-revenue water for water utilities) by the Water Regulatory Authority of Albania, and the non-economic indicators adopted for waste management (total generation of waste and municipal waste generation per capita), provide a base on which resource efficiency indices can be constructed (e.g. resource intensity and productivity) with the cooperation of local service providers and LGUs.

In order to set resource efficiency targets and measure progress at the appropriate geographical level, Albania should start to regularly collect decentralized figures and compare them, having regard to the specific conditions of the new regions and LGUs in the country resulting from the recent administrative reform. To this purpose, economic and demographic statistics are already available at all relevant territorial levels and can be coupled to quantitative figures on resource use that are available for forests, water, land and livestock. Most of the progress in the potential of resource efficiency rests on the efforts still required in the water and waste management sectors, where economic inefficiencies are still largely detectable, for instance in staff efficiency and non-revenue water for water utilities.



INSTAT, in cooperation with relevant authorities at all levels and particularly with LGUs, should check and improve, if needed, quantitative figures on resource use, taking into account also the well-documented phenomena of non-billed water, energy and unpaid waste collection fees in the waste management sector.

**Goal 12: Ensure sustainable consumption and production patterns**

**Target 12.7: Promote public procurement practices that are sustainable, in accordance with national policies and priorities**

Institutions show some level of preparation in the area of procurement. Some important steps have been made towards establishing a sound legal framework and a Public Procurement Agency that has strengthened its monitoring functions. Some 170 public procurement agreements have been signed, representing 6.1 per cent of GDP. However, the contracting authorities still lack capacities to manage these kinds of procedures. As a preliminary step, a manual for green procurement is planned to be developed by the Ministry of Infrastructure and Energy.

In order to reach sustainable public procurement, Albania should increase the capacities of contracting authorities managing procurement, by integrating into GPP procedures requirements and criteria supporting the protection of the environment, social progress and economic development, and by looking for resource efficiency and improving product and service quality and cost-effectiveness.

The progress achieved concerning capacities for ensuring transparent, cost-effective procedures will constitute the base for potentially testing the introduction of sustainability criteria in public procurement contracts.

**Target 12.c: Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities**

Studies conducted on the whole Western Balkan region show that fossil fuel subsidies in Albania are relatively modest. Some indirect disincentives to minimize externalities from transportation have been linked to the importation of used vehicles and low level of taxation, justified as social measures.

The Government did not issue a comprehensive, updated list of existing fossil fuel subsidies and does not directly address the topic.

A list of formal subsidies can be delivered based on the scattered initiatives undertaken by the former Ministry of Energy and Industry. Power sector subsidies to be eliminated by 2020 in Albania mainly apply to hydropower, which is the main source of energy in the country.

In general, the level of direct subsidies in the country is already low, which is also due to the strict financial constraints on public budgets. The macroeconomic conditions of the country, as well as the actions envisaged by the country's main strategies, do not provide for a significant amount of subsidies of any type to be supplied; therefore, at the moment no negative evolution is foreseeable in the sector.

The Ministry of Infrastructure and Energy could set up an expert group to prepare a list of subsidies. Based on the list, the Government should collect country-level data on environmentally harmful subsidies and assess the country's performance. The Government should give more attention to the foundations of a green economy model, by dedicating public officials to the analysis and implementation of measures striving for resource efficiency, sustainable investments and the economic and social sustainability of environmental policies.

## 2.9 Assessment, conclusions and recommendations

### *Assessment*

Approaches to green economy are still unexplored in Albania. Governmental strategies provide policy declarations and some initiatives, on renewable energy, energy efficiency and tourism, but those are not managed under a common framework referencing the principles of green economy. The measures related to green economy that are implemented in the country are scattered and no national policy document specifically refers to green economy as a target.

Environmental economic instruments are not based on any assessment of environmental damage or externalities; however, they encourage consumers and producers to behave in an environmentally friendly way.

Environmental taxes provide only a soft incentive for *pro-environment* behaviour by individuals and organizations. Mostly, tax rates have been set with no consideration of the impact and effects of emissions on the environment in terms of externalities or environmental damage to citizens and firms.

Environmental taxation and fiscal instruments are not subject to harmonized regulation or management at

the central level and no specific unit within the central ministries (finance, economy and environment) is vested with direct responsibility for the environmental tax system.

Albania does not earmark financial resources to environmental protection. Since all budgetary arrangements of other ministries depend on the discretionary decision of the Ministry of Finance and Economy, any decision about strengthening environmental taxation will depend on the Government's will. Furthermore, the conditions for widening public and private environmental expenditure do not exist.

However, the ongoing decentralization reform may ease both the creation of an attractive business environment for companies as an initiative of municipal governments and the collection of revenues and their earmarking to local projects. At the local level, these expenditures are expected to increase the efficiency and quality of local services such as water, waste management and others.

### *Conclusions and recommendations*

#### Sectoral initiatives to induce sound economic growth

The country has experienced significant progress in economic growth, towards which some green economy sectors have also been driving, as the figures on energy, fisheries and tourism show. The private sector still has to develop its full potential, which is constrained by its limited access to credit, a static financial system and a relatively poor business environment, especially outside the main urban centres. At the same time, domestic consumption has increased and SMEs have been growing, supported by domestic and foreign investments.

#### Recommendation 2.1:

*The Government should continue to stimulate domestic demand through ensuring a positive direct fiscal framework for businesses and citizens and by favouring sectoral initiatives to induce sound economic growth, which may ease access to loans and finance for private companies and entrepreneurs operating in economic sectors more likely to contribute to a shift to a green economy.*

#### Fiscal decentralization

Steps forward have been made in the decentralization reform of the country. A sound legal framework setting up the functions of LGUs has been approved, which includes the possibility for LGUs to collect

local fees and indirect taxes. However, fiscal decentralization has not yet been applied. LGUs lack appropriate financial resources or local revenues proportionate to their own, shared and delegated competences.

#### Recommendation 2.2:

*The Ministry of Finance and Economy should continue the process of fiscal decentralization by issuing appropriate legislation and accompanying measures as a way to achieve significant progress in performance of the public utilities managed at the level of local government units.*

#### Statistics for environmental expenditures and measuring green growth

The implementation of the National Strategy for Integration and Development for the period 2015–2020 and several other documents in line with the SDGs of the 2030 Agenda for Sustainable Development requires investment in environmental infrastructure and services such as landfills, water, sewerage systems, protected areas and others. To date, INSTAT has not adopted an international classification of environmental expenditures (such as CEPA), which would facilitate the international comparability of national statistics. Another challenge is to develop statistics for the measurement of green growth indicators, which are designed for, inter alia, gauging improvements in environmental and resource productivity and the extent to which economic growth has been decoupled from economic growth (SDG target 8.4).

#### Recommendation 2.3:

*The Institute of Statistics should develop:*

- (a) *A statistical information system for environmental expenditures based on the existing international standard, i.e. the Classification of Environmental Protection Activities and Expenditures (CEPA);*
- (b) *Statistics for the measurement of indicators designed to measure progress made towards the greening of economic growth.*

#### Resource efficiency

A significant lack of appropriate infrastructure is evident in the public utilities sector and is considered responsible for some of the inefficiencies in this sector, including water leakage, inaccurate metering, scarce environmental protection efforts and poor waste management. Large investments financed by FDI have been made in the energy sector in the past, which allowed for the setting up of framework

conditions that have allowed energy markets to develop and have liberalized alignment with international expectations and the EU acquis.

Recommendation 2.4:

*The Government should support the new local government units and the service providers to increase resource efficiency, especially in the waste and water services, and develop appropriate strategies to concentrate public and private investment, particularly from international donors, on infrastructure and plants that can create the basic conditions for cost-effective service provision.*

Tourism development

The positive trend in tourism development across the country is being confirmed as one of the most promising sources of revenue for the country in the years to come, which necessitates it being managed carefully, avoiding any harmful impacts on the landscape and environment. NAPA's Short and Midterm Strategic Programme for the period 2015–2020 refers to the potential of sustainable tourism as a possible means to raise funds for financing the operations and maintenance of the network of parks across the country and as a driver of local development and well-being.

Recommendation 2.5:

*The Ministry of Tourism and Environment, through the National Agency of Protected Areas, and the Ministry of Finance and Economy should continue their efforts to develop and implement a tourism strategy, especially in high-value natural areas and particularly protected sites, by promoting sustainable forms of tourism.*

See Recommendation 9.1.

Energy market liberalization

Energy liberalization has been considered a successful macrocritical reform that brought about considerable improvements in the sector's performance. Significant legal innovations have been introduced countrywide. In particular, the Law on Energy Performance of Buildings and the Law on Promotion of the Use of Energy from Renewable Energy Sources have been adopted in 2016 and 2017. The 2016 National Renewable Energy Action Plan introduced a particularly innovative indirect support scheme to energy production from RES, working as a sliding feed-in premium that does not burden public finances.

Recommendation 2.6:

*The Ministry of Infrastructure and Energy should, in cooperation with the Ministry of Tourism and Environment, continue with legislative efforts and the development of organizational innovations towards energy market liberalization, particularly with regard to renewable energy sources, by means of advanced, indirect incentivizing mechanisms (such as the sliding feed-in premiums) that support resource efficiency and innovation without burdening the public budget.*

Financial mechanisms to support environmental protection activities

According to the 2011 Law on Environmental Protection, the income from permit fees and fines for not complying with the environmental legislation should be used to finance environmental protection activities. However, no national environmental fund or state budget line for an environment-related purpose has been established in Albania.

Recommendation 2.7:

*The Government should establish financial mechanisms to support environmental protection activities, such as an environmental fund under the ministry responsible for environmental issues as prescribed in the 2011 Law on Environmental Protection.*

## Chapter 3

# ENVIRONMENTAL MONITORING, INFORMATION, PUBLIC PARTICIPATION AND EDUCATION

### 3.1 Environmental monitoring

#### *Monitoring networks*

#### Air

There are five fixed automated air quality monitoring stations in Albania, located in the cities of Shkodër, Durrës, Elbasan, Vlorë and Korçe, and one mobile air quality monitoring unit, which is used in the cities where there are no fixed stations. These stations are operated by the National Environment Agency (NEA).

In addition, there are two fixed automated air quality monitoring stations in Tirana, which are operated by the Institute of Public Health (IPH) of the Ministry of Health and Social Protection. There are no transboundary air quality monitoring stations and no ambient air quality monitoring outside of the cities mentioned above. Equally, there is no air quality monitoring in rural areas.

The air quality data is stored and accessed through a database hosted on a server by the Austrian

Environment Agency (Umweltbundesamt). Annual (internal) calibration of the monitoring equipment is contracted to a private company. There is no accredited laboratory at either the NEA or IPH for testing or repairing the equipment, nor for undertaking the air quality analysis of pollutants. There is no validation of data and no quality assurance/quality control procedures for the data as there is no accredited laboratory. There is also no dispersion modelling.

Internal reports on air quality are prepared at three- and six-monthly intervals; however, this information is not publicly available. These reports are only shared with those responsible for preparing the national state of environment report (SoER) at NEA. There is no near-real-time data made available to the public.

There are some differences since 2011. Most notably, there is no longer an air quality monitoring station in Fier. Additionally, despite a memorandum of understanding between the NEA and IPH on air data and information exchange, there is still no coordinated mechanism for exchanging data and information between the two organizations.

**Photo 3.1: Air monitoring station near Pogradec**





### Surface water

The NEA undertakes monitoring to determine the water quality of lakes, rivers and coastal areas, as well as the impact of discharges of urban wastewater.

The number of routinely monitored physico-chemical parameters increased from eight in 2011 to 15 in 2015. In 2015, the following parameters were sampled and analysed four times per year (once per season): water temperature, pH, alkalinity, salinity, electric conductivity, dissolved oxygen, chemical oxygen demand (COD, dichromate method), biochemical oxygen demand (BOD<sub>5</sub>), nitrite (NO<sub>2</sub>), nitrate (NO<sub>3</sub>), total ammonium (NH<sub>4</sub>), total phosphorus (P<sub>total</sub>), orthophosphate (PO<sub>4</sub>) and suspended solids and transparency (lakes only). The NEA's laboratory is ISO accredited for the aforementioned parameters. Chlorophyll-a is monitored three times per year in Lakes Shkodër, Ohrid and Prespa and in the Butrint Lagoon.

Starting in 2013, analysis of heavy metals was envisaged at selected sampling sites (once per year).

The number of monitoring sites along rivers increased from 22 in 2011 to 34 in 2015 and has remained the same since 2015. Lake monitoring is conducted in Lake Shkodër at three monitoring sites, Lake Ohrid at two sites and Lake Prespa at one site. At each monitoring site samples are taken at different depths.

The NEA's sampling programme along the coastal waters focuses on assessing the impact of urban

discharges on the quality of coastal waters. The key monitoring parameters are COD, BOD<sub>5</sub>, suspended solids and P<sub>total</sub>. In 2016, there were four monitoring sites at Durrës, four at Vlorë and two at Sarandë.

There are 626 reservoirs; however, the ambient water quality of reservoirs is not monitored.

### Bathing waters

Monitoring of the quality of coastal bathing waters is conducted by the IPH. Samples are taken at the major tourist beaches along the Adriatic and Ionian Seas, including Velipojë, Shëngjinit, Durrësit, Gjirit të Lalzit, Kavajës, Vlorës, Sarandë, Ksamil, Qeparo, Dhërmiut, Himarës and Borshit. *Escherichia coli* and *Intestinal enterococci* are the two relevant microbiological indicators. The monitoring programme is compliant with EU Directive 2006/7/EC concerning the management of bathing water quality and repealing Directive 76/160/EEC. Samples are taken throughout the period April to September. In 2016, samples were taken along 16 beaches with 99 samples sites in total, compared with 10 beaches and 72 sampling sites in 2011.

### Groundwater

Groundwater is monitored by the Albanian Geological Service under the Ministry of Infrastructure and Energy. The groundwater monitoring network comprises 80 sites. The Albanian Geological Service visits these sites twice per year. The data from 60 sites are provided to the NEA.

**Photo 3.2: Water monitoring observation point near Pogradec**



Analysis of the physico-chemical parameters comprises pH, water temperature, electric conductivity, major ions (e.g., chloride, potassium, carbonates), nutrients (NO<sub>2</sub>, NO<sub>3</sub>, NH<sub>4</sub>, PO<sub>4</sub>), and heavy metals.

Groundwater levels are not recorded continuously, but are only measured during visits to the site for sampling.

### Hydrology and meteorology

Hydrological and meteorological monitoring is conducted by the Institute of Geosciences, Energy, Water and Environment under the Ministry of Education, Sports and Youth (embedded in the Polytechnic University of Tirana).

There are 121 hydrological posts across the six hydrographic river basins. This includes 21 automatic hydrological stations, where data are collected continuously. At the remaining 100 sites, water levels are measured with staff gauge boards. Local staff visit these sites twice per day and submit monthly reports (paper copies) to the Institute. There are four automated stations monitoring sea to measure water levels and a further four sites where local observations are taken twice daily.

There are 20 automatic and 150 manual meteorological stations and data collection is analogous to the hydrological monitoring. For the manual stations, data are collected up to three times per day depending on the type of station.

The data from the automated hydrological and meteorological stations are transferred to Tirana at a frequency varying between every two hours to once or twice per day.

### Drinking water

Monitoring of drinking water is conducted by the IPH. Samples are taken daily at both the abstraction sites and a selected number of taps inside the area serviced. For example, in 2015, samples were taken from 570 taps. The analyses comprise bacteriological parameters (*Escherichia coli* and *Intestinal enterococci*) and physico-chemical parameters, including fluoride, nitrate, nitrite, iron, arsenic, manganese and heavy metals. In principle, monitoring drinking water quality at both the abstraction points and the tap is a responsibility of the water supply and sewerage utility enterprises. However, the enterprises lack the resources for doing so.

### Waste

Prior to the institutional restructuring of September 2017, data collection on municipal solid waste (MSW) was undertaken at the municipality level and provided to the then Ministry of Transport and Infrastructure. This information was then shared with the then Ministry of Environment and the NEA. The then Ministry of Transport and Infrastructure collected information on annual household waste, recyclable waste (including the categories of metal, plastic and paper) and composted and landfilled waste, as well as construction and demolition waste. Following the institutional restructuring of September 2017, the waste-related responsibilities of the former Ministry of Transport and Infrastructure were transferred to the new Ministry of Infrastructure and Energy, which is expected to continue collecting information on waste.

### Soil and land

The monitoring of soil quality is the responsibility of the NEA, and is then subcontracted to the Faculty of Agro-environment at the University of Agriculture, Tirana. Several indicators of soil quality (pH, N, P, K, Ca, Mg, organic matter, and heavy metals (Cd, Cr, Co, Ni, Pb, Zn)) are monitored at 30 fixed sites as described by the Consolidation of the Environmental Monitoring System in Albania (CEMSA) monitoring network. The monitoring programme is running on a three-year cycle collecting data on 10 sites per year (Rro Lepani (Berat), Tull (Durrës), Topojan (Dibër), Klosi (Dibër), Ma Gjegjan (Kukës), Theth (M. Madhe), Koplik (M. Madhe), Ishull Lezhë (Lezhë), Dritaj (Elbasan)).

Soil erosion is monitored at certain sampling stations in the field and calculations are made by the Faculty of Agro-environment, through its Forestry Department; however, the methodology used is not compatible with EU norms and standards. The Forestry Department carries out annual monitoring of erosion in forestry soils located in the Vjosa River Basin.

Several indicators for land use are monitored by the Ministry of Agriculture and Rural Development as stipulated in DCM No. 1189 dated 18.11.2009 "On rules and procedures for drafting and implementation of the national environmental monitoring programme". In addition, Corine land cover data exists as published by the European Environment Agency (EEA) in 2016. A forest inventory is being prepared using remote sensing and ground-truthing and this will further contribute to the monitoring of land use in the country.

### Noise

The NEA monitors noise at seven cities. Berati, Fier, Korçë, Sarandë, Tirana and Vlorë all have four fixed locations. Gjirokastër has two fixed locations. There are two mobile monitoring units that service the seven cities. Gjirokastër and Berati were added as additional cities in 2016.

In Tirana, there are 15 fixed locations located near the major roads, mostly focused in the centre of the city. Monitoring is undertaken at each location over a 24-hour period (day and night), one day per year, amounting to 15 days in total. There are two noise monitoring units and these are rotated between sites. The NEA fixes the dates and the monitoring programme runs throughout the year; the data are collected manually.

The results are processed at the National Reference Laboratory (NRL) located within the NEA (which is seeking accreditation for noise monitoring this year) and the data are stored in Excel spreadsheets. The NRL analyses the noise data and compares them with World Health Organization (WHO) guidelines. The data are compiled for the three-month and six-month reports, and then recorded in the annual SoER. Noise monitoring has been undertaken by the NEA since 2014; prior to this noise monitoring was undertaken by the IPH. The IPH began collecting noise data in 2007 and also did so in 2008, 2010 and 2011. Now that noise monitoring is undertaken in its entirety by the NEA, this should overcome historical challenges in coordination between the IPH and NEA.

### Vibration

No institution is entrusted by law with the monitoring of vibration related to traffic or industrial activities on a regular basis. Some vibration monitoring has been done in the framework of different projects.

### Radioactivity

No regular monitoring of radioactivity is carried out due to the need to prioritize the funding for monitoring to other priority areas. There has been no monitoring and reporting on radon by the NEA since 2011.

In 2011, the Institute of Geosciences, Energy, Water and Environment undertook an assessment of radon in the cities of Himare and Konispol (in soil, inside buildings and in drinking water), Tirana (inside buildings) and Korçë (in drinking water).

In 2015, the Institute of Applied Nuclear Physics monitored radioactivity in five rivers: Drini River

(Bacallek, Shkodër), Erzen River (Ura e Peshkatarit and Ura e Beshirit), Vjosa River (Ura e Mifolit), Shkumbini River and Mati River. No monitoring of radioactivity was undertaken in 2016.

### Biodiversity

The NEA develops the annual programme for biodiversity monitoring. There are 76 locations identified for monitoring biodiversity in the 2017 national environmental monitoring programme. Depending on the station, lichens, mushrooms, macrophytes, invertebrates, fish, reptiles and amphibians, birds and mammals are to be monitored. These locations are both terrestrial and coastal and based on biodiversity hotspots and requirements under international biodiversity-related agreements. It is likely that around 25 locations will be monitored each year. Historically there were 84 sites identified in the CEMSA biodiversity monitoring network; due to inadequate funding, only 15–20 sites are monitored each year for flora, fauna and birds.

There is very little monitoring of marine life. Biological elements monitored include composition, abundance and biomass of phytoplankton, and some aquatic flora and benthic invertebrate fauna, but no higher taxonomic groups such as fish and mammals. That said, in 2016 the Herpetofauna Albanian Society started monitoring sea turtles. There has been no monitoring of fish stocks since 2011.

The NEA subcontracts biodiversity monitoring to the Faculty of Natural Sciences, University of Tirana. They carry out the monitoring and report to the NEA once per year. The reporting is not satisfactory due to a lack of funds. Between 2013 and 2017, only three contracts were issued with the Faculty of Natural Sciences (i.e. three reports in four years) and therefore the data are incomplete.

The National Agency of Protected Areas (NAPA), which was established in 2015, is the main agency in charge of management of protected areas and monitoring of biodiversity, habitats, species and ecosystems within protected areas. However, as of early 2017, NAPA has not produced any monitoring reports on biodiversity.

### Forests

The Forest Directorate within the NEA is responsible for and carries out forest monitoring, including the inputs into the design of the national annual environmental monitoring programme. Before 2015, the NEA asked for additional data on forest indicators from the regional forest directorates. Since 2015, the

NEA asks the municipalities and forestry enterprises for this data but the feedback by partners is weak. In the current situation where the management of forests is with the municipalities, the NEA is considering training the responsible staff in the municipalities within the scope of the World Bank's Environmental Services Project.

The NEA Forest Directorate collects data on total forest land, forest production, estimates of total biomass, structure of age classes and production index. With regard to forest health, two parameters are used, namely, discoloration and deformation of leaves caused by disease and harmful insects, for the main forest species such as black pine, European maple and beech. These two parameters are aligned with the Forest Europe parameters. Abiotic factors such as storms, winter freezing, floods and natural disasters are also monitored. When floods occur, the NEA collaborates with the municipalities to obtain data. Overall, the monitoring is not sufficient to understand the state of forests and trends and only provides a general view. Over the last four years, the NEA has been working towards monitoring and reporting on the Forest Europe indicators and will continue to do so in 2017.

The NEA will carry out a new national forest inventory with support from the World Bank. This three-year Environmental Services Project will build capacity to undertake the inventory using national staff. In 2017, capacity will be built to undertake the inventory; 2018 will focus on measures in the field and data will be compiled in January 2019 (based on 2018 data). The inventory will be important for forest indicators and provide valuable information that is currently unknown. The previous forest inventory was conducted in 2004 through remote sensing and supported by some 500 sampling points in the field.

#### Financial resources for monitoring

The overall budget of the NEA for monitoring, including staff time, operations and the laboratory is approximately US\$150,000. The NEA receives approximately US\$50,000 per year (7 million to 8 million leks) from the ministry responsible for environmental issues for external contracts to support monitoring activities. The funding has been fairly constant each year since 2011. For 2017, the NEA has received 6.8 million leks. The national environmental monitoring programme, which is produced each year and outlines the proposed environmental monitoring, is estimated to cost US\$1.5 million. Therefore, NEA receives approximately 3 per cent of the budget needed to implement the national environmental monitoring programme. This limited budget is broadly

split into US\$10,000 each for air, water, land and forests/biodiversity, with the remaining US\$10,000 split into small contracts to support additional aspects of monitoring. As a result, the NEA determines which aspects of the annual environmental monitoring programme are actually carried out.

#### Analytical laboratories

The 2011 Law on Environmental Protection requires accredited laboratories to undertake measurements and tests following standardized procedures. In May 2011 the NRL became the first accredited laboratory for water covering the following seven parameters: pH, nitrate (NO<sub>3</sub>), nitrites (NO<sub>2</sub>), chemical oxygen demand (COD), biochemical oxygen demand (BOD<sub>5</sub>), phosphorous and total phosphorous (P<sub>total</sub>). The NRL has since added an additional four parameters: electric conductivity, suspended solids, ammonia (NH<sub>4</sub>) and alkalinity (CaCO<sub>3</sub>).

Since 2011, the NRL has substantially increased its capacity in terms of equipment, staffing and number of parameters. In 2017 the NRL has 10 permanent members of staff, compared with two in 2011. The NRL now routinely analyses chlorophyll-a in lakes three times per year. It also analyses macroinvertebrates, but not routinely. The NRL is also working towards accreditation for testing and measuring pesticides and polycyclic aromatic hydrocarbons (PAH) in water. It is also undertaking a pilot monitoring initiative in the Shkumbini River for mercury as part of the IBECA project. Overall, there has been a marked improvement in the capacity of the NRL.

The NRL currently analyses noise and vibration data in major cities; however, the NRL is not accredited for noise monitoring and analysis, although wishes to obtain accreditation in 2017. There are no accredited laboratories for analysing air quality data in Albania (and international laboratories are not used) and therefore data remain indicative.

Table 3.1 summarizes the status of the laboratories that support the overall national environmental monitoring programme.

#### Integrated environmental management system

Despite several international projects, notably, Strengthening of the Environmental Monitoring System in Albania (StEMA, 2006–2008) and CEMSA (2010–2013), there is no current functioning national integrated environmental management system (IEMS) in place in the country. Through CEMSA, a national



monitoring network and IEMS were designed for air, water, soil and biodiversity.

However, the network does not provide the data required for the indicators listed in DCM No. 1189. As of early 2017, the databases that were developed were never actually linked together and the proposed IEMS was not approved by the then Ministry of Environment.

As of early 2017, UNDP is delivering a Global Environment Facility (GEF) Cross-Cutting Capacity Development project in Albania which, among other objectives, aims to develop an environmental monitoring system that is integrated throughout relevant government institutions and that uses international monitoring standards for indicator development, data collection, analysis and policymaking.

The project will develop national capacities in Albania to align its national environmental information management and monitoring system with global environmental monitoring and reporting priorities, including compliance with the reporting obligations under multilateral environmental agreements (MEAs). The focus of this work will be to support the three Rio Conventions on biodiversity, climate change and desertification.

## Legal, policy and institutional framework

### Legal framework

The Law on Environmental Protection No. 10431/2011 includes provisions on environmental monitoring and the production of the national SoER. In addition, DCM No. 1189 dated 18.11.2009 "On rules and procedures for drafting and implementation of the national environmental monitoring programme" identifies what is to be monitored and by whom. The DCM includes six articles and an annex containing a catalogue of indicators. A recent report by UNDP, *Assessment of Albania's National Capacities on Environmental Monitoring* (2015), concludes that the DCM is quite outdated, but does not go so far as to suggest a thorough revision.

Since 2011, there have been 22 new and six draft acts of subsidiary legislation that contain information relevant to environmental monitoring. They broadly cover the areas of air quality, water, waste, climate change, the marine environment and pollutant release and transfer register (PRTR). These acts will undoubtedly support the alignment to the EU environmental acquis in policy terms. However, without significant increases in the resources required for monitoring, they remain at risk of failing to be implemented.

**Table 3.1: Laboratories involved in environmental monitoring**

Laboratory	Under	Accreditation	Parameters monitored on behalf of NEA
Agricultural University, Faculty of Agro- environment, laboratory	Ministry of Education, Sports and Youth	Yes	pH, N, P, K, Ca, Mg, organic compounds (OM) and heavy metals (Cd, Cr, Co, Ni, Pb, Zn); Soil Monitoring
Institute of Public Health*, Water Monitoring Laboratory (microbiological parameters)	Ministry of Health and Social Protection	No	Two bacteriological indicators: Intestinal enterococci (IE) and Escherichia coli (E.coli); Two chemical parameters: temperature and pH
Albanian Geological Service, Chemical Analysis Laboratory	Ministry of Infrastructure and Energy	Yes	1. Chemical parameters in ground waters: Na, K, Mg, Ca, Fe, NH <sub>4</sub> , HCO <sub>3</sub> , CO <sub>3</sub> , Cl, SO <sub>4</sub> , PO <sub>4</sub> , NO <sub>3</sub> , NO <sub>2</sub> , Mp, Fp, pH, O <sub>2</sub> , temperature; Micro-elements: Cu, Zn, Pb, Co, Cr, Ni, Mn, Cd 2. River estuaries (chemical oxygen demand (COD), NO <sub>3</sub> and P <sub>Total</sub> )
National Reference Laboratory	NEA	Yes	pH, nitrates (NO <sub>3</sub> ), nitrites (NO <sub>2</sub> ), chemical oxygen demand (COD), biochemical oxygen demand (BOD <sub>5</sub> ), phosphorous, total phosphorous (P <sub>total</sub> ), electric conductivity, suspended solids, ammonia (NH <sub>4</sub> ), alkalinity (CaCO <sub>3</sub> )

Source: National Environment Agency, 2017.

Notes: All laboratories are located in Tirana.

\* The quality assurance of the IPH activity is assessed annually by UK NEQAS.

### Policy framework

An annual national environmental monitoring programme is developed each year by the NEA and sent to the ministry responsible for environmental issues for approval. Once approved, the plan is posted on the NEA website ([www.akm.gov.al](http://www.akm.gov.al)). It is important to stress that the national environmental monitoring programme is only implemented to the extent that the budget allows and coordination between institutions is effective. Overall, the financial resources dedicated to monitoring are insufficient and problems remain regarding coordination between institutions. The weak monitoring capacities are also a limiting factor in understanding progress towards the implementation of policies and legislation being developed in Albania in relation to the EU environmental acquis.

### Institutional framework

The Ministry of Tourism and Environment is the responsible authority for environmental monitoring, with the NEA as the coordinating authority and support from relevant ministries, local governments and institutions. The authorities responsible for tracking the indicators include the: Ministry of Tourism and Environment; NEA; Ministry of Health and Social Protection, through the IPH and public health directorates in the regions; Ministry of Infrastructure and Energy; Ministry of Agriculture and Rural Development; Ministry of Defence; and specialized monitoring institutions.

### *Participation in international agreements and processes*

Since the late 1990s and early 2000s, Albania has been party to the majority of global and regional MEAs. While efforts have been made by Albania to fulfil reporting obligations through national reports, the lack of monitoring data is noticeable and therefore some reports tend to be descriptive and qualitative in nature.

Albania participates in the ECE Working Group on Environmental Monitoring and Assessment and the Joint Task Force on Environmental Statistics and Indicators. Increased participation in these processes could build further capacity for the country.

Since 2002, Albania has participated in the European Environment Agency (EEA)'s European Environment Information and Observation Network (EIONET) and has been reporting data on air, water and biodiversity since 2004. In 2013, 56 per cent of the required data was submitted to the EEA and there has been a slight decrease since 2014. A country fiche, summarizing the

state of and trends in the environment was provided in 2014 in support of the EEA's SoER 2015. EIONET provides capacity-building for 26 national reference centres in Albania. Overall, this institutional relationship is strong and very valuable.

## **3.2 Environmental information and public participation**

### *Availability of information*

#### Environmental data reporting by enterprises

Self-reporting is mandatory every three months for enterprises operating with a type A environmental permit and every six months for enterprises with a type B permit. These reports are submitted to the Environmental Assessment Directorate of the NEA and thereafter shared with the PRTR team at the NEA to assist reporting. These reports are not available to the public unless requested, in which case the interested party can review them on site at the NEA. Other public institutions can also access the information as required. Since 2011, no requests have been made by either institutions or members of the public. If the reports show areas of concern, the NEA passes the information to the environmental inspectors. In 2016, there were 1,035 enterprises self-reporting under type A and B permits.

Type C permits exist for small-scale enterprises, which report to the respective regional environmental agency.

### Statistical data

The NEA generates statistical data from direct monitoring activities and receives statistical data from institutions that are subcontracted to undertake monitoring and from other relevant public institutions. The NEA uses the statistical data to generate annual indicator-based reports; the reports from 2011 to 2016 are available online. These reports are all posted on the NEA website ([www.akm.gov.al](http://www.akm.gov.al)). Prior to the institutional restructuring of September 2017, they were also posted on the website of the then Ministry of Environment.

Statistical data also support international reporting obligations to MEAs and the EEA.

### Databases

Certain databases exist to manage information and cover the following topics: air quality, surface waters (rivers and lakes), groundwater, bathing water, noise, waste data and national forests inventory. No

protocols of data flow are in place, and nor are workflow definitions.

#### Pollutant Release and Transfer Register

Albania acceded to the Protocol on Pollutant Release and Transfer Registers in 2009. DCM No. 742 dated 09.09.2015, which entered into force on 01.06.2016, explains how companies report, who should report and which pollutants are to be reported. A project funded by international donors has allowed the development of a database that has been functioning on the NEA website since December 2016. Phase 1 of the project was geared towards awareness among enterprises and Phase 2 led to the establishment of an online reporting tool for companies (the platform is hosted on a server maintained and operated by the Albanian National Agency of Information). PRTR reporting is done annually, and now, with this new platform, companies will be expected to report online. However, to support the transition, the NEA will manually enter the information as relevant for 2017. There should be 230 companies reporting under the PRTR; however, only one company has uploaded information as of early 2017. PRTR and permitting reports are separate as not all companies with permits are required to report under PRTR.

#### Environmental indicators and their use

An annex to DCM No. 1189 lists 160 national environmental parameters/indicators. It was designed using, and refers to, the Driver–Pressure–State–Impact–Response (DPSIR) framework. Indicators exist for PSI but not for D and R. The Ministry of Tourism and Environment, through the NEA and other relevant public institutions, is obliged to monitor all of the indicators/parameters. However, only a subset of the most relevant parameters/indicators (based on the annual monitoring budget and the policy relevance and continuity of data for the main trends) are being used for monitoring and annual reporting. Of the 160 indicators contained within the DCM, 33 are compatible with the EEA. The list of indicators is also outdated in relation to the continued process of transposing EU legislation into Albanian law (e.g. air quality).

#### Implementation of shared environmental information system principles

Albania is generally performing quite poorly regarding the establishment of a shared environmental information system (SEIS). In a 2015 study by ECE, Albania achieved an 11 per cent SEIS performance score based on the availability and accessibility of 67 SEIS data sets and four further criteria, namely, update

regularity, application of standard methodology, data interpretation and/or data source not available.

#### Environmental reporting

Production and publication of environmental data occurs to support the annual SoER and national reporting obligations to global and regional MEAs, and sometimes through individual projects and processes.

Most importantly, each year the NEA produces an indicator-based SoER (released in April/May of the following year). These reports are published in Albanian only. On the NEA website ([www.akm.gov.al](http://www.akm.gov.al)), annual reports exist for the period 2011–2016. In the framework of the SoER 2015, the NEA also provided a country fiche (summary of annual indicator reports 2011–2014).

While the regular annual indicator reports are important to keep track of the state of and trends in the environment, a regular, comprehensive SoER based on the DPSIR framework is not being undertaken to complement the annual indicator reports. Such an integrated SoER at three- to four-year intervals will be more useful to stakeholders and decision makers and may be used to inform policies, programmes, plans and projects.

The NEA produced a thematic report on the state of and trends in forests in Albania in 2013. This is a one-off report supported by a World Bank project. Beyond projects such as these, the NEA does not produce thematic reports as the key information is in the indicator-based reports. That said, information covering various thematic areas is given to the EEA for use in its reports, such as those on bathing water quality, Corine land cover, waste policies and the soil atlas of Europe.

#### Use of environmental information and data

There is little evidence that environmental information is used in decision-making outside of the EIA procedure. The link between the findings of the national SoER and policy-setting is also not clear. It appears that policy-setting is driven by alignment to the EU environmental acquis and not to the findings of the national SoER.

#### *Access to information*

Information on the environment is accessible free of charge to the public through the websites of the Ministry of Environment (not operational as of

November 2017, following the restructuring of September 2017) and the NEA.

The Ministry of Tourism and Environment (as previously the Ministry of Environment) continues to have an Information Coordinator. Since 2011 there has generally been an increase in the number of requests for environmental information and greater participation in public consultations over significant issues. Nearly all information requests are fulfilled within the 10-day limit. There are also monthly environmental bulletins prepared by the Ministry, which are distributed to approximately 500 addressees, including local authorities, NGOs, citizens, academics and the media. All the information required to prepare a request for information is available online, including templates and official contact details. While access to information is fairly good at the central level, it remains more challenging at the municipal level.

Since 2011, the complaints procedure has been strengthened with the introduction of an Information Commissioner (since 2015) and an Ombudsperson (established in 2014). There are provisions in the Code of Administrative Procedures No. 44/2015 to restrict information. However, from 2011 to early 2017, no requests for information have been declined by the then Ministry of Environment.

#### *Public participation*

There are approximately 100 NGOs engaged in environmental issues. The Regional Environmental Center (REC) produces and maintains a directory of NGOs, which is available online. The systemic engagement of NGOs in environmental monitoring, decision-making and awareness-raising is weak.

The extent of public participation in the development of legislation depends on the topic. If the topic is very technical, such as chemicals, attendance at the public consultation tends to be much lower than when a topic such as protected areas is discussed. Comments received at the consultation are addressed by the team working on the legislation and they are required to summarize how the comments were dealt with in the report for the Prime Minister's Office, although this is not always done.

In 2016 (DCM No. 653 dated 14.09.2016), amendments were introduced to the Regulation of the Council of Ministers to require that all draft legislation submitted to the Council of Ministers by all public institutions include, as part of the accompanying information, a write-up of public comments and how they were addressed, or not.

The process for public participation regarding EIA is perceived by the governmental officials as being well established and effective, whereas public participation in SEA is relatively new and remains a learning process. There are cases in which public attendance was low and the majority of participants in a public hearing turned out to be staff of the ministry responsible for environmental issues rather than members of the public. For example, in March 2015, public hearings on the draft cross-cutting environmental strategy for the period 2015–2020 brought together four civil society representatives, six representatives of four international organizations and 17 representatives of the then Ministry of Environment.

In early 2017, the minutes of public hearings organized by the then Ministry of Environment were all placed on its website.

#### *Access to justice*

Since 2010, there have been only two cases, both in 2016, of developments being challenged through the courts on account of environmental concerns. Three NGOs challenged a proposed HPP on the Vjosa River, and 38 citizens have challenged a proposed reservoir in Tirana.

#### *Legal, policy and institutional framework*

##### Legal framework

The Code of Administrative Procedures No. 44/2015 speaks of the right of information.

Environmental information and public participation in environmental decision-making are covered by the Law on Environmental Protection No. 10431/2011, which makes provisions to give the right to information without having or showing a specific interest (public information). The Law on Environmental Permits No. 10448/2011 obliges the NEA to manage the system of environmental information with information on installations holding type A and B permits. Additionally, the Law on Environmental Impact Assessment No. 10440/2011 refers to the parties that need to be involved, and refers to access to public information throughout an EIA; it also details public hearing procedures and provides for the complaints procedure.

The Law on Civil Service No. 152/2013 speaks of the obligation for transparency for all civil servants, and the Law on Strategic Environmental Assessment No. 91/2013 engages the public in decision-making on plans and programmes.

Since 2011, two further general laws have been adopted that are relevant to environmental information and public participation: the Law on the Right to Information No. 119/2014, which guarantees the right to information "without having to explain reasons", and the Law on Public Notification and Consultation No. 146/2014, which obliges public authorities to notify a public hearing in due time. Moreover, there have been two further DCMs related to and strengthening access to environmental information and public participation: DCM No. 247 dated 30.04.2014 "On determination of the rules and requirements of procedures for public information and involvement of the public in environmental decision-making", and DCM No. 219 dated 11.03.2015 "On rules and procedures for consultation with stakeholders and the public and public hearings during the strategic environmental assessment process".

#### Policy framework

All public authorities have an approved transparency programme by which all institutions have to appoint an information coordinator and a public consultation coordinator, as relevant. Transparency programmes require institutions to publish, on their website, information about their functions, organization, legislation, conventions that Albania is party to, policy documents, monitoring and control mechanisms, budgets and procurement, among other matters.

#### Implementation

Overall, until September 2017, the processes around access to information were set up well using the website of the then Ministry of Environment. All legislation was uploaded on the register of public consultations between 20 and 30 days before the public consultation. The role of the Information Commissioner (established in 2015), who oversees the implementation of laws related to access to information – and makes decisions – has improved the situation since 2011. The extent of environmental information available on the Ministry website was ultimately limited by the amount of monitoring, and hence data and information, that was made available by the NEA and other relevant public institutions. There were also some issues concerning internet connectivity, especially outside Tirana and the main cities, which can limit public access to information. As of November 2017, no website of the new Ministry of Tourism and Environment is operational.

Overall, there remains room for improving public participation and access to justice through awareness

campaigns and through ensuring the better participation of the public, including NGOs.

#### Institutional framework

The Ministry of Tourism and Environment and all its subordinate institutions (the NEA, NAPA and State Inspectorate of Environment, Forestry and Water) are responsible for publishing environmental information. The Ministry of Tourism and Environment is also responsible for convening public consultations on environmental legislation, strategic documents and environmental decision-making (development projects).

The NEA is responsible for environmental information and public consultations related to EIA and permitting.

Other relevant ministries that provide information on the environment or relevant to the environment include the: Ministry of Health and Social Protection; Ministry of Agriculture and Rural Development; and Ministry of Infrastructure and Energy.

INSTAT collects and publishes a variety of data including environment-related data from other institutions, such as: the Ministry of Infrastructure and Energy on the number of vehicles and on waste generated; the Ministry of Agriculture and Rural Development on fishing, hunting, waters, agriculture and farming; and the Ministry of Infrastructure and Energy on energy and data relevant for the preparation of the national GHG inventory. Each year, the NEA requests specific data and information from the Institute, mostly that which is relevant for the preparation of the national SoER. At the same time, the NEA provides all the environmental data it receives as a result of monitoring activities to the Institute upon its request.

#### Participation in international agreements and processes

Albania ratified the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters in 2001 and acceded to the Protocol on PRTR in 2009. Albania is not a party to the 2005 Amendment on GMOs to the Aarhus Convention. The Ministry of Tourism and Environment is the national focal point.

Albania takes part in nearly all meetings of the task forces. Albania produces national implementation reports every three years.

### 3.3 Environmental education and education for sustainable development

#### *Curricula*

##### Preschool level

Environmental education (EE) and education for sustainable development (ESD) are not integrated into the teaching curricula at preschool level.

##### Primary level

At the primary school level, EE is integrated into a number of subjects, including natural sciences, citizenship, art and design, and foreign languages. Primary schools often use the 1–2 hours set aside for extracurricular subjects to include EE.

##### Secondary level

At the lower secondary school level (6th to 9th grades), EE is integrated into biology, chemistry, geography, citizenship, technology and foreign languages. In some schools, EE is also available as part of extracurricular activities; however, many schools use this time for teaching other languages. This varies in different parts of the country.

For primary and lower secondary school teaching, teachers have received some training from REC as part of the *Green Pack*<sup>4</sup> initiative, which has an annual national training programme, and as a result they feel more comfortable to teach EE.

At the upper secondary level (10th to 12th grades), EE is integrated into biology, physics, chemistry, geography, citizenship, technology and foreign languages. In addition, there is an optional module on climate change.

##### Vocational training

All vocational training provided by the public educational institutions requires students to take a course on environment and sustainable development (approximately one hour per week). A textbook was produced in 2014 to support this teaching and it is anticipated that a revised textbook and teaching materials will emerge from the SEEDLING project and replace the current materials.

<sup>4</sup> The *Green Pack* was developed by REC to teach children aged between 11 and 14, and was launched in Albania in 2003.

##### Higher education

EE and ESD feature in the higher education system in two ways, either as part of a structured course (i.e. a degree for environmental engineers) or as part of teacher training courses, in which EE is mandatory.

##### *Training of teachers*

##### Primary school

REC has developed a junior version of the *Green Pack* called *Green Pack Junior*,<sup>5</sup> aimed at 7- to 10-year-olds. It is anticipated that the version for Albania will be completed in 2017 and by 2018 will be part of the resource materials available at the primary school level. As part of the roll-out of *Green Pack Junior*, there will be teacher training, with a specific trainer-of-trainers programme to be established in Tirana.

##### Secondary school

In the past, there has been very little training for teachers at the upper secondary level. However, as part of the new SEEDLING project, which runs from 2016 to 2018, REC will analyse the current curricula for inclusion of the objectives of the SDGs and undertake a gap analysis. The project will also develop supporting materials and e-learning facilities online for each SDG, as well as teacher training.

##### Learning materials and standards

REC's *Green Pack* and UNICEF's *Environment Education for Primary Schools* are training materials for teachers and learning resources for students.

In 2015, REC and the Institute of Education Development drafted learning standards (i.e. how and what to include in the curriculum on EE and ESD). The Ministry of Education, Sports and Youth is now responsible for approving the learning standards, after which an action plan will be developed to support the implementation. Currently, there are no specific textbooks or learning materials at the upper secondary level, but materials will be developed as part of the SEEDLING project and the ongoing collaboration between REC and the Institute of Education Development.

The regional directorates for education, under the Ministry of Education, Sports and Youth, develop their action plans, which must include EE activities.

<sup>5</sup> The *Green Pack Junior* includes 10–12 topics that explore the interactions between the environment, society and economic development.

Each regional directorate has a coordinator for EE. Guidelines prepared by the Ministry for regional directorates and schools were developed for the academic year 2016–2017 and these also contain guidance on EE.

#### *Training and retraining of civil servants*

There are no institutional EE training programmes for the Ministry of Tourism and Environment, the NEA or other public administrations (chapter 1). Ad hoc awareness-raising and training does happen when certain annual environment days are celebrated, i.e. the International Day of Biodiversity, and as part of international projects.

#### *Informal and non-formal education*

In the past, UNDP, UNICEF and REC have been involved in training teachers and students; this has been achieved through international funding and projects.

REC organizes training for NGOs and civil society. It also organizes training for civil society about environmental challenges and how to tackle them (direct training). Indirect training comprises how to organize public events and awareness-raising events that can be used for EE through capacity-building, and also subgrants to civil society.

Schools are also promoted as "the centre of communities" where parents are involved in activities. Some of these activities are related to the environment; thus, adults are educated through the school and with their children. NGOs and civil society also cooperate with schools celebrating environment days and undertaking clean-up campaigns.

At the project level, the Ministry of Tourism and Environment is cooperating with UNDP on the GEF-funded project, the third component of which is on EE. This project has provided funds for basic teaching and equipment. In addition, a web-based application called iNaturalist has been developed that enables children to take photos of flora and fauna, which are geo-referenced, and post them on the platform to be checked by scientists and for species names to be checked or identified. This citizen-science initiative has a Facebook account called BioBlitz.

#### *Legal, policy and institutional framework*

##### Legal framework

The Law on the Pre-University Education System No. 69/2012 as amended does not have an article

specifically on EE, but includes the main objectives of EE. Since 2013, through the process of reform, a competency-based curriculum is being developed. The curriculum aims to develop lifelong learning skills and competences. One of these competencies is of "life, entrepreneurship and the environment". The expected learning outcomes are included in all subjects. Environment and sustainable development are defined as cross-cutting curriculum themes. However, the challenge remains that not all curriculum designers are aware of EE and ESD.

##### Policy framework

The vision of the 2016 Strategy for Development of Pre-University Education for the period 2014–2020 includes creating conditions and opportunities for students to develop a responsible attitude towards the environment. The 2015 National Programme for Environmental Education in High Schools for the period 2015–2017, including an action plan, was approved by the then Ministers of Environment and of Education and Sports. The programme targets high schools only. Through this programme, the officials from the ministry responsible for environmental issues and thematic experts try to reach schools in every city in the country in order to teach about three key issues: the obligation to protect the environment, the right to be consulted in environmental decision-making, and biodiversity and protected areas at the national and local levels.

##### Institutional framework

The Ministry of Education, Sports and Youth is responsible for the curriculum and therefore for EE and ESD. The Institute of Education Development provides technical support to the Ministry of Education, Sports and Youth for the development of the curriculum. As part of the 2015 National Programme for Environmental Education in High Schools for the period 2015–2017, the minister responsible for education issues guidance for all schools at the beginning of each year with details of what should be covered in EE. The staff of the ministry responsible for the environmental issues and thematic experts teach regularly at schools throughout the country. The two ministries have also undertaken joint activities.

##### Participation in international processes

ECE Member States adopted the ECE Strategy on ESD in 2005. However, Albania has never submitted its national implementation report, nor has it put forward a national focal point for ESD.



### Box 3.1: Targets 12.8 and 4.7 of the 2030 Agenda for Sustainable Development



#### **Goal 12: Ensure sustainable consumption and production patterns**

**Target 12.8: By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature**

#### **Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all**

**Target 4.7: By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development**

Two SDGs (Goal 12: Ensure sustainable consumption and production patterns, and Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all), through their targets 12.8 and 4.7, are essentially directed at equipping citizens with information needed to pursue sustainable development and lifestyles and ensuring that the educational system facilitates the transfer of such knowledge and information to the people.

In Albania, in order to achieve target 12.8, the Ministry of Tourism and Environment should operationalize an integrated environmental management system (IEMS) that allows for an overview of all environment-related data and information in a central place that is accessible to the public. Simple interpretations of the data and information will be required to make this information more understandable to the public in general and should be disaggregated to local levels where possible as well as at the national level. The Ministry of Health and Social Protection and the Ministry of Tourism and Environment should strengthen the link between environmental data and information and health data and information to allow the public to understand the linkages better and pursue healthier lifestyles.

Full implementation of the 2015 National Programme for Environmental Education in High Schools for the period 2015–2017 and its replication in the future would contribute to supporting the achievement of target 4.7. There are positive signals in some aspects of EE and ESD. However, there is no current dedicated budget or human resource plan to drive this forward. In many cases, EE and ESD are still being carried out by international agencies and donors. The Ministry of Education, Sports and Youth and the Ministry of Tourism and Environment should fully take the lead on EE and ESD with support from other organizations. Experience accumulated by ECE Member States through the ECE Strategy on ESD could be a helpful asset in this regard.

#### *Sustainable Development Goals and targets relevant to this section*

Albania's current position vis-à-vis targets 12.8 and 4.7 is described in box 3.1.

### **3.4 Assessment, conclusions and recommendations**

#### *Assessment*

##### Environmental monitoring

There has been mixed progress regarding environmental monitoring and reporting since 2011. The main improvements include: the increased capacity of the NRL in terms of staff, equipment and accreditation; more monitoring stations and sites for some topics such as water and noise; a new PRTR database and platform for e-reporting; a Corine land cover assessment; a database and platform for organizing air quality data from automated stations; a new agency, NAPA, which may increase biodiversity monitoring capacities; and, through international

projects, the future development of a forest inventory for Albania and an IEMS with a focus on the three Rio Conventions.

However, significant challenges remain. The annual environmental monitoring programme is underfunded and, despite being approved, can never be delivered in full or even in a large part based on the available budget. Challenges also remain over annual subcontracts for monitoring, which lead to delays in undertaking the work. Finally, the NRL is not accredited for monitoring and reporting on certain vital parameters, most notably air quality, but also important parameters for water and noise. Biodiversity monitoring is also particularly weak.

##### Environmental information and public participation

Information on the environment is accessible free of charge to the public through the websites of the Ministry of Environment (as available until September 2017) and the NEA. The extent of environmental information available on the websites is ultimately



limited by the amount of monitoring, and hence data and information, that is made available by the NEA and other relevant public institutions, and this is reflected in Albania's relatively poor progress in implementing SEIS principles.

There have been some clear improvements since 2011, namely, the creation of information coordinator roles in the then Ministry of Environment and the NEA, and establishment of an Information Commissioner and an Ombudsperson; a clear process for public consultations, request-for-information and complaints procedures; and a series of new legislation to enhance procedures for making information available to the public and public engagement in environmental decision-making.

#### Environmental education and education for sustainable development

There has been mixed progress on EE since 2011, yet, with current plans and initiatives, the future prospects look to be brighter. Current constraints to progress include a lack of teaching materials and teacher training, especially at the upper secondary level. Highlights include: the joint national programme on EE established in 2015 between the ministries responsible for environment and for education, which results in on-the-ground teaching at schools across the country; the first signs of citizen-science programmes through web-based applications and including social media; and several projects aimed at curricula reform and the integration of ESD into the educational system.

#### *Conclusion and recommendations*

#### Financial resources for environmental monitoring

The national environmental monitoring programme, which is produced each year and outlines the proposed environmental monitoring, is estimated to cost US\$1.5 million. Yet the overall budget of the NEA for monitoring, including staff time, operations and the laboratory is approximately US\$150,000. In addition, approximately US\$50,000 per year (7 million to 8 million leks) is provided for external contracts to support monitoring activities. Therefore, the NEA receives approximately 3 per cent of the budget needed to implement the national environmental monitoring programme and is required to prioritize activities.

There are no accredited laboratories for analysing air quality data in Albania (and international laboratories are not used) and therefore data remain indicative.

This is also the case for noise monitoring. Building the capacity of the NRL and seeking accreditation for more parameters will be fundamental in the future, in order that monitoring data can be compared with EU norms and standards and ultimately inform progress towards policy targets and goals.

#### Recommendation 3.1:

*The Government should:*

- (a) *Substantially increase financial resources for environmental monitoring in order to fully implement the annual national environmental monitoring programme, with a view to complying with the requirements of the European Union environmental acquis;*
- (b) *Continue investment in the National Reference Laboratory at the National Environment Agency to gain accreditation for an increased number of parameters that are being monitored.*

#### Integrated environmental management system

There are challenges in coordination between institutions responsible for monitoring the environment. With the transfer of monitoring responsibilities since 2011 (i.e. air and noise), establishment of NAPA, and external international donors strengthening certain aspects of monitoring, these challenges are likely to continue.

Despite several projects in the period since 2011, as of mid-2017, there is no operational IEMS. Databases and platforms exist but are neither integrated nor connected. IEMS, once fully functional, would require maintenance and further development.

#### Recommendation 3.2:

*The Ministry of Tourism and Environment should:*

- (a) *Develop mechanisms to improve coordination among those responsible for environmental monitoring and increase their efficiency;*
- (b) *Ensure the functioning of the integrated environmental management system (IEMS) with connected databases;*
- (c) *Through IEMS, improve access to information, especially regarding air quality data, and make near-real-time data available to the public.*

#### State-of-environment reporting

While the regular annual indicator reports are important to keep track of the state of and trends in the environment, a regular, comprehensive SoER based on the DPSIR framework is not being undertaken to complement the annual indicator reports. Such an

integrated SoER at three- to four-year intervals will be more useful to stakeholders and decision makers and may be used to inform policies, programmes, plans and projects.

*Recommendation 3.3:*

*The Ministry of Tourism and Environment, through the National Environment Agency, should strengthen the existing state-of-environment reporting by:*

- (a) Using the Driver–Pressure–State–Impact–Response (DPSIR) framework in order to be more connected with policy needs;*
- (b) Complementing the current annual indicator-based reporting with a more comprehensive state-of-environment report every three to four years;*
- (c) Including an executive summary in the state-of-environment report to better inform stakeholders and decision makers.*

Education for sustainable development

ESD has yet to be integrated and delivered in the current educational system. The 2015 National Programme for Environmental Education in High Schools for the period 2015–2017 is a good step to reach target 4.7 of the Sustainable Development Goals aimed at ensuring that all learners acquire, by 2030, the knowledge and skills needed to promote sustainable development. However, no financial and human resources are dedicated to the implementation of this policy document. In many cases, EE and ESD

are still being carried out by international agencies and donors.

The SEEDLING project is aimed to move the ESD forward. It will analyse the current curricula for inclusion of the objectives of the SDGs and undertake a gap analysis and develop supporting materials and e-learning facilities online for each SDG, as well as teacher training.

Albania has not been active under the 2005 ECE Strategy on ESD. Active participation in this process could build capacity and improve implementation of ESD in the country.

*Recommendation 3.4:*

*The Ministry of Education, Sports and Youth, in cooperation with the Ministry of Tourism and Environment, should:*

- (a) Establish a dedicated provision within the budget for, and develop a regular programme to support, the integration of environmental education (EE) and education for sustainable development (ESD) into the curriculum, with associated learning standards;*
- (b) Improve teacher training on EE and ESD and the development of learning resources for EE and ESD across all levels of schooling;*
- (c) Nominate a national focal point and participate in the activities under the ECE Strategy for ESD.*



## **PART II**

# **DOMESTIC–INTERNATIONAL INTERFACE**



## Chapter 4

# IMPLEMENTATION OF INTERNATIONAL AGREEMENTS AND COMMITMENTS

### 4.1 General priorities for international cooperation related to the environment and sustainable development

Albania has ratified nearly all relevant global and regional environmental agreements and has registered progress towards almost all the MDGs (chapter 1). In the National Strategy for Development and Integration for the period 2015–2020 (NSDI-II), adopted by the Government in May 2016, the SDGs are unambiguously assumed as national objectives.

There is no single document that outlines the general framework for international cooperation on environmental protection, although national priorities for the environment can, in part, be drawn from the NSDI-II.

EU membership is the overarching goal pursued by Albania and will continue to be the main trigger of change for the future. This aspiration also influences, largely, the country's environmental cooperation at global and regional levels.

Albania has in place measures to reinforce the public policy planning system and increase the efficiency of available financial resources, from both external assistance and the national budget. The NSDI-II is the core strategic document for all the downstream planning processes and establishes appropriate linkages with budgeting, in particular with the Medium-Term Budget Programme (MTBP), as well as with the annual budgeting exercise. The Integrated Planning System, which was first adopted in 2005, has been subject to improvements since then.

While Albania continues to be supported by a number of bilateral and multilateral donors, the Instrument for Pre-Accession Assistance (IPA II) accounts for an increasingly large proportion of the external financial assistance received. Notwithstanding the changes in the composition of foreign aid, the Government continuously seeks to enhance coordination with the donor community.

### 4.2 Global and regional agreements

#### *Participation and reporting*

Albania is party to the majority of global and regional MEAs since the late 1990s and early 2000s, and has rapidly ratified the most recent MEAs, such as the Paris Agreement and the Nagoya Protocol.

Efforts have been made by Albania to comply with its international reporting obligations; however, the absence of monitoring data on species and habitats, air quality and GHG emissions has had some impact on timely reporting on these fields. The low response rate from line ministries and government agencies has also affected the quality of the national reports, particularly in the nature conservation and biodiversity domains.

Albania is usually represented at the most relevant meetings of MEA decision-making bodies by one representative – sometimes two, as in the case of the United Nations Framework Convention on Climate Change (UNFCCC). There is informal coordination of negotiation positions among countries in the Eastern European Group and alignment with positions taken by the EU. NGO representatives are never included in the Albanian delegations; neither are they involved in the preparation of the Albanian position for international meetings. NGOs are rarely involved in the preparation of national reports on implementation of MEAs.

There is a general absence of information provided to the public by the Albanian environmental authorities on the status of Albania's participation in global, regional and bilateral agreements and on the implementation of those agreements, including the reports submitted.

#### *Conservation and sustainable use of biodiversity and nature*

#### Convention on Wetlands of International Importance especially as Waterfowl Habitat

Albania has been a party to the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention) since 1996.

Currently, there are four sites in Albanian territory designated as Wetlands of International Importance (Ramsar sites), with a surface area of 98,181 ha: Karavasta Lagoon ecosystem, since 1995; Butrint, since 2003; Lake Shkodra/Shkodër and River Buna, since 2006; and Albanian Prespa Lakes, since 2013.

Since 2011, the main achievements of the Convention's implementation in the country are the designation of the fourth Ramsar site and the elaboration and adoption of management plans for Karavasta Lagoon Ecosystem, adopted in 2015, Butrint, in 2011, Albanian Prespa Lakes, in 2014 and Lake Shkodër, in 2012. As of early 2017, the management plan for the River Buna site is pending adoption. The designation of the most important wetlands in Albania as Important Bird Areas (IBAs) also provides them legal protection.

The Government has received support for planning activities from organizations such as the United Nations Environment Programme (UNEP), World Bank and EU. The Japan International Cooperation Agency has supported the Government in the conservation efforts in the Divjaka-Karavasta National Park.

The main priorities in the context of implementation of the Ramsar Convention are completing the management plans for all Ramsar sites, fundraising for the implementation of the management plans, improving law enforcement, promoting capacity-building of staff in charge of administrating Ramsar sites and awareness-raising of local entities and communities.

#### Convention on International Trade in Endangered Species of Wild Fauna and Flora

Albania acceded to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 2003. The General Directorate of Customs of the Ministry of Finance and Economy is the Enforcement Authority and the Centre for Flora and Fauna Research of Tirana's Faculty of Natural Sciences is designated as the Scientific Authority.

Delays have occurred in the submission of annual reports on CITES trade. The most recent reports submitted by Albania, in August 2016, referred to 2013 and 2014. The biennial implementation reports, on legislative, regulatory and administrative measures taken to enforce the Convention have been submitted regularly, although the most recent was submitted in 2014, covering the period 2009–2010. Starting from 31 October 2017, a new annual report on illegal trade

will also have to be presented, covering the previous year.

On 21 March 2016, the CITES Standing Committee sent a public notice on a compliance matter, and requested parties concerned, including Albania, to submit to the Secretariat appropriate measures that had been adopted for the effective implementation of the Convention. In September 2016, the Committee stated that Albanian legislation had been placed in Category 1 "legislation that is believed generally to meet the requirements for implementation of CITES".

The Law on the Rules and Procedures of International Trade of Endangered Species of Wild Fauna and Flora No. 9867/2008 establishes the main legal framework for CITES implementation. Albania plans to complete it with by-laws, expected to be approved by the end of 2017, thereby strengthening CITES implementation.

No significant seizures, confiscations or forfeitures of CITES specimens have been reported; neither have there been any criminal prosecutions of significant CITES-related violations in Albania. Human and financial constraints have been identified as challenges for assessing the effectiveness of legislation.

#### Convention on the Conservation of European Wildlife and Natural Habitats

Albania ratified the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) in 1999. Reporting is compulsory for parties making exceptions to the provisions of the Convention. For the period 2013–2014, Albania reported an exception concerning strictly protected fauna species, referring to one specimen of goose-beaked whale (*Ziphius cavirostris*). Albania has also responded to a questionnaire on illegal killing of birds and has not presented any additional voluntary reports on the national implementation of the Convention. There are currently 22 protected flora species and 31 marine species of international importance in Albania, as listed in the Bern Convention.

The Order of the then Minister of Environment on approval of the Red List of wild fauna and flora (Order No. 1280, dated 20.11.2013) updated the existing Red List, which was compiled in 2007. According to the International Union for Conservation of Nature (IUCN) Red List, in Albania there are 109 species of animals considered as threatened and 319 threatened plant species.

Albania has made efforts to implement nature conservation policies aimed at the reduction of illegal

killing of birds. The Law on Prohibition of Hunting No. 7/2014 established a hunting ban for a period of two years. In 2016, this moratorium was extended for five years. The Government has also set up a system of professional management of protected areas through the creation of the National Agency of Protected Areas (NAPA) and the regional administrations of protected areas (RAPAs).

There are currently 25 sites in Albania that were officially proposed to the Emerald Network of Areas of Special Conservation Interest in 2011 (chapter 9). In addition, the Document of Strategic Policies for Protection of Biodiversity for the period 2016–2020 (in fact, the country's National Biodiversity Strategy and Action Plan (NBSAP)) defines, as one of the main pillars for the protection of nature, the establishment of the Special Conservation Interest Natura 2000 network, in the context of Albania's EU accession process. It aims at having the ecological network identified by 50 per cent in 2017 and fully identified in 2020.

As of late 2017, Albania had one complaint registered under the Bern Convention complaints register – complaint on the presumed negative impact of hydropower plant development on the Vjosa River (Albania), No. 2016/5. The plans for new HPPs along the Vjosa River have also been addressed under the European Parliament Resolution on the 2016 Commission Report on Albania, adopted on 15 February 2017. The European Parliament highlights that the environmental impact of HPPs is often not properly assessed to ensure compliance with international standards and relevant EU nature legislation, and advises the Government to consider the establishment of a Vjosa National Park and to abandon plans for new HPPs along the Vjosa River.

#### Convention on the Conservation of Migratory Species of Wild Animals

In 2001, Albania became a party to the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention). In addition to the Sector of Programmes for Nature Protection and Biodiversity of the Ministry of Tourism and Environment, the Centre for Flora and Fauna Research and the Biology Department of the Faculty of Natural Sciences of the University of Tirana are also involved in activities for the conservation of migratory species, as well as the NGOs, such as the Association for the Protection and Preservation of the Natural Environment, the Association for the Protection of Aquatic Species and the Institute for Nature Conservation.

In 2014, the Conference of the Parties of the Bonn Convention adopted the Strategic Plan for Migratory Species 2015–2023, adapting for migratory species the Strategic Plan for Biodiversity 2011–2020 of the Convention on Biological Diversity (CBD), including the Aichi Biodiversity Targets. The five goals and corresponding performance targets must now be integrated into relevant policies and planning instruments. Considering the particular relevance that the Albanian territory plays for migratory species, and that no reference is made in the 2016 NBSAP to the Strategic Plan for Migratory Species 2015–2023, Albania lacks measures towards the implementation of goals and targets of the Strategic Plan for Migratory Species 2015–2023.

#### Agreement on the Conservation of Populations of European Bats (EUROBATS)

Albania acceded to the EUROBATS in 2001. The National Focal Point in the Ministry of Tourism and Environment works in collaboration with the Museum of Natural Sciences and the Faculty of Natural Sciences of the University of Shkodër, as Scientific Focal Points. Thirty-two species of bats have been identified in Albania, three of them during the period 2010–2014. Sixteen bat species are included in the Red List of protected fauna and flora (Order of the Minister of Environment No. 1280 dated 20.11.2013).

Albania proposed to the EUROBATS Secretariat the following sites to be added to the important underground sites database: Gjirokastër Castle, Treni Cave, Shkëmbi i Kavajes, Ohrid Prespa Cave, Velçe Cave and Vanister Cave.

On June 2014, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) Conservation of Agrobiodiversity in Rural Albania (CABRA) project organized the first workshop in Albania on bats conservation. Information was also collected on protected caves in Albania and bats using them. The project also allowed increasing collaboration among researchers from Albania, Bulgaria, Montenegro and the former Yugoslav Republic of Macedonia. Training on monitoring and conservation of bats has been provided to protected areas staff. Awareness-raising activities have also been undertaken in 2016.

#### Agreement on the Conservation of African-Eurasian Migratory Waterbirds

In 2001, Albania became a Party to the Agreement on the Conservation of African-Eurasian Migratory Waterbirds. The Albanian Ornithological Society is the designated focal point for the Agreement's Technical Committee.



As of 2015, 112 non-native waterbird species were identified as occurring in Albania. According to the 2016 NBSAP, there are approximately 70 waterfowl species with a population of 180,000 individuals that hibernate/pass the winter on coastal wetlands and lakes in Albania.

Eleven sites have been identified as of international importance regarding water birds; four of them (Karavasta, Narta, Shkodër and Ohrid) have been classified as IBAs and have management plans. Fifteen sites have been identified as of national interest, and six of them have management plans in place.

Prohibition of hunting on coastal wetland sites and in IBAs is covered by Law No. 7/2014, which imposes a general ban on hunting on coastal wetland sites. The legal framework for SEA and EIA considers water birds and their habitats. However, additional procedures are required and implementation is a matter of concern. Mapping of the main migration corridors or migration crossings for water birds has not been done.

An action plan has been developed for the Pygmy cormorant (*Phalacrocorax pygaeus*). Additional action plans for single species of migratory birds have not been developed, due to a lack of human and financial resources. Species reestablishment projects have not been implemented; legislation on the matter would require further work to bring it to completion. Revision of national conservation policies relevant to water birds and climate change is planned under the national strategy on climate change currently being prepared.

#### Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area

Albania has been a party to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) since 2001. Research work in the field of study of cetaceans is developed by the Museum of Natural Sciences, the Faculty of Natural Sciences of the University of Tirana and the Association for the Protection of Aquatic Wildlife in Albania.

Measures taken by the Government to attain and maintain a state of conservation favourable to cetaceans include the adoption in 2007 of an action plan for the conservation of cetaceans and the designation of several coastal protected areas.

#### Convention on Biological Diversity

Albania acceded to the Convention on Biological Diversity (CBD) in 1994. The fifth national report was elaborated under the GEF-funded project Revision and Update of the NBSAP of Albania and was submitted in 2014.

The Government has actively pursued measures aimed at implementing provisions of the CBD. Legal and institutional reforms have taken place through the adoption of amendments to the 2002 Law on Protected Areas and the adoption of the new Law on Protected Areas in 2017, preparation for the revision of the Law on Biodiversity Protection, the establishment of a hunting ban and a moratorium on forest timber exploitation and creation of NAPA and 12 regional administrations of protected areas (RAPAs). The protected area coverage expanded to 16.61 per cent of Albania's territory in 2015, of which 16.1 per cent is of inland and coastal areas and 0.5 per cent is marine area. With international technical and financial assistance, six management plans for protected areas (Prespa National Park, Bredhi i Hotoves-Dangelli National Park, Tomori Mountain National Park, Korab-Koritnik National Park, Pogradec Terrestrial/Aquatic Protected Landscape and Mali me Gropa-Bize-Martanesh Protected Landscape) were adopted in 2014 and several others (Albanian Alps National Park and Divjake-Karavasta National Park) are being prepared. The committees for management of protected areas have been established for the majority of protected areas. Albania has also developed action plans for six single species and habitats.

In response to Article 6 of the CBD, requiring all parties to develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity, Albania approved its new NBSAP in early 2016. The new NBSAP is the strategic framework for implementation of the CBD's Strategic Plan 2013–2020 and the Aichi Biodiversity Targets. It is a continuation of the 2000 NBSAP and identifies the national biodiversity policy objectives, operational objectives, measures, specific targets, time frames, associated costs and sources of funding.

Although legal and institutional reform and the elaboration of management plans for the protected areas and of the action plans for endangered species and habitats constitute positive steps, capacity and effective implementation constitute a challenge.

### Cartagena Protocol on Biosafety

In 2005, Albania acceded to the Cartagena Protocol on Biosafety. Albania acceded to the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol in 2013. An analysis of national legislation and the identification of potential gaps is yet to be done.

Albania has never received an application/notification and neither has it taken a decision regarding intentional transboundary movements of GMOs for intentional introduction into the environment. The legal framework for full compliance with the Cartagena Protocol still requires completion, namely, regulating decision-making processes regarding domestic use, including placing on the market and imports of GMOs, transboundary movements of GMOs, and handling and use of GMOs that are pharmaceuticals.

Albania does not have a coordinating structure for dealing with GMOs. In the framework of the Cartagena Protocol, the relevant stakeholders involved are: the Ministry of Tourism and Environment for the controlled introduction of GMOs into the environment and the notification system; the Ministry of Agriculture and Rural Development and the National Food Authority under its competency, for planting, food and trade; the Ministry of Health and Social Protection for impacts on human health; the Ministry of Education, Sports and Youth for the development of biotechnology; and the Directorate General of Customs regarding transboundary movements of GMOs. The Department of Biotechnology at the Faculty of Natural Sciences of the University of Tirana and the Academy of Sciences perform risk assessment procedures.

### Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization

Albania acceded to the Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (Nagoya Protocol) in 2013. As of early 2017, the Biodiversity and Protected Areas Directorate of the then Ministry of Environment was the only Competent National Authority to have been identified under the Protocol.

The Law on Biodiversity Protection No. 9587/2006 has some provisions related to access to genetic resources but subsidiary legislation is required. Albania has not yet established the necessary measures related to monitoring genetic resources and compliance measures for users, in accordance with the

Nagoya Protocol. There are several ongoing projects related to sharing the benefits arising from the use of genetic resources.

The NBSAP defines the implementation of the Nagoya Protocol as a goal, to ensure an approach for the fair and equitable distribution of benefits from the use of genetic resources, and sets as specific targets for 2020 to increase knowledge on the concept and dissemination of information on access and benefit-sharing (ABS) and to create operational mechanisms for the protection of traditional knowledge, novelties and practices of relevant local communities regarding conservation and sustainable use of biodiversity. In addition, the NBSAP includes other elements relevant to ABS, such as protection of plant genetic resources for food and agriculture or protection of forest genetic diversity. An overview of necessary activities to implement the Nagoya Protocol is also provided in the NBSAP.

Albania is one of the countries that benefit from the UNDP-GEF project Strengthening Human Resources, Legal Frameworks and Institutional Capacities to Implement the Nagoya Protocol, which started in June 2016, with a three-year duration.

Adequate institutional capacity and comprehensive legal measures for establishing an ABS national system are still lacking. Albania could benefit from the support made available by the ABS Clearing-house and capacity-building support from international institutions.

### Convention concerning the Protection of the World Cultural and Natural Heritage

The Convention concerning the Protection of the World Cultural and Natural Heritage was ratified by Albania in 1989. The Albanian National Commission for UNESCO operates under the Ministry for Europe and Foreign Affairs. The Prime Minister's Order No. 121 dated 20.03.2014 determined the reorganization of the cross-sectoral working group, Man and Biosphere.

In July 2017, the World Heritage Committee approved the transboundary extension of the World Heritage site with beech forest, now named Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe. This site now extends over 12 countries, including Albania.

Under the joint cultural and natural category, in 2014 the Ministry of Culture of Albania submitted the "Ancient City of Apollonia" to the tentative list, and in 2011 a submission was presented for the "Natural and

Cultural Heritage of the Ohrid Region". Two thirds of Lake Ohrid is located in the former Yugoslav Republic of Macedonia and is inscribed on the World Heritage List as the property "Natural and Cultural Heritage of the Ohrid Region".

With EU funding and the support of UNESCO, between 2014 and the beginning of 2017, the Government implemented the project Towards Strengthened Governance of the Shared Transboundary Natural and Cultural Heritage of the Lake Ohrid Region. The project aims to strengthen transboundary cooperation and management effectiveness of the region's natural and cultural heritage by addressing the main threats identified in the 2012 Advisory Scoping Mission and to support the process of extension of the World Heritage property "Natural and Cultural Heritage of the Ohrid Region" to Albania. The project supported the development of the Management Plan Supplement (MPS), a process that took two years and involved a large number of stakeholders, led by the ministries responsible for environment and culture, with technical assistance provided by UNESCO, IUCN, ICCROM and ICOMOS.

In 2017 the property "Natural and Cultural Heritage of the Ohrid Region" was extended to include the Albanian part of Lake Ohrid. According to the guidance of UNESCO, the establishment of a World Heritage property requires a specific management plan or documented system of management. For the Lake Ohrid World Heritage extension property, this takes the form of a supplement to the official Management Plan (2014–2019) for the Pogradec Terrestrial/Aquatic Protected Landscape, which includes in its territory the entire area of the World Heritage property. This supplement is intended to guide the management of the property in Albania, to supplement where necessary the existing Pogradec Protected Landscape management plan, and to provide a basis for coordinated management among the main responsible entities and stakeholders in Albania and Macedonia.

In 2014, UNESCO's International Coordinating Council of the Man and the Biosphere (MAB) Programme declared the Ohrid-Prespa Transboundary Biosphere Reserve, the first in Albanian territory. The reserve is shared by Albania and the former Yugoslav Republic of Macedonia.

#### Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa

Albania became a party to the United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (UNCCD) by accession in 2000. Desertification is a sensitive issue due to its implication in the loss of arable land in a country where agriculture accounts for one fifth of GDP and, although decreasing, almost half of total employment (46.10 per cent in 2015). Recent measures to reverse the worrying trend of deforestation may, if they are effective, have positive effects on desertification.

Albania has a monitoring system specifically dedicated to desertification, land degradation and drought (DLDD), but faces financial and technical resources limitations.

Harmonization of the National Action Plan to Combat Desertification in Albania, adopted in 2015, with the 10-year Strategy of the UNCCD (2008–2018) and the preparation of the National Report, were financially supported by GEF. The Government also implemented DLDD-specific capacity-building activities, based on the National Capacity Self-Assessment, with the technical and financial support of the UNCCD Secretariat and GEF. Pilot actions were implemented during the course of a GEF–UNEP project until the end of 2015, followed by a World Bank Environmental Services project. Implemented activities consisted of studies of erosion and land degradation in the Ulza and Bovilla areas, measures such as reforestation and other erosion control pilot actions.

#### European Landscape Convention

The Albanian parliament adopted the law on accession to this convention in July 2016. As of November 2017, the ratification instrument is still to be deposited.

#### *Water*

#### Convention on the Protection and Use of Transboundary Watercourses and International Lakes and the Protocol on Water and Health

Albania ratified the Convention on the Protection and Use of Transboundary Watercourses and International Lakes in 1994. The Protocol on Water and Health was ratified in 2002. The Ministry of Health and Social Protection works in close cooperation with the Ministry of Agriculture and Rural Development for

the purpose of implementation of the Protocol's obligations.

Albania progressed in meeting the reporting obligations under the Protocol on Water and Health. A matter still pending is the establishment of targets and respective time frames for fulfilling the obligations deriving from Article 6 of the Protocol. In 2015, the Government established the Integrated Policy Management Group (IPMG) on Water (Order of the Prime Minister No. 129 dated 21.09.2015). In addition, in 2015, the National Water Council established a sub-thematic group on "Water for people" (Decision of the National Water Council No. 4 dated 12.02.2015). The country was advised in 2015 regarding the establishment of proper mechanisms for ensuring intersectoral coordination among responsible authorities, within a consultation process under the Compliance Committee of the Protocol on Water and Health.

#### Convention on the Law of the Non-navigational Uses of International Watercourses

Albania is not a party to the Convention on the Law of the Non-navigational Uses of International Watercourses and there is no indication of it having any intention to accede to that instrument.

#### *Protection of the marine environment*

Albania has been a contracting party to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) since 1990 and accepted the 1995 amendments in 2001. It is a party to all protocols to the Convention, except for the 2002 Emergency Protocol that replaced the 1976 Protocol to which Albania has acceded. In the framework of the Barcelona Convention, Albania has committed to the Mediterranean Strategy for Sustainable Development for the period 2016–2025.

Albania also participates in the new (2014) EU Strategy for the Adriatic and Ionian Region, which aims at promoting economic and social prosperity and growth in the region by supporting blue growth, improved connectivity of transport/energy networks, better environmental quality and sustainable tourism actions.

Albania acceded in 2003 to the United Nations Convention on the Law of the Sea. The country acceded in 2009 to the Convention for the Control and Management of Ships Ballast Water and Sediments, which enters into force in 2017.

Albania ratified the 1978 Protocol relating to the International Convention for the Prevention of Pollution from Ships (MARPOL) in 2007, but has not yet ratified the 1997 amending Protocol (Annex VI) (chapter 10).

Albania is not a party to the 2009 Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships.

#### *Air protection, ozone layer protection and climate change*

#### Convention on Long-range Transboundary Air Pollution

Albania acceded to the Convention on Long-range Transboundary Air Pollution in 2005. In 2009, Albania ratified the Protocol on the Control of Emissions of Nitrogen Oxides or Their Transboundary Fluxes, and the Protocol on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at least 30 per cent, and in 2011, it acceded to the Protocol on Long-term Financing of the Co-operative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP).

The National Strategy for Ambient Air Quality defines targets for certain pollutants, such as PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>x</sub>, NO<sub>x</sub>, Pb, CO and benzene, to be achieved within 5 to 10 years from its adoption in 2014. With the assistance of the IPA, in particular within the IBECA project, a proposal for a national air quality management plan (AQMP) has been prepared. The draft plan assumes two main goals: (i) improvement of the air quality in areas where emissions have exceeded the limits prescribed by law or there is a high risk of exceeding the limits; and (ii) the maintenance of air quality in the remaining territory of the country.

In the past, Albania has had some difficulties in reporting annual emissions data for 2010, 2011, 2012, 2013 and 2014 and base years under the Protocol on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at least 30 per cent, and the Protocol concerning the Control of Nitrogen Oxides or their Transboundary Fluxes. In the 2016 and 2017 reporting rounds under the Convention, Albania submitted all missing data.

Albania made efforts to become a party to the remaining three protocols – the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (Gothenburg Protocol), the Protocol on Heavy Metals and Protocol on Persistent Organic Pollutants. In 2011, the parliament adopted the Law on Accession to the Gothenburg Protocol to Abate Acidification,

Eutrophication and Ground-level Ozone No. 10476/2011. Draft laws to enable the country's accession to the Protocol on Heavy Metals and Protocol on Persistent Organic Pollutants were also submitted to the parliament. However, during the time frame for preparation and submission of the three draft laws to the parliament, all three protocols were amended by their parties.

In conformity with the Gothenburg Protocol, as amended, Albania was asked to apply even more stringent SO<sub>2</sub> emission reductions, which would imply an adjustment to the Law No. 10476/2011, in particular to reduce eutrophication, acidity and troposphere ozone in urban air. With the absence of sound data, and after having reduced emissions of SO<sub>2</sub> by 77.8 per cent between 1990 and 2010, Albania will have to conduct an in-depth analysis in respect of the additional reduction requested.

#### Convention for the Protection of the Ozone Layer

Albania acceded to the Convention for the Protection of the Ozone Layer (Vienna Convention) and the Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol) in 1999. Albania has acceded to all amendments, except for the very recent 2016 Kigali Amendment, which adds hydrofluorocarbons (HFCs) to the list of controlled substances. The National Ozone Unit under the Department of Environment cooperates with the General Directorate of Customs for implementation of the Montreal Protocol.

A Hydrochlorofluorocarbons (HCFCs) Phase-out Management Plan (HPMP) for Albania was approved by the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol in 2011. The HPMP aims at a 35 per cent reduction of HCFC consumption by 1 January 2020, compared with the baseline level, which refers to the average HCFC consumption in the years 2009 and 2010. The HPMP is being implemented with the assistance of UNIDO and UNEP, at a total cost of US\$122,880. In 2015, the Executive Committee approved the third tranche of stage I of the HPMP.

The Government reported the consumption of 1.64 ODP tons of HCFCs in 2014. Imports of HCFCs amount to 5.6 ODP tons. The commonly used substitutes in Albania include HFC-410A, HFC-134a, HFC-407 and HFC-404.

Albanian legislation establishes a licensing and quota system for control of import/export of HCFCs and HFC-containing mixtures, which is effectively enforced and is in compliance with the Montreal

Protocol. Under the HPMP, customs officers have been trained in monitoring imports and preventing illegal trade of ozone-depleting substances (ODS). New legislation is expected to be approved, including on guidelines for training and certification of technicians and end users, and establishing a framework for record-keeping and data transmission.

Albania also aims to further align its national provisions with EU legislation on ODS and on fluorinated GHGs.

#### United Nations Framework Convention on Climate Change

Albania has been a party to the United Nations Framework Convention on Climate Change (UNFCCC) since 1994 and acceded to the Kyoto Protocol in 2005. Albania ratified the Paris Agreement in 2016 on the occasion of the United Nations High-Level Event on Entry into Force of the Paris Agreement on Climate Change, being one of the countries that contributed to surpassing the threshold for the entry into force of the Paris Agreement.

Albania presented its Third National Communication on Climate Change to the Secretariat of the UNFCCC in October 2016, which was developed by the then Ministry of Environment with the support of UNDP and GEF. The Third National Communication includes a GHG inventory for the period 2000–2009, with 2005 as the base year. Albania's coastal areas and water resources, ecosystems, agriculture, energy and tourism are identified as the sectors most vulnerable to climate change. Several priority measures related to GHG reduction and adaptation to climate change are identified in the Third National Communication.

Albania has developed secondary legislation that establishes the legal and institutional framework for the promotion and approval of Clean Development Mechanism (CDM) project activities. As of early 2017, only one CDM project on forests has passed international approval and verification procedures. CDM-related legislation is expected to be revised in order also to include Nationally Appropriate Mitigation Actions (NAMAs).

With UNDP support, between 2013 and 2014, Albania developed an initial inventory of potential NAMAs. Two NAMA proposals were fully developed: Financing Mechanism for Energy Efficiency in Buildings (Energy Efficiency Fund) and Replacing Fossil Fuels with Non-hazardous Waste in the Albanian Cement Industry (chapter 5).

In September 2015, Albania submitted to the UNFCCC Secretariat its Intended Nationally Determined Contribution (INDC), adopted by DCM No. 762 dated 16.09.2015. The Government committed to reduce CO<sub>2</sub> emissions in the period 2016–2030 by 11.5 per cent compared with the baseline scenario. The reduction of CO<sub>2</sub> emissions is also identified under the NSDI-II strategic objective on reaction towards climate change.

An Interministerial Working Group on Climate Change coordinates the work of line ministries on climate change. It is headed by the deputy minister responsible for environmental issues at the political level and supported by nominated technical focal points in each institution. For the implementation of the INDC, work is being coordinated in order to ensure coherence among the targets identified in the INDC, the National Action Plan on Energy Efficiency, the National Action Plan for Renewable Energy, the draft national strategy on energy and relevant legislation on energy and climate change.

In view of implementation of the Paris Agreement, Albania is currently preparing a climate change strategy and a plan on mitigation of GHG emissions, under the IBECA project, and a national adaptation plan, with the support of GIZ and UNDP. The climate change strategy will aim to be consistent with GHG emission pathways defined in the INDC and to promote sustainable economic growth, by streamlining climate change across sectoral strategic planning. It will also aim to strengthen the awareness and capacity of relevant institutions and inter-institutional cooperation to address climate change issues. It also foresees the establishment of a monitoring, reporting and verification system of GHGs in line with EU requirements, which the NSDI-II also recognizes as needed.

A first proposal of a DCM on establishing a mechanism for monitoring and reporting to the national competent authority on GHG emissions and other information relevant to climate change was discussed in July 2016 and is expected to be approved by July 2018. The central part of the plan on mitigation of GHG emissions will be the implementation of the INDC. The national adaptation plan will establish an implementation framework, by defining overarching objectives and targets as well as 15 priority actions. The national adaptation plan is also expected to address the mainstreaming of adaptation into relevant sectoral policies. It will be accompanied by a financing document identifying costs and possible financing sources.

### *Waste and hazardous chemicals*

#### Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

In 1999, Albania acceded to the Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention).

In addition to wastes listed in Annexes I, II and VIII of the Basel Convention, the Albanian definition of hazardous waste also covers the European List of Waste. Due to inadequate segregation of hazardous waste and the absence of adequate means for processing it, the management of hazardous waste constitutes a challenge for Albania. Hazardous waste is, for the most part, exported to other countries (from 2014 onwards, to Greece, the former Yugoslav Republic of Macedonia, Portugal and Sweden).

According to the Albanian legislation, all types of waste (hazardous or not) that are the object of export and transboundary movements are subject to control and require an authorization from the Ministry of Tourism and Environment. A written consent from the competent authority of the country of import is required. No distinction is made between waste for recovery or final disposal. Companies are obliged to report every three months on the amount of waste exported and in transit.

The transit of hazardous waste through the territory of Albania was prohibited in all circumstances, according to the Law on Hazardous Waste Management No. 9537/2006 (no longer in force). The import of any kind of waste continues to be prohibited under the Law on Integrated Waste Management No. 10463/2011. An amendment of the Law on Integrated Waste Management No. 10463/2011, which would allow the import of waste for recycling purposes, has been approved by the parliament, but has not yet been signed off by the President.

If the import of waste becomes authorized, Albania will be required to ensure effective management of waste and associated infrastructure, to strengthen the system for monitoring control and reporting of waste movements and to capacitate the institutions involved.

Relevant documents on the importing of waste are not always available to the Competent Authority, which poses a practical challenge for compliance with the Basel Convention. Capacity-building for custom officers and for the State Inspectorate of Environment, Forestry and Water in this domain is highly desirable. The development of a Basel Convention electronic

system for transboundary movements could also improve coordination between authorities involved.

Improving overall waste management performance by 2020, namely by planning for and constructing at least one plant for the treatment of hazardous waste, has been set as a strategic objective under the NSDI-II.

#### Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade

Albania acceded to the Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam Convention) in 2010. As of early 2017, the Department of International Organizations of the then Ministry of Foreign Affairs was the Contact Point and the General Directorate of Environmental Policies and Delivery of Priorities of the then Ministry of Environment was the Designated National Authority for industrial chemicals and pesticides.

Albania has submitted to the Convention decisions of no consent for the importing of 47 chemicals listed in Annex III of the Convention and subject to the Prior Informed Consent Procedure.

DCM No. 665 dated 21.09.2016 "On the import and export of hazardous chemicals" aims at fully approximating Albanian legislation with the related EU acquis.

#### Convention on Persistent Organic Pollutants

Albania acceded to the Convention on Persistent Organic Pollutants in 2004. The National Action Plan for Reduction and Disposal of Persistent Organic Pollutants was adopted in 2006 and submitted to the Convention Secretariat in 2007 as the national implementation plan of the Convention. It is currently being revised with the technical and financial support of UNEP and GEF. In 2014, the first national report was submitted.

Albania has adopted legislation establishing the framework for compliance with international commitments on chemicals. The Law on Chemicals Management No. 27/2016 sets the legal framework for the implementation of international conventions in this domain. Aiming at fully aligning the national legal framework with EU legislation, Albania has also adopted subsidiary legislation with regard to: the registration, evaluation, authorization and restriction of chemicals, export and import of hazardous chemicals; classification, labelling and packaging of

substances and mixtures; POPs; animal testing; asbestos; biocides; and mercury.

National legislation on chemicals classification, labelling and packaging is not yet aligned with the United Nations Globally Harmonized System of Classification and Labelling of Chemicals. However, the NSDI-II identifies this as a priority.

Environmental protection policies and practices for the use of chemicals in agriculture are yet to be developed.

Among recent achievements is the establishment of a centre for the collection and treatment of hazardous chemicals in October 2015 in Elbasan.

Due to its transversal nature, compliance with international commitments on chemicals management requires a strengthened effort of coordination among all entities involved, i.e. the Ministry of Tourism and Environment, as the main authority responsible for chemicals management, in coordination with the State Inspectorate of Environment, Forestry and Water (for compliance of safety data sheets, harmonized classification and labelling and restrictions of importers, exporters and producers of chemicals), the Inspectorate on Trade (for compliance of chemicals in the market), the Ministry of Agriculture and Rural Development (on packaging and labelling of plant protection products) and the Ministry of Health and Social Protection (on policies and services relating to biocides in public health). There are no specific training programmes for inspectors or other authorities in the country; therefore, capacity-building with regard to the implementation and enforcement of chemicals legislation should become a priority.

#### Minamata Convention on Mercury

Albania signed the Minamata Convention on Mercury in 2014. In 2016, the then Ministry of Environment started the ratification process, in cooperation with the then Ministry of Foreign Affairs (box 4.1).

Between 2009 and 2012, the Government of Albania, with financial support provided by the Government of the Netherlands and UNDP, conducted the identification and prioritization of historic industrial pollution hotspots, including those contaminated by mercury, and conducted some rehabilitation works. A preliminary site investigation of 35 potential hotspot sites was conducted, followed by prioritization and selection of a shortlist for more detailed evaluation (chapter 8).

**Box 4.1: Preparatory work towards the ratification of the Minamata Convention on Mercury**

In July 2016, Albania began implementation of the project Minamata Initial Assessment for Albania, with the financial support of GEF and UNDP. The project aims to undertake an initial assessment to enable the Government to determine the national requirements and needs for ratification of the Minamata Convention and to establish a sound foundation to undertake future work towards implementation of the Convention. The project has a two-year duration and a budget of US\$200,000.

In order to contribute to this project, a Steering Committee was established by the then Minister of Environment in May 2016. The Steering Committee is composed of representatives of the ministries responsible for environment, agriculture, energy, economy, and health, the NEA, the Faculty of Nature Sciences of the University of Tirana and the NGO EDEN Centre.

The Steering Committee has been working on collecting and reviewing the existing legal, regulatory and policy frameworks on the production and use of mercury in various sectors. A report on legislative gap analysis, including mercury management and recommendations for strengthening the legal and regulatory framework on mercury governance, is under development.

Among recent successes is the completion of remediation and clean-up works (supported by the EU) at the Chlor-alkali plant in Vlorë, which was abandoned after 1990 and had been contaminated by mercury.

Strategic Approach to International Chemicals Management

In 2013, the Government updated its National Chemicals Management Profile, including aspects related to mercury, with the support of UNITAR. This initiative was led by the IPH in cooperation with several stakeholders. The National Chemicals Management Profile constitutes the framework for Albania's implementation of the Strategic Approach to International Chemicals Management (SAICM). The country's national focal point is the Department of Environmental Health of the IPH.

*Industrial accidents and environmental impact assessment*Convention on the Transboundary Effects of Industrial Accidents

Albania ratified the Convention on the Transboundary Effects of Industrial Accidents in 1994. By early 2017, the then Ministry of Environment, in close cooperation with the then Ministry of Energy and Industry, prepared a proposal for a law on the control of major accident hazards involving dangerous substances. The draft law aims at approximating the Albanian legislation with the EU *acquis* in this domain and would simultaneously contribute to implementation of the obligations deriving from the Convention. Although some work has been accomplished, especially on the mapping of hotspots (chapter 8), much remains to be done (chapter 11). There is a lack of technical assistance and capacity-building in this area to quickly overcome existing weaknesses.

Convention on Environmental Impact Assessment in a Transboundary Context

In 1991, Albania ratified the Convention on Environmental Impact Assessment in a Transboundary Context and, in 2005, the Protocol on Strategic Environmental Assessment.

The legal framework on EIA builds on the Law on Environmental Impact Assessment No. 10440/2011 and its subsidiary legislation, including DCM No. 598 dated 01.07.2015 "On rules and procedures for environmental impact assessment in a transboundary context". At present, a proposal for a DCM on the participation of the public in the EIA procedure is being subject to consultation in the relevant ministries. The legal framework for SEA has been enhanced with the adoption of the Law on Strategic Environmental Assessment No. 91/2013 and its subsidiary legislation. The key challenge, however, is to ensure proper application of the SEA instrument by key sectors of the economy (chapter 1).

*Access to Information, Public Participation in Decision-Making and Access to Justice*

Albania ratified the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) in 2001 and acceded to the Protocol on Pollutant Release and Transfer Registers (PRTR Protocol) in 2009. It is not a party to the 2005 Almaty Amendment on Genetically Modified Organisms.

Since 2012, the institutional setting for the implementation of the Aarhus Convention has been clarified and the assignment of tasks among the relevant institutions is at present clearer than in the past. The overall coordinating responsibilities remained with the ministry responsible for



environmental issues, including the development of policy and the legal framework.

The NEA became the predominant actor in providing information to the public on environmental matters, being responsible in particular for preparing and publishing the annual state of environment report (SoER), working on establishing the IEMS, and creating and administering the PRTR (chapter 3). Furthermore, the NEA is responsible for relevant tasks on public participation such as providing information to the public related to the decision-making process on environmental matters (in its capacity as regulatory authority for environmental permitting), including EIA documentation and considering outcomes of public consultations within EIA processes.

Robust improvements with regard to the legal framework for complying with Aarhus Convention requirements were made in the last four years, such as the Law on the Right to Information No. 119/2014, the Law on Public Notification and Consultation No. 146/2014 and DCM No. 247 dated 30.04.2014 "On determination of the rules and requirements of procedures for information and involvement of the public in environmental decision-making".

Following the adoption of the above-mentioned laws, several initiatives were undertaken to increase dissemination of environmental information and ensure public participation in decision-making. UNDP is supporting a project aimed at strengthening the country's capacity for environmental monitoring and information management through the establishment of an operational environmental information management and monitoring system. The establishment of this system is also benefiting from another ongoing project supported by the EU, namely, Strengthening the National Capacity in Nature Protection and Preparation for Natura 2000 Network.

The Better Access to Justice in Central and Eastern Europe project, funded by the German Federal Environment Ministry's Advisory Assistance Programme and supervised by the German Environment Agency, is a valuable contribution for Albania in seeking to better comply with Aarhus Convention obligations. Regional training events for representatives of civil society organizations on access to justice have been organized with the purpose of getting participants more closely acquainted with the access to justice rights and opportunities provided by the Aarhus Convention and national legislation.

The efforts made to improve access to information, public participation in decision-making and access to justice in environmental matters are unquestionable. However, many challenges remain. An IEMS is not yet established. Information provided to public is not always reliable and consistent.

*Sustainable Development Goals and targets relevant to this section*

Albania's current position vis-à-vis targets 11.4 and 14.c is described in box 4.2.

### **4.3 Bilateral cooperation on the environment and sustainable development**

The management of transboundary watercourses is the main priority for bilateral cooperation. Albania has signed several agreements and memoranda of understanding with its neighbours and joint work has been undertaken in several cases.

In 2004, Albania and the former Yugoslav Republic of Macedonia signed an Agreement for the Protection and Sustainable Development of Lake Ohrid and its Watershed, following which the Lake Ohrid Watershed Committee was established in 2005. Furthermore, Albania and the former Yugoslav Republic of Macedonia have also harmonized procedures for water monitoring and established joint protocols for sampling analysis and quality assurance in the case of Lake Ohrid.

In 2005, an agreement on the establishment of a Greek–Albanian permanent Commission on transboundary freshwater issues was concluded between Albania and Greece. The Commission was assigned ambitious tasks, such as setting joint water-quality objectives and criteria, drafting proposals for measures to achieve the water-quality objectives, and organizing and promoting national networks for water quality monitoring. No follow-up on the work of the Commission or the results achieved is available.

Cooperation between Montenegro and Albania on the Protection and Sustainable Development of the Skadar/Shkodër Lake was formalized through an agreement signed in 2008, following which the Skadar/Shkodër Lake Commission was created in 2009. Both countries also committed to implementing a Strategic Action Plan for the lake. A Joint Secretariat is located in Shkodër, Albania, and four working groups (Planning and Legal, Monitoring and Research, Communication/Outreach and Sustainable Tourism, and Water Management) provide support.



#### Box 4.2: Targets 11.4 and 14.c of the 2030 Agenda for Sustainable Development



#### **Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable**

##### **Target 11.4: Strengthen efforts to protect and safeguard the world's cultural and natural heritage**

Most relevant policy priorities for target 11.4 include: NSDI-II pillar 3: Investing in People and Social Cohesion, section 11.8: A Greater Focus on Arts and Culture; and NSDI-II pillar 4: Growth through Sustainable Use of Resources, section 12.3.5: Tourism Development. The institutional framework is represented by the Ministry of Culture and Ministry of Tourism and Environment. The global indicator (11.4.1) is total expenditure (public and private) per capita spent on the preservation, protection and conservation of all cultural and natural heritage, by type of heritage (cultural, natural, mixed and World Heritage Centre designation), level of government (national, regional and local/municipal), type of expenditure (operating expenditure/investment) and type of private funding (donations in kind, private non-profit sector and sponsorship).

In the definition of the domestic indicator and its corresponding target, in what concerns the world's natural heritage, the Government may wish to consider not only the global indicator but also the number of natural heritage sites with a management plan effectively being implemented.

#### **Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development**

##### **Target 14.c: Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of "The future we want"**

The global indicator 14.c.1 for target 14.c refers to the number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in the United Nations Convention on the Law of the Sea, for the conservation and sustainable use of oceans and their resources.

In the definition of the domestic indicator and its corresponding target, Albania may wish to take into consideration activities towards the implementation of the United Nations Convention on the Law of the Sea. Under the scope of competencies of the Ministry of Tourism and Environment, consideration can be given to the elaboration and effective implementation of management plans for coastal and marine protected areas.

In 2011, Albania, Greece, Kosovo,<sup>6</sup> Montenegro and the former Yugoslav Republic of Macedonia signed a Memorandum of Understanding for the Management of the Extended Transboundary Drin Basin, "The Drin: A Strategic Shared Vision". Activities are ongoing for the implementation of the Memorandum, with support from GEF under the project Enabling Transboundary Cooperation and Integrated Water Resources Management in the Extended Drin River Basin. Developments, as well as planned actions, are reviewed on a yearly basis. Management plans for the Drini River basin, as well as possibilities for coordinated action for the management of protected areas at the Drini sub-basin level, are discussed and prepared. The ultimate goal of these activities, and of the GEF Drini project, is to shift the management perspective from the sub-basin level of single water bodies to the interconnected hydrological system of the Drini River basin.

Inter-State cooperation among Albania, Greece and the former Yugoslav Republic of Macedonia on the

Prespa basin started in 2000, with the three countries declaring the Prespa lakes and their catchment as Prespa Park, under the auspices of the Ramsar Convention, upon a proposal by the Society for the Protection of Prespa, WWF Greece and the Mediterranean Wetlands Initiative (MedWet). Prespa was the first transboundary protected area in South-Eastern Europe. The three countries also established the Prespa Park Coordination Committee that prepared a Strategic Action Plan, adopted in 2004. In 2010, the ministries responsible for environment of Albania, Greece and the former Yugoslav Republic of Macedonia, and the EU Environment Commissioner, signed an Agreement on the Protection and Sustainable Development of the Prespa Park Area, setting out detailed principles and mechanisms of transboundary cooperation. The Agreement enters into force in 2017, following the ratification by Greece in February 2017.

Many of the activities for the preparation and implementation of the existing bilateral agreements

<sup>6</sup> References to Kosovo shall be understood to be in the context of Security Council resolution 1244 (1999).

have had strong support from the donor community, namely through projects supported by UNDP, the German Development Bank (KfW), Swiss Development and Cooperation Agency and Swedish International Development Cooperation Agency. A special reference must be made to GEF, whose financing has been critical to support for the majority of the activities developed for the conclusion of those agreements and their follow-up.

However, insufficient information on the activities undertaken for the implementation of the signed agreements, and especially on the results of their expected outcomes and on the pollution trends of the protected natural resources, prevents a sound analysis of their efficiency.

The 2014 IPA II Cross-Border Programmes 2014–2020 would provide a valuable platform for enhancing transboundary cooperation on environmental matters in the coming years.

*Sustainable Development Goals and targets relevant to this section*

Albania's current position vis-à-vis target 6.5 is described in box 4.3.

**4.4 Participation in non-binding processes related to the environment, sustainable development and green economy**

*Ten-year framework of programmes on sustainable consumption and production patterns*

In early 2017, the then Ministry of Environment was the national focal point for the 10-year Framework of Programmes on Sustainable Consumption and Production (SCP) Patterns (the 10YFP). Albania is a member of the Board of the 10YFP, representing the Eastern European Group, for the 2015–2017 term. However, Albania's representation on the Board is assured by the Permanent Mission of Albania to the United Nations and the ministry responsible for environmental issues has so far not been involved in any activity related to Albania's membership of the Board. In early 2017, the then Ministry of Urban Development (no longer existent following the institutional restructuring of September 2017) was the only governmental entity identified as a member of the 10YFP in the Global SCP Clearinghouse.

The promotion of sustainable production and consumption is one of the sustainability principles mentioned in the NSDI-II. Active engagement of the

current Ministry of Tourism and Environment in the work of the Board of the 10YFP could be useful for further actualizing the principle recognized in the NSDI-II and strengthening policies relevant for SCP in Albania. Discussions and exchanges of best practices promoted through the 10YFP Eastern Europe regional meetings could also be helpful in this regard.

There are six programmes currently operating under the global 10YFP: consumer information; sustainable lifestyles and education; sustainable public procurement; sustainable buildings and construction; sustainable tourism, including ecotourism; and sustainable food systems. Establishing national priorities to shift towards SCP patterns in the areas covered by the 10YFP could be beneficial, considering Albania's eligibility to present proposals to the 10YFP Trust Fund to support programmes and initiatives that respond to national and regional priorities in this domain.

No measures have been undertaken by the ministry responsible for environmental issues to enable it to fulfil its role as 10YFP national focal point, such as the development of a national SCP action plan/programme, the organization of an interministerial national round table and dialogues to coordinate the country's participation and support to the 10YFP, or the dissemination of relevant information on SCP through the Global SCP Clearinghouse. Moreover, the ministry does not participate in the preparation of, attendance at and follow-up to the 10YFP Board meetings.

*United Nations Forum on Forests and Forest Europe*

In 2014, Albania presented its voluntary national report to the eleventh session of the United Nations Forum on Forests. The report was prepared by the then Ministry of Environment. However, a national focal point for the United Nations Forum on Forests and Forest Europe process has not yet been designated.

The institutional and legal changes in forest management (the creation of NAPA and regional agencies on protected areas and the 10-year moratorium) have contributed to the implementation of the Forest Instrument. Afforestation and reforestation measures have also been taken, aiming to reverse the loss of forest cover. Stakeholder involvement has been promoted through the organization of meetings with forest authorities, but is considered to be only partially effective.



### Box 4.3: Target 6.5 of the 2030 Agenda for Sustainable Development

#### **Goal 6: Ensure availability and sustainable management of water and sanitation for all**

#### **Target 6.5: By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate**

Target 6.5 focuses on transboundary water cooperation, among other aspects. One of the two global indicators for this target is the proportion of transboundary basin area with an operational arrangement for water cooperation (6.5.2).

Albania is very active in transboundary water cooperation, especially on shared transboundary lakes. However, not all transboundary waters shared by Albania are covered by transboundary water agreements. The country is in the process of approval of the draft framework agreement with Montenegro for transboundary water management in the Drin-Buna Basin (pending approval of the Council of Ministers). It is in the process of drafting bilateral agreement with the former Yugoslav Republic of Macedonia. Albania cooperates on water issues also with Kosovo<sup>7</sup>. The effectiveness of existing agreements is also an important issue, as, for example, there is no evidence of regular meetings of the Greek–Albanian permanent Commission on transboundary freshwater issues.

According to the information provided by Albania in 2017 as part of the reporting under the Water Convention and for SDG global indicator 6.5.2, the total surface area of transboundary basins of rivers and lakes within the territory of the country is 13,986 km<sup>2</sup>, whereas the total surface area of transboundary basins/sub-basins of rivers and lakes covered by operational arrangements within the territory of the country is 9,345 km<sup>2</sup>. The total surface area of transboundary aquifers is 8,916 km<sup>2</sup>, whereas the surface area of transboundary aquifers covered by operational arrangements is 7,964 km<sup>2</sup>. Therefore, the current value for indicator 6.5.2 is 76 per cent. This level indicates a need for efforts to increase the proportion of transboundary basin area with an operational arrangement for water cooperation on the way to 2030.

An important issue flagged by Albania in connection with this reporting exercise is that Albania has not delineated the transboundary aquifers in collaboration with the neighbouring countries and that delineation of water bodies and aquifers using GIS technologies is needed.

Forests have also been included in strategic planning documents, such as the NSDI-II, in which the Government has identified as a strategic objective to strengthen the management and conservation of forestry and pasture resources through the reduction of illegal logging in forests by 2020, and through the formulation of management plans.

#### *Transport, Health and Environment Pan-European Programme and European Environment and Health Process*

The Department of Public Health of the Ministry of Health and Social Protection is the National Focal Point for the Transport, Health and Environment Pan-European Programme (THE PEP) and the European Environment and Health Process (EEHP), and has attended meetings of the Steering Committee of the THE PEP and of the Task Force of the EEHP. The Government was also represented at the recent high-level events of these processes: the 4th High Level Meeting on Transport, Health and Environment (Paris, France, 14–16 April 2016) and the High-level Mid-term Review of the EEHP (Haifa, Israel, 28–30 April 2015). No specific activities under the umbrella of these two processes were implemented in Albania.

#### *Environment for Europe process*

Albania has not submitted any voluntary commitments under the two initiatives endorsed by the ministers at the Eighth Environment for Europe Ministerial Conference (Batumi, Georgia, 8–10 June 2016): the Batumi Initiative on Green Economy and the Batumi Action for Cleaner Air.

#### *Sustainable Development Goals and targets relevant to this section*

Albania's current position vis-à-vis target 12.1 is described in box 4.4.

### 4.5 Legal, policy and institutional framework

#### *Legal framework*

An international agreement that Albania ratifies or accedes to comes into force in the Albanian national legal framework immediately following its publication in the *Official Journal*. An international agreement that Albania has ratified or acceded to prevails over other laws that might conflict with the international agreement.

<sup>7</sup> References to Kosovo shall be understood to be in the context of Security Council resolution 1244 (1999).



#### Box 4.4: Target 12.1 of the 2030 Agenda for Sustainable Development

##### **Goal 12: Ensure sustainable consumption and production patterns**

##### **Target 12.1: Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries**

Most related policy priorities for target 12.1 are identified in NSDI-II pillar 4: Ensuring growth through connectivity, the sustainable use of resources and territorial development. Promotion of sustainable production and consumption is one of the sustainability principles mentioned in the NSDI-II. Related policy priorities are also included in the draft environmental cross-cutting strategy for the period 2015–2020. The global indicator (12.1.1) refers to the number of countries with sustainable consumption and production (SCP) national action plans or SCP mainstreamed as a priority or a target into national policies.

In the definition of the domestic indicator and its corresponding target, the Government may wish to take into consideration establishing a national action plan on SCP, with specific targets and indicators, or as an alternative, including in the environmental cross-cutting strategy, currently being prepared, specific actions towards mainstreaming SCP patterns in the areas covered by the 10YFP, with the respective indicators.

The Law on International Agreements No. 43/2016 applies to all bilateral and multilateral international agreements, governed by international law and concluded in written form. The Law regulates the process of preparing and concluding the ratification/accession process, including mandatory elements that should be submitted for consideration to the Ministry for Europe and Foreign Affairs, Ministry of Justice, Ministry of Finance and Economy and other institutions as relevant.

The proposal for ratification must include: (a) the grounds, purpose and object of the agreement; (b) advantages of becoming a party and expected results; (c) financial implications deriving from implementation; (d) analysis of the compliance with the Constitution, national legislation and the international law binding upon Albania, as well as with the EU acquis; (e) identification of and reasons for taking the necessary legal measures to be adopted for the implementation of the international agreement; and (f) the authority responsible for taking such measures.

Clear guidelines and detailed procedures, including the mandatory nature of an in-depth impact analysis, for ratifying international and bilateral agreements are an added value for ensuring smoother implementation of their obligations.

##### *Policy framework*

The National Strategy for Development and Integration for the period 2015–2020 (NSDI-II) provides the strategic framework for all sector and cross-sector strategies (chapter 1). The NSDI-II is the compass of the Integrated Planning System – a set of

operating principles to ensure that public policies are all aligned and point in the same direction. The definition of sectoral policies, their objectives and targets, is cascaded from the NSDI-II. However, there is no strategic document focused on the environment as a whole that would also set clear priorities for international cooperation on environmental issues. At the same time, the Government has adopted several thematic strategies on environmental issues (air, waste, etc.).

The NSDI-II and the set of sectoral strategic documents developed as part of the NSDI-II process take into account Albania's aspirations of becoming a member of the EU and take as a reference the documents produced by the EU institutions in the framework of the accession process. The policy framework, including on international cooperation on the environment, is largely driven by the priorities set as part of the accession process.

##### *Institutional framework*

Prior to the institutional restructuring of September 2017, the responsibilities regarding international environmental cooperation were mostly concentrated within the then Ministry of Environment. They are now concentrated within the Ministry of Tourism and Environment. Nearly all focal points for global and regional environmental agreements are staff responsible for the relevant clusters, e.g. nature conservation and biodiversity, climate change, air pollution, and chemicals, within the ministry responsible for environmental issues, with the exception of water, sea and marine issues. Focal points, together with their very limited teams, have the responsibility to develop legislation transposing into

national law the obligations arising from those agreements, and to implement and monitor it.

Teams in each area have no more than five staff each, which is clearly insufficient for the tasks assigned to them, which have been increasing significantly in recent years as the legislation adopted increases in number and complexity. In the Albania 2016 Progress Report adopted by the European Commission, the Commission notes that Albania is still at an early stage of building administrative capacity to enforce legislation and that institutional capacity remains weak in several environmental areas, such as waste and water management and climate change. The problems encountered in reporting to some MEAs also reveal weaknesses in the administration's ability to meet the requirements, in terms of both technical know-how and availability of equipment for the purpose, to monitor the state of the environment.

In terms of international, regional and bilateral environmental cooperation, the Ministry for Europe and Foreign Affairs plays a very important role, assessing the political pertinence of acceding to international agreements and assessing their conformity with the Constitution, the international obligations of Albania and the Albanian legislation in force.

In early 2017, in order to ensure robust and full coordination among different ministries towards the fulfilment of the requirements of EU integration and to maximize the impact of the available financial support, both external and domestic, Albania had in place an institutional architecture that had two essential technical pillars: the Department of Development Programming, Financing and Foreign Aid in the Prime Minister's Office and the Delivery Units in each ministry. Following the institutional restructuring of September 2017, foreign aid coordination task was transferred from the Prime Minister's Office to the Ministry of Finance and Economy.

#### **4.6 International technical assistance on the environment**

The development of environmental policy and its implementation and enforcement in Albania has been supported by many donors, among which the EU has become predominant. IPA II assistance was prepared taking into account Albania's national development plans and the Medium-Term Budget Programme (MTBP). This is also the case for the assistance given within the United Nations Programme of Cooperation for Sustainable Development for the period 2015–2020.

Prior to the institutional restructuring of September 2017, donor coordination was under the responsibility of the Deputy Prime Minister, with support from the then Department of Development Programming, Financing and Foreign Aid in the Prime Minister's Office. This overall coordination included a Strategic Planning Committee as an interministerial committee chaired by the Prime Minister, which reviewed and endorsed the Government's policy and fiscal priorities. A number of interministerial working groups were established to ensure coordination and cooperation among line ministries within specific sectors. The then Department of Development Programming, Financing and Foreign Aid was the guardian of a project database that gathered all the information on projects supported by donors, including loans. The database included grants and loans (especially grants, in the case of environmental projects) supported by the following donors: Austria, Germany (GIZ, KfW), Italy, Japan, Sweden, Switzerland, the IPA, GEF, UNDP and the World Bank. Several of the projects aim at reinforcing capacity in environmental administration. Following the institutional restructuring, the task of foreign aid coordination was transferred to the Ministry of Finance and Economy.

Furthermore, to enhance aid coordination, once a year a high-level donor–government dialogue is organized in the format of a round table. The donor–government dialogue is supported by the Donor Technical Secretariat, composed of four multilateral donor organizations, including the EU, and a rotating participation of two bilateral donors.

Although the resources channelled by donors are crucial to advancing environmental protection, the financial needs of the country go well beyond the resources currently available from domestic and external sources.

In general, the donor community has, until recently, mostly concentrated its financial support in capacity-building, in the development of policy and legal frameworks and in small to medium-scale projects. The EU, for example, has provided assistance for environmental purposes through IPA 2007–2013 amounting to €126 million. The next stage of development, the implementation phase, is extremely intensive – in particular in the water and waste subsectors – in terms of financial needs, both for investment and operating and maintenance costs, and demanding with regard to the level of expertise needed to ensure appropriate management of the infrastructures.

In a context of scarce resources, establishing priorities is fundamental. In early 2017, the Government, with support from the then Department of Development Programming, Financing and Foreign Aid, has decided to establish a list of priority public projects. The list already exists although the subcriteria (parameters) for including a project on the list have not yet been made publicly available.

#### 4.7 Assessment, conclusions and recommendations

##### *Assessment*

The prompt ratification of recent MEAs, such as the Paris Agreement and the Nagoya Protocol, is evidence of the political importance that the Government attributes to being an engaged participant in international cooperation in the environmental domain. The aspiration of EU membership is the main driver for the adoption of environmental legislation in Albania, while the MEAs can be considered a second major impetus.

Adequate participation at international negotiations, implementation and compliance remain challenges, due in part to the insufficient capacity and financial resources of the ministry responsible for environmental issues. Effective response to international agreements and commitments will require strengthening the capacity of and ensuring financial resources for the Ministry of Tourism and Environment, as well as other involved entities, in a way that is consistent with the responsibility of being a party to MEAs.

In a context of an increased level of scrutiny associated with environmental matters in the international domain, the same level of political commitment that sustained the decision to ratify a MEA must continue to be shown through its implementation.

##### *Conclusions and recommendations*

##### Capacity and resources

The extended mandate of environmental bodies and units in the public administration to ensure implementation and the country's compliance with the obligations deriving from global and regional agreements has not been matched by an increase in capacity and financial resources.

As of early 2017, the then Ministry of Environment, in particular the Delivery Unit, regularly collected and organized information on projects supported by foreign assistance, but the information collected

remained insufficient for adequate monitoring of the development and outputs of the projects.

##### Recommendation 4.1:

*The Government should:*

- (a) *Undertake an in-depth analysis of the administrative and technical capacity and financial needs of the bodies and units charged with the implementation of the obligations deriving from global and regional environmental agreements;*
- (b) *On this basis, prepare an action plan to ensure that the adequate administrative and technical capacity and financial resources are secured for implementation of the obligations deriving from global and regional environmental agreements;*
- (c) *Establish a publicly accessible, up-to-date system for implementation, monitoring and evaluation of environment-related projects.*

##### Access to information and the involvement of NGOs

There is a general absence of information provided by the Albanian environmental authorities to the public on the status of Albania's participation in global, regional and bilateral agreements and on the implementation of those agreements, including the reports submitted. Information on MEAs ratified by Albania and on the reports on implementation under these MEAs is not placed on the website of the ministry responsible for environmental issues or any other public institution, and neither is information on bilateral agreements related to the environment. With the recent exception of the Minamata Convention on Mercury, NGOs are not involved in the decision-making processes with regard to the country's participation in MEAs. Consequently, they are not involved in the implementation of MEAs.

##### Recommendation 4.2:

*The Ministry of Tourism and Environment should:*

- (a) *Ensure access through its website to the texts of global, regional and bilateral environmental agreements, including translations into the national language;*
- (b) *Make the information on the status of the participation of Albania in global, regional and bilateral agreements and on the implementation of those agreements (in particular, national reports on implementation) available to the public through its website;*
- (c) *Increase the involvement of non-governmental organizations (NGOs) in the preparation of*



*national reports on the implementation of multilateral environmental agreements (MEAs);*

- (d) *Further involve NGOs in the decision-making processes regarding participation in MEAs and the implementation of MEAs, namely, by integrating them into coordination groups dealing with international matters and ensuring their effective consultation.*

Participation in MEAs that Albania is not a party to

Albania is clearly committed to preventing and combating air pollution and to accession and implementation of international agreements in this domain. Further joint work between Albania and the ECE secretariat of the Convention on Long-range Transboundary Air Pollution would allow the country to become a party to the Protocol on Heavy Metals and the Protocol on Persistent Organic Pollutants, as amended, and to undertake an in-depth assessment of the costs and benefits deriving from accession to the amendments to the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone.

As of early 2017, the then Ministry of Environment has started the ratification process for the Minamata Convention on Mercury, which Albania signed in 2014. The current Ministry of Tourism and Environment is expected to continue this work.

Albania is working on the introduction and implementation of the Strategic Approach to International Chemicals Management (SAICM).

Being a party to the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention), Albania has not yet ratified the 2005 Almaty Amendment on Genetically Modified Organisms.

Recommendation 4.3:

*The Ministry of Tourism and Environment should:*

- (a) *Promote the ratification of the Protocol on Heavy Metals and the Protocol on Persistent Organic Pollutants to the ECE Convention on Long-range Transboundary Air Pollution and their amendments;*
- (b) *Facilitate the conclusion of the ratification process for the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone;*
- (c) *Undertake a cost-benefit analysis for the ratification of the amendments to the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone;*
- (d) *Facilitate the conclusion of the ratification process for the Minamata Convention on Mercury;*
- (e) *Engage actively in the intersessional process to develop recommendations on the Strategic Approach to International Chemicals Management (SAICM) and the sound management of chemicals and waste beyond 2020;*
- (f) *Promote the ratification of the Almaty Amendment on Genetically Modified Organisms to the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention).*





## CLIMATE CHANGE MITIGATION AND ADAPTATION

### 5.1 Environmental and economic impacts from climate change

#### *Weather*

##### Temperature

Analysis of mean temperature for the period 1930–2006 against the average from 1961 to the 1990s shows that the period 1931–1970 demonstrated a positive anomaly followed by a negative anomaly between 1971 and 2000. Since 2001, there has been a period with a positive anomaly; this is a consequence of an increase in both maximum and minimum daily temperatures, especially in summer time. Several summers after 1990 are characterized by an increasing rate of minimum temperature higher than that of maximum temperature.

Since 2001, there has been a positive trend of increasing temperature for all seasons (winter: from +1.6°C to +2.5°C; spring: from +2.0°C to +3.0°C; summer: +3.0°C; and autumn: +2.0°C). The northern part of the coastal zone does have lower temperatures in the winter season compared with the middle and southern zones, but summer temperatures are similar across all coastal regions.

Albania has also experienced an overall increase in the frequency of days with temperatures above 35°C. There were two cases of "heat-wave days" (when, over six consecutive days, the air temperature is at least 5°C more than the long-term average temperature for the corresponding days) recorded prior to 2001. In the last decade, the number of heat-wave days recorded has increased by up to fourfold. The absolute record to date was in 2003 at Lezhë, with 26 heat-wave days recorded.

There has been an increase in the probability of days with a maximum temperature more than the 90th percentile from 20 per cent during the period 1951–1964 to 30 per cent in the last decade. Minimum air temperatures show no clear trend, although there is an indication that over the last decade there has been an increase from 0.3 days/year to 0.7 days/year with recorded temperatures of  $\leq -5^\circ\text{C}$ . The number of "cold-wave days" (when, over six consecutive days, the air temperature is at least 5°C lower than the long-

term average temperature of the corresponding days) shows no trend over the same period.

##### Precipitation

Variation in precipitation and anomalies around the normal value (1961–1990) are evident in three periods: 1951–1980, a wet period up to 40 per cent above the normal value; 1981–2000, a dry period up to 45.3 per cent below the normal value; and 2001 onward, a period of increasing precipitation. Seasonal precipitation patterns show no consistent patterns in variation. The intensity of precipitation is measured by the number of days with more than 10 mm precipitation. On this basis, the northern part of the coastal zone has more rainy days than elsewhere – 49 days per year with precipitation of more than 10 mm.

The frequency of occurrence of wet days over the threshold  $> 77$  mm decreased from the period 1951–1978 to the period 1980–2008. Between 1951 and 1978, precipitation of more than 77 mm was observed at least once per year during 75 per cent of the period. Between 1980 and 2008, precipitation of more than 77 mm was observed at least once per year during 50 per cent of the period. To date, any impact that climate change may have had generally on rainfall in Albania cannot be distinguished from natural variations.

##### Wind

Wind speeds show marked seasonality, with higher wind speeds recorded during colder months, which is associated with a higher occurrence of cyclonic circulation in the winter period. The number of days per year with wind speeds in excess of 15 m/s showed no discernible trend in the period 1971–1990, the latest period analysed in the 2016 Third National Communication on Climate Change.

##### *Water resources*

To date, climate change has not affected the availability of water resources in Albania and so has had no impact on water supply and demand. Future projections suggest that water needs for both domestic and industrial use are within existing capacity; while there is no need to increase water

production, there is a need to reduce water losses through infrastructure improvement.

#### *Land and soil*

Soil erosion in Albania remains a permanent threat to land stability. Although climate conditions, such as rainfall (amount, intensity and frequency) and temperature influence erosion processes, other anthropogenic factors, such as deforestation, forest fires, overgrazing, topography modifications and water management policy, have stronger impacts on land and soil.

No comprehensive studies with analysis of the impact of different anthropogenic factors, including anthropogenic climate change, on land degradation and soil erosion were carried out in Albania.

#### *Forest and other natural vegetation*

There are no studies available of the existing impact of anthropogenic climate change on forest cover and other natural vegetation, natural forest increment, composition of species and other forest indicators in Albania.

#### *Biodiversity and ecosystems*

According to the 2016 Third National Communication on Climate Change, there is evidence that the impacts of climate change, such as changing precipitation patterns, increased instances

of severe weather events including flooding and droughts, sea level rise and ocean acidification, have an effect on biodiversity loss, at the level of ecosystems, species, genetic diversity within species and ecological interactions. Unfortunately, the report does not describe any such evidence.

#### *Human health*

Higher temperatures registered during summer 2009 exacerbated the number of cases of arrhythmia, high blood pressure and coronary artery diseases. During the summer months of 2009, a three- to fourfold increase in the registered number of diarrhoea cases was observed, which demonstrates the link between these groups of diseases and warmer temperatures. Years with higher temperatures have higher rates of gastroenteritis.

Floods create conditions for longer term impacts on human health. IPH data show an unusual increase in cases of leptospirosis, a life-threatening infectious disease, in the Shkodër region following the floods of 2010. The situation was triggered by the presence of numerous rodents, which colonize this area, and by a high density of livestock. This situation did not improve in 2011–2012.

#### *Economic impacts from climate change*

There are no studies or assessments available of the impact of anthropogenic climate change on economic sectors in Albania.

**Photo 5: Sea shore**



## 5.2 GHG emissions from economic sectors and their mitigation measures and policies

The third GHG inventory covers the period 2000–2009 and considers the following main sectors: energy/transport; industrial processes; agriculture; land, land-use change and forestry (LULUCF); and waste. Solvents were not considered. The national inventory contains data on direct GHGs (CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O,) and indirect GHGs (CO, NO<sub>x</sub>, SO<sub>2</sub> and non-methane volatile organic compounds (NMVOCs)).

In 2005, Albania's total emissions of direct GHGs (CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O) were 8,864.6 Gg of CO<sub>2</sub> eq. The time series of emissions per sector (energy/transport, industrial processes, agriculture, LULUCF and waste) for the period 2000–2009 are presented in table 5.1.

Carbon dioxide is the highest emissions contributor, accounting for 75.22 per cent in 2005 and 75.71 per cent in 2009. Methane is the second highest, accounting for 23.45 per cent in 2005 and 22.07 per cent in 2009, followed by nitrous oxide, accounting for 4.12 per cent in 2009. The group of CFC, HCF, PCF refrigerants accounted for a negligible share – 0.87 per cent in 2009.

In 2005, the energy sector produced the highest CO<sub>2</sub> eq. emissions, followed by LULUCF, agriculture and industrial processes. In 2009, the energy sector remained the highest emitter, followed by industrial processes, agriculture and LULUCF.

In terms of the type of gas, CO<sub>2</sub> is mostly emitted by the energy and industrial processes sectors and LULUCF, CH<sub>4</sub> by the agriculture and waste sectors, and N<sub>2</sub>O by the waste and energy sectors.

### *Energy activities*

Emissions arising from energy activities (fossil fuel combustion and fugitive emissions) cover the following sectors: energy and transformation industries, manufacturing industry and construction, transport, and small combustion (commercial/institutional buildings, residential buildings, agriculture/forestry/fishing) (table 5.2).

Energy activities are the main source of GHG emissions in Albania, accounting for 39 per cent to 51 per cent of overall direct GHG emissions for the period 2000–2009. Energy production is based mainly on hydropower, domestic and imported fuels,

and fuelwood used for electricity production, heat production and transport.

In 2005, CO<sub>2</sub> emissions released from energy-related activities were estimated to be 3,835.33 Gg by the reference approach and 3,828.31 Gg by the sectoral approach. The reference approach is a top-down approach, using a country's energy supply data to calculate the CO<sub>2</sub> emissions from combustion of mainly fossil fuels.

### *Industry*

The amount of GHGs emitted from industry increased from 1,118.00 Gg of CO<sub>2</sub> eq. in 2005 to 1,701.12 Gg of CO<sub>2</sub> eq. in 2009. The main sources of emissions were the cement industry, followed by metal production (table 5.3).

### *Agriculture*

The amount of GHGs emitted from agriculture decreased from 1,403.08 Gg of CO<sub>2</sub> eq. in 2005 to 1,130.86 Gg of CO<sub>2</sub> eq. in 2009. This was due to a reduction in the total number of animals during this period. Cattle were the main contributor of CH<sub>4</sub> emissions from enteric fermentations, followed by sheep. N<sub>2</sub>O emissions were mainly produced from the application of nitric fertilizers. The emissions of CH<sub>4</sub> and N<sub>2</sub>O as a result of burning agricultural residues are insignificant.

### *Land, land-use change and forestry*

The LULUCF sector includes emissions and removals of GHG from six land uses: forests, cropland, grasslands, wetlands, settlements and other lands.

Lack of accurate data regarding forest stocks is one of the main problems for LULUCF emissions estimation. At the same time, Albania lacks a national database for the whole country in which relevant land-use changes are recorded.

Unlike in many countries, forests in Albania became a net CO<sub>2</sub> emitter. This became possible due to the reduction in the volume of forest for the whole period covered by the GHG inventory (2000–2009). The volume of forests in Albania decreased from 83.295 million m<sup>3</sup> in 2000 to 75.726 million m<sup>3</sup> in 2009. Thus, over a period of 10 years, the volume of stock decreased by about 7.57 million m<sup>3</sup>. On average, the annual volume of logging surpassed the annual natural increment of forests by approximately 757,000 m<sup>3</sup>.

**Table 5.1: Anthropogenic greenhouse gas emissions, by gas and sector, 2000–2009, Gg**

Gas	Sector	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CO <sub>2</sub>	Energy	2 987.90	3 372.10	3 477.95	3 648.75	3 896.11	3 835.33	3 749.38	3 925.06	3 983.30	4 319.45
	Industrial processes	520.00	852.00	806.00	966.00	1 043.00	1 118.00	1 195.00	1 470.00	1 547.00	1 623.12
	Agriculture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Land-use change and forestry	3 303.00	2 506.00	2 055.00	1 719.00	1 790.00	1 715.00	1 638.00	1 617.00	1 179.00	911.00
	Waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total	6 810.90	6 731.10	6 339.95	6 333.75	6 728.11	6 668.33	6 582.38	7 013.06	6 709.30	6 853.57
CH <sub>4</sub>	Energy	4.73	4.75	4.92	5.13	5.43	5.34	5.38	5.45	5.50	5.50
	Industrial processes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Agriculture	73.78	71.77	69.58	70.12	69.58	66.66	65.32	60.96	57.21	53.70
	Land-use change and forestry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Waste	24.14	24.24	24.19	24.65	26.69	26.96	30.30	30.66	29.08	35.28
	Total	102.65	100.76	98.69	99.90	101.70	98.96	101.00	97.07	91.79	94.48
N <sub>2</sub> O	Energy	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10
	Industrial processes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Agriculture	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	Land-use change and forestry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Waste	0.27	0.27	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.28
	Total	0.36	0.37	0.37	0.37	0.38	0.38	0.38	0.38	0.39	0.39
CO <sub>2</sub> eq.	Energy	3 111.93	3 499.67	3 609.11	3 784.34	4 038.02	3 975.37	3 890.28	4 067.45	4 129.86	4 466.04
	Industrial processes	520.00	852.00	806.00	966.00	1 043.00	1 118.00	1 195.00	1 470.00	1 599.00	1 701.12
	Agriculture	1 552.48	1 510.27	1 464.28	1 475.62	1 464.28	1 402.96	1 374.82	1 283.26	1 204.51	1 130.80
	Land-use change and forestry	3 303.00	2 506.00	2 055.00	1 719.00	1 790.00	1 715.00	1 638.00	1 617.00	1 179.00	911.00
	Waste	590.64	592.74	591.69	601.35	647.29	652.96	723.10	730.66	697.48	827.68
	Total	9 078.30	8 962.00	8 527.40	8 546.60	8 981.90	8 864.60	8 821.50	9 169.60	8 810.00	9 036.80

Source: Third National Communication of the Republic of Albania on Climate Change, Tirana, June 2016.

**Table 5.2: Greenhouse gas emissions from energy subsectors, 2000–2009, Gg of CO<sub>2</sub> eq.**

Subsector	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Whole energy and transport sectors	3 111.93	3 499.67	3 609.11	3 784.34	4 038.02	3 975.37	3 890.28	4 067.45	4 129.86	4 466.04
Energy industries: all	246.29	248.28	257.85	270.80	286.84	282.89	285.22	288.13	291.62	312.82
Energy industries: only fugitive emissions	7.46	7.48	7.50	7.52	7.54	7.56	7.58	7.60	7.62	7.65
Manufacturing and construction	381.49	467.56	464.64	465.39	501.90	493.37	470.32	506.41	515.31	562.78
Transport	1 817.61	1 835.36	1 906.07	1 996.71	2 115.09	2 085.95	2 103.11	2 124.57	2 150.31	2 306.46
Domestic aviation	8.38	8.45	8.77	9.19	9.74	9.60	9.68	9.78	9.90	10.62
Road	1 774.53	1 788.84	1 857.95	1 946.52	2 061.99	2 033.52	2 050.29	2 071.26	2 096.41	2 249.00
Railways	7.44	7.50	7.79	8.16	8.65	8.53	8.60	8.68	8.79	9.43
National navigation	25.58	25.79	26.78	28.06	29.72	29.31	29.55	29.86	30.22	32.42
Pipeline transport	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Residential	441.51	625.25	648.22	694.73	745.38	731.65	678.72	755.42	771.52	843.18
Service	73.27	116.11	122.02	131.68	144.54	141.54	128.65	146.18	149.49	164.50
Agriculture	144.30	199.63	202.81	217.51	236.73	232.41	216.68	239.14	243.99	268.65
International marine bunkers	18.62	18.77	19.49	20.43	21.63	21.34	21.51	21.73	21.99	23.60
International aviation bunkers	36.38	36.68	38.10	39.91	42.28	41.70	42.04	42.47	42.99	46.12
International bunkers	54.45	54.89	57.01	59.73	63.27	62.41	62.91	63.56	64.33	69.02
Others	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Source: Third National Communication of the Republic of Albania on Climate Change, Tirana, June 2016.

Note: "NO" means no emissions. 0.00 means the figure is almost 0, for example, 0.00001.

**Table 5.3: Contribution of individual industrial subsectors to greenhouse gas emissions, 2000–2009, Gg**

Subsector	Gas	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Whole industrial sector	CO <sub>2</sub>	520.00	852.00	806.00	966.00	1 043.00	1 118.00	1 195.00	1 470.00	1 547.00	1 623.12
	CH <sub>4</sub>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N <sub>2</sub> O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	CFC, HCF, PCF refrigerants	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.00	78.00
	CO <sub>2</sub> eq.	520.00	852.00	806.00	966.00	1 043.00	1 118.00	1 195.00	1 470.00	1 599.00	1 701.12
Other industrial processes (excl. lime and cement)	CO <sub>2</sub>	38.00	41.00	41.00	44.00	47.00	48.00	50.00	53.00	56.00	57.12
	CH <sub>4</sub>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N <sub>2</sub> O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	CO <sub>2</sub> eq.	38.00	41.00	41.00	44.00	47.00	48.00	50.00	53.00	56.00	57.12
Lime products	CO <sub>2</sub>	77.00	81.00	86.00	90.00	94.00	98.00	103.00	107.00	111.00	116.00
	CH <sub>4</sub>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N <sub>2</sub> O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	CO <sub>2</sub> eq.	77.00	81.00	86.00	90.00	94.00	98.00	103.00	107.00	111.00	116.00
Cement production	CO <sub>2</sub>	200.00	449.00	449.00	449.00	449.00	449.00	449.00	648.00	648.00	648.00
	CH <sub>4</sub>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N <sub>2</sub> O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	CO <sub>2</sub> eq.	200.00	449.00	449.00	449.00	449.00	449.00	449.00	648.00	648.00	648.00
Chemical industry	CO <sub>2</sub>	40.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	CH <sub>4</sub>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	N <sub>2</sub> O	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	CO <sub>2</sub> eq.	40.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Metal production	CO <sub>2</sub>	165.00	241.00	230.00	383.00	453.00	523.00	593.00	662.00	732.00	802.00
	CH <sub>4</sub>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	N <sub>2</sub> O	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	CO <sub>2</sub> eq.	165.00	241.00	230.00	383.00	453.00	523.00	593.00	662.00	732.00	802.00
Others	CO <sub>2</sub>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	CH <sub>4</sub>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N <sub>2</sub> O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	CO <sub>2</sub> eq.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CFC, HCF, PCF refrigerants	CFC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HCF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
	PCF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	CO <sub>2</sub> eq.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.00	78.00

Source: Third National Communication of the Republic of Albania on Climate Change, Tirana, June 2016.

Note: "NO" means no emissions. 0.00 means the figure is almost 0, for example, 0.00001.

In 2005, total CO<sub>2</sub> eq. emissions in this sector reached 1,715 Gg. By 2009 they had decreased to 911 Gg. The main reason for this is the decrease in emissions and removals from soil, from 1,304 Gg in 2005 to 522 Gg in 2009. This decrease in soil carbon emissions has occurred because of the reduction in intensive management practices on agricultural land, as well as the reduction of land cultivated with crops and cereals.

#### *Waste*

GHG emissions in the waste sector, by subsector, are presented in table 5.4. The amount of GHG emitted from the whole waste sector increased from 652.96 Gg of CO<sub>2</sub> eq. in 2005 to 827.68 Gg of CO<sub>2</sub> eq. in 2009.

### **5.3 Adaptation to climate change by economic sectors**

#### *Energy, industry and transport*

There is no evidence that Albania has already implemented or is currently implementing policies and measures on adaptation of the country's existing energy, industrial and transport infrastructure to the current and foreseeable impact of climate change.

#### *Agriculture*

Temperature variation has already affected the growing season for agriculture. Compared with the period 1961–1971, the period 2001–2010 has seen an extension of the growing season by 15 days in the southern region of the coastal zone (Vlorë) and by 10 days in the northern region (Lezhë).

Irrigation and drainage have a direct impact on agricultural production in the country. With current rainfall patterns, irrigation of 3,000–5,000 m<sup>3</sup>/ha during summer months and drainage during the winter months, with a hydromodule of 4–5 litres/sec/ha, are needed. Because of the changes in precipitation, agriculture depends on irrigation more and more. The country plans to increase its irrigated area from 204,396 ha in 2011 to 225,000 ha in 2020.

The agriculture sector is characterized by small farms (350,654 in 2010) averaging 1.21 ha in size and small herds. Small farms have limited access to financial resources. Therefore, their adaptive capacity to climate change is particularly low. Through the EU accession process Albania is encouraged to implement actions towards climate change

preparedness and adaptation. In the agricultural sector, this can be done through increasing farmers' access to technology and information, including hydrometeorological.

#### *Forestry*

Climate change affects forests through a number of factors. Increased atmospheric CO<sub>2</sub> limits the ability of trees to increase their growth rates. Low air humidity and soil water are limiting factors for forest growth. Extreme weather events, such as extended droughts and hot spells, have an impact on tree growth. Climate change will affect herbivores and pathogens both directly and indirectly.

Albania lacks policies and measures to curb or minimize the impact of these factors on the forestry sector.

#### *Tourism*

Construction of tourist infrastructure, especially in coastal areas, has occurred without considering the potential impact of climate change and extreme events (flooding, storms, coastal erosion and drought). Consequently, transport, water and electricity supply infrastructure have suffered constant damage each year, especially due to sea surges (during storms and high tides) and river flooding during periods when rainfall is frequent and often intense. During the two periods December 2009–March 2010 and November 2012–January 2013, almost the entire coastal area was inundated by water, resulting in considerable damage.

### **5.4 GHG emissions mitigation scenarios**

The Intended Nationally Determined Contribution (INDC), now referred to as the Nationally Determined Contribution (NDC), commits to reduce CO<sub>2</sub> emissions in the period 2016–2030 by 11.5 per cent compared with the baseline scenario. It includes the following intentions:

- Selling carbon credits by 2030 within an "international market mechanism" subject to effective accounting rules developed under the United Nations Framework Convention on Climate Change (UNFCCC) to ensure the environmental integrity of the mechanisms;
- Developing an environmental and climate change strategy.



**Table 5.4: Contribution of individual waste subsectors to GHG emissions, 2000–2009, Gg**

Subsector	Gas	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Whole waste sector	CO <sub>2</sub>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	CH <sub>4</sub>	0.27	0.27	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.28
	N <sub>2</sub> O	24.14	24.24	24.19	24.65	26.69	26.96	30.30	30.66	29.08	35.28
	CO <sub>2</sub> eq.	590.64	592.74	591.69	601.35	647.29	652.96	723.10	730.66	697.48	827.68
Solid waste disposal on land	CO <sub>2</sub>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	CH <sub>4</sub>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	N <sub>2</sub> O	20.66	20.74	20.70	21.11	23.00	23.42	26.71	27.04	25.47	31.68
	CO <sub>2</sub> eq.	433.86	435.54	434.70	443.31	483.00	491.82	560.91	567.84	534.87	665.28
Wastewater handling	CO <sub>2</sub>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	CH <sub>4</sub>	0.27	0.27	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.28
	N <sub>2</sub> O	3.48	3.50	3.49	3.54	3.69	3.54	3.59	3.62	3.61	3.60
	CO <sub>2</sub> eq.	156.78	157.20	156.99	158.04	164.29	161.14	162.19	162.82	162.61	162.40
Waste incineration	CO <sub>2</sub>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	CH <sub>4</sub>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	N <sub>2</sub> O	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	CO <sub>2</sub> eq.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Other	CO <sub>2</sub>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	CH <sub>4</sub>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	N <sub>2</sub> O	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	CO <sub>2</sub> eq.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Source: Third National Communication of the Republic of Albania on Climate Change, Tirana, June 2016.

Note: "NO" means no emissions. 0.00 means the figure is almost 0, for example, 0.00001.

In 2013–2014, with UNDP support, Albania established an initial inventory of potential nationally appropriate mitigation actions (NAMAs). Two NAMAs were fully developed:

- (i) Financing Mechanism for Energy Efficiency in Buildings;
- (ii) Replacing Fossil Fuels with Non-hazardous Waste in the Albanian Cement Industry.

#### *Energy and transport sectors*

Albania assessed two scenarios for GHG mitigation in the energy and transport sectors.

#### Baseline scenario

The baseline scenario is based on the following assumptions:

- The current structure of energy supply and demand in all economic sectors will not change;
- Electrical energy will be predominantly used for heating and hot water supply in the residential and service sector;
- A considerable portion of future demand for electricity will be covered through the extension of the natural gas thermal power plants and HPPs;
- Planned short-term measures derived from national energy efficiency action plans will not be fully implemented;
- National energy intensity will not decrease in the period 2009–2030 compared with the mitigation scenario.

The baseline scenario is based on projected demand for electrical energy of 12,000 GWh in 2030. The scenario also assumes a gradual improvement of distribution efficiency leading to a reduction in distribution losses, from 18.5 per cent in 2009 to 10 per cent in 2030. The baseline scenario anticipates an increase by approximately 3.99 times in GHG emissions from the energy industries including the power sector, from 312.8 Gg in 2009 to 1,250.7 Gg in 2030.

The scenario concludes that, in the period of 2009–2030, the shares of the residential and agriculture sectors will increase and the shares of the service, industry and transport sectors will decrease. The GHG emissions from all energy consumption sectors are projected to increase from 4,793.8 Gg in 2009 to 7,731.2 Gg in 2030.

#### Mitigation scenario

The mitigation scenario identifies lists of measures to be implemented in the residential and service sectors, industry sector and transport sector and through energy transformation.

The mitigation scenario estimates the costs of emission reduction and rate of penetration for each proposed technology for 2020 and 2030. The total emissions reduction for 2020 is estimated at 608 Gg per year (8.26 per cent reduction from the baseline year). The total emissions reduction for 2030 is estimated at 1,339 Gg per year (14.91 per cent reduction from the baseline year).

#### *Agriculture*

Mitigation measures in agriculture are grouped in the following categories: cropland management, grazing land management and pasture improvement, management of organic soils, manure management, and bioenergy.

Regarding livestock, the mitigation scenario presents the following practices for reducing CH<sub>4</sub> emissions: improved feeding practices, the use of specific agents or dietary additives, and longer-term management changes and animal breeding.

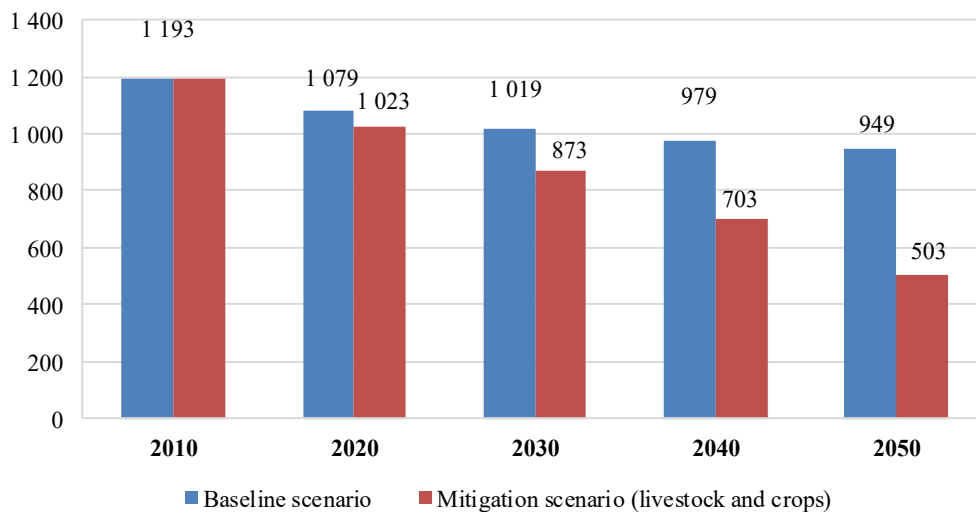
The overall results of the mitigation measures to be introduced in both agriculture and livestock activities are shown in figure 5.1. If the mitigation measures are successfully implemented in agriculture, including livestock activities, a reduction of 47.01 per cent of the agricultural sector emissions can be projected to 2050. Therefore, this sector has considerable potential for reducing GHG emissions by implementing suitable mitigation measures.

#### *Land-use change and forestry*

The main sources of GHG emissions from LULUCF include wood removal, fuelwood removal, harvested wood products, biomass burning, site preparation for forest plantations, shifting cultivation and deforestation.

The forest sector appears to be a net emitter of GHGs, due to the fact that the level of annual forest cutting is higher than the forest's natural growth rate. For this reason, the sector is considered an emissions source. Albania predicts its wood demand for the period 2010–2050 will be approximately two times higher than the natural annual forest increment.

**Figure 5.1: GHG emissions from agriculture sector under the two scenarios, 2010, 2020, 2030, 2040, 2050, Gg of CO<sub>2</sub> eq.**



Source: Third National Communication of the Republic of Albania on Climate Change, Tirana, June 2016.

The following mitigation measures are considered:

- Improved utilization of technology in forest harvesting;
- Restoration of degraded lands;
- Sustainable protection and management of existing forests;
- Agroforestry: intentional growing of trees along with crops, pasture, and/or animals;
- Short rotation of woody biomass plantations;
- Reversion of cropland to another kind of land cover.

Among the findings from the GHG mitigation assessment for the LULUCF sector are that:

- Technological improvements to forest exploitation could improve the efficiency of wood utilization up to 95 per cent, from the current 80 per cent;
- Afforestation of 500 ha/year, with the application of technological improvement measures, would lead to the forest sector reaching zero CO<sub>2</sub> balance by 2040; without technological improvements, it would reach zero CO<sub>2</sub> balance by 2047;
- Afforestation of 1,000 ha/year, with the application of technological improvement measures, would lead to the forest sector reaching zero CO<sub>2</sub> balance level by 2033; without technological improvements, it would reach zero CO<sub>2</sub> balance by 2038.

Implementation of all measures for the forestry sector (planting of 1,000 ha/year to 2050, technological improvements, etc.) would result in an increased sequestration capacity of around 3,233 Gg of CO<sub>2</sub> by

2050. Implementation of all measures does not take into consideration the potential damage to forests from fires or other extreme events.

#### *Waste sector*

The scenarios for the waste sector are built on the assumption that the amount of waste generated per capita per day in Albania will increase from the average value (0.7 kg/person/day) of 2009 to 1.5 kg/person/day in 2025. The latter is equal to the rate of waste generation of the Tirana area in 2009.

#### Baseline scenario

This scenario is based on the following assumptions:

- The current waste collection system remains in place;
- The main waste treatment technology continues to be open landfills and dumpsites;
- Some improvements on moving from dumpsites to landfills take place;
- An increasing percentage of population is served in the period 2009–2025;
- The recycling industry will not differ much from the current rates of collection and diversion from landfill;
- The objectives of DCM No. 608 dated 17.09.2014 "On development of necessary measures for collection and treatment of bio-waste as well as criteria and rules to reduce the amount of bio-waste going to landfill" will not be fully met by 2025, as there is no diversion of this waste stream from landfills or dumpsites;

- Appropriate biodegradable waste treatment systems will not be constructed.

CO<sub>2</sub> eq. emissions from the entire waste sector as per the baseline scenario will continue to increase until 2025. Methane emissions from landfills will also increase. Net growth in GHG emissions will be observed in the waste sector.

#### Mitigation scenario 1

This scenario – Good environmental performance for the period 2010–2025 – is built on the following assumptions:

- DCM No. 452 dated 11.07.2012 "On landfill of waste" is fully implemented during the period 2016–2025;
- Waste treatment will be based on properly engineered landfills, which will become operational, and the Elbasan incinerator. The cities of Tirana, Durrës, Korçe, Sarandë, Shkodër and Lezhë, and some of the surrounding communes of these cities, will be served by new, properly engineered landfills;
- The region of Elbasan will be served by an incinerator by early 2017. Landfill gas emissions will be reduced as a result of a proper functioning landfill capturing systems and diversion from biodegradable mass landfills;
- Recycling will increase, reaching 30 per cent of all mass recyclables by 2025 as a result of segregation at source in some major cities as of 2016, and also due to improvements in the collection and treatment systems.

If the above assumptions materialize, total GHG emissions under this scenario will reduce in comparison with the baseline scenario. Emissions from waste disposal on land will decrease from their peak of 900 Gg of CO<sub>2</sub> eq. in 2014 to some 250 Gg of CO<sub>2</sub> eq. in 2025. Emissions from wastewater treatment will decrease from their peak of 168 Gg of CO<sub>2</sub> eq. in 2013 to some 140 Gg of CO<sub>2</sub> eq. in 2025.

#### Mitigation scenario 2

This scenario – Waste-cement Industry (NAMA scenario) for the period 2010–2025 – is built on the following assumptions:

- The national appropriate mitigation action for the waste-cement industry is implemented;
- A large quantity of municipal solid waste (MSW) is processed as refuse-derived fuel or processed engineered fuel to fit the process of clinker production;

- The recycling systems will improve and segregation of MSW will occur at source;
- The collection system is improved.

Under this scenario, CO<sub>2</sub> eq. emissions from the entire waste sector will reduce fivefold, from more than 1,000 Gg of CO<sub>2</sub> eq. in 2014 to some 200 Gg of CO<sub>2</sub> eq. in 2025, mainly because of the reduction in methane emissions from landfills and dumpsites.

### **5.5 Legal, policy and institutional framework**

#### *Legal framework*

The 2011 Law on Environmental Protection defines climate change as changes caused by human activities on the climate.

As of early 2017 Albania still lacks specific legislation to support and promote the reduction and stabilization of GHG emissions and carbon capture and storage.

The rules and procedures for development and implementation of the national environmental monitoring programme, approved by DCM No. 1189 dated 18.11.2009, instruct the ministry responsible for environmental issues to prepare the national environmental monitoring programme. The rules include a range of environmental indicators related to climate change that are subject to monitoring: air temperature; sea level; precipitation; groundwater level; and annual emissions of CO<sub>2</sub>, NO<sub>x</sub> and CH<sub>4</sub> and their distribution according to economic sectors, including energy, transport, waste management, agriculture and industry.

Albania, as a UNFCCC non-Annex I country, has developed secondary legislation aimed at establishing the legal and institutional framework for the promotion and approval of Clean Development Mechanism (CDM) project activities in the country. DCM No. 1553 dated 26.11.2008 "On the establishment of the National Designated Authority under the Clean Development Mechanism, in the framework of the Kyoto Protocol", defines the structure of the Designated National Authority (DNA), the respective roles and the service fees for the letter of approval for a CDM project proposed by a developer. Internal Order No. 24 of the then Ministry of Environment dated 10.02.2009 defines the structure of the DNA Committee and Secretariat, and designates its members. The Regulation of the then Ministry of Environment on CDM projects review and approval procedures, No. 1 dated 25.03.2009, describes in detail the procedures of review and approval of a CDM project.

Other climate-change-related by-laws include:

- DCM No. 865 dated 10.12.2014 "On reduction and stabilization of fluorinated greenhouse gas emissions";
- Order of the Prime Minister No. 155 dated 25.04.2014 "On establishment and functioning of the Interministerial Working Group on Climate Change";
- DCM No. 762 dated 16.09.2015 "On approval of the Intended Nationally Determined Contribution for the United Nations Framework Convention on Climate Change".

#### Draft law on climate change

A draft law on climate change was prepared under the IBECA project. When adopted, the draft law on climate change would bring to the national legislation the principles, definitions and requirements of the UNFCCC, Kyoto Protocol and relevant EU directives, promote low-carbon and low-cost investments in the country, and cover both mitigation and adaptation strategies, NAMAs and CDM. The draft law would provide the legal bases for the transposition of the EU Emissions Trading System (ETS) Directive (2003/87/EC) and inclusion of geological storage of CO<sub>2</sub>, F-gases, fuel quality, emissions standards for new cars, emission standards for new vans, consumer information, and land use, land-use change and forestry (LULUCF). The draft law comprises provisions on national communications and biennial update reports, the INDC and GHG emissions permits.

#### Draft DCM on monitoring and reporting of GHGs

The draft DCM on monitoring and reporting of GHGs was developed in 2016 and aims at establishing a mechanism for monitoring and reporting to the national competent inventory authority GHG emissions and other information relevant to climate change.

#### *Policy framework*

#### National Strategy for Development and Integration for the period 2007–2013

The NSDI for the period 2007–2013 stated that Albania was a small actor in the global environment due to its low per capita GHG emissions. It listed some measures for mitigation and adaptation to climate change. Overall, it focused on energy efficiency improvement in all sectors, with a view to reducing energy consumption and GHG emissions.

#### National Strategy for Development and Integration for the period 2015–2020

With regard to climate change, the draft NSDI-II had a target of 8 per cent reduction of GHGs as compared with the base scenario. This quantitative target, however, did not survive into the final version of NSDI-II, which simply aims at "reducing greenhouse gas emissions, compared to a baseline scenario for reduction of CO<sub>2</sub> emissions, by 2030".

The NSDI-II also envisages further improvement of infrastructure in agriculture towards sustainable use and management of natural resources and mitigation of climate change. It promotes resource efficiency and the shift towards a low-carbon economy, including in the climate-sensitive sectors of agriculture, food and forestry.

#### Strategy for Health System Adaptation to Climate Change

The 2011 Strategy for Health System Adaptation to Climate Change aims at strengthening health services and intersectoral system functions to improve response to the impacts of climate change. The main objectives linked to climate change are:

- Adapting the information system to make it appropriate for detection of climate-change-related risks and evaluating in time their effects on health, and encouraging research and innovation related to health and climate change;
- Integrating health perspective approaches and issues in all current and future climate change policies;
- Increasing capacities, preparedness and coordination of the health system with other systems in dealing with expected health problems inflicted by heat waves and extreme cold weather;
- Improving collaboration and integration of the health system into the national emergency structures responsible for dealing with floods and fires, landslides and other natural disasters inflicted by climate change;
- Adapting and integrating surveillance and control systems for selected communicable diseases and their vectors likely to be affected by climate change.

The Strategy contains specific actions/activities to achieve all objectives. It also includes a matrix with a list of actions, including timelines, the role and responsibilities of different stakeholders, performance management, monitoring and evaluation. The Strategy has budget estimates for all the measures. However, it does not clarify whether all

the financing will be provided from the national budget. There are no implementation reports or information on implementation of the Strategy.

#### National Energy Efficiency Action Plan for the period 2011–2018

The 2011 National Energy Efficiency Action Plan has a target to reduce energy consumption by 2018 by 9 per cent compared with average consumption in the period 2004–2008. It corresponds to a reduction in energy consumption of 168 ktoe. The Plan is expected to result in a reduction in carbon emissions of 332.8 tons of CO<sub>2</sub>/year by 2018.

#### National Action Plan on Renewable Energies for the period 2015–2020

The 2016 National Action Plan on Renewable Energies for the period 2015–2020 contains targets aimed at increasing the use of carbon-free and/or low-carbon energy sources by 2020. For 2020, it sets a target of 38 per cent share of renewable energy sources (RES) in gross final energy consumption. This is equivalent to 1,017.28 ktoe, compared with 29.74 per cent (560.76 ktoe) in the base year. This target is split into a 10.8 per cent target for heating and cooling, a 23.67 per cent target for electricity and a 3.65 per cent target for transport.

Prior to the institutional restructuring of September 2017, the responsible institution for implementation and monitoring of the plan was the Ministry of Energy and Industry with its subordinated Agency, the National Agency of Natural Resources. Starting from September 2017, this is the responsibility of the Ministry of Infrastructure and Energy.

#### Other strategies

The 2014 Intersectoral Strategy for Agriculture and Rural Development for the period 2014–2020 (ISARD) includes a detailed description of the current state of development of Albanian agriculture and rural areas from an economic, environmental and social point of view. ISARD's Rural Development Policy includes measure 3, Investments in physical assets concerning processing and marketing of agricultural and fishery products, which is expected to help address climate change by promoting resource efficiency and renewable energy. Other measures (e.g. measure 7, Establishment and protection of forests) are also directed to assisting adaptation to climate change challenges.

The draft strategy for irrigation, drainage and flood protection does not explicitly mention impact from

and adaptation to climate change. However, if successfully implemented, it can contribute to the country's adaptation to climate change.

The National Transport Strategy and Action Plan for the period 2016–2020 does not mention impact from and adaptation to climate change in the transport sector.

In 2016, the Sustainable Transport Plan for 2016–2020 was prepared by the then Ministry of Transport and Infrastructure to help meet the targets of reducing energy consumption and improve overall sustainability in the transport sector. It includes nine measures, some of which can have direct, quantifiable impacts in terms of energy savings and pollutant reduction, such as road capacity expansion, improvement of road pavement conditions and renewal of the car fleet stimulated by efficiency-based fees and incentives.

The 2007 Sector Strategy on Tourism for the period 2007–2013 and the 2017 draft strategy for tourism development and its action plan do not have provisions on adaptation of the tourism sector to climate change.

The 2004 National Civil Emergency Plan aims to prevent, mitigate and remedy any damage inflicted upon people, animals, cultural heritage and the environment by emergencies. The Plan draws together and clarifies the roles and responsibilities of all public and private stakeholders. It aims to channel the flow of relevant information, strengthen decision-making and, through coordination, reinforce the capacity to respond through all phases of the disaster cycle. Although climate change is not explicitly mentioned in the Plan, development of such capacity is also relevant for climate-change-induced disasters.

The General National Territorial Plan "Albania 2030" has been prepared by the National Agency for Territorial Planning and the then Ministry of Urban Development in accordance with the Law on Territorial Planning and Development No. 107/2014. It represents an important instrument of territorial planning in Albania, which addresses sectoral issues in an integrated manner with the aim of planning on Albanian territory as a whole. It includes many measures in different sectors that can be linked with climate change mitigation, such as:

- Development of energy infrastructure to enhance renewable energy;
- Reduction of pollutant emissions (CO<sub>2</sub>) by 2030 through investments in technology, innovation and capacity-building in line with the European

target for 2030 to reduce emissions by 60 per cent for transport in general;

- Reforestation and regeneration projects in areas degraded by erosion and flooding.

The 2016 Document of Strategic Policies for Protection of Biodiversity for the period 2016–2020, under Objective III, Review and monitoring of threatening effects and activities, recognizes the importance of:

- Conducting studies on the selection and management of inductive species for climate change;
- Evaluation of the health and vitality of forests;
- Monitoring of forest insects indicative for climate change;
- Long-term monitoring of changes in the forestry ecosystems;
- Projections for future changes in the distribution and diversity of species that are sensitive to climate change.

#### Draft national climate change strategy and plan

The first draft of the national climate change strategy was finalized and presented for discussion to the Interministerial Working Group on Climate Change in May 2016. The draft strategy includes both the national climate change mitigation plan and the national climate change adaptation plan. It was developed in accordance with decision 1/CP16 of the UNFCCC and the mitigation plan was developed in accordance with Decision 525/2013/EU. Concerning adaptation, the document followed the 2012 Technical Guidelines for the National Adaptation Plans (NAP) Processes developed by the UNFCCC Least Developed Countries Expert Group. The national adaptation plan process was organized in accordance with the EU 2013 Strategy on Adaptation to Climate Change.

The draft summarizes strategic priorities for the mitigation of climate change, focusing on the main emission sectors responsible for climate change:

- SP.1: Ensure sustainable economy growth consistent with GHG emission pathways defined in the INDC and move towards an economy-wide target to which all sectors contribute;
- SP.2: Establish a monitoring, reporting and verification system for GHGs in line with EU requirements;
- SP.3: Strengthen the capacity of relevant institutions and inter-institution cooperation to address climate change issues;

- SP.4: Streamline climate change across sectoral strategic planning;
- SP.5: Reinforce capacity and awareness on climate change issues;
- SP.6: Align sectoral policies with the European policy framework for climate and energy in the period from 2020 to 2030.

The draft lists 11 main policy objectives and a number of goals and indicators, and links them to the strategic priorities.

The draft national mitigation plan lists the detailed measures and actions included in the analysed policy documents. For the selected measures, brief information is provided, including reduction target, year or period by which the measure has to be implemented and cost estimation as reported in the source document or specifically assessed. The total costs needed to implement the plan up to 2020 are also calculated, as well as the financial resources allocated and/or committed so far from the state budget, donors and other sources. The total cost for implementing the plan's direct measures is estimated at some 106.9 billion leks.

The draft national adaptation plan is an umbrella plan rather than a detailed operational plan specifying all actions necessary for a successful adaptation process in the country. According to the document, it is based on two assumptions:

- The understanding that adaptation actions have to be mainstreamed in various development and sector plans and policies in the country and will be specified within this context;
- Several existing conceptual frameworks and planning documents will be supplemented but not substituted.

It lists 15 priority actions with strategic and leverage functions (so-called "umbrella projects") and sector actions of high priority on which the Albanian Government makes a concrete decision for implementation. The list of priority actions was agreed during the meeting of the Interministerial Working Group on 8 September 2015. Each priority action includes rationale/main goals, potential substantial elements, responsible actors and resources needed for implementation.

#### *Sustainable Development Goals and targets relevant to this chapter*

Albania's current position vis-à-vis targets 13.1, 13.2, 13.3 and 11.b is described in box 5.1.



**Box 5.1: Targets 13.1, 13.2, 13.3 and 11.b  
of the 2030 Agenda for Sustainable Development**



**Goal 13: Take urgent action to combat climate change and its impacts**

**Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries**

Albania does not have a national disaster risk reduction (DRR) strategy. It is planned to develop such a strategy in 2019. DRR is incorporated in the National Strategy for Development and Integration for the period 2015–2020 (NSDI-II).

Albania's key policy document on emergency response is the 2004 National Civil Emergency Plan. It specifies actions to increase resilience to floods as the most important climate-change-related disaster in Albania, through better early warning systems and disaster prevention mechanisms. It also addresses forest fires, high snowfalls and landslides.

The national action plan of the draft national climate change strategy (Priority Action No. 15) is aimed at building the resilience of the Kune-Vaini Lagoon system. The resilience of the ecosystems and the local communities will be improved after applying several techniques, from soft to hard. The Priority Action has three goals, of which two are about resilience, namely:

- Goal 2: Building climate resilience of the Kune-Vaini Lagoon system using demonstration of best practice and concrete EbA and other adaptation interventions.
- Goal 3: Increased awareness of local and national stakeholders to climate change risks and the potential of EbA to increase the resilience of local communities to climate change.

**Target 13.2: Integrate climate change measures into national policies, strategies and planning**

The 2016 National Strategy for Development and Integration for the period 2015–2020 and the 2016 General National Territorial Plan "Albania 2030" are the main cross-sectoral strategies that address, among other matters, issues related to climate change mitigation. The General National Territorial Plan "Albania 2030" includes many measures that positively affect climate change mitigation in different sectors, such as energy, transport, agriculture and LULUCF. The draft environmental cross-cutting strategy for the period 2015–2020, among other matters, sets out policy goals and medium- and long-term objectives in the area of climate change. Adaptation to the impacts of climate change on the health sector is targeted in the 2011 Strategy for Health System Adaptation to Climate Change. The Strategy covers both mitigation and adaptation issues.

Except for two NAMAs, policy documents in the energy sector linked to climate change issues include the 2011 National Energy Efficiency Action Plan for the period 2011–2018 and the 2016 National Action Plan on Renewable Energies for the period 2015–2020.

The main policy framework linked to climate change for the agricultural sector is the Intersectoral Strategy for Agriculture and Rural Development (ISARD) and its Rural Development Programme 2014–2020 under the Instrument for Pre-Accession Assistance in Rural Development (IPARD).

Since 2011, the integration of climate change into sectoral strategic documents has progressed in all sectors, although the degree of such integration varies. There is, however, great potential to improve the integration of change measures into national policies, strategies and planning. The SEA instrument could be used, among other tools, to contribute to such integration. The adoption of the national climate change strategy and plan would be an important pillar to integrate climate change measures into the national policy framework.

**Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning**

There are no systematic governmental measures implemented or being implemented to improve education and awareness-raising on climate change mitigation, adaptation, impact reduction and early warning. According to the draft national action plan of the draft national climate change strategy, the limited awareness of climate change at the level of policymaking and public recognition hampers a strong national action plan process. Climate change policy still ranks relatively low on the political agenda. However, several initiatives and actions to improve awareness have been taken by different stakeholders.

**Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable**

**Target 11.b: By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels.**

No municipalities have adopted and implemented local DRR strategies. With support from GIZ, a Vulnerability Assessment and Adaptation Action Plan for Tirana was published in May 2015 as a first pilot of a municipal climate-resilience action.



### *Institutional framework*

#### Ministry of Tourism and Environment

In March 2016, the Air and Climate Change Sector was established within the then Ministry of Environment by dividing the Sector on Air, Climate Change and Chemicals into two sectors (DCM No. 47 dated 29.03.2016). The Air and Climate Change Sector employed three staff. However, the Air and Climate Change Sector did not survive the institutional restructuring of September 2017.

The Pollutant Release and Transfer Register Sector within the NEA is responsible for the GHG emissions inventory. The Agency is responsible for the country's reporting obligations under UNFCCC.

#### Other ministries

A number of other ministries contribute not only to collecting the necessary data for GHG emissions reporting but also to developing appropriate actions on mitigation and adaptation. These authorities include, but are not limited to, the: Ministry of Infrastructure and Energy; Ministry of Agriculture and Rural Development; and Ministry of Finance and Economy.

#### Dedicated committees

Specific institutional arrangements were put in place to ensure the sustainability of the process of preparing the GHG inventories, including the Interministerial Working Group on Climate Change and National Climate Change Steering Committee.

The Interministerial Working Group on Climate Change was established by an Order of the Prime Minister in 2014, led by the then Deputy Minister of Environment with all other relevant line ministries participating at the level of general technical director.

The composition of the Interministerial Group has been updated accordingly. The Group has led the process of preparation of the strategy on climate change and its action plans, i.e. the national plan on mitigation and national plan on adaptation. The process of preparing the national plan on adaptation served as a catalyst for participation and awareness-raising. The Group had seven meetings on the national plan on adaptation, and three meetings on developing strategy and the national plan on mitigation. It drafted the law on climate change and DCM on establishing a mechanism for monitoring and reporting to the national competent authority

GHG emissions and other information relevant to climate change.

A National Climate Change Steering Committee has been appointed and regularly updated within the process of producing the Third National Communication on Climate Change to the Secretariat of the UNFCCC. It provides information and policy guidance to ensure further streamlining of the results of the Communication to sectoral policies and/or strategies. The Committee comprises representatives of several ministries; the Academy of Science; NEA; Institute of Geosciences, Energy, Water and Environment; and environmental NGOs.

#### *Participation in international agreements and processes*

Albania has been a party to the UNFCCC since 1994 and to the Kyoto Protocol since 2005. Three national communications have been prepared so far. The Third National Communication was released in 2016, covering the period until 2009. Steps towards starting preparation of a biennial update report are being made through UNDP. There are no CDM projects implemented in Albania.

Since 21 September 2016, Albania has been party to the Paris Agreement. On 24 September 2015, the country submitted its INDC to the UNFCCC Secretariat.

## **5.6 Measures on climate change mitigation and adaptation**

### *Economic measures*

#### Financing Mechanism for Energy Efficiency in Buildings (Energy Efficiency Fund)

The Financing Mechanism for Energy Efficiency in Buildings (Energy Efficiency Fund) NAMA is planned until 2020. The Government intends to extend it beyond 2020 if funds become available. This NAMA consists of four actions:

- A financing mechanism providing grants and low interest loans for investments in energy efficiency in buildings, in cooperation with international financial institutions and donors;
- Technical support to the projects financed by the fund in all phases of the project from design to implementation and management and operation of the buildings; the technical support includes measurement, reporting and verification (MRV);
- Outreach and awareness-raising, promoting the advantages of energy efficiency and renewable

- energy investments, as well as promoting the financial opportunities provided by the fund itself;
- Support to improved building management.

#### Replacing Fossil Fuels with Non-hazardous Waste in the Albanian Cement Industry

The time frame for the Replacing Fossil Fuels with Non-hazardous Waste in the Albanian Cement Industry NAMA is 2015–2017. This NAMA proposes that the cement industry incinerates non-hazardous waste in kilns. This measure could help curb local pollution due to waste landfilling and illegal dumping, and reduce carbon emissions and dependency on fossil fuels. Subsidies to the waste collection sector are part of the implementation measures under this NAMA. The NAMA has four components:

- Studying technological options and the feasibility of using MSW as alternative fuel in the cement industry;
- Investing in recycling centres within municipalities;
- Operating recycling centres;
- Building capacity in relevant sections of the waste management system.

There is no information on the implementation of these two NAMAs.

#### *Fiscal measures*

Albania is one of the countries that has already included in its tax system a specific tax on carbon. Based on the Law on National Taxes No. 9975/2008, a specific carbon tax is levied on a number of fossil fuels used in the market. This tax is levied on oil by-products produced domestically or imported. Initially the carbon tax was applied only to diesel and gasoline, but since 2011 the number of fuels subject to this tax increased to include coal, coal coke, heavy and light fuel oil, and kerosene. As of early 2017, the carbon tax is 1.5 leks/litre on gasoline and 3 leks/litre on all other oil by-products and 3 leks/kg on coal and coal coke.

The carbon tax is used as a purely revenue-generating mechanism for the budget. The tax revenues are not directly used for environmental protection and mitigation of and/or adaptation to climate change.

#### *Information measures*

The Government does not systematically implement measures to improve education and awareness-raising on climate change mitigation, adaptation and impact reduction. Although limited governmental

efforts to raise public awareness on climate change have contributed positively to the process of integrating climate change issues, the importance of climate change still remains underestimated in public opinion. Climate change policy still ranks relatively low on the political agenda. Climate awareness at all levels and cooperation among all relevant stakeholders remain low.

However, several initiatives and actions to improve awareness have been taken by different stakeholders.

The 2012 National Conference on Climate Change and Health, organized by the then Ministry of Health, its IPH and WHO, was preceded by some other events and awareness-raising campaigns.

Regional Environmental Center (REC) Albania has organized a range of activities related to climate change awareness-raising within the frame of projects, namely:

- In September 2015, a survey was undertaken in Albania as part of the study "Public Perception on the Environment". About 83 per cent of the respondents believe that climate change is a reality. Almost 99.9 per cent of the respondents considered natural disaster to be a consequence of climate change resulting in more intense weather phenomena (storms and floods). About 60 per cent of respondents believed that climate change effects would considerably affect their way of living.
- In 2014 a series of presentations on climate change was organized under the banner "Climate reality project reaches Albania". Presentations were given to approximately 1,200 students in 20 schools in four regions, combined with one day dedicated to students' activities such as performances, drawing exhibitions and planting trees.
- In 2014, approximately 50 university students from Tirana joined the global online audience for "24 hours of reality", part of Al Gore's Climate Reality Project.
- In 2010, a "Climate Change" brochure was prepared and distributed to approximately 1,200 high school students in five regions. The brochure aims to support teachers by providing additional illustrative and up-to-date factual data on the impact of climate change on health, agriculture and ecosystems.
- Since 2006, support has been given to education for sustainable development (ESD) by introducing and running the teacher's qualification for the Green Pack cross-curricula programme. The programme includes a special course dedicated to

climate change. Over 10 years, approximately 500 secondary schools (of the 1,700 countrywide) have implemented the programme. REC Albania has trained approximately 400 teachers of biology, chemistry, geography and other subjects. Sectoral cross-cutting issues such as saving energy, energy efficiency and environmental friendly transport are implemented through individual or class practical work.

In the framework of the 2013 World Bank study *Reducing the Vulnerability of Albania's Agricultural Systems to Climate Change*, the national awareness-raising and consultation process has taken place, aimed at raising the awareness of farmers and local experts on climate change to the impacts of climate change on agriculture.

### 5.7 Assessment, conclusions and recommendations

#### *Assessment*

As a party to the UNFCCC and Kyoto Protocol, Albania participates in international activities and processes under this framework. The country has already submitted three national communications under the UNFCCC and started to prepare a biennial update report. In 2016, the country ratified the Paris Agreement.

Albania is progressing in developing its legal, policy and institutional framework on climate change. In particular, the country drafted a law on climate change and DCM on monitoring and reporting of GHGs. Albania has finalized the first draft of the national strategy on climate change.

#### *Conclusions and recommendations*

##### Impact of anthropogenic climate change on components of nature and on economic sectors

Albania lacks data and studies on the impact of climate change on different components of nature, including water resources, land and soil cover, forest and other natural vegetation, biodiversity and ecosystems. Nor are studies and data available on the monetary impact of anthropogenic climate change on the country's economic sectors.

##### Recommendation 5.1:

*The Ministry of Tourism and Environment, in cooperation with other government bodies, should include in relevant studies the impact of anthropogenic climate change on components of nature and on economic sectors.*

##### Resilience of economic sectors

Albania's contribution to global warming is negligible due to the country's low total and per capita GHG emissions. At the same time, the country is vulnerable to impacts of natural and anthropogenic phenomena and hazards, such as floods, precipitation patterns, heat and cold waves, forest fires, landslides and erosion.

The country lacks policies on adaptation of different economic sectors and infrastructure to climate change, as well as to other natural and anthropogenic hazards. The country has few financial resources to invest in actions and measures on either mitigation of or adaptation to climate change. Implementing policies that build and strengthen resilience to climate-related and natural hazards would be an important step towards progress towards Albania's achieving targets 13.1, 11.b and 13.2 of the 2030 Agenda for Sustainable Development.

##### Recommendation 5.2:

*The Government should:*

- (a) *Implement policies and measures to increase the resilience of economic sectors to natural and anthropogenic hazards caused by natural climate variability and anthropogenic climate change;*
- (b) *Ensure that adaptation measures are foreseen in local urban plans.*

##### Awareness

The limited awareness of climate change at the level of policymaking and low public recognition hamper progress on Albania's adaptation to climate change. At the same time, the Government does not implement systematic measures to improve education and awareness-raising on climate change mitigation, adaptation, impact reduction and early warning, as advocated by target 13.3 of the 2030 Agenda for Sustainable Development. To date, the only activities related to climate change awareness-raising were implemented in the framework of international projects.

##### Recommendation 5.3:

*The Government should regularly implement measures to raise awareness on climate change mitigation, adaptation and impact reduction and early warning on natural and anthropogenic hazards caused by natural climate variability and anthropogenic climate change.*

## **PART III**

# **INTEGRATION OF ENVIRONMENT INTO SELECTED SECTORS/ISSUES**



## Chapter 6

# AIR PROTECTION

### 6.1 Urban and rural air quality

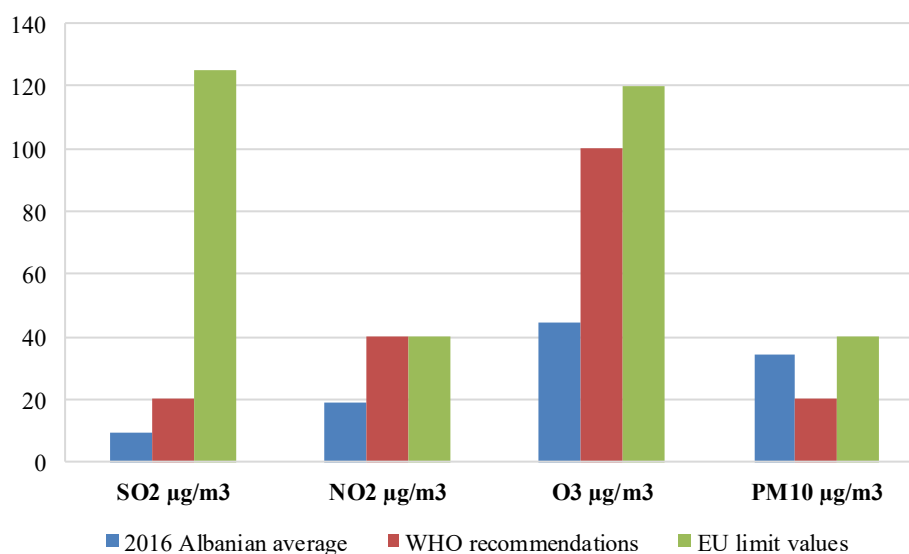
Considering the available data on concentrations of the main pollutants, ambient air in Albania is in general of a good quality, and, where average values for the whole country are taken into account, there are no exceedances of the annual limit values compared with WHO recommendation, except for PM<sub>10</sub> (figure 6.1).

However, daily concentrations of PM<sub>10</sub> measured in the capital city, Tirana, and the former industrial centre, Elbasan, often exceed limit values. According to the 2015 State of Environment Report (SoER), data from the mobile station that is used to assess air quality in Tirana in a non-continuous manner show that, in six months of measurements, there were 67 days of exceedance of the daily limit value of 50 µg/m<sup>3</sup>. According to domestic legislation and Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe, this limit value can be exceeded only 35 times in a year. During 2015, PM<sub>10</sub> concentrations were also measured by the gravimetric method in the NEA laboratory, where PM<sub>10</sub> exceeded

the daily limit value of 50 µg/m<sup>3</sup> on 115 of the 158 days of measurement. Two fixed automatic stations for air quality monitoring, which are installed in Tirana by the IPH, were not functioning during 2015. Although data gained by non-continuous measurement do not meet the data quality objectives, they indicate the need for continuous monitoring of PM<sub>10</sub> in Tirana. Assessment of air quality in Elbasan was performed using a fixed automatic station, which recorded 106 days of exceedance of the daily limit value of 50 µg/m<sup>3</sup> and the slight exceedance of the annual limit value of 40 µg/m<sup>3</sup>. Similar exceedance of the annual limit value (44.85 µg/m<sup>3</sup>) was recorded in Korçë, where daily limit values were exceeded on 105 days during the year.

Table 6.1 shows annual mean values of PM<sub>10</sub> concentration in Albanian cities over a 10-year period. It clearly shows a significant declining trend, especially in coastal places (Durrës, Vlorë) from 2012 onwards. It also shows inconsistency of air quality assessments in certain cities, which cause data gaps during 2008–2009 and 2012–2013. Some of these data come from mobile stations and passive sampling methods of measurement.

**Figure 6.1: Average concentrations of SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub> and PM<sub>10</sub> in Albania compared with WHO recommendations of limit values and limit values set by the EU for those pollutants, 2016**



Source: National Environment Agency, 2017.

**Table 6.1: Annual mean values of PM<sub>10</sub> concentration in selected cities, 2005–2016, µg/m<sup>3</sup>**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Tirana	172.0	163.0	160.0	68.4	33.5	72.8	82.6	35.4	32.6	54.1	57.3	50.6
Shkodër	107.0	100.0	101.0	108.0	112.0	86.0	93.9	40.2	..	21.8	20.7	16.6
Durrës	91.0	93.0	100.0	116.0	121.0	91.0	104.0	32.9	..	14.0	18.1	24.0
Elbasan	120.0	90.0	103.0	57.2	51.4	116.4	97.2	89.7	..	46.3	45.1	38.7
Vlorë	72.0	86.0	89.0	..	..	80.0	83.7	..	34.4	15.3	18.7	23.1
Fier	93.0	106.0	102.0	112.0	110.0	93.0	89.0	97.0	..	..	..	..
Korçe	63.0	82.0	91.0	..	..	85.0	84.4	44.5	27.5	38.3	44.9	37.7

Source: National Environment Agency, 2017.

As for the other important pollutants, data show low levels of SO<sub>2</sub> concentrations in urban areas, where air quality monitoring is performed. Annual average values are below the critical levels for the protection of vegetation (20 µg/m<sup>3</sup>).

Concentration of NO<sub>2</sub> increases in Tirana, which led to slight exceedance of the annual limit value in 2015 due to increased traffic in the capital. Concentrations in other cities are below limit values set for protection of human health and critical levels for the protection of vegetation.

PM<sub>2.5</sub> was measured inconsistently, so that only in Korçe and Durrës was there continuous measurement in the period from 2012 to 2015. The Albanian air quality monitoring network does not include rural background stations, where this parameter should be measured in order to ensure that adequate information is made available on levels in the background. This information is essential to judge the enhanced levels in more polluted areas, such as urban background, industry-related locations and traffic-related locations, to assess the possible contribution from long-range transport of air pollutants, to support source apportionment analysis and for the understanding of specific pollutants such as particulate matter. It is also essential for the increased use of modelling in urban areas.

Tropospheric ozone is assessed at six air quality monitoring stations and in general shows a declining trend. Concentrations of O<sub>3</sub> are higher in Shkodër and Vlorë than in other cities (figure 6.2). Again, data on monitoring of ozone concentrations in urban areas are not complemented with data on exposure of the population, crops and natural ecosystems to subregional-scale ozone concentrations, which are usually monitored in rural areas. Stations can be located in small settlements and/or areas with natural ecosystems, forests or crops, which are representative for ozone concentrations away from the influence of immediate local emissions, such as industrial installations and roads. During 2015, one exceedance of the eight-hour limit value was recorded in Korçe,

five were recorded in Tirana, 22 in Vlorë and 355 in Shkodër.

Assessed levels of concentration of CO throughout Albania are below the limit values. Concentrations of benzene in the ambient air are quite high, especially in Korçe.

Taking into account the data available, it is not easy to estimate the impact of air pollution on livestock and biodiversity. Since Albania is not a party to the Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone, there is a lack of data to support assumptions on possible risks.

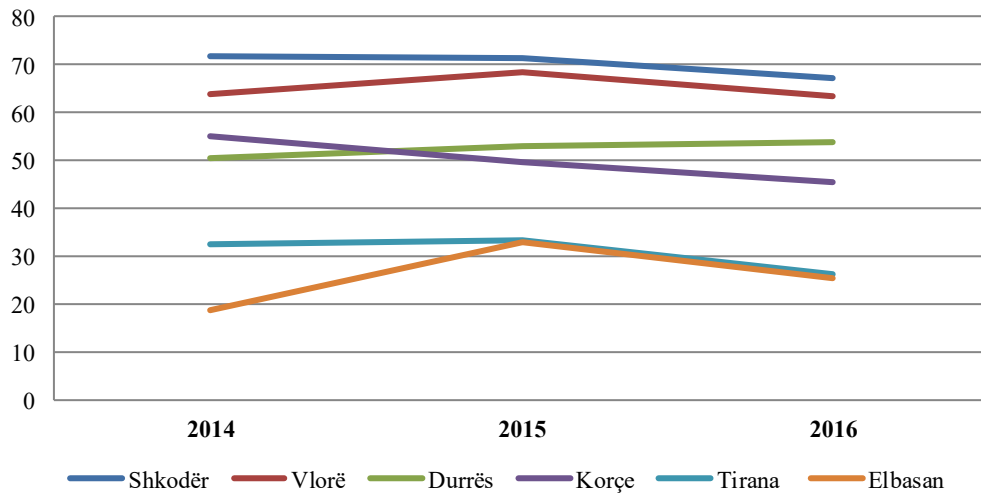
According to assessments done by the European Environment Agency (EEA), Albania has a high risk of accumulated ozone exposure values for crops and forests, while risk from acidification and eutrophication is moderate.

## 6.2 Trends in emission levels

Data on trends in emission levels comes from the National Inventory on Air Emissions, which was updated within the scope of the IBECA project in 2017. This recent update covers data for 2015, as well as missing data for the period 2010–2014, which Albania reported to the secretariat of the Convention on Long-range Transboundary Air Pollution in 2017. The data processing and methodologies applied, as well as the selection of emission factors, are based on the EMEP/EEA Air Pollutant Emission Inventory Guidebook 2013 and the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

In 2005, total national SO<sub>2</sub> emissions amounted to 34.4 Gg. In 2007, there was a slight increase to 36.99 Gg, and since then emissions decreased quite steadily (figure 6.3). In 2010, emissions were down by 60.6 per cent compared with 2005, which was mainly due to reductions in the quantities of coal burnt. Combustion in manufacturing industries is the main source of sulphur oxides in air.

**Figure 6.2: Average eight-hour ozone concentrations in summer period in selected cities, 2014–2016,  $\mu\text{g}/\text{m}^3$**



Source: National Environment Agency, 2017.

In 2005, total national NO<sub>x</sub> emissions amounted to 24.7 Gg. Emissions decreased slightly until 2007 but then increased again, reaching 33.1 Gg in 2015, an increase of 34 per cent compared with 2005 (figure 6.3). The main source of NO<sub>x</sub> emissions is road transport, which accounted for 75 per cent of NO<sub>x</sub> emissions in 2015.

Since 2005, when total national emissions of ammonia amounted to 27.28 Gg, emissions of ammonia have been decreasing slightly but almost constantly to be at 24.65 Gg in 2015 (figure 6.3). The main source of NH<sub>3</sub> emissions is dairy cattle, which accounted for 44 per cent.

The trend in emissions of non-methane volatile organic compounds (NMVOCs) shows an up-and-down curve, decreasing in the period 2008–2013 then increasing to 39.1 Gg in 2015, some 17 per cent more than in 2005 (figure 6.3). The main contributor to NMVOC emissions is the macrosector non-industrial combustion plants. Relevant levels are also emitted from solvent and other product use.

Persistent organic pollutants (POPs) such as dioxins and furans were monitored until 2009. Emissions of POPs in 2005 were 30.2 g I-Teq (toxic equivalency factor) and in 2010 the estimated value amounted to 32 g I-Teq. The new inventory update that is covering the period from 2010 to 2015 does not include data on POPs.

In 2005, total national PM<sub>10</sub> emissions amounted to 17.26 Gg. Until 2008, emissions were stable, then they decreased until 2014. In 2015, PM<sub>10</sub> emissions amounted to 21.68 Gg. Emissions of fine particulates

PM<sub>2.5</sub> were not estimated for the period 2010–2015. Non-industrial combustion plants and production processes are the main sectors contributing to particulate matter emissions during the investigated period, while the contribution of road transport has increased over these years. The main source of PM<sub>10</sub> emissions in Albania, with a share of 74 per cent in 2015, was residential stationary plants.

Data on heavy metals are also available only until 2009 and the recent update of the inventory did not cover the estimation of emissions of heavy metals.

As a party to the Montreal Protocol on Substances that Deplete the Ozone Layer, Albania banned production of ozone-depleting substances (ODS) and products that contain ODS listed in annexes A, B, and E of the Protocol, and import and placing on the market, export and transit of products and equipment containing ODS. In accordance with the Montreal Protocol, HCFCs are still in use, but their use is reduced through the Hydrochlorofluorocarbons Phase-out Management Plan (HPMP) and DCM No. 353 dated 29.04.2015.

There is no production of ODS in Albania, which means that imports minus exports is equal to the level of consumption. Consumption of chlorofluorocarbons (CFCs) was phased out in 2008, as a result of the National CFC Phase-out Plan with a comprehensive and integrated strategy to phase out the use of ODS in the refrigeration and air-conditioning sector. Meanwhile, HCFC consumption was increased from 40 tons in 2006 to 97.37 tons in 2009, as presented in the HPMP.

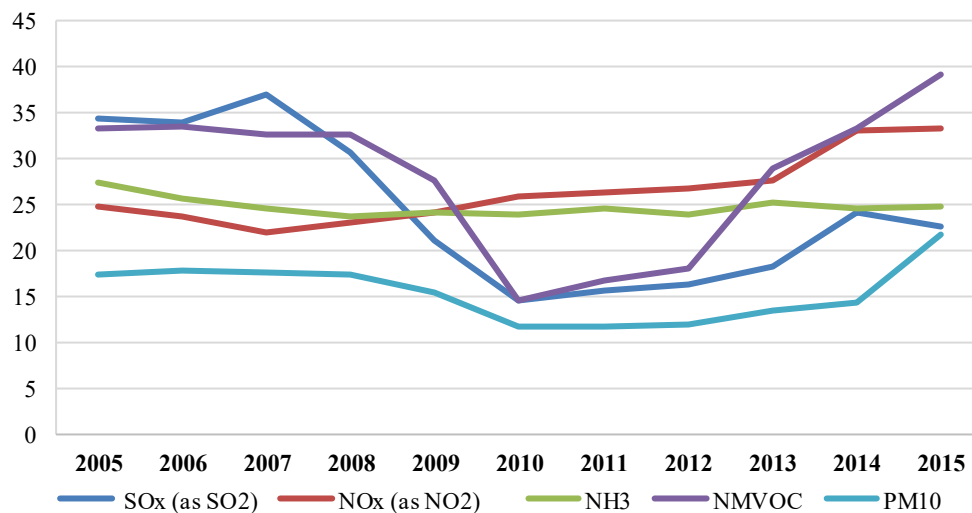


The use of HCFCs was at its peak between 2009 and 2013, when, in accordance with Article 5 of the Montreal Protocol, consumption had to be "frozen" at the average consumption level in the years 2009 and 2010. Further phase-out steps were defined by Decision XIX/6 of the Nineteenth Meeting of the Parties of the Montreal Protocol as 10 per cent reduction by 2015, 35 per cent reduction by 2020, 67.5 per cent reduction by 2025 and complete phase-out by 2040. Therefore, import of HCFCs is controlled by the import licensing system. As figure 6.4 demonstrates, the first phase-out step was more than successful, reducing the consumption of HCFCs in the period 2013–2015 by more than 50 per cent.

Total GHG emissions are relatively low (9,036.8 tons in 2009 (table 5.1)), although the most recent official documents submitted to the UNFCCC Secretariat

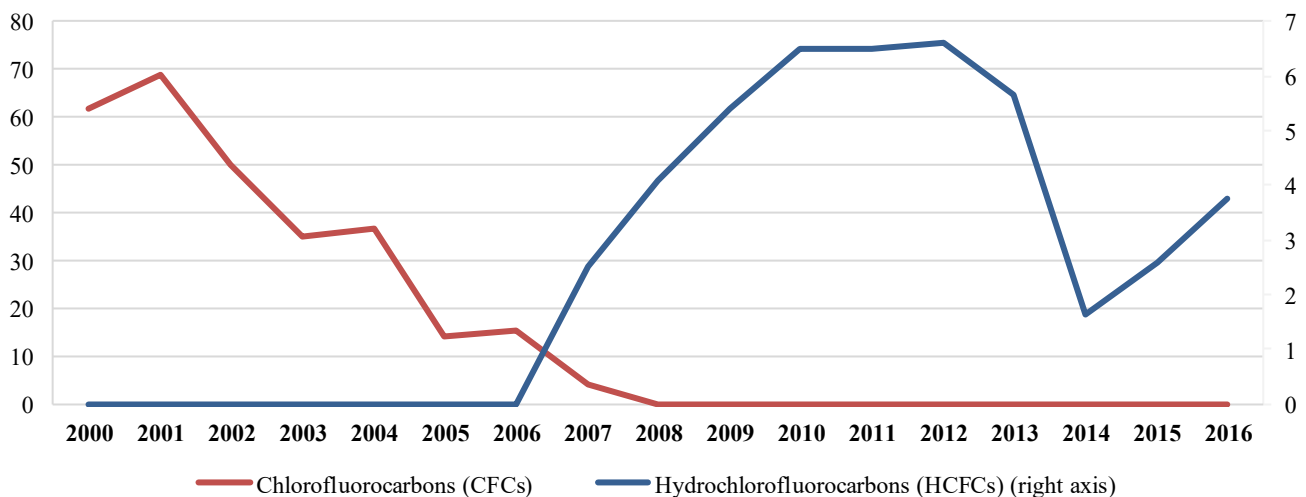
(Intended Nationally Determined Contribution (2015), Third National Communication on Climate Change (2016)) are based on obsolete data up until 2009. Seven years after the Second National Communication, the Third National Communication contains only recalculated time-series data for the period 2000–2009. The highest emissions contributor in 2009 was carbon dioxide (CO<sub>2</sub>) at 75.71 per cent, followed by methane (CH<sub>4</sub>) at 22.07 per cent, nitrous oxide (N<sub>2</sub>O) at 4.12 per cent, and the group of CFC, HCF and PCF refrigerants at 0.87 per cent. Albania has a unique emissions profile as its electricity generation is based on hydropower. However, in 2009, by sector, direct GHG emissions were highest in energy and transport (49.42 per cent), industrial processes (18.82 per cent) and agriculture (12.51 per cent), followed by LULUCF (10.08 per cent) and waste (9.16 per cent).

**Figure 6.3: SO<sub>x</sub>, NO<sub>x</sub>, NH<sub>3</sub>, NMVOC and PM<sub>10</sub> emissions, 2005–2015, Gg**



Source: National Environment Agency, 2017.

**Figure 6.4: ODS consumption, 2000–2016, ODP tons**



Source: <http://ozone.unep.org/en/data-reporting/data-centre>, 2017.

### 6.3 Performance and gaps in air monitoring networks

Air quality monitoring in Albania is performed in the network consisting of seven automatic stations positioned in Tirana (two stations), Elbasan (one), Durrës (one), Shkodër (one), Vlorë (one) and Korçe (one). This network composition dates from 2011, when WHO donated two automatic monitoring stations, which are located in Tirana, and, within the scope of the EU project Consolidation of the Environmental Monitoring System in Albania (CEMSA), four automatic monitoring stations were installed in Durrës, Shkodër, Korçe and Vlorë.

Additional indicative measurement is done with one mobile station and the semi-automatic PM<sub>10</sub> analyser situated in the NEA building, which can only provide 16 days of measurement per month.

The two automatic stations in Tirana are run by the IPH, which was in charge of air quality monitoring until 2011, when this competence was transferred to the NEA. Currently, the NEA subcontracts the IPH from time to time to perform air quality assessment. Since these contracts are of a temporary nature due to budget constraints, data gaps happen often and are generally filled by data from mobile stations. Therefore, the assessment of air quality in Tirana is inconsistent, with questionable data quality.

The remaining five automatic stations are also placed in urban areas and, although they are categorized as urban traffic (UT), urban background (UB) or suburban (SB) by their macrolocation, they all measure more or less the same pollutants (table 6.2). Macrolocation of the air quality station is determined by the wider area in which the station is positioned, and is chosen in such a way that the air sampled is representative of the exposure of the general population or ecosystems, taking into account the type of environment (urban, suburban, rural) and major impacts in the surroundings (traffic, industrial).

Microlocation is determined by the immediate vicinity and should provide for the unrestricted flow of air around the sampler (normally some metres away from buildings, balconies, trees and other obstacles), which is positioned between the breathing zone (1.5 m) and 4 m above the ground. Microlocations are chosen in such a way as to avoid interference from direct pollution sources and to ensure access, security and availability of electrical power and communications.

The content of heavy metals is analysed occasionally by subcontracting the Institute for Nuclear Physics. Benzo (a) pyrene, other polyaromatic hydrocarbons and gaseous mercury are not monitored.

The monitoring station in Elbasan is the only station where PM<sub>2.5</sub> is not monitored, although the city obviously has increased concentrations of particulate matter. PM is not regularly analysed on the content of heavy metals, although there is a metal processing industry in the city. The microlocation of the station is not favourable as it is too close to the municipality building, under the trees, and it could therefore be affected by pollen.

In accordance with relevant legislation, continuous monitoring of air quality is necessary in all zones and agglomerations where there were exceedances of limit values of monitored pollutants. This means that it is necessary to continuously monitor air quality in Tirana (due to exceedances of PM<sub>10</sub> and NO<sub>2</sub>), Elbasan, Korçe (exceedances of PM<sub>10</sub>) and Shkodër and Vlorë (exceedances of ozone). Moreover, based on available data, continuous monitoring of air quality is not carried out in Fier, a city where the country's petroleum extraction and processing activities are based.

The air quality monitoring network does not include stations in remote or rural background areas. There is no monitoring of transboundary air pollution within the EMEP programme in Albania.

**Table 6.2: Air quality monitoring network**

Location	Type	Institution	Monitored pollutants
Tirana	UB	IPH	PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>x</sub> , SO <sub>2</sub> , CO, O <sub>3</sub>
Tirana	UT	IPH	PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>x</sub> , SO <sub>2</sub> , CO, O <sub>3</sub>
Durrës	UT	NEA	PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>x</sub> , SO <sub>2</sub> , CO, O <sub>3</sub> , BTX*
Shkodër	UB	NEA	PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>x</sub> , SO <sub>2</sub> , CO, O <sub>3</sub> , BTX
Vlorë	SB	NEA	PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>x</sub> , SO <sub>2</sub> , CO, O <sub>3</sub> , BTX
Korçe	SB	NEA	PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>x</sub> , SO <sub>2</sub> , CO, O <sub>3</sub> , BTX
Elbasan	UT	NEA	PM <sub>10</sub> , NO <sub>x</sub> , SO <sub>2</sub> , CO, O <sub>3</sub> , BTX

Source: National Environment Agency, 2017.

Note: \* BTX: a mixture of aromatic hydrocarbons such as benzene, toluene and the three xylene isomers.

Monitoring equipment is calibrated annually through subcontracting a local company. Albania does not have an accredited calibration laboratory. Air quality assessment is performed by the NEA and IPH, which are not accredited by standard ISO/IEC 17025 (General requirements for the competence of testing and calibration laboratories) or any referent method for air quality monitoring. Data on air quality are not regularly validated and no QA/QC (quality assurance/quality control) system is applied.

Apart from an evident need for improvement in measurement data quality, there is no air quality modelling used in order to estimate air quality in the parts of the country that are not covered by continuous monitoring.

Air quality monitoring data are regularly reported to the European Environment Information and Observation Network (EIONET).

#### 6.4 Pressures on air quality

##### *Energy*

Energy production is mostly based on hydropower, which has no negative impact on air quality. The only thermal power plant, in Vlorë (currently non-operational), is capable of meeting the requirements of European environmental standards regarding emissions of air pollutants.

Albania has the second largest oil deposits in the Balkans (after Romania) and the largest onshore oil reserves in Europe. Albania's crude output amounted to more than 1.2 million tons in 2013. However, petroleum output and petroleum refinery production have declined since the 1990s due to the refineries' inadequate technology. Albania is the largest exporter of crude oil in the region. In 2015, exports increased by 9.37 per cent compared with 2014 (1.156 kt compared with 1.057 kt), whereas crude oil production decreased by 7 per cent (1,278 kt compared with 1,368 kt).

The legal requirements limiting sulphur content of heavy fuel oil and gas oil to 1 per cent entered into force as of 1 January 2015, and the standards for sampling and analysis of petroleum products were updated in September 2015. The draft action plan for implementation of the Strategy on Ambient Air Quality states that there is a great necessity for better monitoring and enforcement of fuel quality standards, regular fuel quality control and preparation of national annual reporting on the fuel quality data.

In 1990, the main source of SO<sub>2</sub> emissions in Albania, with a share of 45 per cent, was petroleum refining. In the updated air emissions inventory, emissions from this source in 2015 were declared as "not occurring". However, the last available data (2012) from Fier are a matter of concern, since the average annual value for PM<sub>10</sub> was 221 µg/m<sup>3</sup>, more than five times higher than the annual limit value (40 µg/m<sup>3</sup>).

Currently, Albania is updating the national energy strategy, aiming at the diversification of the energy sector through gasification/utilization of natural gas in economic sectors.

##### *Industry*

Mining, metallurgy, food processing, textiles, lumber and cement are among the leading industries in Albania. During the period of transition to a market economy, many industrial plants were closed. Revival of the chromium, steel and cement industries came with the increase in foreign investments in 2000. Mining remains a large (but shrinking) sector of the economy, given the rich deposits of bauxite, chromium, nickel, iron, copper ores and petroleum.

According to the draft air quality management plan (draft AQMP), the following installations are remarkable in terms of emissions:

- Durrës (Krujë Thumanë): Antea Cement (cement production);
- Durrës (Krujë Fushë-Krujë): Cement Factory Fushë-Krujë (cement production);
- Fier (Mallakaster Ballsh): ARMO (petroleum refining);
- Fier (Fier): ARMO (petroleum refining);
- Fier (Patos): AlbPetrol (petroleum extraction);
- Fier (Roskovec Kuman): Bankers Petroleum (petroleum extraction);
- Elbasan (Elbasan Bradashesh): ACR (ferrochromium production);
- Elbasan (Elbasan Bradashesh): Kurum (steel production).

Based on air quality monitoring results in Elbasan and the Fier area (i.e. high concentrations of total suspended particles in both places – 204 µg/m<sup>3</sup> and 221 µg/m<sup>3</sup> respectively in 2012, the last available data), it may be concluded that the petroleum and metals industries are the main industrial sources of air pollution. Although new/revived industrial sites strive to comply with air emissions standards, industrial dumpsites and deposits from previous industrial activities might also contribute to emissions and resuspension of particles. Many "oil pools" in the Fier area contribute to the considerable emission of

hydrocarbons. Environmental inspection lacks the equipment and expertise to regularly control emissions from stationary sources. Moreover, there is no accredited laboratory that can be engaged by the environmental inspection to perform this task. The main source of data on industrial emissions is self-reporting by installations, which is going to be further improved through an electronic PRTR, which was recently established.

According to the National Inventory on Air Emissions, combustion in manufacturing industries is the main activity responsible for high levels of sulphur oxides in air. Based on the balance of fuel consumption in the industrial sector, it was calculated that 12,716 Gg of SO<sub>2</sub> was emitted from this source in 2015. It is followed by emissions from small commercial and institutional combustion plants at 7,065 Gg, and residential plants at 2,163 Gg of SO<sub>2</sub> emissions. Stationary combustion in manufacturing industries and construction is the largest source of SO<sub>2</sub> emissions in 2015, accounting for 56 per cent. High values of sulphur oxides emissions are to be attributed to the high sulphur content of fuels used in combustion processes.

### *Agriculture*

Agriculture is an important sector in the Albanian economy and contributes about 20 per cent to the national GDP (2011), although with a decreasing trend. Livestock constitutes more than half the total value of agricultural production. Development of the sector is greatly hindered by the high level of fragmentation of the arable land, since more than 75 per cent of the total country area is hilly and mountainous. Hence, holdings are of very limited size (averaging 1.2 ha, compared with 14 ha in the EU). The low level of mechanization limits the pressure on air quality from agricultural activities to the consumption of fertilizers and pesticides, emissions of NO<sub>x</sub> and ammonia from cattle breeding, and NO<sub>x</sub> emissions from the burning of agricultural waste. Since 1990, emissions of ammonia have been reduced by 23 per cent, due to reduced use of fertilizers as well as a reduction in the number of cattle. NO<sub>x</sub> emissions from agriculture in 2015 were negligible and declared as "not occurring" in the latest air emissions inventory. Agricultural activities contribute to the emission of direct GHGs (methane and N<sub>2</sub>O). Total GHG emissions from agriculture are estimated at 15.83 per cent of total GHG emissions in 2015. Methane emissions are generated mainly from enteric fermentation and manure management. Emissions of N<sub>2</sub>O were mainly produced from the application of nitric fertilizers. The emissions of CH<sub>4</sub> and N<sub>2</sub>O as a

result of burning of agricultural residues were insignificant.

According to the Food and Agriculture Organization of the United Nations, fertilizer consumption (kg/ha of arable land) was 87.48 as of 2013. Its highest value over the past 11 years was 111.60 in 2005, while its lowest value was 75.88 in 2008. Albania produced POP pesticides in Chemical Enterprise Durrës (DDT, heptachlor, aldrin, dieldrin, toxafene (Melipax), chlordane). Hexachlorane and lindane have been also produced in this factory. The production of pesticides essentially ceased in 1990. The National Waste Management Plan for the period 2010–2025 does not tackle agricultural waste, but promotes composting and aims at the recycling/composting of 55 per cent of MSW by 2020.

### *Transport*

Albania has a fleet of 436,013 vehicles, the vast majority of which are used. In 2014, the number of passenger cars was 276,000. The number of passenger cars has increased substantially since 2009, when there were 16,408. Of all passenger cars, 75 per cent are diesel vehicles. The main public investments in Albania (about 55 per cent of total public investment) are concentrated on road infrastructure, which is the main mode of freight and passenger transport. The impact of transport on air quality in the capital city is described in box 6.1.

According to the National Inventory on Air Emissions, in 2015, road transport accounted for 73 per cent of NO<sub>x</sub> emissions, heavy-duty vehicles 47 per cent, passenger cars 15 per cent and light commercial vehicles 11 per cent.

According to the Third National Communication on Climate Change, emissions from the energy and transport sectors accounted for 97.07 per cent of CO<sub>2</sub> emissions in 2005, of which the transport subsector contributed 45.06 per cent; road transport was by far the main contributor to this. World Bank data indicates that CO<sub>2</sub> emissions from transport in Albania were 59.95 per cent of total fuel combustion in 2011 and 58.2 per cent in 2012.

Albania has a coastline of about 440 km, and several seaports play an important role in the development of international trade. The country's main ports are the Port of Durrës, with 11 berths, currently responsible for 78 per cent of national maritime trade, and the Port of Vlorë, covering about 10 per cent of export-import trade.

### Box 6.1: Impact of transport on air quality in Tirana

Increased concentrations of NO<sub>x</sub> in Tirana (exceeded annual limit value in 2015) were assessed in specific situations when the road traffic in the centre of Tirana was restricted. The State of Environment Reports (2014 and 2015) describe two specific situations:

- During the visit of Pope Francis in Albania, monitoring was done on 21 September 2014 in Durrës Street, which was closed for traffic between 7 am and 5 pm, and again the following day. Concentrations of NO<sub>2</sub> and benzene were significantly lower when the street was closed for traffic.
- A similar exercise was repeated in 2015, on International "No Car Day", 22 September, when average daily concentration of PM<sub>10</sub> was 36 µg/m<sup>3</sup>, below the daily limit value. The following day, the average daily concentration was elevated, at 71 µg/m<sup>3</sup>. As in the 2014 exercise, when traffic was stopped, monitored values of NO<sub>x</sub> were several times lower than they were the following day.

Tirana Municipality has set up a centre for traffic control, funded by a loan received from the EBRD. The cost of the project is €8.2 million.

The new Port of Shëngjin is planned to be the deepest port on the Mediterranean, capable of processing ships of all sizes and drafts, handling goods for Europe–Balkans export and import, and capable of processing a minimum of 2.6 million containers per year, or about 52 per cent of annual capacity of goods. The Port of Sarandë is a secondary port, developed as a tourist port. These four ports raise concern regarding air pollution from maritime transport, which, according to the International Maritime Organization (IMO), is assumed to become the biggest single emitter of air pollution in Europe by 2020. Therefore, according to the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI, as amended in 2016, ships worldwide have to cut their fuel's sulphur content to a maximum of 0.5 per cent, effective from 2020. Albania is not party to Annex VI of the MARPOL Convention and port authorities do not perform regular control of marine fuel on ships calling into Albanian ports (chapter 10).

#### *Housing*

A large proportion of the Albanian population uses woodburning fireplaces and stoves to heat their homes. There is no district heating infrastructure in Albania. Data from the National Inventory on Air Emissions show that 74 per cent of PM<sub>10</sub> emissions in 2015 come from residential stationary plants. Korçë, a little city with no working industry, provides an example of the negative impact of domestic heating; there, in 2015, there were 100 days of exceedances of daily limit values for particulate matters PM<sub>10</sub>, mostly in the winter months.

Apart from domestic heating, the uncontrolled burning of waste in the open air can present a serious negative impact on air quality; it is the most significant contributor to the emission of PCDDs and PCDFs (dioxins and furans). The poor waste collection rate in the rural areas of the country led to the burning of

waste in backyards and in the streets, in order to reduce volumes and get rid of the smell. Also, some of the uncontrolled burning is done in order to retrieve valuable waste streams such as metals. Such activities are also taking place at uncontrolled dumpsites.

## 6.5 Legal, policy and institutional framework

### *Legal framework*

The Albanian legal framework on air quality consists of the Law on Protection of Ambient Air Quality No. 162/2014 and subsequent secondary acts. The Law defines the responsibilities of competent authorities, prescribes the manner of public information on air quality, and provides the legal basis for regulating air quality assessment and reduction of air pollution from mobile sources and certain products, development of air quality plans and public participation in these processes, reporting on implementation of the law and administrative offences.

DCM No. 352 dated 29.04.2015 "On air quality assessments and requirements concerning certain pollutants" provides updated, EU-aligned air quality standards, while DCM No. 1189 dated 18.11.2009 "On the rules and procedures for drafting and implementation of the national monitoring programme" defines procedures for air quality monitoring.

The quality of fuel is regulated by DCM No. 781 dated 14.11.2012 "On the quality of certain liquid fuels for thermal, civil and industrial use, as well as for use in water transport (sea, river and lake)", and DCM No. 147 dated 21.03.2007 "On the quality of gasoline and diesel fuel", as amended. DCM No. 1075 dated 23.12.2015 "On measures for the control of volatile organic compound (VOC) emissions resulting from the storage of petrol and its distribution from terminals to service stations" regulates reductions of VOC

emissions. A DCM has been drafted on stage II petrol vapour recovery during refuelling of motor vehicles at service stations to regulate the reduction of VOCs emissions.

ODS were first regulated by DCM No. 453 dated 23.6.2005 "On approval of the list of equipment using substances that deplete the ozone layer which production and import is prohibited, and procedures for re-loading of existing equipment". It was amended by DCM No. 353 dated 29.04.2015, which regulates the procedure for licensing the import of HCFCs.

The legal framework has been shaped in the process of approximation to the EU and reflects most of the provisions of the European legal framework on air quality (except the new Directive 2016/2284/EU on the reduction of national emissions of certain atmospheric pollutants, which regulates the implementation of the Gothenburg Protocol to the Convention on Long-range Transboundary Air Pollution). However, some provisions (e.g. provision of air quality data to the public) are not sufficiently precise and lack effective implementation mechanisms in order to be properly implemented. For instance, the Law prescribes regular provision of data but does not specify its frequency, except for annual reporting. Hence, the public gets only annual data, which also falls under the category of "regular".

DCM No. 352 dated 29.04.2015 "On air quality assessments and requirements concerning certain pollutants" prescribes reference methods for air quality assessment but does not establish the obligation to use them. Provisions connected to administrative fines and other implementation and enforcement mechanisms are not sufficiently precise to ensure strong implementation of the legal acts.

#### *Policy framework*

The policy framework related to air protection is much more recent than the legal framework. The draft air quality management plan (AQMP) is prepared to complement the 2014 Strategy on Ambient Air Quality (DCM No. 594 dated 10.09.2014) but is not yet adopted. Both documents were developed through SELEA and IBECA projects, since the number of employees in the ministry responsible for environmental issues, the competent authority in this regard, is not sufficient for development of the policy and legal framework, inter-institutional and international cooperation and other daily tasks related to air quality.

The key measures proposed by the Strategy on Ambient Air Quality concern:

- Ensuring that the existing monitoring networks are reconfigured to be consistent with the basic environmental and programmatic needs for current environmental management;
- Ensuring that the type of monitoring required is appropriate to the nature and size of the source and the pollutants under consideration;
- Ensuring integration of various monitoring networks where opportunities for integration exist, and enhancing NEA supervision of these networks;
- Improving the scientific and technical competency of the NEA to ensure high quality data.

Moreover, the Strategy proposes measures to reduce emissions of air pollutants from vehicles, industrial installations, agriculture and households, as well as measures to be applied at the local level. These measures are proposed in a general manner without defining competent authorities, terms, conditions and estimation of costs. However, it greatly contributed to the fact that air protection policy is very well integrated into other relevant sector policy documents, such as transport, energy efficiency and climate change.

The draft AQMP divides the national territory into three air quality zones:

- Zone A: the agglomerations of Tirana and Elbasan, where the air quality is endangered, and it is necessary to ensure compliance with the daily and annual limit values for particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) and nitrogen dioxide (NO<sub>2</sub>). Although data quality should be improved on various levels, the draft AQMP states that "there is no doubt that traffic is by far the most important source for the air pollution in Tirana" and recommends that the measures to improve the air quality in Zone A should concentrate on traffic;
- Zone B: the municipal units of Fier, Durrës, Vlorë, Shkodër, Korçe, Patos and Ballsh, where exceedance of air quality standards for at least one pollutant is already registered, or there is a high risk of exceedance due to industrial pollution sources, road traffic and relatively small point sources;
- Zone C: the rest of the country, where exceedances of air quality standards are not considered as likely. This zone covers 91.8 per cent of Albanian territory, with 1,701,873 inhabitants (65 per cent of the total population).

The draft AQMP does not provide enough data to support this air quality zoning or key measures, which are focused on reduction of emissions from the transport sector, which is recognized as having the

major negative impact on air quality in urban areas. It also proposes measures to reduce emissions of pollutants from urban construction, agriculture, use of firewood and industry. It also envisages the strengthening of inspection and monitoring capacities and improvement of public awareness. The plan is expected to be reviewed every three years.

In terms of prioritization, high priority is given to measures such as the management and control of traffic flows, promotion of the use of public transport, banning the outdoor burning of refuse materials, revision of existing installation permit conditions, modernization and upgrading of the monitoring network and a public information campaign on the health and environmental risks associated with backyard burning. It also envisages several measures to reduce the negative impact of households on air quality:

- Promoting thermal insulation and reducing unnecessary use of power for heating or cooling systems in residential buildings;
- Introducing product standards for domestic boilers;
- Promoting use of solar heating systems in residential buildings;
- Improving waste collection and safe waste disposal in rural areas.

The overall costs of implementation of the draft AQMP are estimated at €318.25 million. Implementation has not yet started since the plan has not been adopted.

At the local level, an Air Quality Plan was drafted for Tirana but was never adopted or implemented. Although there is a legal obligation for municipalities to prepare an air quality plan in the case of exceedance of any of the prescribed limit values or target values for different pollutants, no municipal air quality plans have been prepared/adopted so far.

Among sector strategies, the positive example of integration of air protection policy is the 2016 National Transport Strategy and Action Plan for the period 2016–2020, which sets objectives to reduce air pollution and GHG emissions from transport and increase energy efficiency in this sector through a set of measures such as application of EURO standards for vehicles and vehicle testing procedures. The Strategy proposes major expansion of the existing air quality monitoring network to 18 monitoring stations, but limits this to cities already covered by the existing network (Tirana, Elbasan, Durrës, Vlorë, Shkodëra,

Korçë and Fier, where currently there is no fixed monitoring).

### *Sustainable Development Goals and targets relevant for this chapter*

Albania's current position vis-à-vis targets 3.9 and 11.6 is described in box 6.2.

### *Institutional framework*

The Law on Protection of Ambient Air Quality No. 162/2014 assigns competence for the approval of measurement systems (methods, equipment, networks and laboratories), provision of information to public, inter-institutional coordination and international cooperation on different issues regarding air quality to the ministry responsible for environmental issues.

Line ministries are responsible for the measures to be taken within the frame of their own specific legislation that result in the maintenance of or improvements to air quality. The Law specifically regulates the role of the ministry responsible for transport in approving legal acts that regulate emissions from motor vehicles and off-road machinery. The ministry responsible for industry approves decisions that regulate emissions of VOCs due to the use of organic solvents, certain paints and varnishes and vehicle refinishing products, and VOCs emissions resulting from the storage of petrol and its distribution from terminals to service stations and refuelling of motor vehicles at service stations.

The NEA is the competent authority for monitoring and assessment of ambient air quality, ensuring the accuracy of measurements and analysis of assessment methods, and preparation of the annual report on ambient air quality assessment. However, there are more actors involved in the management of air quality, especially in its monitoring, since the NEA still has limited capacities to perform this task. Therefore, the IPH is temporarily subcontracted to run two automatic stations situated in Tirana, but does not have clear legal obligations to monitor the impact of air pollution on public health, which should be its primary task. The Institute for Nuclear Physics is also temporarily subcontracted to undertake laboratory assessment of the PM content of heavy metals. The Central Technical Inspectorate is in charge of monitoring fuel quality.

The National Licensing Centre under the Ministry of Finance and Economy issues licences for import of allowed ODS (HCFCs) on the basis of the opinion of the Ministry of Tourism and Environment.



### Box 6.2: Targets 3.9 and 11.6 of the 2030 Agenda for Sustainable Development



#### **Goal 3: Ensure healthy lives and promote well-being for all at all ages**

#### **Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination**

Under Goal 3: Ensure healthy lives and promote well-being for all at all ages, countries should substantially reduce the number of deaths and illnesses from air pollution (target 3.9). The target is measured by, among other indicators, the mortality rate attributed to household and ambient air pollution. This indicator is not currently in use in Albania.

The 2014 national health report "Albanian population health status" highlights that the health risk from indoor air pollution was substantially reduced in Albania between 1990 and 2010. However, in 2010, this risk factor was still responsible for 6.4 per cent of the total burden of disease in Albania. There was similar reduction of the burden of disease due to environmental pollution by particulate matter, which, in 2010, was responsible for 3.4 per cent of the total burden of disease. In 2012, air quality levels for Tirana were, on more than two occasions, in excess of the WHO Air Quality Guidelines, and therefore it was estimated that each year 500 deaths in the city can be attributed to air pollution.

The most recent data on deaths attributed to bad air quality in Albania comes from a global assessment of exposure and burden of disease related to ambient air pollution (WHO 2016). It is estimated that air pollution in Albania causes 1,842 premature deaths (64 per 100,000 inhabitants), while some 2,740 deaths can be attributed to household (indoor) air pollution.

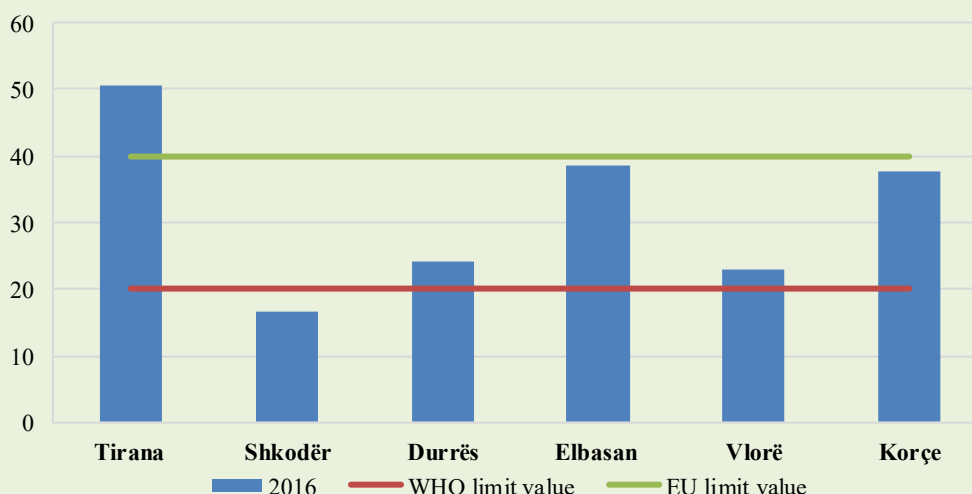
In order to reduce the number of deaths and illnesses from air pollution, air quality should be improved, but it is also important to regularly assess the impact of air pollution on public health. Therefore, the IPH has to strengthen its cooperation with WHO and develop sufficient expertise for monitoring the impact of air quality on public health, rather than monitoring air quality itself. Particular attention should be given to indoor air pollution, which has the same severe impact on health. This very important role of the IPH is currently not reflected in the legal and policy framework related to air quality.

#### **Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable**

#### **Target 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management**

Nowadays, more than half the population on the planet lives in cities. Under Goal 11, countries should reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality. Annual mean levels of fine particulate matter in cities should serve as an indicator.

**Figure 6.5: Annual mean concentrations of PM<sub>10</sub> in selected cities, 2016, µg/m<sup>3</sup>**



Source: National Environment Agency, 2017.

Figure 6.5 shows that PM<sub>10</sub> concentrations in all cities in Albania, except in Shkodër, exceeded the WHO annual mean recommended value (20 µg/m<sup>3</sup>) in 2016, while concentrations in Tirana exceeded the EU and Albanian annual limit value of 40 µg/m<sup>3</sup>. The National Inventory on Air Emissions shows that 74 per cent of PM<sub>10</sub> emissions in 2015 came from residential stationary plants. The reduction of PM<sub>10</sub> concentrations in urban areas can be achieved through implementation of measures recommended in the draft AQMP related to the energy efficiency of buildings and heating systems, as well as measures related to the contribution of road transport, which was 7 per cent in 2015.



**Photo 6: Air pollution over Pogradec**

Local government units are responsible for measures to be taken within the frame of their own specific legislation that result in the maintenance of or improvements to air quality, including preparation of air quality plans in the event of exceedances of limit and target values set for different pollutants and short-term action plans in the event of exceedances of alert thresholds.

The capacities of the main competent institutions are not sufficient. In early 2017, in the then Ministry of Environment, the head of the Sector for Air Quality and Climate Change and one junior expert were responsible for both air quality and climate change policies. Following the institutional restructuring of September 2017, the Sector for Air Quality and Climate Change was abolished. In the new Ministry of Tourism and Environment, as little as two specialists have to cover air, climate change, chemicals, industrial pollution, industrial accidents and noise issues. In the NEA, two employees are in charge of processing air quality data and preparation of the annual report on air quality. The NEA laboratory is not accredited for air quality assessment referent methods. One person in the NEA is responsible for the maintenance and updating of both the air emissions and GHG inventories. Capacities at the municipal level are also limited, lacking specific expertise for proper air quality management (e.g. development of air quality plans).

#### *Coordination*

The Law on Protection of Ambient Air Quality requires a certain level of coordination among different levels of administrative divisions, for example: (i) ministry and/or municipality(ies), when preparing the air quality plans, cooperate with line ministries, the NEA, REA and SEI; (ii) the plan of the zone (where the zone is composed of more than one agglomeration and/or municipality(ies)) shall be prepared by the relevant municipalities and approved by the municipal councils.

The Law does not provide for specific cooperation mechanisms, which might be needed, since air quality zoning of the country envisages only three zones and cooperation among different municipalities in the development and adoption of air quality plans will be necessary. It should be borne in mind that regional environmental units – regional environmental agencies and regional environmental inspectorates – are recently reformed and will need some time to absorb their competences.

#### *Regulatory, economic, fiscal and information measures*

The Law on Protection of Ambient Air Quality prescribes fines for failure to comply with air emissions values by the operator of an installation holding environmental permit types A, B or C in the

range of 500,000–2,000,000 leks, as well as fines in the range of 1 million to 2 million leks for failing to comply with provisions regarding placing on the market fuel of prescribed quality, and respecting technical conditions related to control of VOCs emissions from the storage and distribution of petrol.

There is a specific tax on carbon based on the Law on National Taxes. The tax is charged on a number of fossil fuels used in the market, produced domestically or imported. Initially, the carbon tax was applied only to diesel and gasoline but, from 2011, it includes coal, coal coke, heavy and light fuel oil, and kerosene. Currently, the carbon tax is 1.5 lek/litre on gasoline, 3 leks/litre on all other oil by-products, and 3 leks/kg on coal and coal coke.

Apparently, in the past, the import tax for used vehicles brought more revenues than all the other environmental mechanisms. As of 1 January 2012, owners of used cars were paying an annual tax calculated on the basis of the following formula: cylinder in  $\text{cm}^3$  multiplied by a coefficient based on year of production of the car multiplied by the fixed fee on fuel type (25 leks on oil and 20 leks on gasoline). Vehicles less than four years old were exempt from paying the annual tax on used vehicles. The average annual tax was 10,000–30,000 leks, while state and municipal budgets (18 per cent of revenue went to municipalities) expected a few billion leks annually from these revenues. However, an amendment to the Law on National Taxes, which reduced taxes on used cars by half, entered into force in June 2013.

Information on air quality is provided to the public on a very limited basis. Nearly-real-time data from air monitoring stations are accessible only to staff of the NEA, while the public have access only to processed data from the annual SoER, which is published and uploaded to the NEA website ([www.akm.gov.al](http://www.akm.gov.al)), as well as the website of the ministry responsible for environmental issues (not operational as of November 2017, following the institutional restructuring of September 2017). The draft AQMP recognizes the need to improve public awareness on air quality, but does not propose more frequent dissemination of air quality data to the public.

The quality of available data is questionable since monitoring is not performed by an accredited laboratory, data validation and AQ/AC procedures are not applied, and measurement instruments are not regularly calibrated. Therefore, current data are not reliable enough to be provided and justified to the general public on an everyday basis.

Moreover, there is no initiative to develop mechanisms to help the general public understand data on pollutants concentration and either standard messages or expert advice related to the impact of air quality on health, especially for sensitive groups within the population.

## 6.6 Participation in international agreements and processes

### *Convention on Long-range Transboundary Air Pollution*

Albania has been a party to the Convention on Long-range Transboundary Air Pollution since December 2005, its 1985 Protocol on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at least 30 per cent (1985 Sulphur Protocol) since June 2009, its 1988 Protocol concerning the Control of Nitrogen Oxides (NO<sub>x</sub>) or their Transboundary Fluxes (Protocol on NO<sub>x</sub>) since June 2009 and the Protocol on Long-term Financing of the Co-operative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) since September 2011. Albania provided its base year data under the 1985 Sulphur Protocol and the Protocol on NO<sub>x</sub>. Albania prepared national emissions inventories for 2010, 2011, 2012, 2013, 2014 and 2015, and submitted the data to the Convention Secretariat.

Albania actively participates at the Convention meetings and information exchange instruments. The country shared information on air-pollution-related policies in Albania and their implementation challenges in 2015, in accordance with the template developed and distributed by the Secretariat ahead of the fifty-third session of the Working Group on Strategies and Review, and gave a presentation on the same topic at the fifty-fourth session of the Working Group.

In 2011, Albania adopted the Law on Accession to the Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone No. 10476/2011 (chapter 4). Upon submission of the proposed national emission ceilings, Albania was asked to further adjust them in line with the amendments to Annex I of the Protocol, which represents national efforts to reduce emission of pollutants covered by the Protocol. At that time, in 2011, Albania had already reduced emissions of SO<sub>2</sub> from the base year (1990) by 77.8 per cent and it was difficult for the country to plan further reductions, bearing in mind that the inventory was not updated. The Executive Body for the Convention on Long-range Transboundary Air Pollution, at its thirtieth

session, held from 30 April to 4 May 2012 in Geneva, adopted amendments to the 1999 Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone.

In the same course of action, the Albanian parliament adopted laws on ratification of the Protocols on POPs and Heavy Metals, but those Protocols were amended as well, on 18 December 2009 and 13 December 2012 respectively (chapter 4).

#### *Convention on Persistent Organic Pollutants*

Albania is party to the Stockholm Convention on Persistent Organic Pollutants, as of 2004. The country submitted its report on implementation during the third reporting cycle in 2014. Production, import, placing on the market and use of chemicals and pesticides that exhibit characteristics of POPs, are banned in Albania by Law on Environmental Protection No. 10431/2011, Article 37.

#### *Convention for the Protection of the Ozone Layer*

Albania acceded to the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol in 1999. In 2006, Albania acceded to four amendments to the Montreal Protocol. Albania has not started a procedure to adopt the 2016 Kigali Amendment (chapter 4).

As a party to the Montreal Protocol, Albania banned production, import and placing on the market, export and transit of ODS and products that contain ODS except HCFC substances, the use of which is currently being phased out in accordance with Article 5 of the Protocol. The phase-out is managed by the Hydrochlorofluorocarbon Phase-out Management Plan of Albania (HPMP) developed in cooperation with the United Nations Industrial Development Organization (UNIDO) and UNEP, and regulated by DCM No. 353 dated 29.04.2015.

#### *Convention for the Prevention of Pollution from Ships*

Albania is a party to the International Convention for the Prevention of Pollution from Ships (MARPOL) and its five protocols, but still has not ratified Annex VI: Regulations for Prevention of Air Pollution from Ships, which entered into force in 2005 (chapter 10). This Annex sets limits on sulphur oxide and nitrogen oxide emissions from ship exhausts and prohibits deliberate emissions of ODS.

#### *Batumi Action for Cleaner Air*

Albania participated in the Eighth Environment for Europe Ministerial Conference (Batumi, Georgia, 8–10 June 2016). The country had not submitted voluntary commitments under the Batumi Action for Cleaner Air.

### **6.7 Assessment, conclusions and recommendations**

#### *Assessment*

Air quality in Albania improved greatly in the course of the last 10 years. Albania reduced the use of fossil fuels in energy production and industrial processes and introduced European standards for fuel quality. The country also imposed a carbon tax on a number of fossil fuels used in the market, including diesel and gasoline, coal, coal coke, heavy and light fuel oil, and kerosene.

Since 2005, emissions of sulphur oxides decreased some 35 per cent, and emissions of ammonia around 10 per cent, while emissions of NO<sub>x</sub>, NMVOC and PM<sub>10</sub> increased slightly.

Decreased fertilizer consumption and fewer livestock reduced the pressure on air quality from agriculture. The country's energy production is currently based solely on hydropower. Industrial pollution has substantially reduced since numerous installations with obsolete technology ceased production. Albania moved from heavy industry to other, lighter industrial branches (textiles, leather, food), which have less negative impacts on air quality. On the other hand, the negative impact of transport has increased due to the higher number of vehicles (e.g. the number of passenger cars increased by 94 per cent in the period 2009–2014). Intensive urbanization that is not followed by adequate development of infrastructure (district heating systems, sustainable public transport), poses a major threat to air quality, which is already noticeable in some areas of Albania.

Since 2011, air quality in Albania is monitored by seven automatic stations. The country adopted European standards on air quality and developed a system of reporting through EIONET, enabling international comparability of data. However, data quality, including time and territory coverage, is not satisfactory.

The legal framework on air quality in Albania has been immensely improved through the process of accession to the EU, and is complemented with an adequate national policy framework. Further efforts

are needed to build capacity for development of air protection policies on the regional and local levels. The health impact of air pollution in Albania is not monitored and general public awareness of the negative effects of air pollution is low.

### *Conclusions and recommendations*

#### Accreditation for air quality monitoring and assessment

Until 2011, the competence for air quality monitoring was entrusted to the IPH. Currently, the NEA is the institution responsible for air quality monitoring, but it has limited human, technical and financial capacities to perform this task. On a temporary basis, it engages the IPH, which still runs two monitoring stations in Tirana, and the Institute for Nuclear Physics, for some laboratory analysis. None of these institutions has an accreditation for air quality monitoring and assessment.

#### Recommendation 6.1:

*The Government should ensure that institutions involved in air quality monitoring and assessment are accredited for air quality monitoring and laboratory analysis, in order to provide the public with correct, accurate and validated data that meet data quality objectives.*

#### Air quality monitoring network

The current network for air quality monitoring does not allow for providing a correct picture of air quality in Albania, mostly because the number of monitoring stations is limited and the macro- and microlocations of existing monitoring stations are not accurate. The current composition of the network does not cover air quality assessment in rural or rural background locations. Regardless of the type of monitoring station, the same parameters are monitored in all stations (e.g. there is no need to monitor O<sub>3</sub> in urban traffic stations).

There is no monitoring station in Fier where exceedances of air quality standards were recorded in the past and realistic concern exists due to the presence of the petroleum industry and a plan to build a new waste incinerator. Monitoring in Tirana often relies on data from measurement by a mobile station, which can only be considered an indicative measurement. Monitoring in Elbasan is affected by the microlocation of the station (too close to municipal building, under the trees).

#### Recommendation 6.2:

*The Ministry of Tourism and Environment should support the National Environment Agency to enlarge*

*the air quality monitoring network and adjust the location of existing monitoring stations where necessary, taking into account the feasible use of equipment according to the type of monitoring station and combining air quality monitoring in rural background locations with the monitoring of the transboundary transport of air pollution (EMEP Programme, level-1 station), if possible.*

#### Impact of air pollution on human health

The main purpose of air quality assessment and protection is to minimize the negative effects of air pollution on human health and the environment. However, the impact of air pollution on human health is not assessed in Albania. In absence of such an assessment, Albania is not able to measure its progress towards target 3.9 (by 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination) in relation to air.

The population, especially vulnerable groups, is not provided with sufficient and timely data on air quality accompanied by recommendations on health protection. Public awareness related to air quality in Albania is very low, since access to information is virtually limited to annual reports on air quality. Nowadays, countries worldwide use different types of air quality indices in order to provide the public not only with nearly-real-time information but also with forecasts of air quality and its impact on health.

#### Recommendation 6.3:

*The Government should ensure that the Institute of Public Health regularly assesses the impact of air pollution on health and supports the raising of public awareness on this topic, including by use of an air quality index.*

#### Organic farming

Although some 40 per cent of the Albanian labour force is employed in the agricultural sector, due to high fragmentation of the arable land, only a limited number of farms, mainly on the coastal plains or close to suburban areas, practise more intensive agriculture that allows them to produce for the market. Organic farming oriented towards quality rather than quantity is not very well promoted.

#### Recommendation 6.4:

*The Government should promote the application of organic farming principles, which include very strict limits on the use of pesticides and synthetic fertilizers and the promotion of composting rather than burning of agricultural waste, which can contribute not only to*

*production of healthy organic food but also to the protection of air quality and other aspects of the environment.*

Energy efficiency and use of renewable energy sources

Households in rural areas also have a large impact on air quality due to the use of woodburning stoves and uncontrolled waste disposal. The draft AQMP proposes measures to minimize the impact of households on air quality through the promotion of

better thermal insulation, product standards for domestic boilers, the use of solar energy for heating and improved waste management.

Recommendation 6.5:

*The Government should, in cooperation with international donors, favour ensuring funds for energy efficiency, the use of renewable energy sources and the promotion of circular economy activities, which at the same time improve air quality and minimize the adverse effects of climate change.*

## Chapter 7

# WATER MANAGEMENT

### 7.1 Water resources

Six river catchments drain seven main rivers: the Drini, Mati, Ishmi, Erzeni, Shkumbini, Semani and Vjosa Rivers (map 7.1). Average total river discharges are estimated at between 39 billion m<sup>3</sup>/y and 42 billion m<sup>3</sup>/y, with 95 per cent being discharged into the Adriatic Sea and 5 per cent into the Ionian Sea. Groundwater resources are estimated at between 9 billion m<sup>3</sup>/y and 13 billion m<sup>3</sup>/y.

There are about 250 natural lakes, the three largest being transboundary: Lake Ohrid (estimated volume approximately 55 billion m<sup>3</sup>), Lake Prespa (estimated volume approximately 5 billion m<sup>3</sup>) and Lake Shkodër (estimated volume approximately 2 billion m<sup>3</sup>). Around 626 reservoirs provide a designed capacity of 560 million m<sup>3</sup>.

Albania has access to the Adriatic and Ionian Seas in the west, with a coastline of 418 km. There are several lagoons along the coast, including Karavasta Lagoon and Butrint Lagoon.

### 7.2 Water quality

#### Rivers

Currently, only basic physico-chemical parameters are routinely monitored four times per year (once per season) – at 37 sites in 2016. Table 7.1 provides the

scheme for classification of the physico-chemical quality of rivers applied in Albania. The EU Water Framework Directive (WFD) priority substances and biological quality elements (benthic invertebrate fauna, phytoplankton, phytobenthos, macrophytes and fish) are not yet routinely monitored. This classification – albeit distinguishing five classes, labelled from "high" to "bad" – is not yet designed fully in accordance with the requirements of the WFD.

Figures 7.1 to 7.4 indicate that parts of the river basins did not meet the Albanian thresholds for "Good" status for physico-chemical parameters, notably in the lower reaches of the rivers. Assessment of the 2015 monitoring data resulted in the following ranking of the monitoring sites based on the classification scheme in table 7.1: "high" status, 2 stations; "good", 12 stations; "moderate", 12 stations; "poor", 1 station; "bad", 7 stations.

#### Lakes

Routine water quality monitoring is conducted in Lakes Ohrid, Prespa and Shkodër and the Butrint Lagoon, which is a transitional water body. An oligotrophic state could tentatively be associated with "high to good" status, mesotrophic with "moderate to poor" and eutrophic with "poor to bad" (table 7.2). However, such a scheme is not compliant with the criteria for assessment of ecological status in the WFD.

**Table 7.1: Classification scheme for assessment of physico-chemical parameters in rivers**

Parameter	Unit	Status				
		High	Good	Moderate	Poor	Bad
Dissolved oxygen	mg/l	>7	>6	>5	>4	<3
BOD <sub>5</sub>	mg/l	<2	<3.5	<7	<18	>18
pH (acid)	-	-	>6.5	>6	-	-
pH (alkaline)	-	-	<8.5	<9	-	-
NH <sub>4</sub>	mg N/l	<0.05	<0.3	<0.6	<1.5	>1.5
NO <sub>2</sub>	mg N/l	<0.01	<0.06	<0.12	<0.3	>0.3
NO <sub>3</sub>	mg N/l	<0.8	<2	<4	<10	>10
PO <sub>4</sub>	mg P/l	<0.05	<0.10	<0.2	0.5	>0.5
P-total	mg P/l	<0.1	<0.20	<0.4	<1	>1

Source: National Environment Agency, State of the Environment Report 2015 and 2016.

Note: BOD<sub>5</sub>: biochemical oxygen demand (five days); NH<sub>4</sub>: ammonium; NO<sub>2</sub>: nitrite; NO<sub>3</sub>: nitrate; PO<sub>4</sub>: orthophosphate; P-total: total phosphorus.

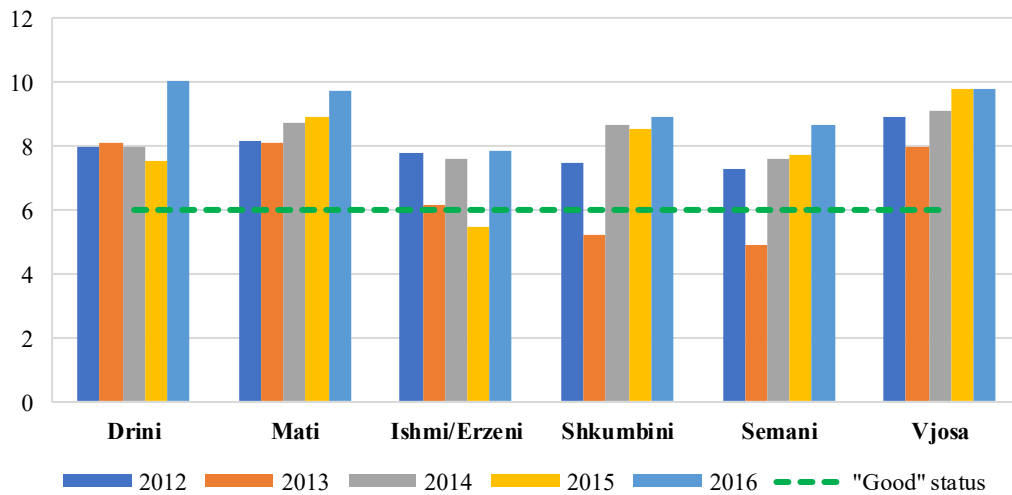
Map 7.1: Main river basins



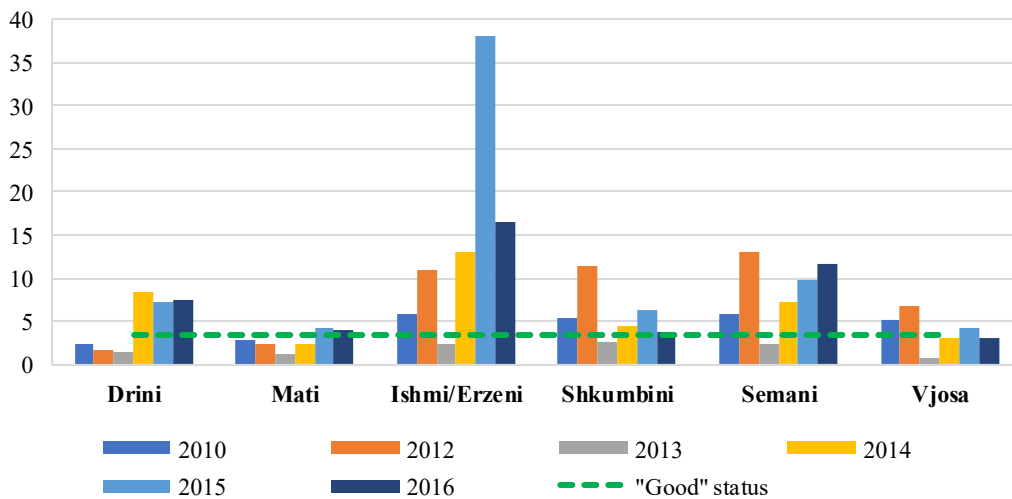
Source: United Nations Cartographic Section, 2011. Position of monitoring stations: WWA Hof, November 2011.

Note: The boundaries and names shown on this map do not imply official endorsement or acceptance by the United Nations. River basin names: B1: Drin/Drini; B2: Mat/Mati; B3: Ishem/Ishmi and Erzen/Erzeni; B4: Shkumbin/Shkumbini; B5: Seman/Semani; B6: Vjose/Vjosa.

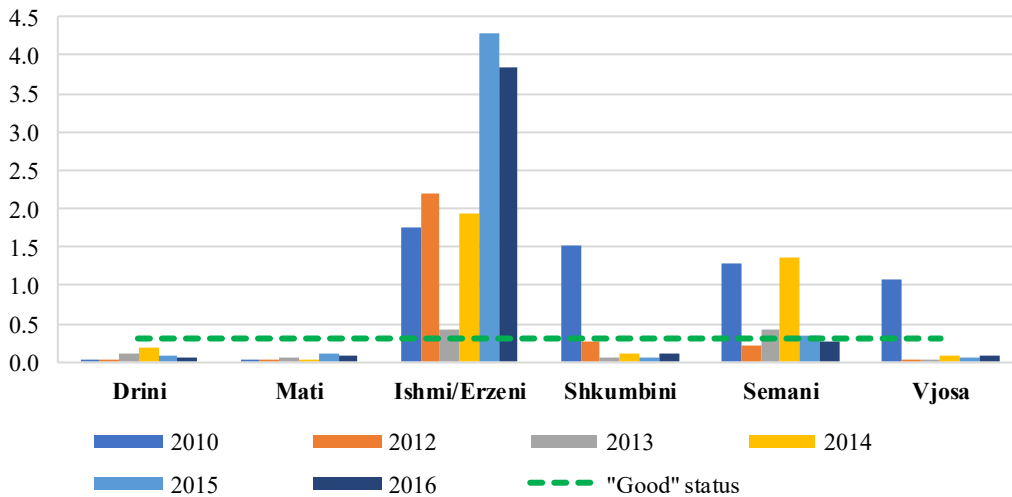


**Figure 7.1: Annual average concentrations of dissolved oxygen, 2012–2016, mg O<sub>2</sub>/l**

Source: National Environment Agency, State of Environment Report 2015 and 2016.

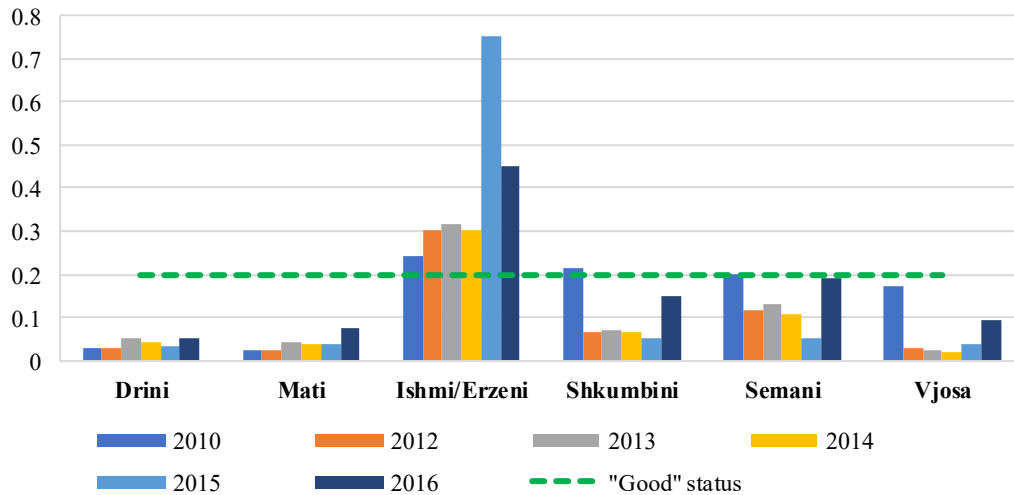
**Figure 7.2: Annual average concentrations of BOD<sub>5</sub>, 2010, 2012–2016, mg O<sub>2</sub>/l**

Source: National Environment Agency, State of Environment Report 2015 and 2016.

**Figure 7.3: Annual average concentrations of NH<sub>4</sub>, 2010, 2012–2016, mg N/l**

Source: National Environment Agency, State of Environment Report 2015 and 2016.



**Figure 7.4: Annual average concentrations of total phosphorus, 2010, 2012–2016, mg P/l**

Source: National Environment Agency, State of Environment Report 2015 and 2016.

**Table 7.2: Trophic state of Lakes Ohrid, Prespa and Shkodër, and Butrint Lagoon, 2012–2016**

	2012*	2013*	2014*	2015*	2015**	2016***
Lake Ohrid	..	..	oligotrophic	oligotrophic	oligotrophic	oligotrophic
Lake Prespa	mesotrophic	..	mesotrophic	mesotrophic	mesotrophic	mesotrophic
Lake Shkodër	mesotrophic	..	mesotrophic	mesotrophic	oligotrophic	mesotrophic tending to eutrophic
Butrint Lagoon	mesotrophic	eutrophic	mesotrophic	mesotrophic	oligotrophic	mesotrophic tending to eutrophic

Source: National Environment Agency, State of Environment Reports 2012 through 2016.

Notes: \* Based on physico-chemical parameters; \*\* Based on chlorophyll-a; \*\*\* Based on both physico-chemical parameters and chlorophyll-a.

The 2015 GIZ report "Initial Characterisation of Lakes Prespa, Ohrid and Shkodra/Skadar" assessed the results of investigations of biological quality elements (phytoplankton, macrophytes, benthic invertebrate fauna, fish) tentatively, as follows: Lake Ohrid: "possibly at risk of not achieving WFD good ecological status"; Lake Prespa: "at risk of not achieving WFD good ecological status"; Lake Shkodër: "at risk of not achieving WFD good ecological status".

### Groundwater

According to the 2015 SoER, throughout the period 2011–2015 there was little variation per monitoring site in concentrations of the following parameters: pH, hardness, mineralization, sodium (Na), calcium (Ca), magnesium (Mg), iron (Fe), chloride (Cl), sulphates (SO<sub>4</sub>), NH<sub>4</sub>, NO<sub>3</sub> and NO<sub>2</sub>.

At several sites, pH, hardness, mineralization, Na, Ca, Mg, Fe, Cl and/or SO<sub>4</sub> values exceeded prevailing Albanian groundwater quality standards. However, this does not necessarily imply anthropogenic pressures. Elevated concentrations of such parameters

can be attributed to specific local/regional natural geogenic conditions or by intrusion of seawater.

Elevated NH<sub>4</sub>, NO<sub>3</sub> or NO<sub>2</sub> concentrations indicate anthropogenic pressures, e.g. application of fertilizers or seepage from pit latrines. In 2015, the maximum nitrate concentration was 27 mg NO<sub>3</sub>/l, while concentrations at most sites were less than 5 mg NO<sub>3</sub>/l. Thus, concentrations were below the threshold of 50 mg NO<sub>3</sub>/l, which is also established by the EU Directives 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources, 98/83/EC on the quality of water intended for human consumption, and 2006/118/EC on the protection of groundwater against pollution and deterioration.

In 2015, at a limited number of sites, the following heavy metals were analysed: nickel (Ni), manganese (Mn), zinc (Zn), lead (Pb), copper (Cu), cobalt (Co), chromium (Cr) and cadmium (Cd); concentrations were within the active Albanian groundwater quality standards.

### Transitional and coastal waters

The NEA takes water samples near the shoreline at a 10-metre distance from wastewater outlets in Durrës, Vlorë and Sarandë. The samples are analysed for physico-chemical parameters, e.g. chemical oxygen demand (COD), BOD<sub>5</sub> and P<sub>total</sub>. The SoERs indicate quite polluted water throughout the years 2011–2015. However, these assessments are confined to the sampling zones and cannot be extrapolated to the state of coastal waters – the 12 nautical miles territorial zone. Assessment of coastal water bodies implies boat-based sampling, which is currently not practised.

To date, only the water quality in the Butrint Lagoon is routinely monitored (table 7.2).

### Drinking water

The piped drinking water supply is monitored at both the abstraction sites and selected taps. The monitoring scheme comprises 557 points "at the tap", including 31 points in Tirana, 21 in Pogradec and 6 in Sarandë. Throughout the period 2012–2015, between 0.67 and 3.4 per cent of the samples at the tap were contaminated, i.e. polluted with *Escherichia coli*.

In 2015, 3 per cent of the samples exceeded the national standards for physico-chemical water quality for Fe and Mn. No assessments are conducted to identify whether elevated Fe and Mn concentrations were due to natural, geogenic conditions at abstraction sites, or generated in the distribution network, e.g. by rusty pipes.

Only the piped drinking water supply is routinely monitored. The quality of drinking water abstracted from private or local wells in rural areas is not monitored.

### Bathing water

In accordance with Directive 2006/7/EC concerning the management of bathing water quality and repealing Directive 76/160/EEC, Albania is monitoring the bacteria *Escherichia coli* and *Intestinal enterococci*. Albania does not yet apply the Blue Flag programme for beaches.

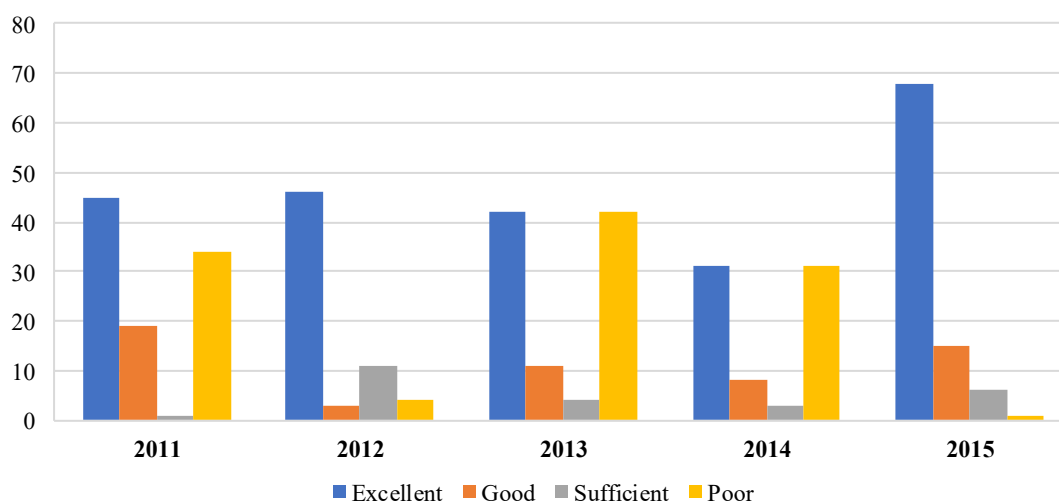
The bathing water quality is monitored along the coast. Throughout the years 2011–2014, the quality was "excellent" at 31–46 per cent of the monitoring stations and "poor" at 31–42 per cent ("poor" quality implies that bathing should be prohibited). In 2015, the quality was "excellent" at 68 per cent of the monitoring stations and "poor" at 10 per cent (figure 7.5). However, before concluding whether or not the latter represents a systematic improvement, assessments for ensuing years are needed.

Organoleptic properties of bathing waters, e.g. odour and floating debris, are not systematically monitored and reported.

### Impact on environment and human health

In the period 2013–2015, there was one incident of bacillary dysentery in 2014 and another in 2015, which potentially can be water related.

**Figure 7.5: Assessment of bathing water quality, 2011–2015, per cent**



Source: Albania's national report to the Protocol on Water and Health, third cycle, 2016.

Note: Measurements were carried out on 10 beaches from 2011 to 2013 and on 12 beaches from 2014.

### 7.3 Water supply and demand

#### *Power generation*

The cascades of big hydropower plants (HPPs) are situated within the Drini River basin at Vau i Dejës, Fierza and Koman (installed capacity 1,350 MW, 92 per cent of the country's potential); the Mati River basin at Ulëza and Shkopet (installed capacity 49 MW); and the Vjosa River basin at Bistrice I and II (installed capacity 28 MW). Furthermore, there are about 70 small HPPs with an installed capacity ranging from 20 KW to 9,200 KW; 38 of these smaller HPPs are currently operational.

Hydropower generation is not a consumptive use of water (i.e. water abstracted without returning it to its resource). The overall water balance remains equal, but water available for uses further downstream is partly regulated by the operation of reservoirs.

#### *Process/cooling water in industry*

In Albania, both groundwater and surface water can be used for industrial technological processes. However, no data are published about such industrial water uses.

#### *Irrigation in agriculture*

Estimates for water demand for irrigation purposes range between 743 million m<sup>3</sup>/y and 1,040 million m<sup>3</sup>/y. About 450 million m<sup>3</sup>/y is directly abstracted from rivers and streams (i.e. not via reservoirs). Use of underground waters for irrigation is limited (about 3 per cent of the total). These figures are not, however, based on actual monitoring of volumes abstracted for irrigation purposes.

Around 626 reservoirs with a designed capacity of 560 million m<sup>3</sup> are used for irrigation. Due to erosion and alluvium, their real water retention capacity has been reduced to approximately 290 million m<sup>3</sup>.

#### *Fisheries*

This sector refers to aquaculture and recreational fishing. About 47 per cent of the total fish catch is of marine origin; inland waters account for 35 per cent, coastal waters 12 per cent and lagoons 5 per cent. There are around 100 aquaculture operations for trout cultivation in mountain streams and rivers.

#### *Recreation and tourism*

The Albanian coast accommodates major tourist resorts, but Lakes Ohrid, Prespa and Shkodër are also important destinations. Recreation and tourism require

"good bathing water quality". Furthermore, tourists impose demands on potable water, not only for drinking but also for showering and flushing toilets, for example. They will produce sewage accordingly.

#### *Households*

The drinking water supply comes mainly from natural springs and underground water sources (83 per cent), except that the Tirana metropolitan area gets a portion of its supply from the Bovilla reservoir, and the Maskuria reservoir takes water from Lake Maskuria to supply the Kavaja Touristic Area (Golem and part of the Durrës beach area).

In 2015, the water supply and sanitation (WSS) companies provided water supply services to 81 per cent of the population in their areas, covering 90 per cent of the population in urban areas and 63 per cent in rural areas.

In 2014, the average capacity of the exploited water sources was estimated at 484 million m<sup>3</sup> and the total water volume produced was 274 million m<sup>3</sup>. The estimated population water demand – based on a daily norm per capita demand of 150 litres/capita/day and an allowance of 20 per cent water losses – was calculated to be 218 million m<sup>3</sup>/y. Excluding the fixed 20 per cent water losses, national household demand was estimated to be 176 million m<sup>3</sup>/y.

Accordingly, in 2014 the total available water for all WSS utilities exceeded the national demand in their service areas by 25 per cent (including an allowance of 20 per cent water losses) and the national demand from customers served by more than 50 per cent. However, although indicating that water is not scarce, this is an average consideration; furthermore, there are differences between WSS companies. Water losses are generally high to very high in most of the utilities.

#### *Ecosystem functioning*

Healthy functioning of (aquatic) ecosystems is considered the pinnacle of water resources management. With regard to water quality, anthropogenic water uses/functions are safeguarded with the sound functioning of aquatic ecosystems. With regard to water quantity, however, "ecological demands" might conflict with anthropogenic water uses.

The Law on Integrated Water Resources Management No. 111/2012 establishes that ecological flows cannot be less than the "Q355" discharge (i.e. a low-flow index that indicates the streamflow that is equalled or exceeded 355 days in a year, on average).

The EU Guidance Document No. 31 "Ecological flows in the implementation of the Water Framework Directive" indicates that such "static criteria" might not suffice, however. Actually, required ecological flows – supporting the healthy functioning of aquatic ecosystems – can even differ between different segments of rivers and lakes/reservoirs. This has finally to be determined through monitoring and assessment of the relevant biological quality elements, such as benthic invertebrate fauna, phytoplankton, phytobenthos, macrophytes and fish.

#### 7.4 Performance and gaps in water monitoring networks

The principles underlying the monitoring and assessment of "water status" under the WFD are relevant benchmarks, particularly because Albania has been granted EU candidate status.

##### *Rivers*

In 2015, basic physico-chemical parameters were routinely monitored four times per year at 34 sites.

As of early 2017, the NEA laboratory is having its equipment (atomic absorption spectrometer – AAS, and gas chromatograph/mass spectrometer – GC/MS) prepared and its methods accredited for analysis of a selected number of WFD priority substances: heavy metals, organochlorine pesticides and polycyclic aromatic hydrocarbons. However, the analysis of Priority substances is expensive, while the NEA already has difficulties financing water monitoring in the framework of the current monitoring programmes.

Biological quality elements, such as benthic invertebrate fauna, phytoplankton, phytobenthos, macrophytes and fish, are not yet routinely monitored. Establishing schemes for the classification of ecological status requires many field data. Assessment of ecological status is arguably the most complicated challenge for surface water monitoring programmes. Since Albania has to start from scratch, establishing WFD-compliant schemes for (type-specific) classification of the ecological status of surface water bodies could easily take 6–10 years.

Parameters such as water temperature, dissolved oxygen, BOD<sub>5</sub>, NH<sub>4</sub>, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub> and P<sub>total</sub> are basic but relevant. They are significant parameters supporting biological quality elements, which, furthermore, can be linked with primary sources of pollution, such as discharges of untreated and treated wastewater. Preparation of a first generation of river basin management plans (RBMPs) with a focus on basic physico-chemical quality parameters would be

justifiable, mainly because of the anticipated complications with monitoring and assessment of chemical status and ecological status.

Preparation of first generation RBMPs – including characterization of surface water body types in accordance with Annex II of the WFD – can, furthermore, reveal potential numbers of required monitoring sites. Most likely, (substantially) more than 34 monitoring sites will be needed for the preparation and implementation of RBMPs.

Monitoring four times per year may not be sufficient for capturing the dynamics of river water quality and determining trends, notably for seasonally varying parameters; at least monthly sampling should prevail.

Hydrological (and meteorological) data are also relevant in the framework of, for example, water allocation, flood forecasting, drought management, ecological flows and climate change. With 121 monitoring posts, the hydrological network is already quite dense. Other hydromorphological quality elements are not yet monitored. Other complications include:

- Data collected at the bulk of the stations are submitted monthly as hard copy and not systematically entered into electronic systems (e.g. databases); thus rendering these data nearly non-operational;
- Q<sub>h</sub> rating curves (linking river water levels with river flows) are out of date.

##### *Lakes and reservoirs*

The major gap in the monitoring of lakes is the lack of measurements of biological parameters (chlorophyll-a is a rather generic indicator for algae/phytoplankton). Only the three major lakes (Ohrid, Prespa and Shkodër) are currently subject to routine water quality monitoring. The ambient water quality of reservoirs or artificial water bodies is not yet routinely monitored.

##### *Transitional and coastal waters*

Albania does not conduct ambient monitoring of transitional waters (except for the Butrint Lagoon) and coastal waters.

##### *Groundwater*

The currently monitored physico-chemical quality elements are adequate. However, heavy metals are not routinely analysed, due to a lack of financial resources. Organic micropollutants, such as pesticides and polyaromatic hydrocarbons, are not yet analysed, due

to the lack of required equipment in the laboratory of the Albanian Geological Service.

Groundwater levels are measured only while visiting the sites for sampling, thus two to four times per year. This is too low a frequency for assessing the dynamics of groundwater levels. Groundwater levels are preferably monitored with data loggers, which can often also measure, for example, water temperature and electric conductivity, but this is currently not practised in Albania for ambient groundwater monitoring.

The current groundwater monitoring network may not be representative for groundwater bodies delineated and characterized in line with the WFD. Most likely, more monitoring sites are to be anticipated.

#### *Drinking water supply*

The monitoring programme for the piped drinking water supply is adequate. The major gap is the lack of monitoring of drinking water quality from private/local wells in rural areas.

#### *Bathing waters*

The programme for monitoring the quality of bathing waters along the coast is adequate. However, bathing waters along the lakes (e.g. in Lake Ohrid at Pogradec) are not subjected to quality monitoring.

## 7.5 Water use

### *Households*

The population served by utilities is around 90 per cent in urban areas (table 7.3). The water coverage in rural areas increased from 57 per cent in 2011 to 63 per cent in 2015. The water coverage in both urban and rural areas in 2015 lags behind the objectives stipulated in the National Strategy of Water Supply and Sewerage for the period 2011–2017.

During the period 2010–2015, the average availability of continuous water supply increased from 11 to 12 hours per day. There are significant differences between agglomerations, however; in 2015, for example, supply was 24 hours/day in Korçe, 11 hours/day in Tirana and 7 hours/day in Durrës.

On average, 67 per cent of the produced drinking water is "non revenue" (box 2.1).

The average metering ratio (proportion of metered connections/customers as a percentage of the total number of connections/customers) increased substantially, from 45 per cent in 2010 to 64 per cent in 2015. This indicator is important because it directly affects the quality of service to customers, as well as the results of some other indicators such as non-revenue water. By increasing the level of measurement, the accuracy of the non-revenue water indicator is increased.

**Photo 7.1: Equipment for continuous water supply**



**Table 7.3: Performance of the WSS sector, 2010–2015, vis-à-vis the objectives of the National Strategy of Water Supply and Sewerage for the period 2011–2017**

Performance indicator	2010	2011	2012	2013	2014	2015	Strategy 2011-2017 objectives		
							2015	2016	2017
Water coverage (%)	80.3	80.8	80.8	80.8	80.8	81.0			
Urban	90.7	90.7	89.4	88.2	89.5	90.4	95.0	96.0	98.0
Rural	57.2	57.4	59.5	62.6	61.8	62.6	79.0	82.0	85.0
Hours of supply (hours/day)	11.1	10.9	10.8	11.5	12.1	12.1	16.0	18.0	20.0
Non-revenue water (%)	63.2	63.5	67.1	67.4	67.2	67.0			
Metering ratio (%)	44.6	50.6	55.1	59.0	61.2	64.0			
Sewerage coverage (%)	50.0	50.8	51.0	51.0	51.0	50.0			
Urban	83.0	..	..	..	..	..	86.0	87.0	87.0
Rural	10.9	..	..	..	..	..	25.0	35.0	45.0

Sources: National Strategy of Water Supply and Sewerage for the period 2011–2017; Regulatory Authority of the Water Supply and Waste Water Disposal and Treatment Sector, Report on the Performance of the Water Supply and Sewerage Companies (separate reports published for the years 2011 through 2015).

The overall sewerage coverage<sup>8</sup> remained about 51 per cent. There is a significant difference between urban and rural areas. In 2010, the sewerage coverage of urban areas was 83 per cent and rural areas 11 per cent.

In 2011, two urban wastewater treatment plants (UWWTPs) were operational, in Kavaja and Pogradec. Through to 2015, three more UWWTPs were put into operation: in Durrës, Korca and Shkodër. By 2016, Albania has built – with donor support – eight UWWTPs, with a capacity covering around 25 per cent of the country's urban population. However, lack of financial capacities and limited technical capacities rendered three of them idle, with unclear long-term operational arrangements. More UWWTPs are under construction, for example for Tirana.

Demographic features in Albania include:

- A decrease in total population, from 3.06 million inhabitants in 2001, to 2.91 million in 2011 and 2.89 million in 2015;
- Urbanization; the population composition shifted from 43 per cent urban and 57 per cent rural in 2001, to 54 per cent urban and 46 per cent rural in 2011.

Whereas the declining population trend seems to have stopped, urbanization will most likely continue throughout the coming decade. Therefore, urban WSS demands are expected to increase.

The 2016 World Bank report "Albania Water Supply and Sanitation Sector Financing Strategy" has elaborated three scenarios for further development of

WSS in Albania until 2040. All three scenarios include an ambitious programme of efficiency improvements comprised of enhanced energy use efficiency, staff and other operational efficiency, collection efficiency and decreases in non-revenue water. Scenarios 1 and 2 are more optimistic in terms of expected achievements. However, the World Bank report considers only Scenario 3 to be feasible, in the sense that it provides service-level improvement and stays within internationally accepted parameters for tariff levels while within a realistic level of investment funding (table 7.4).

The 2016 World Bank report concluded that there are important shortcomings in securing effective and efficient water supply and sanitation in Albania, including: (i) severe underinvestments in infrastructure in the past decades; (ii) high non-revenue water; (iii) low cost recovery and low metering coverage; (iv) intermittent supply in many cities; (v) limited coverage outside cities; (vi) utility-scale inefficiencies; and (vii) limited levels of wastewater collection and treatment.

Disposal of MSW is a concern that can also affect the quality of surface water and groundwater.

### *Agriculture*

Irrigation is the major agricultural water use.

The designed capacity of 626 reservoirs used for irrigation purposes is 560 million m<sup>3</sup>, but their actual water retention capacity has been reduced to approximately 290 million m<sup>3</sup> (due to erosion and

<sup>8</sup> Proportion of the population in a utility's service area to whom sewage disposal, but not necessarily treatment, services are offered.



alluvium). Furthermore, 410 of the 626 dams have significant technical damage that needs attention to ensure dam safety and availability of water for irrigation. Approximately 200,000 ha of irrigated area requires infrastructure rehabilitation, including, inter alia, silt removal from the irrigation canals and replacement of virtually all pumping stations used for irrigation purposes. In the early 1990s, more than 300,000 ha of irrigation systems and 153,000 ha of drainage systems disintegrated due to lack of investment, insufficient budget for operations and maintenance, and an unclear management framework. In addition, performance was weak as systems were designed at 70 per cent efficiency; actual efficiency estimates vary between 30 and 60 per cent.

Estimates for water demand for irrigation purposes range from 743 million m<sup>3</sup>/y to 1,040 million m<sup>3</sup>/y. However, there are no statistics for actual irrigation water demands.

### Industry

In Albania, small and medium-sized enterprises (SMEs) normally discharge their wastewater into the urban sewerage system. Besides discharges of treated and untreated wastewater, there are more potential impacts of industries. Abandoned industrial sites can still be significant pollution hotspots in Albania.

However, there are no official data on amounts of water used by this sector, nor for the quantity/quality of discharged wastewater.

**Table 7.4: Expected WSS indicators 2020–2040 according to World Bank Strategy Scenario 3**

Indicator	Base Year 2014	Objectives		
		Short Term 2020	Mid-Term 2027	Long Term 2040
Water supply coverage (%)	62			
Urban	89	92	97	99
Rural	36	50	75	90
Continuity (hours of supply/day)	13	18	20	24
Non-revenue water (%)	67	45	30	25
Metering connections (%)	58	80	100	100
Sewerage coverage (%)	36			
Urban	63	65	75	99
Rural	6	15	40	75
WWTP coverage (%)				
Urban	12	25	97	99
Rural	0	0	40	75

Source: World Bank, "Albania Water Supply and Sanitation Sector Financing Strategy", June 2016.

**Photo 7.2: Sanitation facility in rural Albania**



### *Mineral extraction*

The mining and quarry sector uses surface water and/or ground water for technological processes, but there are no official data on the amounts used in Albania.

Sand and gravel excavations (exact locations and magnitudes are not yet known for Albania) can affect the morphology of rivers. This can have impacts on flow regimes (including bank erosion) and on aquatic ecosystems.

### *Energy*

Nearly, 100 per cent of the Albania's domestically produced electricity comes from hydropower. Albania has big hydroenergetic potential, of which only 33 per cent is used so far. Nevertheless, during the period 2011–2015, between 10 and 40 per cent of the available electricity was imported (varying, inter alia, according to the annual domestic production). Losses account, on average, for some 35 per cent of the total available electricity.

The cascades of big hydropower plants (HPPs) are situated within the Drini, Mati and Vjosa River basins. There are, furthermore, about 70 small HPPs, of which 38 are currently operational.

One of the key issues is hydropower development in protected areas. No cumulative impact assessment of HPPs in protected areas was made. There are also cases in which licences for HPPs were given before the issuance of an EIA report or when the EIA report was not taken into account when issuing a licence.

### *Tourism*

Throughout 2011–2015, there were, on average, 334,000 foreign tourists per year. Assuming that a reasonable estimated water consumption would be 150 litres per tourist per day and that foreign tourists spend 14 days per vacation, total foreign tourist water consumption would be of 0.7 million m<sup>3</sup>/y.

### *Floods and droughts*

Flooding, as well as droughts, are recurrent events in Albania. Flooding has worsened in recent decades

because of deforestation, overgrazing and erosion, combined with a lack of maintenance of drainage canals and pumping stations, as well as reservoir operation regimes.

Albania is among the countries exposed to climate change that will experience impacts on its water resources, including the magnitude and frequency of catastrophic flooding events. Droughts in summer and flooding in winter are expected to be exacerbated as a result of climate change. In the context of extreme weather events, it needs to be mentioned that more than 80 per cent of the potable water supply is abstracted from groundwater resources.

## **7.6 Impact from and adaptation to climate change**

The average annual rainfall is 1,485 mm/y. The average annual rainfall in mountainous zones is 3,000 mm/y and in the western lowlands it is 1,000 mm/y. Seventy per cent of rainfall falls between October and March, especially during November; July and August have the least rainfall. Eighty-six per cent of the rivers' discharges occur between October and May.

### *Impact from climate change*

Climate change scenarios for Albania indicate overall decreases in precipitation and increases in air temperature (table 7.5). Despite the total precipitation being expected to decrease, an increase of intensive rain episodes is also likely. Besides inland impacts of climate change, Albania is also facing an expected rise in the sea level.

Because of the anticipated overall combination of increased air temperatures, decreased precipitation and increased sea levels, the 2016 Third National Communication on Climate Change also pays specific attention to Albania's coastal area (of course, without ignoring potential impacts further inland). Albania's coastal zone encompasses substantial territories of national importance, from the social, economic and ecological points of view, among others. About one third of the total population inhabits the coastal area; approximately 80 per cent of tourists visiting Albania are concentrated there and in the capital, Tirana, and it contains several important Ramsar (wetland) sites.



**Table 7.5: Anticipated changes of precipitation and air temperature under climate change scenarios**

Season	2025		2050	
	Precipitation (%)	Temperature (°C)	Precipitation (%)	Temperature (°C)
Annual	-3.4 to -2.6	0.8 to 1.1	-6.9 to -5.3	1.7 to 2.3
Winter	-1.8 to -1.3	0.7 to 0.9	-3.6 to -2.8	1.5 to 1.9
Spring	-1.2 to -0.9	0.7 to 0.9	-2.5 to -1.9	1.4 to 1.8
Summer	-11.5 to -8.7	1.2 to 1.5	-23.2 to -17.8	2.4 to 3.1
Autumn	-3.0 to -2.3	0.8 to 1.1	-6.1 to -4.7	1.7 to 2.2

Source: Albania's Second National Communication to the Conference of Parties under the United Nations Framework Convention on Climate Change (2009).

**Photo 7.3: Ishem River pollution by construction waste**

For the country as a whole, potential impacts of climate change in Albania's water sector include:

- There will be a reduction in the long-term average annual and seasonal runoff;
- Riverine flood risks will generally increase, with the time of greatest risk moving from spring to winter;
- The groundwater supply will be affected by decreased percolation of water due to a decrease in the amount of precipitation and stream flow, and loss of soil moisture due to increased evapotranspiration;
- Sea-level rise can cause several direct impacts, including inundation and displacement of wetlands and lowlands, coastal erosion, increased storm flooding and damage, increased salinity in estuaries and coastal aquifers, and rising coastal water tables.

Reduced runoff implies reduced rivers' discharges and therewith less available fresh surface water resources. Then again, nowadays reservoirs also provide buffer capacities.

Reduced recharges of aquifers imply less available groundwater resources and lower groundwater tables. However, the estimated volume of groundwater appears not to be limiting, although potential occurrences of regional/local scarcity cannot be excluded.

#### *Adaptation to climate change*

Comprehensive strategies for coping with anticipated impacts of climate change are addressed in the Third National Communication on Climate Change, the National Strategy for Integrated Water Resources

Management and the National Sectoral Programme, among other documents.

However, related, proactive measures are yet to be examined (let alone agreed and implemented). Underlying questions include, for example: (i) how to cope with increasing the number of reservoirs to extend the national potential for hydropower generation and/or irrigation demands, when reservoirs are notorious (potential) "hydromorphological pressures" on aquatic ecosystems, and (ii) should flooding risks be anticipated by heightening dikes along flood-prone stretches, creating/extending riparian "buffer zones" and/or steering the operating regimes of reservoirs?

In the future, RBMPs are expected to settle the balance between water demands and uses.

### 7.7 River basin management and management of coastal areas

The Law on Integrated Water Resources Management No. 111/2012 has provided the legal umbrella for establishing integrated – WFD-compliant – river basin management. However, its actual implementation also depends on further preparation and adoption of secondary legislation. For example, the draft DCM on classification of waters according to their chemical and ecological, quantitative and qualitative status is crucial, but has still not been adopted as at early 2017. Similarly, adoption of the draft DCM on content, development and implementation of the national strategy on water, river basins management plans and flood risks management plans is also pending.

The first RBMP was prepared for the Mati River basin and issued in September 2010. Despite being adopted, it has not yet been implemented accordingly. Further RBMPs are under development for the Drini-Buna, Semani, and Shkumbini River basins.

However, apart from supporting legal arrangements, the river basin councils and their supporting river basin agencies are limited because of the capacities required for planning and implementation of integrated RBMPs. Their main activities are merely focused on the preparation of permits for use of water resources (abstraction as well as discharge) and supervising their implementation.

To date, Albania has not prepared integrated coastal zone management plans. Major threats for Albania's coastal areas include erosion, overfishing, pollution and potential impacts of climate change.

## 7.8 Legal, policy and institutional framework

### *Legal framework*

The Law on Integrated Water Resources Management No. 111/2012, in force since December 2013, enabled integrated water resources management (IWRM) as well as transposition of the WFD. Implementation of the WFD requires/implies further legal arrangements. Several provisions have already been settled via subsidiary legislation, but others are still pending. For example, transposition of the several related directives is still at an early stage, including the Directives 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources, 2007/60/EC on the assessment and management of flood risks, and 2008/56/EC establishing a framework for community action in the field of marine environmental policy.

The Law on Environmental Treatment of Wastewater No. 9115/2003 was amended in 2013 to revise the size of penalties for administrative offenses such as e.g. uncontrolled wastewater discharges or failure to install wastewater treatment facilities.

### *Policy framework*

Approximation of the EU's environmental acquis is an important driving factor for Albania, which is simultaneously aiming at achieving IRWM.

Implementation of the 2011 National Strategy of Water Supply and Sewerage for the period 2011–2017 did not manage to achieve its goals in 2015 (table 7.3). The 2016 National Action Plan for Renewable Energy Resources 2015–2020 envisages that nine medium and large HPPs, with a designed capacity of 385 MW, will be under construction, or envisaged. Since 2014, about 120 concession contracts for HPPs were submitted (110 have been already approved and 10 are in the final stage of discussion) with a total installed designed capacity of 1,740 MW. This includes 112 contracts for small HPPs with an installed designed capacity of 839 MW. As comparison, the installed capacity of the existing small HPPs until 2006 was 25 MW.

### Draft policy documents

The draft national strategy for integrated water resources management designed for the period 2017–2027 (chapter 1) aims to address and guide policies, as well as to stimulate operational and investment developments across all sectors over a 10-year time frame. It does not define detailed actions for all specific water sectors, but includes an overall action

plan that serves as the framework and sets the overall strategic direction, setting conditions for other water-sector-related strategies. As of early 2017, the document has been disseminated among stakeholders for consultation.

The draft national sector programme for water (chapter 1) contains a proposal for the strategic measures of an institutional, legal, planning and operational nature for the period 2017–2027. The

document still needs to be finalized, prior to dissemination among stakeholders for consultation.

These two draft documents were developed in parallel. Their contents are largely complementary.

*Sustainable Development Goals and targets relevant for this chapter*

Albania's current position vis-à-vis Goal 6 and target 3.9 is described in box 7.1.



### Box 7.1: Goal 6 and target 3.9 of the 2030 Agenda for Sustainable Development



#### **Goal 6: Ensure availability and sustainable management of water and sanitation for all**

Overall, Goal 6 is highly relevant for Albania as the country still faces huge difficulties with providing water supply and sanitation to all and is at the very start of implementing IWRM. While the primary legal and policy framework for water resources management is in place, secondary legislation still needs to be developed for many aspects, and practical implementation lags behind, requiring stronger institutional cooperation, as well as investments.

#### **Target 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all**

According to the 2016 World Bank report "Albania Water Supply and Sanitation Sector Financing Strategy", under the most realistic scenario, drinking water supply coverage would reach 97 per cent in urban areas and 75 per cent in rural areas by 2027, and 99 per cent and 90 per cent respectively by 2040. Nevertheless, setting ambitious national targets would be an important measure to drive progress in this area.

#### **Target 6.2: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations**

According to the 2016 World Bank report "Albania Water Supply and Sanitation Sector Financing Strategy", under the most realistic scenario, sewerage coverage would be 75 per cent in urban areas and 40 per cent in rural areas by 2027, and 99 per cent in urban areas and 75 per cent in rural areas by 2040. Nevertheless, setting ambitious national targets would be an important measure to drive progress in this area.

Open defecation is not an issue for Albania. Even in rural areas, people not yet connected to sewerage systems have access to outhouses (latrines).

#### **Target 6.3: By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally**

Envisaged policies (such as the 2011 National Strategy of Water Supply and Sewerage for the period 2011–2017 and the draft national sector programme for water) and measures (investments in wastewater treatment, including construction of new UWWTPs) would most likely result in reaching this target, if properly implemented.

#### **Target 6.4: By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity**

Current monitoring programmes and reporting to the Institute of Statistics do not allow for accurate assessment of water abstraction and use by sectors. Thus, it is not possible to substantiate this target. Water-use efficiency in the agriculture, industry, mining and quarrying, and energy sectors is not sufficiently addressed in national policy documents.

#### **Target 6.5: By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate**

This target is feasible, albeit IWRM implementation is currently a point of concern. The first RBMP was prepared for the Mati River basin in September 2010. Although being adopted, it has not yet been implemented accordingly. Further RBMPs are still under development for the Drini-Buna, Semani and Shkumbini River basins. The river basin councils and their supporting river basin agencies are limited by the capacities required for the planning and implementation of IWRM. Currently, their

activities focus on the preparation of permits for use of water resources and supervising their implementation. The transboundary cooperation aspect of target 6.5 is addressed in box 4.3.

**Target 6.b: Support and strengthen the participation of local communities in improving water and sanitation management**

Responsibilities for water supply and sanitation are assigned to the municipalities. River basin councils are the mechanisms to ensure the participation of local communities in water management. Legal and institutional mechanisms are already in place and anticipated to have better effect while further developing and implementing RBMPs in compliance with the WFD. The availability of financial means to perform these tasks is an important aspect of meeting the target.

**Goal 3: Ensure healthy lives and promote well-being for all at all ages**

**Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination**

In respect of illnesses from water contamination, available statistics related to water-borne diseases for 2013–2015 refer to bacillary dysentery and indicate that one case occurred in 2014 and another in 2015. No cases of cholera, enterohaemorrhagic *E. coli*, viral hepatitis A or typhoid fever were registered in the same period.

*Institutional framework*

Several changes occurred throughout the period 2011–2017. In February 2015, the Department of Water Resources Policy together with six river basin agencies and the State Water Inspectorate was transferred from the then Ministry of Environment to the then Ministry of Agriculture, Rural Development and Water Administration. Responsibilities for WSS were assigned to the 61 new municipalities through DCM No. 63 dated 01.27.2016 "On the reorganization of operators that provide drinking water supply, collection, removal and treatment of wastewater services". In September 2017, the Ministry of Agriculture, Rural Development and Water Administration was transformed into the Ministry of Agriculture and Rural Development. The responsibilities for water management stayed with this Ministry but a further reform is envisaged to establish a separate agency for water resources management in 2018.

National Water Council

The National Water Council is the central lead body in the water resources sector. It represents a high-level interministerial forum for water planning and management in an integrated manner, presided over by the Prime Minister.

The Technical Secretariat is the executive body of the National Water Council. Its activities include the design and development of the total integrated water system, as well as monitoring and guaranteeing the effective operation of the integrated management of this system.

Integrated Water Management Group

The Integrated Policy Management Group on Water is one of the four integrated policy management groups (IPMGs) that were established in September 2015 to manage cross-cutting and complex sector policies that require a substantial degree of horizontal cooperation (chapter 1).

The Integrated Water Management Group is presided over by the Prime Minister. Its members are ministers responsible for a specific area of the water sector, as well as representatives of donors operating within the country. This body primarily aims at coordinating work and directing the development and monitoring of reforms in the water sector, through the development of a national sectoral programme.

Four thematic subgroups were established to assist the Integrated Water Management Group, pursuant to the decision of the National Water Council No. 4 dated 15.12.2015 on the organization and the functioning of the thematic subgroups in the field of the integrated management of water: Water for People; Water for Food; Water for the Environment; and Water for Industry. As of early 2017, the Technical Secretariat of the National Water Council acts as the secretariat of the Integrated Water Management Group.

Ministry of Agriculture and Rural Development

The Ministry of Agriculture and Rural Development (prior to the institutional restructuring of September 2017, the Ministry of Agriculture, Rural Development and Water Administration) is responsible for developing and implementing policies and strategies in the sectors of irrigation, flood protection infrastructure, and fishing and aquaculture, as well as water resources management, including inland, groundwater and maritime waters.

Six river basin councils, comprising the local authorities, are responsible for the management of water resources in the respective basins. Each council consists of 9–19 members, representing various institutions involved in water issues for the particular basin. They are directed by the prefect, who has a key role at the local level in planning civil emergency and crisis management within the relevant administrative boundaries, i.e. the district. The river basin council's main responsibility is to organize and coordinate emergency plans and implement the measures defined.

Six river basin agencies act as the executive bodies of the river basin councils. They are responsible for drafting the water resources use inventory, in quality and quantity, and producing periodical update reports for the river basin councils.

Prior to the institutional restructuring of September 2017, the State Water Inspectorate (DCM No. 386 dated 6.05.2015 "On the establishment and organization and structuring of the State Water Inspectorate") under the then Ministry of Agriculture, Rural Development and Water Administration dealt with inspection of water resources and appropriate measures in the case of illegal water users or those who violate the terms of the relevant licence to use the water source. In November 2017, the State Water Inspectorate was integrated into the new State Inspectorate of Environment, Forestry and Water.

As of early 2017, 13 drainage boards were responsible for the use and maintenance of the irrigation and drainage system and for every waterworks for flood protection within their area of operation, to remove excess water and prevent the accumulation of water and floods. Furthermore, these boards were to undertake specific tasks related to the monitoring, maintenance and repair of dams that were part of irrigation systems. Following the adoption of the Law on Irrigation and Drainage Administration No. 24/2017, four irrigation and drainage directorates were established in the regions of Lezha, Korça, Fieri and Durrësi in May 2017. The new directorates will be responsible for the management of 22 primary main irrigation channels serving more than one municipality, seven big reservoirs, main drainage channels, flood protection works and 27 drainage pumping stations. In addition, there are irrigation and drainage units established by municipalities that are responsible for the management of irrigation infrastructure transferred to them.

#### Other ministries

The Ministry of Tourism and Environment is responsible for developing and implementing policies

and strategies aiming at environmental protection, sustainable use of natural resources, encouragement and promotion of renewable energy sources, conservation of nature and biodiversity, monitoring of water quality and climate change. The NEA is the core institution subordinated to the Ministry responsible for implementing the national programmes of environmental monitoring – including water resources – and for drafting of the annual SoER. The NEA (sub)contracts other institutions to conduct field measurements of groundwater and surface waters.

The Ministry of Health and Social Protection is responsible for developing and implementing policies and strategies concerning the quality of drinking water and bathing waters. Its subordinated Institute of Public Health is responsible for monitoring the quality of drinking water (both at abstraction sites and "at the tap") and of bathing waters.

The Ministry of Infrastructure and Energy is playing a key role in electrical energy production from HPPs and also in industrial water use. Its subordinate institutions involved in water issues include the Albanian Geological Service, the responsible institution for monitoring ambient conditions of groundwater, and the National Agency of Natural Resources, which is instrumental in the development/surveillance of rational exploitation of natural resources.

#### Other institutions

The Institute of Geosciences, Energy, Water and Environment of the Ministry of Education, Sports and Youth is responsible for monitoring surface waters in terms of quality and quantity and carrying out various studies in relation to the water flow, precipitation and flood prevention.

The Regulatory Authority of the Water Supply and Waste Water Disposal and Treatment Sector is an independent authority, in charge of setting tariffs (for drinking water and sanitation), for licensing of water supply and sanitation companies, and for monitoring their performance.

Local government units represent both end consumers and suppliers. The Law on Organization and Operation of Local Government No. 8652/2000 provided that the supply of drinking water and operation of sewerage systems were exclusively within the competence of local governments. These are further stated as the exclusive competences of municipalities in the Law on Local Government No. 139/2015.

Responsibilities for dam safety

Supervision and maintenance of irrigation-related reservoirs/dams is the responsibility of the Ministry of Agriculture and Rural Development.

At a ministerial level, reservoirs/dams dedicated to hydropower generation are under the auspices of the Ministry of Infrastructure and Energy. However, specific responsibilities are delegated to the actual operators of HPPs.

Actual data for operating reservoirs (notably, volumes of waters released) – if they exist – are not shared, for example, with the Institute of Geosciences, Energy, Water and Environment. The Institute does need such data, for instance for flood forecasting, calculating water balances and monitoring the potential impacts of climate change.

Responsibilities for transboundary cooperation

A Special Commission for the Management of Transboundary Waters is responsible for the high-level discussion of issues related to transboundary waters.

*Participation in transboundary water cooperation*

Albania ratified the Convention on the Protection and Use of Transboundary Watercourses and International Lakes in 1994 and the Protocol on Water and Health in 2002. In 2014, it acceded to the amendments to Articles 25 and 26 of the Convention.

Albania has bilateral transboundary water agreements with Greece, Montenegro and the former Yugoslav Republic of Macedonia (chapter 4).

The Agreement on the Protection and Sustainable Development of the Prespa Park Area, involving Albania, the former Yugoslav Republic of Macedonia and Greece, was signed in 2010 (chapter 4). It enters into force in 2017.

In 2011, Albania, Greece, Kosovo,<sup>9</sup> Montenegro and the former Yugoslav Republic of Macedonia signed a Memorandum of Understanding for the Management of the Extended Transboundary Drin Basin, "The Drin: A Strategic Shared Vision". Activities are ongoing for the implementation of the Memorandum, with support from GEF under the project Enabling Transboundary Cooperation and Integrated Water

Resources Management in the extended Drin River Basin.

**7.9 Assessment, conclusions and recommendations***Assessment*

Available monitoring data and assessment criteria do not yet allow for a comprehensive assessment of the environmental state of water bodies. Generally, most of the rivers are polluted in their middle/lower reaches, largely due to the discharges of treated and untreated wastewater. This implies that those river sections will not comply with the WFD criteria for "good" status. Reservoirs – used for irrigation, hydropower and/or drinking water supply – impose hydromorphological pressures, while having to be approached as "heavily modified or artificial surface water bodies". However, there are no monitoring data for substantiating the state and impacts of reservoirs. Lakes Ohrid, Prespa and Shkodër are, possibly, at risk of not achieving the WFD criteria for "good" status. Most groundwaters appear to be still of good quality, although there are insufficient monitoring data to assess their possible pollution with pesticides or heavy metals, among other things.

Since 2011, Albania progressed with adjusting its legislation to meet the requirements of integrated water resources management, simultaneously approximating the environmental policies of the EU. Milestones include the adoption of the Law on Integrated Water Resources Management No. 111/2012 and its subsidiary legislation, such as the regulation on drinking water quality (DCM No. 379 dated 25.05.2016), the list of priority substances in aquatic environments (DCM No. 267 dated 07.05.2014) and the environmental quality norms for surface waters (DCM No. 246 dated 30.04.2014). However, secondary legislation to implement the WFD is still lacking. Transposition of several water-related EU Directives is still in an early stage.

Albania keeps adjusting its institutional structures in order to find optimal solutions for integrated water resources management.

*Conclusions and recommendations*Enhancement of water monitoring

The current monitoring data on the quality (including the WFD's "ecological status") and quantity

<sup>9</sup> References to Kosovo shall be understood to be in the context of Security Council resolution 1244 (1999).



(including the WFD's "hydromorphological status") of water resources are insufficient. Monitoring and assessment of the state of water resources is required not only for preparing RBMPs but also for tracking the results of implementation of programmes of measures. Furthermore, water management has to take into account flood protection and climate change.

The NEA and the Albanian Geological Service do not have laboratories equipped with all the analytical instruments, methods and consumables required for analysis of water samples for the assessment of the chemical status of surface water and groundwater bodies. Their respective staff capacity and expertise for monitoring and assessment are not yet aligned with WFD requirements. The Albanian Geological Service does not have data loggers for monitoring groundwater levels. The Institute of Geosciences, Energy, Water and Environment is not able to retrieve and store all its hydrological and meteorological monitoring data in unified databases and to update the  $Q_h$  rating curves for all rivers.

Recommendation 7.1:

*The Government should allocate adequate budgets for enabling monitoring and assessment of the status of surface water, coastal water and groundwater bodies, in line with the European Union Water Framework Directive (WFD) requirements.*

WFD-compliant classification schemes

Assessment of WFD-compliant ecological status is arguably the most complicated challenge for surface water monitoring programmes. Monitoring of biological quality elements is not yet routinely performed, while establishing classification schemes requires many field data. Since Albania has to start from scratch, establishing WFD-compliant classification schemes could easily take 6–10 years.

Water bodies have not been identified, delineated and characterized in accordance with WFD Annex II. The NEA, Albanian Geological Service and Institute of Geosciences, Energy, Water and Environment have not yet developed WFD-compliant classification schemes.

Recommendation 7.2:

*The Government should prepare WFD-compliant schemes for assessment of the status of surface water, coastal water and groundwater bodies.*

River basin management plans

Fully fledged WFD-compliant monitoring and assessment of the status of water bodies is deemed not to be feasible in the short to medium term. Nevertheless, a useful first generation of RBMPs can be developed, with a preliminary focus on general physico-chemical quality elements and generic water quantity requirements. Of key interest are, notably, the formulation, reaching of consensus and actual implementation of programmes of measures. Furthermore, by focusing on these, the robustness of the legal and institutional settings can be tested. The first RBMP was prepared for the Mati River basin in 2010, but it has not yet been implemented. RBMPs are under development for the Drini-Buna, Semani and Shkumbini River basins. The lack of RBMPs prevents Albania from progress towards achieving target 6.5 of the 2030 Agenda for Sustainable Development.

Recommendation 7.3:

*The Government should develop and implement river basin management plans compliant with the WFD.*

Water supply and sewerage

Implementation of the National Strategy of Water Supply and Sewerage for the period 2011–2017 is behind its scheduled targets. Meanwhile, the 2016 World Bank report "Albania Water Supply and Sanitation Sector Financing Strategy" underlines the difficulties in reaching ultimate water supply and sewerage targets. The adoption and implementation of a strong policy framework to support further progress on water supply and sewerage is crucial for Albania to make progress towards the achievement of targets 6.2 and 6.3 of the 2030 Agenda for Sustainable Development.

Recommendation 7.4:

*The Government should:*

- (a) *Ensure the adoption of a strong policy framework to support further progress on water supply and sewerage following the expiration of the National Strategy of Water Supply and Sewerage for the period 2011–2017;*
- (b) *Based on analyses of administrative reform, elaborate a strategy for water utilities to ensure that they are able to cover the relevant costs, while also taking into account social concerns.*

## WASTE AND CHEMICALS MANAGEMENT

### 8.1 Practices and trends in waste management

#### *Municipal solid waste and similar waste*

##### Generation and collection

The local authorities are obliged to organize municipal solid waste (MSW) collection and provide data to the relevant bodies of the Government. The collection of MSW is provided in most cities and towns, but significant part of rural areas do not have an official collection system in place.

The data collection on MSW generation and treatment is based on reports of municipalities sent to the ministries. For a number of years, official data collection was carried out by the then Ministry of Transport and Infrastructure with the collaboration of INSTAT through annual surveys on urban waste. Municipalities reported to the Ministry on MSW and on construction and demolition waste.

Data collected by the then Ministry of Transport and Infrastructure is for the period 2011–2016 at the regional level (table 8.1). Considering that the overwhelming majority of municipalities do not have access to sanitary landfills with an entry gate suitable for weighing trucks bringing waste, data are based on the number of truckloads that are dumped on the dumpsite or landfill. Thus, the amount of generated waste is only estimated, sometimes even in the case of modern sanitary landfills. This dataset shows a trend of moderate but continuous increase in waste production (with the exception of 2013, when a 17.5 per cent decrease was reported and 2016, when an 8 per cent decrease was reported): 5.5 per cent between 2011 and 2012, 8.1 per cent between 2012 and 2014 and 15 per cent between 2014 and 2015. This suggests that further growth of MSW generation might be expected in the coming years.

During the period 2011–2016, MSW generation per capita varied, from a low of 321 kg in 2013 to 396 kg in 2015 per inhabitant (table 8.2). It is similar or slightly lower than the annual per capita waste generation in other Balkan countries: 350 kg in Croatia, 347 kg in the former Yugoslav Republic of Macedonia and 318 kg in Serbia in 2012.

Since the recent administrative and territorial reform, the Ministry of Urban Development (abolished with the institutional restructuring of September 2017) has also done data collection in this field in order to obtain data that are more accurate to underpin the planning process of new landfills all over the country, which is explicitly its responsibility. The data collection was based on an online reporting system and also included data on recycling, though the latter data set mostly lacked data. The system also showed data on the covered population related to waste collection and certain types of costs (percentage of population covered by the service, cost ton/year, cost resident/year) at the level of municipalities and presented data based on map and graphs. There are differences between data from the then Ministry of Transport and Infrastructure and INSTAT and data from the then Ministry of Urban Development. The reasons are not yet assessed. Therefore, a precise picture on current waste generation in the country, which is a precondition for proper planning of capacity of the disposal facilities, is not ensured.

The current data on the population served by waste collection and management can be considered as inaccurate – both the then Ministry of Transport and Infrastructure and the then Ministry of Urban Development data sets – due to the fact that both report significantly more inhabitants served than the country's actual population. According to INSTAT, the population was less than 2.9 million inhabitants in 2015. The Ministry of Transport and Infrastructure's report for 2015 states the total population of Albania as 3,934,671, while the served population was 2,953,338; the Ministry of Urban Development's dataset states a served population of 3,195,778 for 2016.

Companies contracted by local authorities carry out the collection of MSW. They can be private or owned by local authorities themselves, but even when collection is done by municipal companies they are required to have a contract with the local authority for the specified job. Bigger settlements sometimes contract more than one company, such as in Tirana where six companies are currently appointed. These companies usually operate all the waste management activities in the given settlement from collection to disposal. Separate companies operate (new) sanitary landfills, but are not involved in the collection.



**Table 8.1: Municipal solid waste, 2011–2016, tons**

Region	2011	2012	2013	2014	2015	2016
Berat	51 157	49 996	43 129	46 531	59 356	64 500
Dibër	30 918	33 128	23 147	28 834	35 331	22 727
Durrës	95 330	140 755	105 534	140 387	145 563	156 218
Elbasan	64 586	81 125	41 076	56 329	105 992	99 617
Fier	119 104	115 295	116 492	161 304	250 142	149 668
Gjirokastrë	41 072	43 529	60 519	98 752	55 116	85 878
Korçë	65 177	62 050	54 005	10 176	101 753	12 610
Kukës	21 898	17 332	28 633	36 691	11 306	49 573
Lezhë	31 195	37 806	31 217	40 727	50 876	33 860
Shkodër	52 597	65 904	48 950	78 369	84 794	60 286
Tirana	414 377	383 138	289 180	422 326	371 681	492 890
Vlorë	90 586	106 744	96 019	108 458	141 323	72 550
<b>Total</b>	<b>1 077 997</b>	<b>1 136 802</b>	<b>937 901</b>	<b>1 228 884</b>	<b>1 413 233</b>	<b>1 300 377</b>

Source: Ministry of Transport and Infrastructure, INSTAT, Annual Survey on Urban Waste, February 2017.

**Table 8.2: Municipal solid waste, 2011–2016, kg/inhabitant**

Region	2011	2012	2013	2014	2015	2016
Berat	342	341	327	341	266	476
Dibër	214	235	298	291	191	150
Durrës	353	513	462	411	420	438
Elbasan	210	266	195	138	138	278
Fier	367	360	296	408	409	409
Gjirokastrë	524	583	477	386	387	390
Korçë	283	273	348	314	104	134
Kukës	245	197	214	217	218	350
Lezhë	223	272	293	442	441	340
Shkodër	233	296	237	341	342	242
Tirana	543	491	343	405	513	469
Vlorë	490	584	539	558	558	265
<b>National average</b>	<b>371</b>	<b>392</b>	<b>321</b>	<b>335</b>	<b>396</b>	<b>373</b>

Source: Ministry of Transport and Infrastructure, INSTAT, Annual Survey on Urban Waste, February 2017.

Contracted companies usually do other cleaning activities in the settlements, which cannot be considered as part of waste management (e.g. washing of streets in the summer) and maintain green areas. Short-term contract periods (contracts usually cover three to five years but in some cases even shorter periods) present a big problem for the operation of such companies because they cannot plan in the long term and therefore they do not invest enough in equipment, i.e. the quality of collection is not improving. Delayed payments by local authorities for the delivered services also increase uncertainty in the operation of waste management companies.

In almost all settlements, inhabitants pay waste management services indirectly through other bills in the form of a levy, mostly through the bill for drinking water services. This system was introduced because of the very low payment collection rates when the bills for waste management were separate, despite the fact

that the fee for this service was and remains relatively low.

In 2016, households in rural parts of the country expected to pay €10 annually for this service, while in Tirana a household's annual payment obligation is about €37. Expert estimation is that the countrywide bill collection rate is around 60 per cent, while in Tirana it was 65 per cent in 2015 and increased to 85 per cent in 2016. However, in most of the settlements the levels of the fees remain unchanged since 2011. Companies pay for waste management services based on the surface area of their premises.

#### Separate collection and recycling of specific waste streams

Despite the regulatory framework (DCM No. 418 dated 25.06.2014, "On the separate collection of waste at source"), which obliges the local authorities to organize separate collection of waste with a three-bin

system, it is rarely done systematically in settlements, and therefore there are no available data related to the generation or recycling of specific waste streams. Separate collection has only been introduced to date within the frame of several pilot projects funded by intergovernmental organizations (IGOs) and NGOs. These have been implemented in numerous settlements around the country, targeting the at-source separation of paper and cardboard, PET and other recyclable plastic and metal (mostly aluminum cans) waste streams from other types of waste. In rural areas, the projects also covered the separate collection of organic and (small-scale) agricultural waste from households.

Recycling activities are still at a very moderate level and, besides the above projects and the public service provided by Ecotirana (since December 2016) (box 8.1), they are carried out by groups or individuals who scavenge the waste and who provide most of the domestic raw material for the recycling companies. Consequently, there are no data on the amount of recycled waste and even raw estimations can only suggest that it is between 5 and 12 per cent on the national level, in total.

Glass, beverage cartons (tetra packs), batteries, used tyres, waste electrical and electronic equipment (WEEE), construction and demolition waste, sludge, end-of-life vehicles (ELV) and used oil are not

collected separately anywhere through legal activities. The illegal collection of such waste is at a low level even in the case of waste that might have somewhat higher value than other types of waste (e.g., WEEE, ELV).

The ban on the import of waste (Law No. 156/2013, amending the Law on Integrated Waste Management No. 10463/2011), with the exception of aluminium with purity higher than 90 per cent and iron with purity higher than 98 per cent, was imposed with the explicit intention to enhance domestic separate waste collection and processing of this waste by domestic industry. However, the ban proved to be a counterproductive measure. Without the significant increase in separate waste collection, it led to a big reduction in the activities of recycling companies because of the lack of adequate raw material, according to the Association of Recyclers of Albania and companies working in this field. Discussion has started in 2016 to amend or eventually lift the ban.

Currently there is no dedicated collection system for non-recyclable waste, such as aerosol spray cans, wax, plastic-coated paper, chemicals or medicines, and a significant proportion of these wastes end up being disposed of in dumpsites/landfills or unofficially being incinerated.

**Photo 8.1: Separately collected plastic before processing at Everest IE**



**Box 8.1: Ecotirana**

Ecotirana is a joint-venture company in which Tirana Municipality holds 51 per cent of ownership and the municipal public cleaning service company Amia Verona SpA (Italy) holds 49 per cent. The Italian partner provides the knowledge and most of the initial investment. Ecotirana was established with the aim of providing separate municipal waste collection for the whole area of the Municipality of Tirana. It started the operation in December 2016 in downtown Tirana, serving the area within the central ring of the city. Its service will be gradually expanded to cover the whole city in a year and a half, by mid-2018.

The company is the first to systematically provide separate and at-source waste collection in an urban area in Albania. Ecotirana introduced a two-bin system: a blue dustbin for the non-separated waste and a green dustbin for paper, plastic and metal. In the first phase, it has 710 bins at 280 points all over the downtown area. Currently, the company presses and stores recyclables at its depot, but it is negotiating with recycling companies to sell them the recyclable waste. The company not only provides a new type of regular service for the inhabitants of the capital but its car/truck park is completely new and equipped with EURO 6 engine cars. It also introduced collection by cargo bikes, so this operation is also respecting the up-to-date environmental requirements of a modern public service.

Ecotirana has already started glass collection in the most central neighbourhood within its first-phase operation area, called Camera. Glass collection is a door-to-door service for commercial facilities, mostly restaurants and bars. Ecotirana is also planning to launch separate batteries, medicines and electric waste collection. The company ran advertising and awareness-raising campaigns in the city to launch this new service.

**Photo 8.2: Ecotirana bins****Final disposal**

Approximately 70 per cent of the generated MSW is deposited at disposal sites, which, in most cases, are dumpsites that do not comply with any sanitary standards. The remaining 30 per cent of the generated MSW is deposited at any of the three existing sanitary landfills. Most of the waste goes to landfills and dumpsites without any pretreatment.

According to the landfill inventory compiled in 2016 by the then Ministry of Urban Development, there were 78 non-sanitary landfills in the country

"officially" used by the companies contracted by municipalities to deposit waste. These are the bigger dumpsites and there are also thousands of smaller sites used as dumpsites by the local population, institutions and companies, and sometimes by the municipal cleaning companies appointed to collect waste.

At the end of 2016, there were three sanitary landfills operating in the following sites:

- Sharra: serving Tirana, with a surface of 15 ha and capacity of 2,450,000 m<sup>3</sup>; this landfill is already close to reach its full capacity; by certain

estimations, it should be closed before the end of 2018;

- Bushat: serving Shkodër, Vau i Dejes, Lezhë and some smaller settlements nearby, with capacity of 1 million m<sup>3</sup>;
- Bajkaj: serving most of the coastal area of Sarandë and Himare – around 130,000 inhabitants within Vlorë region – with capacity of 825,000 m<sup>3</sup>.

Some unofficial sources also mention two smaller sanitary landfills that are in operation in Bajram Curri and Rrëshen.

There are a few ongoing projects aiming to rehabilitate old and open new sanitary landfills. All of them are targeting integrated waste management in the covered area and include other elements, such as technical assistance, capacity-building, awareness-raising and review of waste management plans, in order to set the grounds for long-term, economically and environmentally sustainable waste management:

- Maliq landfill is expected to be completed by the second quarter of 2017 and to be operational by the fourth quarter of 2017. This project is financed by KfW. The landfill is envisaged to serve most of the Municipality of Korçë with the bigger cities of Maliq, Pogradec and Erseka.
- Selenica landfill has a completed feasibility study and agreement for funding by KfW. It is envisaged to serve the remaining part of Vlorë region (i.e. not served by Bajkaj) and cover the city of Vlorë.
- Berat landfill project is at an early stage: the Swiss Government will fund the project, which consists of two phases. The first phase will result in the review of regional waste management plan and feasibility study, while the second phase aims at the construction of a regional landfill and technical assistance.

There is an ongoing project in Elbasan funded exclusively by the Government, aiming at the rehabilitation of the city's old dumpsite and building a smaller landfill and an incinerator for waste recovery and power generation. The project will serve the whole region of Elbasan and its 300,000 inhabitants. Both the landfill and incinerator are under construction. The incinerator is expected to be suitable for the treatment of 68,000 tons of waste per year. The incinerator will burn all kinds of waste (hazardous and non-hazardous) generated in this region. However, the permitting and licensing procedures for such a facility remain unclear, as this incinerator will be the first in the country. The project also envisages the construction of a second landfill, which will serve for the disposal of the ash that remains after incineration and the waste that does not enter the incinerator.

The Government is planning for two more incinerators, in Fier and nearby Tirana, but these projects are at an early stage.

#### *Manufacturing waste*

There are no data available on manufacturing waste. Small-scale manufacturing waste is treated and disposed of together with MSW, while waste from big factories is deposited at on-site dumpsites within the plants or transported directly to municipal dumpsites/landfills by the operators or contracted companies.

#### *Waste from the energy sector*

There are no data available on waste generated by the energy sector but, considering that more than 90 per cent of the generated power in Albania comes from HPPs, the waste generated through these activities is negligible compared with other types of waste. However, there is domestic production of petroleum and gas, which is considered to be mining activity.

The country has two operating oil refineries. The bigger one is in Ballsh and has a capacity of 1 million t/y. The Fier refinery has a capacity of 0.5 million t/y and is designed mainly to produce bitumen. There are no data on the waste generated by the oil refineries.

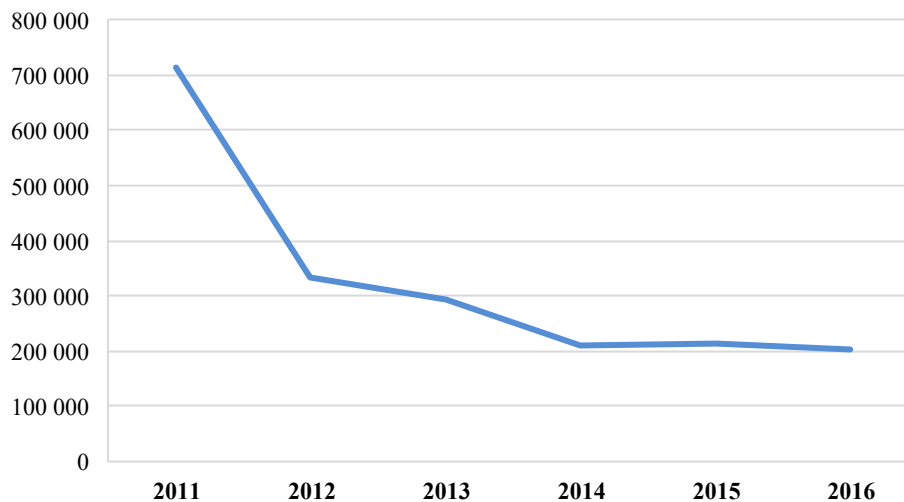
#### *Construction and demolition waste*

Construction and demolition waste is managed in the same way as MSW, meaning that there is no separate collection or disposal system for this type of waste despite the related legislation (DCM No. 575 dated 24.06.2015 "On requirements on management of inert waste"). The generated amount in the base year, 2011, was reported to be 712,993 t and this was followed by an extremely sharp fall in 2012 (332,199 t); thereafter, the decreasing trend was variable until stabilizing at just over 200,000 t/y (figure 8.1). However, that the amount of generated construction and demolition waste in 2011 was more than double that of subsequent years suggests that the reporting of such waste is not fully evidence based.

#### *Mining and quarrying waste*

At the end of 2016, there were 610 active mining permits, of which 342 licensed for quarry exploration. The total area licensed for exploitation of quarry minerals is 40 km<sup>2</sup>. There are 268 underground mining facilities, of which 250 are for the extraction of chrome and 18 for the extraction of copper ore and Fe, Ni, Si ore.



**Figure 8.1: Construction and demolition waste, 2011–2016, tons**

Source: Ministry of Transport and Infrastructure, INSTAT, Annual Survey on Urban Waste, February 2017.

There are no data about the amount and nature of mining and quarrying waste. Companies are obliged to remove harmful substances during the environmental rehabilitation process that takes place after the closure of a mining site and to dispose of them on landfills that are licensed to handle industrial and hazardous waste. Currently, the only such landfill is the Rubik landfill, which has 3,500 t/y capacity for industrial and hazardous waste.

#### *Agricultural waste*

There are no data available on agricultural waste, which is not yet regulated by the current legislation. Neither the Ministry of Agriculture and Rural Development, nor other line ministries or state bodies, are collecting data on this type of waste. The reusable or recyclable portion of agricultural waste is processed on site by the owners of the waste while the non-usable portion goes to dumpsites or is disposed of onto fields and on roadsides.

#### *Hazardous waste*

Currently, there is no separate collection for hazardous waste, but it is collected, treated and disposed of based on its origin, i.e. overwhelmingly as part of MSW (e.g. batteries, medicines, used oil). Consequently, there are no data available on the amount of hazardous waste generated in the country.

#### *Past pollution*

The field of hazardous waste is still considered to be an issue of hazardous waste hotspots that were caused by activities before 1990. There were numerous projects targeting the hotspots, ranging from the initial

examinations through to establishing monitoring of these sites and elaborating feasibility studies, as well as complete rehabilitation of some hotspots. Based on inventories and studies made within the frame of UNDP and UNEP projects, an initial nine priority hotspots were identified in 2000; of these, seven were rehabilitated while the remaining two were still in the process of rehabilitation in 2016:

- Patos-Marinza oilfields (where fields are contaminated with hydrocarbons and associated with emissions into the air of toxic gases such as hydrogen sulphide and carbon monoxide);
- Ballsh oil refinery (where emissions of water with hydrocarbons create the risk of contamination of surface water and groundwater).

The UNDP project Identification and Prioritization of Hotspots Environment in Albania, completed in July 2011, identified 35 environmental hotspots (additional to the nine that had been identified in 2000), of which nine were declared priority hotspots (table 8.3). These hotspots have already undergone a feasibility study and EIA, including action plans for their short-, medium- and long-term rehabilitation, as well as the estimated costs for rehabilitation and monitoring. Feasibility studies for the remaining 26 identified hotspots are not yet completed.

According to the research, Elbasan tops this priority list as it has the greatest impact on the environment; there are nine sites contaminated with hazardous waste within the city and its surroundings.

For the complete rehabilitation of these sites, about €620 million is required. About €320,000 is needed for their annual operation after the rehabilitation.

**Table 8.3: Environmental hotspots**

<b>Name of hotspot and type of waste</b>	<b>Initial (investment) costs (€)</b>	<b>Estimated duration (year)</b>	<b>Annual operational costs (€)</b>
Mine of Përrenjas (heavy metals)	13 000 000	2-3	80 000
The tailings dam in Guri i Kuq on the shore of Lake Ohrid (heavy metals, approx. 40 000 m <sup>3</sup> )	5 460 000	2-3	25 000
Mine of Bitincka Korçë (heavy metals)	2 275 000	2	25 000
Former textile factory Berat (metals, ammonium)	195 000	0.5-1	..
Battery production factory in Berat (heavy metals, Pb)	2 015 000	1-2	95 000
Dajti Enterprise in Tirana	52 000	0.5	..
Alba Film-Kinostudio (5 m <sup>3</sup> chemical waste together with the Dajti Enterprise)	143 000	0.5-1	..
Metallurgical Complex in Elbasan (containing heavy metals, industrial waste, about 400 000 m <sup>3</sup> )	38 350 000	3-4	25 000
Pesticide dumps in Rrëshen (containing heavy metals, pesticides, contaminated soil, approx. 200 m <sup>3</sup> )	507 700	1	70 000

Source: Ministry of Environment, February 2017.

During the period 2011–2015, there were no significant improvements or works concerned with hotspot rehabilitation.

#### *Medical waste*

The practice for treating medical waste mostly remained unchanged since 2011. The legislative framework has not been changed but, due to the lack of financing, state hospitals and healthcare institutions cannot fully comply with the regulations, as evidenced by the reports of the former State Inspectorate of Environment and Forestry. Although seven hydroclaves have been distributed to hospitals and other medical institutions around the country in 2013 as part of a government-run Health Sector Modernization Project, supported by the World Bank, these are still insufficient to cover all the medical waste generated in state healthcare institutions.

The Ministry of Health and Social Protection has prepared the National Guideline Document for Safe Management of Healthcare Waste. According to this, all the healthcare institutions must develop a healthcare waste management plan as part of an overall environmental management strategy, setting out the detailed requirements and procedures for proper handling of healthcare waste.

There are 43 state and eight private hospitals reporting to the Ministry of Health and Social Protection. In 2014, 439,605 kg of medical waste was reported, which was properly disposed by licensed private companies (table 8.4). Most of the medical waste properly disposed of is first sterilized by hydroclaves, then in some case ground up, and then sent to the municipal landfill.

**Table 8.4: Medical waste disposal, 2014, kg**

<b>Region</b>	<b>Amount</b>
Tirana	199 146
Durrës	19 662
Lezhë	7 300
Gjirokastrë	12 632
Vlorë	25 151
Berat	17 600
Dibër	5 910
Elbasan	24 585
Fier	28 380
Korçë	12 414
Kukës	36 280
Shkodër	50 544
<b>Total</b>	<b>439 605</b>

Source: Ministry of Health, February 2017.

The smaller portion of such waste is incinerated on site (e.g. in Durrës State Hospital and Hygeia private clinics).

#### *Radioactive waste*

There is no production of radioactive material and the use of nuclear substances is very limited in Albania. Radioactive material is only used for the purposes of medical treatment (oncology), calibration and scientific research; therefore, the main users of radiation sources are the Institute of Applied Nuclear Physics and the University Hospital Centre "Mother Theresa" (Nuclear Medicine Laboratory and Oncology Institute) in Tirana.

An International Atomic Energy Agency expert team conducted a review of the national nuclear security practices in 2016. The International Physical

Protection Advisory Service mission was initiated by the Government. The mission reviewed Albania's nuclear-security-related legislative and regulatory framework for radioactive material and associated facilities and activities, and reviewed the physical protection systems at Mother Theresa Hospital. The review concluded that Albania has taken important steps to strengthen its nuclear security. It also gave recommendations regarding nuclear security, especially in the area of physical protection, in line with the Agency's guidance.

## 8.2 Transboundary movement of waste

Despite the ban on import of waste, statistical data (table 8.5) show that those types of waste that are not exempt from the import ban were imported into the country, even after 2013, such as rubber, turnings, shavings, chips, milling waste, sawdust and filings, plastic, paper and cardboard, solid waste from organic oil, and waste from cereals processing. The imported waste is used for (re)processing in factories, as the legislation does not allow their disposal in Albania.

The import of banned types of waste is only possible with a special permit given by the Government; however, it is not clear what the criteria are to obtain such permission and why waste types other than metals were allowed to be imported despite the ban on import.

## 8.3 Practices and trends in chemicals management

Chemicals are not currently produced in Albania; they are only imported into the country. The legislation related to export and import of dangerous chemicals, classification, labelling and packaging of substances, POPs, asbestos, biocides and mercury, transport, storage and use of chemicals is aligned with the relevant EU legislation. It complies with the requirements of related MEAs, in particular the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.

The import of biocidal products is based on the Order of the then Minister of Health No. 365 dated 3.08.2012 "On approval of the list and use of substances for use as disinfectants and rodenticides in public health". Biocides can be imported only with an import authorization from the Ministry of Health and Social Protection. The Ministry periodically issues an updated list of active ingredients of products allowed to be imported and traded in Albania.

Albania produced plant protection products until the early 1990s, but thereafter ceased their production. Imports of pesticides varied in the period 2011–2014 between 766 t and 1,365 t. Exports were negligible in comparison, remaining below 3 per cent of imports during this period (table 8.6). Disinfectants and fungicides made up most of the imports.

Data on the amount of pesticides used in agriculture are available only for 2011 and 2012, and reveal discrepancies relative to the imported amounts: in 2011, 386 t were used and 1,302 t imported; in 2012, 337 t were used and 766 t imported. Due to the lack of suitable landfills in Albania, unused pesticides should be exported for final disposal.

## 8.4 Pressures from waste and chemicals on the environment and well-being of local communities

### *Pressures from illegal dumping*

Due to the lack of capacity of sanitary landfills and the widespread practice of illegal dumping of waste into and along the rivers, there is a potential risk of pollution of fresh and groundwater sources, which would thus transmit infections, especially in rural areas where the potable water treatment is still not adequate.

Illegal dumping is destroying the vegetation and contributes to the proliferation of disease vectors through insects and rodents. However, there is no monitoring system, and no data or surveys on the impact of current waste management practices. The most visible, most widespread and one of the most dangerous forms of pollution is that which takes place in and along rivers, in the form of solid deposits along riverbeds and dissolved materials as a result of the dumping of waste beside and directly into rivers.

### *Pressures from mining*

In 2000, in the Bulqiza mining area, there was about 15 million m<sup>3</sup> of sterile deposit, which covered 15 ha. This amount is to be added to the amount of sterile (waste) produced by underground mining each year: an average of 10,000 m<sup>3</sup>. In total, there is approx. 30 million m<sup>3</sup> of sterile in the chromium mines. All stocks of sterile are under the influence of atmospheric agents, especially water erosion, and, as a result, part of the material (with dimensions as small as 3–4 cm) in these stores moves with the water, affecting other surfaces. The same problem occurs in other mines, such as in the area of Batres, Theknës, Krastes, Instance, Kalimash and Vllahën.

**Table 8.5: Imported and exported waste, 2012–2015, tons**

Description	Imports				Exports			
	2012	2013	2014	2015	2012	2013	2014	2015
Adhesives based on rubber or plastics (including artificial resins)	534.00	730.58	0.00	0.00	1.52	1.91	0.00	0.00
Wastes of metal-pickling liquors, hydraulic fluids, brake fluids and anti-freeze fluids	0.22	0.28	0.00	0.00	..	..	0.00	0.00
Waste, parings and scrap, of polymers of ethylene	2 212.00	2 474.88	0.00	0.00	843.48	1 167.39	0.00	0.00
Waste, parings and scrap, of polymers of vinyl chloride	124.00	0.00	0.00	0.00	..	..	0.00	0.00
Waste, parings and scrap of rubber (other than hard rubber) and powders and granules obtained therefrom	460.00	339.45	380.58	435.33	2.40	6.67	0.00	0.00
Waste and scrap of alloy steel	0.23	0.00	0.00	0.00	286.40	42.48	0.00	0.00
Waste and scrap of refined copper	0.83	6.04	0.00	0.00	1 122.51	886.40	0.00	0.00
Waste and scrap of copper base alloys	0.01	61.17	0.00	0.00	3 433.85	2 886.14	3 849.65	0.00
Waste and scrap of nickel, not alloyed	34.00	0.00	0.00	0.00	476.58	0.00	0.00	0.00
Waste and scrap of nickel, alloys	8.44	0.00	0.00	0.00	0.00	0.00	..	0.00
Aluminium waste	202.00	1 126.52	0.00	0.00	1 150.77	243.85	0.00	0.00
Aluminium waste and scrap	320.00	507.56	2 853.03	6 698.47	4 659.97	5 056.98	5 468.88	3 899.02
Tin waste and scrap	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waste and scrap of titanium	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waste and scrap of primary cells, primary batteries and electric accumulators	296.00	0.00	0.00	0.00	19.02	0.00	0.00	0.00
Waste, parings and scrap of plastics	0.00	1 035.24	39.80	167.95	2 174.87	1 856.20	4 195.33	3 850.47
Residual products of the chemical industries	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Waste and scrap of cast iron	0.00	248.23	0.00	0.00	0.00	93.01	0.00	0.00
Waste of stainless steel, containing by weight 8 per cent or more of nickel	0.00	23.03	0.00	0.00	525.09	436.13	0.00	16 942.29
Turnings, shavings, chips, milling waste, sawdust and filings	0.00	190.00	1 219.87	833.68	2 125.00	599.00	10 757.00	0.00
Trimnings and stampings waste in bundles	0.00	18.68	0.00	0.00	32.88	114.95	0.00	0.00
Other trimnings and stampings waste in bundles	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00
Ferrous waste and scrap, remelting scrap ingots of iron or steel	0.00	200 925.00	327 495.72	0.00	82 829.00	21 353.00	22 002.12	..
Waste and scrap of paper pulp or cardboard	0.00	0.00	1 244.00	0.11	0.00	0.00	7 188.30	8 720.78
Plastic waste	0.00	0.00	320.00	36.07	0.00	0.00	0.00	0.00
Solid waste from organic oil	0.00	0.00	0.00	21 659.43	0.00	0.00	0.00	0.00
Technological waste from cereals processing	0.00	0.00	0.00	30 363.42	0.00	0.00	0.00	0.00
Zinc waste and scrap	0.00	0.00	0.00	0.00	0.00	0.00	336.48	0.00
<b>Total</b>	<b>4 192.03</b>	<b>207 689.71</b>	<b>333 553.00</b>	<b>60 194.46</b>	<b>99 683.34</b>	<b>34 744.11</b>	<b>53 797.76</b>	<b>33 412.55</b>

Source: General Customs Directory, 2017.



**Table 8.6: Pesticides imports and exports, 2011–2014, kg**

Description	Imports				Exports			
	2011	2012	2013	2014	2011	2012	2013	2014
Disinfectants	39 334	57 773	17 809	655 682	..	357	515	..
Fungicides	283 031	240 776	247 589	376 622	1 735	7 873	8 307	..
Herbicides	97 802	48 500	110 836	137 290	12 289	11 849	1 977	..
Insecticides	823 845	409 416	556 379	89 579	478	190	106	5 953
Rodenticides	54 388	1 312	41 069	106 172	..	..	175	..
Plant growth regulators	4 235	8 466	8 633	..	..	..	..	..
<b>Total</b>	<b>1 302 635</b>	<b>766 242</b>	<b>982 314</b>	<b>1 365 346</b>	<b>14 502</b>	<b>20 269</b>	<b>11 080</b>	<b>5 953</b>

Source: General Customs Directory, 2017.

In the closed coal mines, some mining facilities, galleries, vertical wells and buildings have been abandoned since 1996. These facilities are part of the former enrichment factories and buildings that served as offices, dormitories, warehouses, engine rooms and workshops. These abandoned buildings are deteriorating further, causing a possible serious risk of accidents. Some of them have completely collapsed (former Kurbnesh enrichment factory, Rëps, Mjedë, Kalimash Rëhova village and Golaj).

The dumpsites of copper enrichment factories are potential polluters of air and water. There are 12 sterile dumps containing deposits of copper from processing in enrichment plants. These factories are located near rivers and streams. Only one is in operation, dump No. 2 at Fushë Arrëz. The dumpsite in Rrëshen was rehabilitated, and dump No. 3 in Reps was partially rehabilitated, within a UNDP project.

Two dumpsites in Kurbnesh are not controlled and maintained and are constantly degrading. Dump No. 1 of Fushë Arrëz is out of control and maintenance, and is further degrading. At Reps, dumpsites No. 1 and 2, and partly No. 3, are out of control and maintenance and are being damaged, creating ecological problems by polluting the waters of the Fan i Vogel River. In total, in all the dumpsites, about 12 million tons of copper sterile are deposited and contain heavy metals.

Dumpsites of copper enrichment factories are out of control and maintenance since 1996. Certain elements of the dumps, such as channels and the main collectors, are ruined and non-operable. Dump material is very fine (0–200 µm) and has heavy metal content. Consequently, a significant amount of material in the dumps is under the action of water and wind erosion and is washed into nearby rivers and streams. As a result of water erosion, the sterile from these dumps is constantly borne away and significant amounts are being deposited in the riverbeds, polluting these waters and endangering the flora and fauna of the rivers.

There has been only one operating iron and nickel enrichment factory. Two sterile dumpsites were built near Lake Ohrid in Pogradec, representing a source of pollution of the lake.

#### *Impacts on local communities*

Based on the 2016 study "National Strategy Plastic Waste Management and Recycling in Albania" conducted by the Environmental Centre for Administration and Technology of Tirana, the informal waste collection sector accounts for more than 10,000 informal individual collectors who collect waste from bins and dumpsites and sell it to recyclers or collection points, usually positioned near main cities. Most collection points are run informally but some are part of the collection networks managed by recycling companies. These informal individual collectors tend to lack equipment and training and not have formal agreements with the buyers. They are subject to health risks and accidents due to poor working conditions.

### **8.5 Legal, policy and institutional framework**

#### *Legal framework*

#### Waste management

The Law on Integrated Waste Management No. 10463/2011 remains the main legal act on waste management. The purpose of the Law is to protect the environment and human health and to guarantee proper environmental management of waste.

DCM No. 177 dated 06.03.2012 "On packaging and packaging waste" obliges producers of packaging to establish a reimbursement system that promotes the collection of packaging waste and the use of packages that do not contain hazardous substances. Its main target is to minimize the quantity of packaging waste and it aims to ensure the reusability and recovery of packaging.

**Photo 8.3: Waste pickers in Tirana**

According to the DCM, any packaging producer that has an activity in the territory of the local government unit has to recover and recycle at least the defined quantities within the defined timelines, as specified in the Law.

The purpose of DCM No. 418 dated 25.06.2014 is to determine the terms and measures for the differentiated collection of waste streams, in order to reduce the amount of waste to be deposited, by:

- Optimizing waste collection;
- Providing differentiated waste collection at source;
- Promoting the reuse of products;
- Preparing reuse activities;
- Improving the quality of waste recycling.

Subject to this DCM is the implementation of differentiated collection of the following waste streams: paper/cardboard, metal, plastics and glass. Based on this DCM, local authorities are obliged to organize separate waste collection.

The Government made efforts to transpose the relevant EU legislation related to ship-generated waste. DCM No. 1104 dated 28.12.2015 "On approval of the requirements for the prevention and reduction of discharges of ship-generated waste and cargo residues into the sea" regulates this type of waste. The General Maritime Directorate under the Ministry of

Infrastructure and Energy is responsible for the implementation of this DCM to ensure the necessary framework and conditions in the ports for proper waste management, including the licensing of operators of waste management activities on the territories of the ports. The DCM requires that vessels must be cleaned after their arrival in the port and after unloading their cargo. The DCM introduces the certificate of delivery of waste, which is issued by the licensed waste management companies certifying that the ship has fulfilled the procedures set out in the law. The DCM introduces an ecological waste fee that has to be paid by all the ships and boats using the ports in order to cover the cost of waste management in the ports.

Mining legislation addresses the problem of mining waste as an integral part of the environmental rehabilitation of mining facilities. In total, 12 secondary legislation acts define the specific principles and procedures of how mining waste shall be treated during rehabilitation, mine closure, monitoring of mining and post-mining activities. The Order of the Prime Minister No. 47 dated 08.04.2015 "On setting up a working group on verification and evaluation of implementation of legal obligations for environmental rehabilitation of companies that operate in the energy and mining sector" has been approved in order to strengthen control and establish an appropriate management regime throughout the mining and energy-producing activities in the country.

In the period 2008–2012 Albania has revised its legislation and regulations dealing with protection against ionizing radiation in accordance with EU directives and recommendations and standards of the International Atomic Energy Agency. The Law on Protection from Non-Ionizing Radiation No. 10469/2011 designates the Radiation Protection Commission as the competent authority in this field and the Office of Radiation Protection as its executive organ.

In 2013, the legislation related to inspections regarding ionizing radiation was also amended (Law No. 27/2013). Since then, the inspections are conducted by the Office of Radiation Protection.

### Chemicals

The Law on Chemicals Management No. 27/2016 enters into force in March 2018. It ensures that the legislation is aligned with EU requirements on REACH, export and import of dangerous chemicals, classification, labelling and packaging of substances, POPs, asbestos, biocides and mercury.

The Law was followed by adoption of: DCM No. 488 dated 29.06.2016 "On the classification, labelling and packaging of chemicals"; DCM No. 489 dated 29.06.2016 "On approval of the list of substances of very high concern (SVHC), criteria for inclusion of substances in the list of SVHC and issuing of a conditional authorization in order to continue using the SVHC"; and DCM No. 665 dated 21.09.2016 "On export and import of hazardous chemicals". These DCMs largely transposed the relevant EU regulations. As of February 2017, there is a draft DCM awaiting approval, on restrictions on the manufacture, placing on the market and use of certain chemicals and certain dangerous articles, which aims to approximate Annex XVII and Annex VI of the REACH regulation.

The Law on Biocidal Products and Services in Public Health No. 95/2015 partially transposed the relevant EU regulation concerning the making available on the market and use of biocidal products (Regulation 528/2012).

DCM No. 484 dated 29.06.2016 "On the protection of workers from exposure to risk from asbestos" aims to transpose EU Directive 2009/148/EC on the protection of employees from the risks related to exposure to asbestos at work.

Considering that the adoption of the new regulations on chemicals management started in 2016, it is too early to assess their implementation. The newly designed organizational system is still not fully

established, e.g. the Chemicals Office is not working. The establishment of the legal and organizational framework should be followed by capacity-building in relation to the implementation and enforcement of the new legislation, because, currently, there is no qualification or specific training programme for inspectors and staff of the NEA or other authorities in the country.

### *Policy framework*

#### National Strategy for Development and Integration for the period 2015–2020

Pillar 4 of the NSDI-II aims at ensuring growth through connectivity, the sustainable use of resources and territorial development through improved water supply, sewerage and waste management systems. The Strategy makes clear that, despite the National Strategy for Waste Management for the period 2010–2025 and the National Plan for Waste Management for the period 2010–2025 having been approved by the Government in 2011, the prioritization of waste management was not adequately reflected in the governmental strategic and budget planning. Consequently, reform priorities in the sector have focused on the legal and regulatory frameworks. The NSDI-II is realistic in terms of the identification of problems and challenges, and the concrete plans and measures seem to be (mostly) feasible by 2020 (box 8.2).

#### National Strategy for Waste Management for the period 2010–2025

The 2011 National Strategy for Waste Management and National Waste Management Plan for the period 2010–2025 remains the highest sectoral policy document on waste management. However, the goals set out in the Strategy were too ambitious. For example, the first mid-term indicator, recycling/composting 25 per cent of municipal waste by 2015, was not achieved. The other mid-term and final goals are also unrealistic:

- By 2020: preventing an increase in municipal waste;
- By 2020: recycling/composting 55 per cent of municipal waste;
- By 2025: recovering energy from 15 per cent of municipal waste;
- By 2025: reducing municipal waste in landfill by 90 per cent.

Considering this, the Government has decided to review and update the National Strategy for Waste Management and the National Waste Management

Plan in 2017 with the support of GIZ. Parallel to the review process, a master plan will be prepared as a part of the Strategy in order to present concrete proposals for new landfill sites, thus accelerating the process of providing the whole territory of the country with adequate waste disposal facilities.

#### Regional and local waste management plans

Based on the Law on Integrated Waste Management, the regions and local governmental units (i.e. municipalities) were obliged to elaborate their own waste management plans in conformity with the National Strategy for Waste Management and the National Waste Management Plan and the requirements of the Law.

All 12 regional waste management plans were elaborated but there is no information or central database on the local plans. Also, there is no evaluation of the conformity or implementation of such plans. The 2015 territorial administrative reform made a profound change at the local level by establishing 61 municipalities to replace 373 local government units (municipalities and communes), which means that the local waste management plans should be elaborated at the level of 61 municipalities starting from 2015. This caused serious confusion at the local level. There is no information about the elaboration of the envisaged 61 municipal waste management plans.

#### *Sustainable Development Goals and targets relevant to this chapter*

Albania's current position vis-à-vis targets 3.9, 12.4 and 12.5 is described in box 8.3.

#### *Institutional framework of waste management*

##### Ministry of Tourism and Environment

The Ministry of Tourism and Environment defines governmental policy with respect to the environment, including waste management, and drafts legislation on waste. The Ministry cooperates with national and local bodies to elaborate strategies and policies, and to monitor the processing and disposal of waste.

Prior to the institutional restructuring of September 2017, the then Ministry of Environment had a Waste Sector, with three staff members, as part of the Directorate of Environment and Delivery of Priorities. This sector was responsible for drafting government policy and legislation relating to waste. However, it had insufficient capacities to develop the role and responsibilities of the institution and cooperation with other central and local institutions. In the new Ministry of Tourism and Environment, the Sector for Preparation of Feasibility Studies for Environment, Clean up and Waste Treatment Projects has three staff.

#### **Box 8.2: National Strategy for Development and Integration for the period 2015–2020: vision and strategic objectives related to waste management**

Vision: "An efficient and effective integrated waste management system that contributes to the protection and conservation of the environment, the protection of human health and safety, and supports the rational use of natural resources through reuse, reduction, recycling and recovery".

##### Objectives:

1. Ensuring a comprehensive and strategic approach for integrated urban solid waste management by:
  - 1.1 Updating and full implementation of the National Strategy for Waste Management for the period 2010–2025 and National Plan for Waste Management for the period 2010–2025;
  - 1.2 Formulating the Master Plan for integrated urban solid waste management;
  - 1.3 Conducting studies and design for the closure and rehabilitation of waste dumpsites for 15 per cent of the most hazardous sites;
  - 1.4 Conducting studies and design for the creation of new regional landfills servicing 50 per cent of the national territory.
2. Improving overall waste management performance, by 2020, through:
  - 2.1 Increasing the amount of waste going to landfills;
  - 2.2 Increasing the amount of waste going for recycling and compost;
  - 2.3 Implementing rehabilitation plans for nine priority hotspots and developing plans for the remaining hotspots;
  - 2.4 Constructing and operating two landfills;
  - 2.5 Rehabilitating the five existing landfills;
  - 2.6 Planning for and constructing at least one plant for the treatment of hazardous waste.
3. Improving waste management accountability through:
  - 3.1 Establishing a central/regional authority for the review and approval of tariffs for removal of waste in landfills;
  - 3.2 Reviewing and improving concession services and contracts;
  - 3.3 Strengthening the capacities of waste management responsible institutions.



### Box 8.3: Targets 3.9, 12.4 and 12.5 of the 2030 Agenda for Sustainable Development



#### **Goal 3: Ensure healthy lives and promote well-being for all at all ages**

#### **Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination**

There are no evidence-based data on the effects on human health in Albania of non-sanitary landfills, illegal dumpsites or other illegal activities of throwing waste onto the roadsides and especially into rivers and onto riverbanks. This is mostly because infection, and especially mortality, are indirectly connected to exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services, thus, it rarely appears as the cause of death. No research or study is carried out to estimate the country's performance in this field. Albania does not currently measure indicator 3.9.2: Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe WASH services), nor indicator 3.9.3: Mortality rate attributed to unintentional poisoning.

#### **Goal 12: Ensure sustainable consumption and production patterns**

#### **Target 12.4: By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment**

Albania is party to the Rotterdam, Basel and Stockholm Conventions and it is preparing for ratification of the Minamata Convention on Mercury. This enables the country to benefit from the international experience and cooperation on environmentally sound management of chemicals and wastes. It would also see Albania fulfil indicator 12.4.1: Number of parties to international multilateral environmental agreements on hazardous waste, and other chemicals that meet their commitments and obligations in transmitting information as required by each relevant agreement.

However, there are no data collected to measure indicator 12.4.2: Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment.

In recent years, Albania progressed with advancing the legal and regulatory frameworks for waste and chemicals management. However, practical implementation represents the current challenge.

#### **Target 12.5: By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse**

The 2011 National Strategy for Waste Management and National Waste Management Plan for the period 2010–2025 have set highly ambitious goals: to achieve recycling/composting of 25 per cent of municipal waste by 2015 and 55 per cent of municipal waste by 2020.

There are no official data on the amount or ratio or any other characteristic related to recycled materials, despite the obligatory reporting by municipalities that requires their indicating the percentage of waste recycled. The lack of official data makes Albania unable to monitor progress under indicator 12.5.1: National recycling rate, tons of material recycled. Data for recycling were reported by only two municipalities in 2016 and they reported 35.44 per cent and 52.82 per cent of recycled waste from the total generated waste, which can be considered a very high amount. Unofficial estimations put the national recycling rate between somewhere between 5 and 12 per cent.

Improving data collection, in particular assisting municipalities in fulfilling their reporting obligations, is important for understanding the problems with the prevention, reduction, recycling and reuse of waste. Furthermore, municipalities require assistance with drafting and implementing the obligatory local waste management plans.

The State Inspectorate of Environment, Forestry and Water, subordinated to the Ministry of Tourism and Environment, is responsible for law enforcement on waste management. The State Inspectorate conducts environmental inspections to ensure compliance with regulations related to waste management, especially in the field of hazardous, industrial and medical waste.

The NEA is the implementation body of the Ministry of Tourism and Environment. It sets the conditions for environmental permits. It prepares the annual SoER, which describes trends and presents data on waste

management. The Agency does not have a sector, or even an expert, dealing with waste management, so its current role in waste management is negligible.

#### Ministry of Infrastructure and Energy

Prior to the institutional restructuring of September 2017, the then Ministry of Transport and Infrastructure was responsible for infrastructure investments in the waste sector. It was responsible for the project cycle with respect to the construction of regional landfills, e.g. project planning, design and implementation. It

also coordinated and monitored the activity of waste dumpsites, and the use of regional landfills and incineration plants. The Ministry included the Directorate for Waste, which had only one employee. The then Ministry of Urban Development included the Sector of Solid Waste, with three staff members, as part of the Directorate of Urban Services and Housing. This sector was responsible for territorial planning, in view of the foreseen and planned waste management facilities in the national and regional strategic documents. It operated the information system for data collection related to waste management in order to support its planning activities. The then Ministry of Energy and Industry was responsible for drafting regulations on the management of mining waste.

Following the institutional restructuring of September 2017, the new Ministry of Infrastructure and Energy includes a Sector for Development of Programmes for the Management of Urban and Construction Waste, with six staff.

#### Ministry of Health and Social Protection

The Ministry of Health and Social Protection is responsible for drafting regulations on medical waste. Hospitals and other medical waste generators are responsible for drafting waste management plans. The policy on medical waste is tracked and enforced by the Directorate of Public Health, which does not have an expert on waste issues. Hospitals have no waste experts in their administration structure, except for some technicians maintaining equipment such as hydroclaves and incinerators.

#### Ministry of Agriculture and Rural Development

The Ministry of Agriculture and Rural Development has responsibility for the drafting of regulations on pesticides, the use of sewage sludge in agriculture and management of animal by-products.

#### Regional councils

The regional councils are responsible for approving regional management plans, regional landfills and the management of dumpsites for urban waste at the regional level. However, the regional councils have no structure or experts on environmental and waste issues.

#### Municipal authorities

Municipal authorities are in charge of organizing waste collection, transport and disposal, and managing contracts with the companies that clean the cities, and

including waste management investment at the local level. They also set tariffs for waste collection and disposal in their respective jurisdictions and issue the authorization to collect, treat and dispose of waste. They are responsible for defining waste collection and processing sites, in accordance with environmental criteria and development plans.

They are also responsible for organizing separate collection of packaging waste. They should take appropriate measures for differentiated waste collection, at least for main waste streams such as paper/cardboard, metal, plastic and glass.

#### *Institutional framework for chemicals management*

The Ministry of Tourism and Environment is the coordinating body for chemicals. It currently serves as a help desk for companies in the implementation of the new Law on Chemicals Management, adopted in 2016. The Ministry of Tourism and Environment, through the envisaged Chemicals Office, is responsible for development of the legislation on chemicals management.

The State Inspectorate of Environment, Forestry and Water is responsible for checking the compliance of safety data sheets, the use of regulations on harmonized classification and labelling, and the enforcement of restrictions on importers, exporters and producers of chemicals.

The organization and functioning of the Chemicals Office will be arranged through a new government order that is under adoption. According to the planned by-law, the most significant tasks of the Chemicals Office will be to:

- Ensure transposition of the legal acts on chemicals management to the national legislation;
- Organize a help desk in order to disseminate information about companies' obligations to the stakeholders;
- Provide secure arrangements for data security to enable access to the REACH-IT database of the European Chemicals Agency (ECHA);
- Provide stakeholders with scientific advice related to the safe use of chemicals;
- Provide statistical information on chemicals;
- Provide support to local and regional authorities;
- Provide support/secretariat for intersectoral cooperation;
- Ensure participation in the relevant EU bodies.

The Ministry of Agriculture and Rural Development is responsible for policy development regarding the

management of pesticides and fertilizers, and for the packaging and labelling of plant protection products. Each municipality has its own food and consumer protection unit.

The Ministry of Health and Social Protection is the responsible authority for formulating policies for biocidal services in public health and organize their implementation through the State Health Inspectorate, Secretariat for Biocidal Products Authorization, Commission for Biocidal Products Authorization and Institute of Public Health.

The Inspectorate of Market Surveillance, a body of the Ministry of Finance and Economy, checks the compliance of labels on chemicals that are distributed in the market.

The Interministerial Working Group on Waste brings together deputy ministers from various ministries involved in waste issues.

*Regulatory, economic, fiscal and information measures*

#### Costs and tariffs in waste management

Tariffs do not reflect the real costs of the services. The local authorities are not keen on even a gradual increase in the fees for waste management services, because of the anticipated unpopularity of such a measure and the economic situation of the population, especially in rural areas.

In addition to the fees being low, there are significant difficulties in relation to the collection of fees: unofficial estimations suggest that the collection rate on the national level is around 60 per cent, although it is around 30 per cent in some of the larger cities. The collection rate of 85 per cent in Tirana is among the highest.

A few projects funded and implemented by IGOs and NGOs (especially those created by the Decentralization and Local Development Programme (DLDP) and REC Albania) produced detailed calculations, methodology and guidelines for the establishment of proper costs and tariff systems, to be followed by capacity-building of local authorities' staff, but the situation remains mostly unchanged in this area.

The Government is aware of the situation and of the results of the above projects. As of February 2017, the then Ministry of Environment and the then Ministry of Finance have prepared a draft DCM on the cost and tariff system.

#### Permits

The Ministry of Tourism and Environment drafts the waste import permits, which are to be approved by the Council of Ministers. It is also responsible for issuing permits related to the transport of waste according to the rules of the Basel Convention, such as export and transit permits for shipment of waste, and hazardous waste export permits.

#### Taxes and fees

The Law on the Tax System No. 8977/2002 introduced a tax on plastic containers for liquids, such as bottles and cans, for both locally produced and imported products, e.g. soft drinks, water, milk, by-products, oil and detergents. This fee is levied at the container production stage. The rates are:

- 1 lek (€ 0.07) per container up to and including 1.5 litres;
- 2 leks (€ 0.14) for larger containers.

Also according to this Law, importers and manufacturers of plastic packaging are obligated to pay the national tax on plastic packaging. The tax applies to all plastic products when they are imported separately, and when plastic material is at least 51 per cent of the volume of overall packaging. The Law distinguishes two rates:

- 100 leks/kg for imported products (collected by the General Directorate of Customs at the moment of an import);
- 50 leks/kg for the domestic recycling industry.

The tax administration collects this tax when products are packaged, stored or produced from recycled plastic in the country. For plastic packaging produced inside the country, the tax is paid at the moment when the product is sold with a tax receipt. Manufacturers who use plastic packaging should demand a tax invoice and evidence of payment of packaging taxes from the importer or producer. Every month, a producer who uses plastic packaging should declare its stock of goods that falls under this regulation in the tax administration; otherwise, the tax should be paid on all items sold by the producer in the concerned month regardless of the quantity of goods which would have been actually subject to this tax.

The revenues from the tax on plastic packaging were 11.8 million leks in 2012, 8.6 million leks in 2013 and 9.7 million leks in 2014. However, product taxes are currently not used for the financing of related waste management activities and not linked to any chapter or



budget line within the state budget dealing with waste or environmental issues.

Guarantee of environmental rehabilitation with regard to mining and quarrying

Mining companies are obliged to pay a guarantee of environmental rehabilitation, which is used in case the companies do not fulfil their obligations for rehabilitation after they quit mining activity. The total amount of the paid guarantee of environmental rehabilitation for four years (2011, 2012, 2013 and 2014) was 275,564,013 leks (approximately €2 million). During these years, the environmental rehabilitation guarantee was not paid by 53 mining entities in the amount of 46,761.901 leks (around €350,000). In the case of these companies, measures have been taken to revoke the mining permits. Despite the fact of revocation of a mining permit, the companies have a legal obligation to rehabilitate the areas in which they conduct mining activities (Law on Mining No. 10304/2010).

Awareness, education and training for sound management of waste and chemicals

During the period 2011–2015, the then Ministry of Environment launched a few campaigns and tools, partly applying innovative technologies, with the aim to engage the citizens in environmental issues, such as the Mjedis Im (My Environment), AKZM Albania (NAPA Albania) and Trash Out applications. The Ministry also organized the National Action for cleaning the national road axis of waste that had been thrown and abandoned along the roadsides. As a result, about 4,600 tons of waste was collected on about 600 km of national road axes. Nevertheless, most awareness-raising related to waste management is done as part of projects implemented by IGOs and NGOs.

## 8.6 Participation in international agreements and processes

Albania acceded to the Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam Convention) in 2010. Since then, within the framework of the Convention, the country has reported 47 import responses. All resulted in the refusal of consent for import based on the relevant legislation that bans the import of the requested substances.

Albania acceded to the Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention) in 1999. Albania's

legislation and its implementation regarding the transboundary movement of waste is aligned with the Convention's requirements. Albania has also acceded to the Ban Amendment in 2005. This field is regulated by DCM No. 229 dated 23.04.2014 "On approval of the rules for non-hazardous waste transfer and other requirements for the information to be included in the transfer document", and DCM No. 641 dated 01.10.2014 "On approval of rules for waste export and transportation of non-hazardous waste or inert waste". The Ministry of Tourism and Environment is the responsible body for permitting the transport (in fact, export, because the import of such waste is prohibited) of hazardous or non-hazardous waste. The Ministry sends the notification to the transit and destination country and the destination country has to give written approval for the transport, while, from the transit country, tacit approval is sufficient. For non-hazardous waste, it is not necessary to give prior notification: if a company has a licence for such activity and if it submits all the required documents, it is given the permit. The Ministry of Tourism and Environment signs authorizations for transport. It also prepares annual reports on transported waste to the Secretariat of the Basel Convention. Companies are obliged to report every six months on the amount of transported waste.

Albania acceded to Stockholm Convention on Persistent Organic Pollutants in 2004. In 2015, it started the project Review and Update of the National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (POPs) in Albania, prepared by the then Ministry of Environment and funded by UNEP/GEF. Based on the findings and the POP inventory made in the frame of the review project, it is concluded that:

- There are no physical quantities of POP pesticides or stocks in Albania;
- The evaluation and monitoring of pesticide residues in the environment, or their transport in plant and animal organisms, is still lacking;
- Analyses of the impurity of imported pesticides in Albania are not performed and, as a result, they may contain POP pesticides;
- There is a need to undertake studies on the state of POP pesticides in the environment, in order to take appropriate measures to reduce/eliminate them from contaminated areas;
- Monitoring of POP pesticides, especially in contaminated sites and identified hotspots, must be included in the annual national environmental monitoring programme;
- The qualitative and quantitative analysis of imported/traded pesticides must be performed, not only for active substances of pesticide but also for



impurities or their waste, to detect the possible presence of POP pesticides.

The updated National Implementation Plan for the Stockholm Convention is expected to be adopted by the end of 2017 by the Council of Ministers.

In 2015, two national regulations addressing POPs were adopted: DCM No. 360 dated 29.04.2015 "On approval of the list of persistent organic pollutants and the establishment of measures for their production, import, trade and use", which is intended to protect both human health and the environment from POPs; and DCM No. 387 dated 06.05.2015 "On approval of rules to control the disposal of PCBs, decontamination or disposal of equipment containing PCBs and/or disposal of used PCBs", which is intended to regulate the disposal of PCBs, decontamination of equipment containing PCBs and the disposal of used PCBs in order to completely eliminate them in Albania.

Albania signed the Minamata Convention on Mercury in 2014 (chapter 4). Since then, the necessary preparatory activities for its ratification show moderate development. The initial assessment that is the precondition for the ratification has not yet begun, although a project is planned with the support of UNDP in order to prepare the assessment.

Albania is working on the introduction and implementation of the Strategic Approach to International Chemicals Management (SAICM) (chapter 4). Albania has updated, in 2013, the national chemical profile. The National Focal Point for SAICM is the Department of Environmental Health of the Institute of Public Health.

## 8.7 Assessment, conclusions and recommendations

### *Assessment*

Waste management has undergone profound improvements during the last years in terms of legislative background by transposing 19 EU directives and regulations, fully or partially, by the end of 2015; these represent the most important part of the EU *acquis* related to waste. This means Albania currently has laws, which, in principle and from a technological and methodological viewpoint, would ensure waste management that is sustainable in the long term and would allow the country to work towards the continuous reduction of waste to be landfilled and move towards being a "recycling society".

However, the implementation and enforcement of these laws is at a very low level. The reason for this mostly lies in the fact that the financing of the costs of waste management is still unresolved, due to the lack of a comprehensive and evidence-based cost and tariff system. This seriously hinders the willingness to further invest in the waste infrastructure.

Since 2011, there have also been significant legislative developments related to chemicals management, which peaked with the adoption of the new Law on Chemicals Management and related by-laws in 2016. This means that the country now has the essential legal framework for the safe management of chemicals and, by due implementation of the recently adopted (and already envisaged) provisions of the legislation, operations in this field might accord with the standards of the EU and other developed countries.

### *Conclusions and recommendations*

#### Waste management infrastructure

Much-needed capital investments – mostly funded by foreign donors – have slowed down since 2011; only one new investment in facilities was completed between 2011 and 2016 (the Bajkaj landfill). Since 2011, activities to clean up and rehabilitate old waste and chemical hotspots have almost halted. Albania still lacks the basic infrastructure for proper waste management, which can best be demonstrated by the fact that, currently, only three sanitary landfills are operating rather than the 12 envisaged.

On the other hand, there are numerous, small and mid-scale projects targeting the improvement of waste management at the level of local communities and municipalities, funded by foreign IGOs and implemented by local NGOs. These projects combine technical assistance and capacity-building with small-scale investments and they play an important role in enhancing the efficiency of waste management at local/regional level and in awareness-raising among local decision-makers and stakeholders, as well as the general population.

Albania does not yet measure indicator 3.9.3 (Mortality rate attributed to unintentional poisoning) under the target 3.9 (by 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination) of the 2030 Agenda for Sustainable Development.

#### *Recommendation 8.1:*

*The Government should strengthen its efforts towards the closure and rehabilitation of legal and illegal*

*dumpsites and the construction of sanitary landfills based on the real needs of the country, taking into account the proposal by the European Commission to phase out the landfilling of recyclable waste by 2025.*

#### Cost and tariff schemes

One of the biggest obstacles to the establishment of sustainable MSW management in the long term is the lack of application of a costs and tariffs system that reflects the real costs of the services. This sector and the MSW management services are historically underfinanced due to the low fees, which have not been raised since 2011, in most settlements of the country. Moreover, even these low fees cannot be fully collected from the population. The "polluter pays principle" is not functioning in the current MSW management system.

#### Recommendation 8.2:

*The Government, in cooperation with the municipalities and other stakeholders, should establish cost and tariff schemes for waste management services that reflect the actual costs of municipal solid waste management, and request the municipalities to apply them, taking into account the need for support for vulnerable consumers.*

#### Separate collection and recycling

Despite the legal and regulatory framework, which obliges the local authorities to organize separate collection of waste, and despite the ban on the import of waste effective since 2013, separate waste collection is rarely done systematically. Thus, recycling rates remain low and, despite the presence of a recycling industry, recycling companies fail to acquire enough raw material from the domestic market to operate at full capacity. Enforcing separate collection of waste and mandatory reduction, recycling and reuse of waste would help Albania achieve progress under target 12.5 (by 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse) of the 2030 Agenda for Sustainable Development and measure its performance in accomplishing this target.

#### Recommendation 8.3:

*The Ministry of Tourism and Environment, in cooperation with the Ministry of Finance and Economy, should take measures to establish a viable market for recyclables in which waste collecting and recycling companies will have an economic interest, in order to increase the recycling rate of separately collected waste such as metal, plastic, glass and paper.*

#### Industrial and mining hotspots

There were numerous projects targeting environmental hotspots but there are still numerous industrial and mining sites which present a potentially serious risk to the environment and human health. From 2011 to 2016, there were no significant improvements and works on hotspot rehabilitation. Continuing to remediate these industrial and mining sites might reduce deaths and illnesses from contaminated sites and contribute to achievement of target 3.9 (by 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination) of the 2030 Agenda for Sustainable Development.

#### Recommendation 8.4:

*The Government should put the clean-up and remediation of the existing industrial and mining hotspots high on its agenda, including by developing a specific programme to address this issue.*

#### Capacity-building and organizational development

Due to the recent adoption of the Law on Chemicals Management No. 27/2016 and related by-laws (of which some will come into force gradually in the coming years, by 2020), implementation of the new legislation package is an ongoing process. However, there is a lack of knowledge and awareness about the newly introduced rules and procedures, not only among the companies working in this field but among the different stakeholders in the public administration. The envisaged Chemicals Office has not yet begun operation; thus, it cannot fulfil its role in capacity-building in order to facilitate the implementation of the adopted and envisaged regulations.

#### Recommendation 8.5:

*The Ministry of Tourism and Environment should implement the necessary capacity-building and organizational development activities on chemicals management, following the requirements of the 2016 Law on Chemicals Management.*

#### Data on hazardous waste and chemicals

Despite the legal provisions on the management of specific waste streams that are considered hazardous, the amount and origin of generated hazardous waste is unknown, mostly due to the lack of data collection, which is partly due to the lack of separate collection of hazardous waste. The lack of data hampers the establishment of sound management of hazardous waste. Moreover, Albania is not able to measure progress towards indicator 12.4.2 (hazardous waste

generated per capita and proportion of hazardous waste treated, by type of treatment) to allow the tracking of progress towards the achievement of target 12.4 of the 2030 Agenda for Sustainable Development.

Recommendation 8.6:

*The Ministry of Tourism and Environment, in cooperation with the Institute of Statistics, should establish an effective data collection system on generated hazardous waste and chemicals.*

## Chapter 9

# BIODIVERSITY, FORESTRY AND PROTECTED AREAS

### 9.1 Trends in species and ecosystems

Topographic, habitat and ecosystem diversity in Albania provides for a diversity of plants and wildlife species. According to the Document of Strategic Policies for Protection of Biodiversity for the period 2016–2020 (the second NBSAP), there are approximately 7,233 plant groups, including ferns, fungi, lichens, mosses and algae, and 5,438 wildlife species, including birds, mammals, fish, insects and decapods, in Albania. Approximately 32 per cent of all European flora is found in Albania. Flower plants and microalgae represent the most diverse and the richest group of rare species.

The Albanian flora is closely linked with the flora of the Mediterranean region and the flora of the mountains of Southern Europe. High forests contain communities of large mammals such as the grey wolf, European brown bear and Eurasian lynx, and a versatile community of birds.

Coastal and lake wetlands in the country are important locations, especially for the wintering of migratory birds. According to the 2016 NBSAP, approximately 70 water bird species with a population of approximately 180,000 individuals are found in Albania during the winter period.

Although the Albanian coast is 418 km long, marine biodiversity is not regularly monitored and related information is scarce. According to the 2016 NBSAP, 6 of the 14 endangered algae species in the Mediterranean region are found in Albania. So far, there are 930 taxons of microscopic organisms documented. Information on the coastal and marine fauna is very limited. Some benthic groups are virtually not covered at all.

According to the most recent list of marine ichthio fauna, there are more than 260 species and subspecies of fish, including 28 species of sharks, of which some are globally threatened and are on the IUCN Red List of Threatened Species.

Agricultural biodiversity plays an important role in the overall diversity of biological systems. Albania has approximately 30 autochthonous wheat species, and a

number of grape, corn and olive species. According to the 2016 NBSAP, Albania has a considerable number of autochthonous animal breeds: six breeds of goats and six of sheep, and their populations have been increasing in the past 10 years.

#### *Threatened species*

A first national Red List was compiled in 2007. Albania completed updating the Red List of Fauna and Flora in 2013, in accordance with the IUCN criteria. The new Red List was approved in December 2013 by Order of the then Minister of Environment No. 1280 dated 20.11.2013.

Although few species have become extinct during the past century in Albania, the rate of loss of the country's biodiversity during the last 25 years is believed to be high (table 9.1). Two species of plants and four species of mammals have become extinct. Meanwhile 17 bird species no longer nest in the country's territory. During the last 25 years, approximately 122 species of vertebrates and four species of plants are expected to have lost more than 50 per cent of their population.

**Table 9.1: Endangered flora and bird species according to IUCN risk category, number**

IUCN category	Flora species	Bird species
Extinct	0	5
Critical	76	43
Endangered	123	56
Vulnerable	120	154
Low risk	59	238
No data	30	72
Not evaluated	2	7

Source: National Biodiversity Strategy and Action Plan, 2016.

#### *Endemic species*

The territorial relief of Albania is conducive to the existence and conservation of a number of endemic and subendemic species. There are about 32 endemic and approximately 110 subendemic plant species in the country.

### *Invasive species*

There are 47 invasive fauna species that are registered by the Ministry of Tourism and Environment. According to the project on invasive species in Albania, funded by the World Bank in 2007, they are mainly nematodes, molluscs, insects, decapods, fish and mammals.

In terms of flora, there are 196 invasive species that have been adopted and cultivated in Albania, as well as 81 fully naturalized species and 16 partially naturalized weeds, 11 remnants from former cultivation, 9 old species and 38 new invasive species; 41 alien species that were previously registered are supposed to be extinct. The current percentage of invasive flora species in Albania is the lowest in Europe.

Invasive alien species are also marked among sea organisms in Albania, including 20 species so far identified. They represent different taxonomic classifications: rhodophyta (4), chlorophyta (1), phaeophyta (1), spermatophytae (1), annelida (1), decapods (3), molluscs (5) and fish (4).

The low rates of invasive species, absence of damage and relatively low frequency of invasive species in Albania reflect the impact of the country's long-term isolation during the twentieth century. However, significant social and economic changes since the 1990s have facilitated the spread of alien species, in particular in the lowlands.

### *Ecosystems*

Although there are a number of ongoing projects whose objective is to develop better understanding and valuing of the ecosystems and habitats, comprehensive monitoring or overview of ecosystems and habitats in Albania does not exist at the moment. The Environmental Services Project funded by the World Bank foresees the establishment of a database and maps on forest ecosystems and development of the national forestry inventory, which is expected to be completed in 2018.

Albania also enjoys maritime ecosystems, coastal zones, lakes, rivers, evergreen and broadleaf bushes, broadleaf forests, pine forests, alpine and subalpine pastures and meadows, and high mountain ecosystems. Along the coastline of the country, there are many ecosystems of significance in the Mediterranean region such as lagoons, wetlands, sand dunes, river deltas, and hydrophilic and hygrophilic forests. Littoral and infralittoral communities of

Mediterranean origin along the rocky coast are quite diverse and well preserved.

## **9.2 Current situation in forests and forestry**

### *State of forests and other wooded land*

There has not been a comprehensive national forest inventory compiled since 2004, and most data gathered are from field visits as well as satellite imagery, and do not accurately reflect the state of national forests.

In 2014, the World Bank started implementing the Environmental Services Project, the main objective of which is to support sustainable land management practices and increase communities' monetary and non-monetary benefits in targeted project areas, which are mainly in erosion-prone rural upland areas. The project has four components and will end in December 2019. Within component 2: Planning and Provision of IPARD-like Grants to Improve Land Management, a new national forestry inventory, registration of forests and pastures and quality control for registration were initiated in 2016 and are expected to be finalized in 2018. Once this project output is finalized, it will give a much clearer overview of the state of forests in Albania.

In 2015, total forests accounted for approximately 1,052,253 ha or 36 per cent of the country's territory, while pastures accounted for approximately 400,000 ha or 14 per cent of the country's territory. Most of Albanian territory is rough mountain relief of an average altitude of 700 m; 60 per cent (244,000 ha) of pasture is composed of alpine and subalpine pastures and meadows.

According to the last national forestry inventory, produced in 2004, approximately 83 per cent of the forest consists of semi-natural forests with natural origin of replication. High forest (a type of forest originated from seed or from planted seedlings) constitutes 45.7 per cent, while coppice (an area of woodland in which the trees or shrubs are, or formerly were, periodically cut back to ground level to stimulate growth and provide firewood or timber) accounts for the remaining 54.3 per cent. Simple forest accounts for 72.3 per cent and mixed forests account for 27.7 per cent. Broadleaf forests make up 81.5 per cent, of which 32.1 per cent is oak, 17.9 per cent is beech and 10.0 per cent is *Carpinus*, with small percentages of other broadleaf forests such as acacia, poplar, maple and willow. Coniferous forests make up 18.5 per cent, represented mainly by black pine (11.4 per cent), Mediterranean pines (wild pine, soft pine) (3.4 per

cent), white fir (2.2 per cent), and smaller percentages of other coniferous trees.

According to the 2004 national forestry inventory, the mean natural annual increment is 1.4 m<sup>3</sup>/ha/year, which is half the European average. In addition, since these data are from 2004, it is believed that this has drastically decreased since the last inventory. According to the World Bank project, tree-felling has exceeded the net annual increment, resulting in an overall decrease in growing stock. According to Corine land cover data, between 2006 and 2012 the forest cover decreased by approximately 17 per cent. Precise data analysis and a Corine land cover report are expected to be available in late 2017. It is believed such drastic decline in forest cover is due to clearance for agriculture, overgrazing, logging for fuelwood, forest fires and illegal logging.

According to the European Forest Fires Information System, between 2007 and 2014, 216,074 ha of forest nationwide were burned. This is almost 21 per cent of all forest cover. According to the analysis by the then Ministry of Environment, fires during this period had catastrophic consequences in terms of both timber volume loss and the loss of natural regeneration.

The Albanian parliament approved a 10-year moratorium on logging for industrial purposes and export in February 2016. As of early 2017, there are no data on forest fund recovery; however, according to the governmental officials, illegal logging has decreased considerably and the exploitation of the forest fund is at only 20 per cent of annual growth capacity.

There are no available data on the impact of acid rain on forestry in Albania. However, it is believed to be non-existent or very minimal due to the fact that there is very little industry or other possible source causing acid rain.

#### *Type of forest management including ownership*

In 2015, 97 per cent of forests are public forests, of which 47 per cent are state forests and 50 per cent communal forests. Three per cent are private. Until 2015, the forestry sector was under the administration of the then Ministry of Environment. Nowadays, due to overall decentralization, municipalities manage 85 per cent of the forestry sector.

#### *Protected forests*

There is no protected forest in Albania. Only forests in the protected areas have some degree of protection,

depending on the degree of protection of the protected area.

The Ministry of Tourism and Environment estimates that 8.2 per cent, or 84,841 ha, of national forests are so called "virgin forest", mostly located in the north of Albania. Currently, there is no law that protects forests as "high-nature-value forests" or "virgin forests" or forests that contain special species, or are of any other special kind of importance. According to the Ministry of Tourism and Environment, most high-nature-value forests identified so far are located in the already existing protected areas.

### **9.3 Pressures on species and ecosystems**

The 2016 NBSAP identifies the following as major sources of pressure on species and ecosystems: habitat loss and fragmentation; urban sprawl; overexploitation of natural resources, in particular sand and gravel mining of beaches and river beds; intensive deforestation; and hunting. The most prevalent of these pressures affect the marine and coastal ecosystems (sand dunes, delta rivers, alluvial and wet forests, lagoons and coastal lakes), and alpine pastures and meadows.

#### *Land use*

The fragmentation, reduction and loss of natural habitats have been a direct result of demographic developments and the urbanization process. Beginning in 1990, the country has been characterized by massive population shifts from the countryside to large and medium-sized urban centres such as Tirana, Durrës, Vlorë, Elbasan and Sarandë, and to undeveloped coastal areas. This urbanization was occurring primarily through informal processes. As a result, poor or non-existent water and sewerage systems, the clearance of land for infrastructure and a lack of overall spatial plans have caused pressures on ecosystems and species. The Government has made important progress with regard to property registration. There is some evidence of progress in enforcing existing legislation and regulations, particularly in the capital, but gaps remain with regard to the efficiency of the practical implementation of the legislative framework and dealing with construction permits.

Construction of the north–south and east–west highways in the late 1990s, as well as the increase in traffic, have also contributed significantly to the increased fragmentation of natural habitats, interruption of migration and large movement of animal species, leading to the genetic degeneration of animal populations.

### *Development of hydropower*

Southeast Europe is experiencing a wave of hydropower projects. According to the study by Euronatur and River Watch, "Financing for Hydropower in Protected Areas in Southeast Europe", published in 2015, Albania is the regional leader in the number of built and planned HPPs. Of 94 currently planned projects, one quarter have been planned to be located inside protected areas or to have a strong impact on them.

Among them are the Ashta 1 and 2 plants (53 MW in total) on the Drini River. In 2014, local communities rallied against the construction of the Bence Tepelene HPP, objecting that it diverts river water used by three villages in the area, and damages livelihoods and the ecosystem. The same year, four villages in the Municipality of Zerqan held repeated protests against the works on the Ternove HPP, claiming that the derivation of water for the plant has deprived them of irrigation water and drinking water resources. The local community and environmental groups have also taken a strong stance against hydropower developments inside the Shebenik-Jabllanica National Park.

No cumulative impact assessment of HPPs in the country, and in particular in protected areas, has been undertaken.

### *Soil losses*

According to the 2016 National Action Programme to Combat Desertification, soil losses in Albania due to erosion are very high, varying from 20–30 tons/ha/year, and, in some areas, soil loss is as high as 150 tons/ha/year, whereas the acceptable erosion rate is only 1 ton/ha/year. According to INSTAT, average soil erosion in 2015 was 11.2 m<sup>2</sup>/ha, with sampling taken in four different areas. An evaluation of the potential erosion risk in Albania estimated that 24 per cent of land is under high risk of erosion, 59 per cent is at moderate risk and 17 per cent is at low risk, with approximately 100,000 ha of agricultural land in the process of desertification caused by poor vegetation cover.

Although soil erosion and other forms of land degradation are due in part to natural climatic conditions and Albania's topography, these factors have been exacerbated by human activities, such as deforestation, overgrazing, cultivation of sloping soils, poor water and irrigation management and unsustainable agricultural practices.

According to the 2016 National Action Programme to Combat Desertification, current agricultural practices also deplete the area of soil surface rich in organic matter. About 285,000 ha or 42 per cent of agricultural land have suffered from the loss of soil organic matter and the decline in soil nutrients, with annual losses of three essential nutrients of 69,609 tons, or 40 per cent more than the amount of fertilizer used. The agricultural sector provides employment for about 41 per cent of Albania's labour force and accounts for about 25 per cent of GDP, so the pressure on ecosystems and biodiversity from agriculture is likely to increase if the same agricultural practices continue. With the transition to a free market economy in the early 1990s, about 470,000 small family farms were created, with holdings averaging about 0.7 ha; in hilly and mountainous areas, some land parcels are even smaller, measuring as little as 0.2 ha. Due to such small agricultural holdings, the habitat is very fragmented, adversely affecting the ecosystems and species.

Historical activities that produced negative effects on the environment and ecosystems, such as the drainage of swamps (250,000 ha), deforestation (290,000 ha), terracing and the creation of fruit tree plantations, and damage to subalpine and alpine pastures for the purpose of setting up cultivated ground or "improved" pastures in the period 1945–1990, still adversely affect biodiversity in the country.

### *Logging*

According to the cadastre reports, data on legal and illegal logging are as follows:

- In 2013, 449,859 m<sup>3</sup> of timber legally harvested and an estimated 14,502 m<sup>3</sup> of illegal logging;
- In 2014, 180,343 m<sup>3</sup> of timber legally harvested and an estimated 13,793 m<sup>3</sup> of illegal logging;
- In 2015, 110,086 m<sup>3</sup> of timber legally harvested and an estimated 2,243 m<sup>3</sup> of illegal logging.

From 2013 to 2015, the decrease in harvested timber was about 75.52 per cent, while illegal logging decreased by 84.53 per cent.

Due to the large loss of forest cover in the past 25 years (an estimated 20 per cent), in early 2016, Albania imposed a nationwide, 10-year moratorium on logging, with the exception of fuelwood used by local communities.

### *Hunting*

Illegal hunting has presented one of the major pressures on carnivorous mammals and migratory

birds. In 2014, Albania declared a hunting moratorium and, in June 2016, extended the moratorium for the next five years.

In 2016, bird count data for 68 different bird species was gathered from 19 important bird sites in Albania. It shows the rise in population of migratory birds in the country, also supporting the effectiveness of the hunting moratorium.

According to Albanian ornithology experts, the elimination of illegal hunting in lagoons, which has eliminated noise disturbance from guns, is one of the reasons why the flocks are staying in the lagoons and not migrating elsewhere. During the migration season, a small flock of birds initially comes to "test" the route near the shore. It has been observed that, in the past, due to gun noise, the flock would divert its migration route from the lagoons in Albania.

#### *Non-timber forest products*

Export of non-timber forest products (NTFP) is an important economic activity for local communities. In 2011, more than 7,000 tons of NTFP were collected and exported, worth approximately €14 million. In 2015, 13,000 tons of NTFP were exported, worth more than €27 million. Since 2011, there has been an 85 per cent increase in the amount of NTFP collected. However, the Law on the Protection of Medicinal Plants No. 10120/2009, which includes NTFP, does not specify quotas on allowable limits of NTFP collection. Therefore, there are currently no mechanisms for overall control of NTFP collection.

#### *Acidification*

As the impact of acid rain on species and ecosystems is not studied in Albania, there are no data. According to the European Environment Agency (EEA) study of exposure of ecosystems to acidification, Albania is not exposed to the effect of acidification at all. This is consistent with the fact that there is very little industry in Albania or the bordering countries that would contribute to the effect of acidification.

#### *Eutrophication*

Although there is no comprehensive report on eutrophication in Albania, some data from foreign-funded projects and the EEA are available.

According to the 2015 GIZ report "Initial Characterisation of Lakes Prespa, Ohrid and Shkodra/Skadar", there is a high number of macrophyte communities as well as nutrient enrichment in all littoral zones of Lakes Shkodër and

Prespa. According to biological and chemical analysis, Lake Ohrid is mostly in its natural oligotrophic state, particularly in the pelagic zone. However, the littoral zone of the lake is showing mesotrophic conditions, especially around the more urbanized areas. Eutrophication is considered to be significant in all three transboundary lakes, which is a result of their increased phosphorus content from agricultural runoff and untreated wastewater.

According to the EEA assessment of exposure of ecosystems to acidification, eutrophication and ozone, Albania has a small coastal area that might be exposed to eutrophication, which is most probably due to untreated wastewater and sewage and agricultural runoff.

#### *Climate change*

According to Albania's Third National Communication on Climate Change, there is evidence that the impacts of climate change have had an effect on biodiversity loss in the country (chapter 5).

### **9.4 Performance and gaps in monitoring networks with regard to biodiversity and forests**

#### *Forests*

Monitoring of forests is done by forestry units in 61 municipalities. Municipalities gather data on an annual basis and send them to the NEA, which then consolidates and reports them in the annual SoER. Parameters for monitoring include total forest land, forest production, estimates of total biomass, structure of age classes and production index. However, most of the reports received from municipalities do not address these parameters but present descriptive and qualitative observations. Moreover, there is very little monitoring in terms of forest biodiversity. In general, annual reports give a descriptive, qualitative overview of forest health, and do not present data on indicators or trends.

#### *Biodiversity*

Monitoring of flora and fauna is organized around 76 locations spread across the whole territory of Albania. Through contracted institutions, the NEA monitors lichens, mushrooms, macrophytes, invertebrates, reptiles and amphibians, fish, birds and mammals at 15–20 locations each year, depending on the available annual budget. On average, the NEA uses only €10,000 a year – to subcontract one institution, the Faculty of Natural Sciences of the University of Tirana – for the monitoring of biodiversity and ecosystems.



This amount is insufficient to cover the 76 designated biodiversity monitoring sites. Consequently, the annual reports refer to a maximum of 15–20 sites a year, which does not allow for comprehensive monitoring or development of indicators. Since the overall monitoring started only in 2013 and different locations are being monitored each year, no trends can be drawn.

The National Agency of Protected Areas (NAPA) is responsible for flora and fauna monitoring within the protected areas, and for sending this information to the NEA, which then consolidates it into the annual SoER. However, since NAPA was established only in 2015, there are still no reports available. Also, since some of the 76 recommended sites are in protected areas, the responsibilities for biodiversity monitoring in protected areas might be overlapping between the NEA and NAPA.

There are very little data on the monitoring of marine life. Biological elements monitored annually include only the composition, abundance and biomass of phytoplankton, and some aquatic flora and benthic invertebrate fauna, but no higher taxonomic groups, such as sea turtles, fish and mammals, unless monitoring of higher taxonomic groups is supported through international donors.

During the summer of 2016, monitoring of sea turtles started within the framework of the project Network for the Conservation of the Cetaceans and Sea Turtles in the Adriatic, implemented by the Albanian Herpetofauna Society. Monitoring of sea turtles is now included in the national monitoring network established through CEMSA. In 2016, 191 sea turtles were studied, photographed, measured (carapace and tail), tagged and released. Since the monitoring only started in 2016, there are no trends available yet.

Albania is a cooperating country with the EEA. In terms of biodiversity, it reports on only one indicator: CSI 008 – Designated Areas.

In general, there has been improvement in biodiversity monitoring; however, it is still incomplete and fragmented. There is still no coherent national system of monitoring in place, and it largely depends on the financial contribution of international projects and donors. Currently, results and information gathered

though implementation of such projects is dispersed among institutions and agencies. This hinders the compatibility, quality and reliability of the information.

## 9.5 Protected areas

In Albania, protected areas are classified according to IUCN categorization.

One of the main priorities of the Government over recent years has been the designation of new protected areas. Since 2002, Albania has increased protected areas from 3.6 per cent to 16.61 per cent of total national territory in 2015. Since 2012, Albania has increased protected areas by 1.61 per cent. In 2015, Albania had 800 protected areas covering a surface of 477,566 ha or 16.61 per cent of the whole national territory, the highest percentage of all countries in South-East Europe. There has been no further increase in protected areas in 2015–2017.

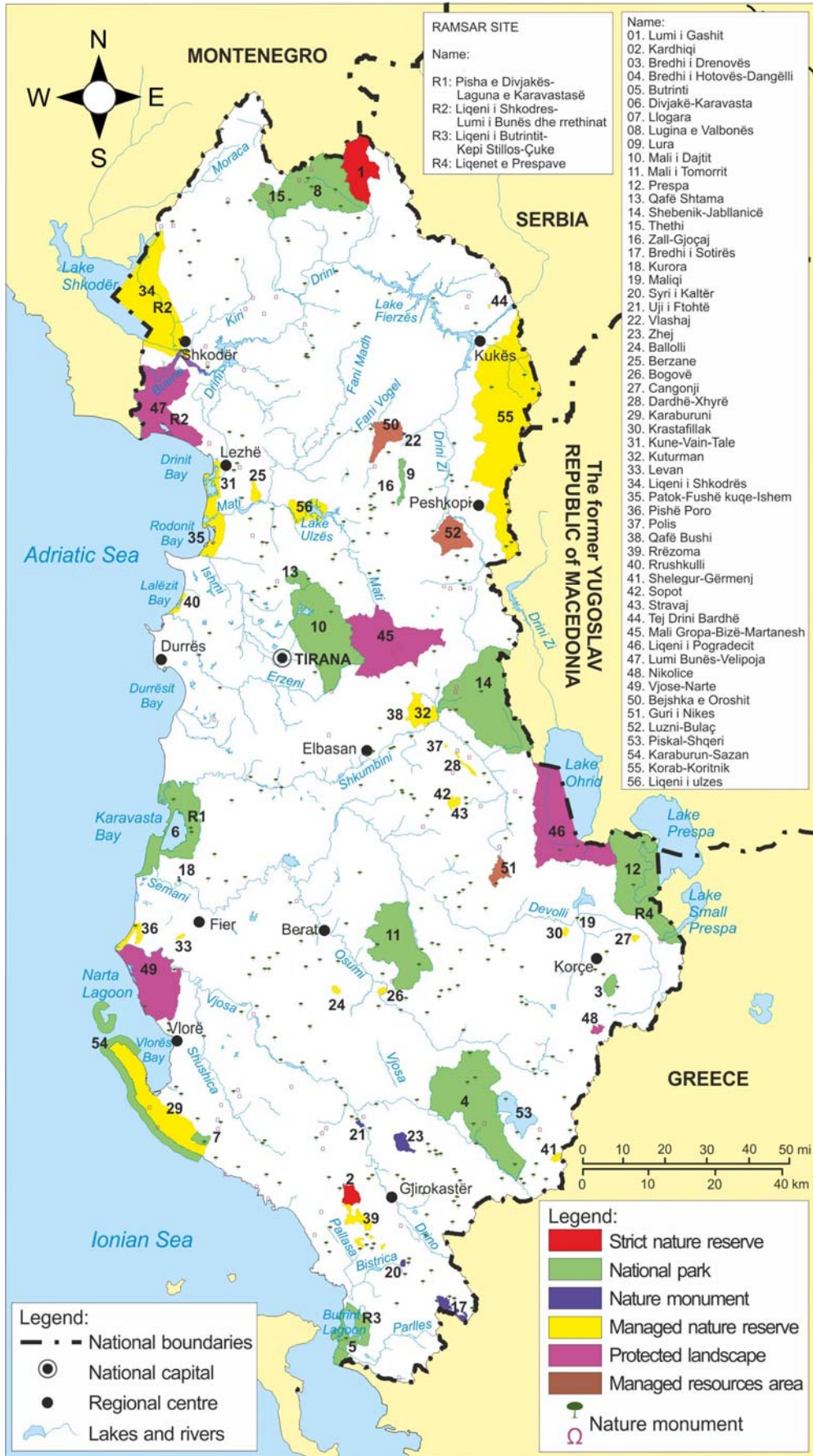
Protected areas include 15 national parks, 5 protected landscape areas, 4 strict nature reserves, 23 managed nature reserves, 2 nature and science reserves, 4 protected resource areas and 750 monuments of nature (map 9.1).

Since 2011, Albania has proclaimed one new regional nature park, Lake Ulzi, in 2013. Lake Prespa was accepted as a Ramsar site in 2013. In 2014, the Regional Nature Park Nikaj i Mertar was established. The country is currently in the process of proclamation of the Porto Palermo marine protected area and the Albanian Alps National Park, which will encompass three already existing protected areas.

Development of protected area management plans did not follow the increase in protected areas immediately. Since 2011, there has been significant development in protected area management plans (table 9.2).

The Government is making significant efforts to make protected areas functional, which can be seen through their designation and management, for example. So far, all protected areas depend strictly on the state budget, and, for this reason, the majority of protected areas still lack basic infrastructure and enforcement mechanisms. Therefore, illegal logging or hunting are not rare.

Map 9.1: Protected areas



Source: Ministry of Environment, February 2017.

Note: The boundaries and names shown on this map do not imply official endorsement or acceptance by the United Nations.

**Photo 9: Divjaka-Karavasta National Park****Table 9.2: Development of protected area management plans**

Protected area	Proclamation year	Adoption year
Dajti National Park	1966/2006	2004
Vjosa-Narta Protected Landscape	2004	2004
Llogora National Park and Karaburun Managed Nature Reserve	2004	2004
Butrint National Park	2005	2011
Kune-Vain Managed Nature Reserve	2010	2011
Lake Shkodër Managed Nature Reserve	2005	2012
Bredhi i Hotoves-Dangelli National Park	2008	2014
Lake Prespa National Park	2014	2014
Tomorri National Park	2014	2014
Korab-Koritnik National Park	2014	2014
Mali me Gropa-Bize-Martanesh Protected Landscape	2007	2014
Lake Pogradec Protected Landscape	2014	2014
Karaburun-Sazan Marine National Park	2010	2015
Divjaka-Karavasta National Park	2007	2015
Buna River-Velipoja Managed Nature Reserve	2005	In adoption process
Shebenik-Jabllanice National Park	2008	In adoption process

Source: Ministry of Environment, February 2017.

According to the 2002 Law on Protected Areas, all revenues generated by a protected area were transferred to the Government without any repayment to the protected area that had generated them. The then Ministry of Finance used to allocate funds on an annual basis to NAPA, which distributed them to the RAPAs for application to protected areas. As a result, NAPA could finance only the staff costs and utilities, and in some cases not even those. In some protected areas, the allocations of funds were so small that logging became the only source of revenue to cover

the salaries of the protected area staff. Protected areas did not themselves have the authority to develop in a sustainable manner. This situation should change with the adoption of the new Law on Protected Areas No. 81/2017. The new Law stipulates that revenues generated by protected areas are to be used by NAPA for the development of protected areas, the purchase of transport and equipment for field work, the development of management plans and inventories, afforestation, fire prevention and communication and

awareness activities. Subsidiary legislation still needs to be adopted to make these provisions operational.

## 9.6 Ecological networks

Albania still does not have a national ecological network and associated management plans. As part of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention), Albania has developed a proposal for Emerald sites. As of early 2017, neither the Standing Committee of the Bern Convention nor the Government has officially adopted it.

The Emerald network proposal was submitted to the Standing Committee of the Bern Convention in December 2011 and, following its assessment, it was concluded that Albania needs to work further on filling the identified gaps. The process is ongoing and is planned to be completed by the end of 2017, after which time it will be submitted again to the Standing Committee. As for national adoption, there was no legal framework related to Emerald sites. However, the new Law on Protected Areas No. 81/2017 addresses this concern.

Since Albania is very important for migratory species and globally threatened species, it has four designated Ramsar sites, with the Albanian Prespa Lakes the latest to be accepted.

Since 2015, Albania is implementing Natura 2000. Albania is still in the initial phase and there are still no designated networks identified or adopted.

## 9.7 Legal, policy and institutional framework

Since 2011, the country has made efforts on biodiversity conservation, mostly through the establishment of the new institutional and legal frameworks, and partially through enforcement.

### *Legal framework*

Protection of nature and the general principles of biodiversity conservation are stated in the Law on Environmental Protection No. 10431/2011, Law on Biodiversity Protection No. 9587/2006 and Law on Protected Areas No. 81/2017. In terms of the legal framework, the major achievement since 2011 was further transposition of the EU Habitats and Birds Directives through the enactment of amendments to national laws and adoption of the secondary legislation. The moratorium on hunting introduced by the Law on Prohibition of Hunting No. 7/2014 was extended in 2016 for another five years.

The Law on the Protection of Medicinal Plants No. 10120/2009 includes most NTFPs, but does not set quotas for their sustainable harvesting. Therefore, there are no limitations on how much can be harvested in a given area.

The Law on Forests and the Forestry Service No. 9385/2005 includes a legal obligation on municipalities for the establishment of structures for the management of the forest fund (which has not been implemented by five municipalities as of early 2017). No national forest certification is in place.

In February 2016, the Law on the Moratorium in Forests No. 5/2016 introduced a 10-year ban on logging for industrial purposes and export. The Law guarantees the supply of the population with firewood. The other exception refers to forest exploitation for the purposes of regeneration and sanitary cleaning (chapter 1).

### *Policy framework*

The Document of Strategic Policies for Protection of Biodiversity for the period 2016–2020 envisages the expansion of the system of protected areas by increasing the surfaces of protected areas. It also envisages the development of management plans and implementation of those already adopted (chapter 1).

Conservation action plans for certain species (brown bear (*Ursus arctos*), Eurasian lynx (*Lynx lynx*), pygmy cormorant (*Phalacrocorax pygmeus*), cetacea, neptune grass (*Posidonia oceanica*) and sea turtle) have been adopted.

The 2016 National Action Programme to Combat Desertification is a key instrument for implementing the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa. It details the current state of land and soils and contains an action plan to combat land degradation, desertification and drought.

The key strategic objectives on forestry of the 2016 Second National Strategy for Development and Integration for the period 2015–2020 (NSDI-II) are to strengthen management and conservation of forestry and pasture resources through reduction of illegal logging in forests by 2020, formulate management plans for all forestry economies in the country, and rehabilitate degraded areas.

The draft environmental cross-cutting strategy for the period 2015–2020 is intended to replace the 2007 Environmental Cross-cutting Strategy, but its adoption

is still pending. The draft sets out policy goals and medium- and long-term objectives in all environmental fields, including biodiversity conservation, forestry and pasture management.

*Sustainable Development Goals and targets relevant to this chapter*

Albania's current position vis-à-vis Goal 15 is described in box 9.1.



### Box 9.1: Sustainable Development Goal 15

**Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss**

Overall, Albania is making good efforts to achieve Goal 15, in particular by increasing the surface of protected areas and improving their management, by taking radical measures to end poaching and by strengthening the conservation of mountain ecosystems. There is much more to do to increase afforestation and ensure sustainable forest management. The targets on mobilizing and increasing resources for sustainable forest management (15.b) and biodiversity conservation (15.a) are crucial for Albania to be able to meet all the challenges of Goal 15.

**Target 15.1: By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and dry lands, in line with obligations under international agreements**

Albania has increased its protected areas from 3.6 per cent of the national territory in 2002 to 16.61 per cent in 2015. In addition, Albania is currently in the process of establishing another two national parks, one of which will be a marine protected area. However, protected area management plans did not follow this increase. As of spring 2017, the country has adopted 14 protected area management plans and is in the process of adoption of two others. Improving the management of protected areas and ensuring the enforcement of legislation on protected areas are key challenges for the achievement of this target.

**Target 15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally**

**Target 15.b: Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation**

Albania has taken a number of steps towards sustainable forest management. Currently, a new national forestry inventory is under development through a World-Bank-funded project. This will increase knowledge about current forest coverage and forest health.

There has been some progress with afforestation efforts. Until 2013, nurseries were completely in private holdings and presented an issue for afforestation activities, as they were insufficient. In 2013, the then Ministry of Environment established a nursery in Cërrik-Elbasan which is currently producing 200,000 seedlings of different forest tree types. In 2014, US\$400,000 were granted through the carbon capture mechanism to 24 communes countrywide for new reforestation efforts carried out by the communes. According to the Ministry, 800,000 ha has been afforested, with a 90 per cent survival rate. However, the invested funds are still not significant enough to combat the forest degradation that has occurred over the past three decades in Albania. The country needs to further invest in conservation of forest ecosystems and afforestation.

No national forest certification is in place; establishing a certification system would provide incentives for sustainable forest management.

**Target 15.3: By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world**

Soil losses due to erosion are very high, varying from 20 to 30 tons/ha/year. In some areas, soil loss is as high as 150 tons/ha/year. In 2016, the Government adopted the National Action Programme to Combat Desertification. This envisages measures for rehabilitation of degraded land. Albania is also implementing a number of soil restoration activities through donor-funded projects such as the UNEP/GEF-funded project Promoting Sustainable Land Management in Albania through Integrated Restoration of Ecosystems.

**Target 15.4: By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development**

Albania is currently in the process of establishing the Albanian Alps National Park, which will encompass and enlarge three already existing protected areas. The main objective is to ensure a consolidated approach to the conservation of mountainous ecosystems.



**Target 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species**

Albania updated the Red List of Fauna and Flora in 2013, in accordance with the IUCN criteria. Conservation action plans for several species under the Red List have been adopted.

**Target 15.6: Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed**

Since 2013, Albania has been party to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization. Implementation is still at an early stage. The country is in the process of establishing national-level measures on access and sharing of genetic resources and profits. The legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits are still to be developed and adopted.

**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**

Due to widespread illegal hunting, the Government declared a ban on hunting in 2014 and extended it in 2016 for the next five years. According to various sources, the ban has been successful and has already brought positive results. Strengthening enforcement and control over compliance with nature protection legislation are important aspects to complement the effect of the ban.

**Target 15.8: By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species**

Invasive alien species are not considered a major threat to the biodiversity in Albania. No research has been conducted, mainly due to the lack of financial and human resources. The current percentage of invasive flora species is the lowest in Europe. The low rates of invasive species, absence of damage and relatively low frequency of invasive species in Albania reflect the impact of the country's long-term isolation during the twentieth century. However, since the 1990s, significant social and economic changes have facilitated the spread of invasive alien species. In 2009, the Government issued a decree on invasive alien species, which includes the list of alien species that are not allowed to enter the country.

**Target 15.9: By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts**

While some progress has been achieved with integration of biodiversity conservation requirements into sectoral legislation, there is a lot of room to increase such integration in strategic documents in the agriculture, energy, transport, industry, mining and territorial planning sectors.

**Target 15.a: Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems**

There are no financial resources earmarked to protected areas, or nature and biodiversity conservation. Limited financial resources are available from the state budget to cover management costs and maintenance of equipment and infrastructure of the protected areas. The revenues generated by protected areas are transferred to the state budget and not used for specific purposes such as local economic development, particularly tourism. Very limited and clearly insufficient resources are assigned for biodiversity monitoring. Mobilizing and increasing financial resources to conserve biodiversity is an urgent priority for Albania.

*Institutional framework*

The Ministry of Tourism and Environment is responsible for, among other matters, the development of policies and legislation on biodiversity, nature protection, sustainable management of forests and pastures, and tourism. Within the Ministry, the Directorate of Development Programmes for Environment includes a Sector of Programmes for Nature Protection and Biodiversity and a Sector of Forests and Pastures (figure 1.2).

The NEA is responsible for producing the SoER on an annual basis, including reporting on the issues of biodiversity and forestry (chapter 3). It is the competent authority for environmental monitoring,

including flora, fauna, forest health and ecosystems. The NEA provides environmental information to the public.

The State Inspectorate of Environment, Forestry and Water is responsible for ensuring enforcement laws and regulations pertaining to biodiversity conservation (chapter 1).

NAPA works on the management, protection, development, expansion and operation of protected areas (DCM No. 102 dated 04.02.2015). It has 12 regional administrations for protected areas (RAPAs). NAPA is responsible for the monitoring of flora and fauna within the protected areas (chapter 1).

The Ministry of Tourism and Environment is cooperating with the Ministry of Agriculture and Rural Development on agricultural biodiversity. It cooperates with the Customs Administration of the Ministry of Finance and Economy for international customs control of trading endangered species of wild flora and fauna.

At the local level, the management of transferred forests and pastures is among the new functions assigned to municipalities. Municipalities are required to establish structures for the management of the forest fund. Such structures have not yet been established in all municipalities (chapter 1). The municipalities are jointly responsible, along with the Ministry of Tourism and Environment, Ministry of Interior and Ministry of Finance and Economy, for enforcement of the Law on the Moratorium in Forests No. 5/2016.

### 9.8 Participation in international agreements and processes

Albania has been party to the Convention on Biological Diversity (CBD) since 1994. It acceded to the Cartagena Protocol on Biosafety in 2005. It acceded to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization and to the Nagoya–Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety in 2013 (chapter 4). Albania has submitted five national implementation reports to the CBD. A series of capacity-building training events related to the Cartagena Protocol were organized. However, capacity-building is still necessary in the following areas: human resources; identification of living modified organisms (LMOs), including their detection; handling of confidential information; measures to address unintentional and/or illegal transboundary movement of LMOs; and scientific biosafety research relating to LMOs. Under the Nagoya Protocol, Albania is in the process of establishing the necessary measures related to monitoring genetic resources and compliance measures for users.

Albania ratified the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) in 1999. Albania has proposed 25 sites to the Emerald Network of Areas of Special Conservation Interest; a decision on these sites is still in the process of adoption (chapter 4).

In 2003, Albania acceded to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The Law on the Rules and Procedures of International Trade of Endangered

Species of Wild Fauna and Flora No. 9867/2008 ensures the implementation of CITES. In 2010, an assessment of the effectiveness of the legislation was planned, but was not performed due to human and financial constraints. There is no national website with information on CITES and its requirements.

In 2001, Albania acceded to the Bonn Convention on the Conservation of Migratory Species of Wild Animals. It is also party to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) and Agreement on the Conservation of Populations of European Bats (EUROBATS) (chapter 4). The country has taken actions to minimize the effect of habitat destruction and pollution by reducing the level of pollution, especially in the coastal areas that serve as the main habitat for migratory species. It also applied some efforts to the restoration of the most important coastal wetlands. Further capacity-building activities are necessary in order to gain experience, particularly in terms of legal enforcement on issues related to migratory species.

Albania has been party to the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitats since 1996 and has four sites designated as wetlands of international importance (chapter 4).

Albania ratified the UNCCD in 2000. The National Action Plan to Combat Desertification was prepared within the GEF Project Harmonization of the National Action Plan to Combat Desertification in Albania and Preparation of the National Report.

### 9.9 Assessment, conclusions and recommendations

#### *Assessment*

Since 2011, Albania has progressed in the establishment of protected areas and in improving the institutional framework for their management, in particular through the creation of NAPA.

Biodiversity monitoring shows some progress, but little progress was achieved in forest monitoring. Data about forestry as a sector, forest trends and the extent and status of high-nature-value forests are lacking. Both the NEA and NAPA are responsible for the monitoring of biodiversity in the country, and it is unclear how data are shared between the two institutions. Of the 76 locations selected for biodiversity monitoring, only 15–20 are monitored

due to the lack of funds. Monitoring of marine biodiversity is almost non-existent.

In terms of forestry, Albania is lagging behind in many aspects. The Ministry of Tourism and Environment estimates that 8.2 per cent, or 84,841 ha, of national forests are of high nature value. However, the country still does not have a law for protection of high-nature-value forests. The current legislation related to NTFPs does not provide for quotas/limitations on their collection.

The management of forests and pastures has recently been assigned to the local government units. As of 2016, municipalities are responsible for sustainable management of forests, including monitoring. Generally, there has been little assistance provided to the newly established municipalities in the process of implementation of these new functions.

### *Conclusions and recommendations*

#### Monitoring of forests and biodiversity

Albania progressed with the establishment of the legal and institutional framework for monitoring and reporting on biodiversity and forestry. However, implementation still lags behind due to a lack of funds and overlap of monitoring responsibilities between the NEA and NAPA with regard to biodiversity monitoring in the protected areas, impeding the analyses of trends.

#### Recommendation 9.1:

*The Ministry of Tourism and Environment should:*

- (a) *Clarify the mandates of the National Environment Agency and the National Agency of Protected Areas in terms of the locations and parameters for the monitoring of biodiversity in protected areas;*
- (b) *Increase funding for the monitoring of forests and biodiversity in order to include all the identified locations and high-nature-value forests, to enable the collection of data on the core set of biodiversity and forestry indicators and make them publicly available.*

#### Forest management by municipalities

During the territorial reform and decentralization, there has not been enough assistance provided to the municipalities to meet their new responsibility for forest management. Most of the training organized at the municipal level was not organized by the Government but took place sporadically as part of international projects, seminars, workshops, etc.

Municipalities face difficulties in establishing competent forest management structures. The data on the state of forests reported by municipalities are scarce and largely represent a qualitative description of the situation. This situation needs to be urgently addressed for Albania to be able to make progress towards sustainable forest management in line with target 15.2 of the 2030 Agenda for Sustainable Development.

#### Recommendation 9.2:

*The Ministry of Tourism and Environment should:*

- (a) *Assist newly formed municipalities with the implementation of their forest management responsibilities;*
- (b) *Build the capacity of municipalities on sustainable forest management.*

#### High-nature-value forests and non-timber forest products

Although 8.2 per cent of all national forests are identified as high-nature-value forests, the country still lacks a specific legal framework for the protection of these forests, and, within it, a mechanism for protection. Although the harvesting and export of non-timber forest products have significantly increased over the past decade, the current legislation is inadequate to ensure their sustainable use. It does not cover all NTFPs exported and it does not set quotas for allowed harvesting per area. This poses a risk of overexploitation of NTFPs, which could highly damage the forest ecosystems.

#### Recommendation 9.3:

*The Ministry of Tourism and Environment should improve the sustainable management of forests by drafting legislation for the protection of identified high-nature-value forests and non-timber forest products, including the establishment of quotas for the harvesting of non-timber forest products.*

#### Forest certification

Albania does not have a national forest certification in place.

#### Recommendation 9.4:

*The Ministry of Tourism and Environment should prioritize the implementation of the Programme for the Endorsement of Forest Certification (PEFC) and develop a national forest certification system as an essential element of sustainable forest management practices.*





## Chapter 10

# TRANSPORT AND ENVIRONMENT

### 10.1 Transport infrastructure

The transport sector is dominated by road transport, which accounts for 99 per cent of inland freight and passenger transport volumes. Rail transport has a share of no more than 1 per cent of these movements and this share has been falling dramatically in recent years. Maritime volumes have been growing steadily, as has air travel through Tirana International Airport.

The Government has, in recent years, increased its focus on the transport sector through a number of policy initiatives aimed at aligning Albanian law with the EU acquis. In particular, the then Ministry of Transport and Infrastructure prepared the National Transport Plan in 2006 and subsequently the First Five-year Review of the Albanian National Transport Plan, published in 2010. This was followed in 2016 by the National Transport Strategy and Action Plan for the period 2016–2020, subsequently accompanied by a draft sustainable transport plan, which was completed in 2016. This last document has yet to be adopted and implemented but touches on a number of potential initiatives to "green" the transport sector.

As a candidate country for EU accession, Albania has benefited from significant investment in the transport sector in recent years. The prioritization of investments in Albania is based on the South East Europe Transport Observatory (SEETO) priorities set out in its multi-annual plans and the subsequent Single Sector Project Pipeline for Transport adopted by Albania, prepared through the Western Balkans Investment Framework. The resulting list of priority projects (table 10.1) forms the basis for the National Transport Strategy and Action Plan for the period 2016–2020.

In recent years, Albania has seen a significant deterioration in its Logistics Performance Index scores and rank since 2012 (table 10.2). This is because of significant deterioration on the components of the index relating to infrastructure, the ability to track and trace consignments, and timeliness. This fall followed a period of sustained improvement from 2007 to 2011.

#### *Road transport*

Road transport dominates both passenger and freight movements across Albania. According to the Road

Authority, there are currently 3,848 km of national roads, divided between primary and secondary roads. All primary roads, and about two thirds of secondary roads, are paved. In addition to this, there are more than 10,000 km of communal (municipal) roads.

Albania is located on the international Corridor VIII and investments are aimed at improving connectivity along this corridor. A large number of projects have been funded with the aim of increasing the quality and extension of the road network (table 10.1), but, according to local stakeholders, significant attention still needs to be directed towards road maintenance.

In 2014, according to the then Ministry of Transport and Infrastructure, the total number of passenger cars, including vehicles going through compulsory annual inspections, was about 276,000. The 2016 Strategy suggests that this is significantly below the real number of cars in circulation, with as much as 30 per cent of the actual vehicle fleet not being inspected or not being appropriately registered. In 2016, there were approximately 436,013 cars, which is equivalent to a motorization rate of 151 passenger cars per thousand inhabitants. The Government is currently encouraging owners to either scrap or retroactively register their vehicles, through a temporary amnesty that allows owners to register their vehicle and pay the circulation tax without incurring any fines.

In terms of fuels, more than 75 per cent of personal passenger cars run on diesel fuel (with 24 per cent running on petrol and 1 per cent on other fuel types). All other road transport vehicle types are powered almost exclusively by diesel, except for two-wheeled vehicles, which are all powered by petrol.

The car fleet increased from 114,532 in 2000 to 436,013 in 2016. A proportion of the vehicles newly registered in Albania are actually second-hand vehicles imported from other countries, mainly Italy. Data are not collected on the split between new and second-hand newly registered vehicles, but the draft sustainable transport plan estimates that 60 per cent of newly registered cars are actually second-hand cars coming from other countries and the remainder are new, where new is based on the likely emission level of Euro 4 or above.

**Table 10.1: Priority transport investment projects**

Corridor/ Route/Node	TEN-T Network	Project	Total length (km)	Total estimated cost (€000)
Route 2 (Adriatic–Ionian Highway)	Core – Road	Construction of the Fushe Kruja–Shkodër (doubling) Road	63.50	202.50
		Construction of the Thumana–Kashar/Vorë Road	22.00	98.00
		Construction of the Tepelena by-pass	3.50	29.00
		Construction of the Lezhë by-pass	2.50	25.00
		Construction of the Tirana by-pass	22.00	108.50
Route 7		Construction of the Doubling of Milot–Rrëshen Road	26.00	64.01
Route 2	Core – Railways	Rehabilitation of the railway Vora–Shkodër– Hani Hotit	120.20	175.80
Corridor VIII		Rehabilitation of the railway Durrës–Tirana	35.00	60.79
		Construction of the new railway Tirana– Rinas branch	7.40	
	Comprehensive – Railways	Construction of the new railway Pogradec–Korçe–border with Greece	90.00	150.65
		Rehabilitation of the railway Durrës–Pogradec–Lin and construction of new railway link to the border with the former Yugoslav Republic of Macedonia	137.00	173.30
National Roads	n/a	Reconstruction of the Vlorë River Road	94.20	70.20
		Construction of the section Arbri Road	27.00	205.00
Maritime Transport	n/a	Upgrading of port infrastructure for enhancement of maritime safety and security and protection of marine environment		7.00
<b>Total</b>				<b>1 369.75</b>

Source: National Transport Strategy and Action Plan for the period 2016–2020.

**Table 10.2: Freight Logistics Performance Index, 2007, 2010, 2012, 2016**

	2007	2010	2012	2016
LPI rank	139.00	119.00	78.00	117.00
LPI score	2.08	2.46	2.77	2.41
Customs rank	132.00	129.00	86.00	121.00
Customs score	2.00	2.07	2.43	2.23
Infrastructure rank	78.00	112.00	99.00	148.00
Infrastructure score	2.33	2.14	2.43	1.98
International shipments rank	109.00	104.00	70.00	110.00
International shipments score	2.33	2.64	2.84	2.48
Logistics competence rank	130.00	103.00	91.00	102.00
Logistics competence score	2.00	2.39	2.65	2.48
Tracking and tracing rank	145.00	124.00	88.00	135.00
Tracking and tracing score	1.67	2.39	2.65	2.15
Timeliness rank	144.00	120.00	45.00	94.00
Timeliness score	2.12	3.01	3.58	3.05

Source: World Bank, 2017.

In 2014, a total of 8.6 billion passenger kilometres (pkm) were registered and 3.5 billion ton kilometres (tkm) of freight were moved on the road network. Data from previous years are unavailable, but, given the

change in the vehicle fleet set out above, it is likely that these volumes have increased significantly in recent years.

### *Rail transport*

The railway network has been in decline in recent years, with the current total length amounting to 379 km in 2015. The current network was completed in 1986 and the average age of the network is about 68 years. The network is "T-shaped", with the majority of the infrastructure being along the coast, with the largest spur heading to Tirana.

As the country has focused on expanding the road network, the railway has been neglected. The maximum speeds across the majority of the network do not exceed 40 km/h and in some sections are as low as 20 km/h. As a result, the use of rail has been in continual decline and the passenger and freight volumes set out below highlight this.

A number of rehabilitation projects are currently being finalized with the aim of modernizing the railways. These projects include the rehabilitation of the main Tirana–Durrës line, the construction of a new rail and intermodal terminal in Tirana and the construction of a new link between Tirana and the airport. These infrastructure projects do not focus enough on improving the signalling, nor on ensuring appropriate separation of the railway from other modes. There are still many informal crossings along the rail network, which are hazardous to pedestrians, motorists and rail users.

The vehicle fleet is entirely composed of trains hauled by diesel-electric locomotives. There is currently a plan to renew the rolling stock fleet, which will be replaced by other diesel-electric stock, as there are no plans to electrify the network.

In 2015, a new entrant operator started operating a freight service in Albania in addition to the national operator, showing that there is interest and potential in growing the rail sector.

The challenges facing the rail sector can be seen in the change in volumes on the network. Between 2000 and 2016, passenger journeys have fallen from 125 million pkm to 3 million pkm while total freight transported on the Albanian network has fallen from 28 million tkm to 9 million tkm.

### *Maritime transport*

The maritime sector is focused around the four major ports of Durrës, Vlorë, Shengjin and Sarandë. The largest and most important of these ports is Durrës, which has 13 berths and handles all types of freight and passenger services. It is also the only port that is

currently run by the private sector through a concession agreement.

The Albanian fleet includes nine general cargo vessels, four passenger vessels and about 230 fishing boats. Between 2009 and 2013, the total number of freight ships passing through Albanian ports almost halved, from over 3,100 vessels to just over 1,800. The same trend was also seen in relation to ferries, which reduced from about 7,000 vessels in 2009 to about 3,400 in 2013; however, over the same period, the total number of ferry passengers has fallen by only about 8 per cent. The reduction in the ferry fleet has been mainly due to the removal from service of ships that were old and of a poor standard.

### *Aviation transport*

The aviation sector is currently focused around Tirana International Airport, which is the only airport currently receiving international flights. The airport is currently managed by a public–private partnership, which holds a 20-year concession that runs until 2025. In 2016, the Government signed an agreement with the concessionaire to extend the concession for two years in exchange for the removal of the exclusivity granted to the airport on international flights. As a result, new airports are under development in Vlorë and Sarandë and international flights will be allowed to and from Kukës.

Between 2004 and 2015, the number of passengers passing through Tirana International Airport more than tripled, from 650,000 to 2 million passengers, while freight increased at a much slower rate, rising from 1,560 tons to 1,770 tons over the same period. While passenger traffic is stable throughout the year, it reaches a peak in August and experiences a trough in February.

### *Urban transport*

The responsibilities for urban transport are devolved to the municipalities. Public transport and non-motorized modes of transport retain a significant share of the transport sector, with data from Tirana in 2009 showing that 36 per cent of the population use public transport and 32 per cent use bicycles or walking as their main mode of transport. This is also because average journey times in Tirana are less than 30 minutes for more than 80 per cent of the urban population. According to the Institute of Transport, the situation is similar in other cities across Albania.

Tirana has, over the years, carried out a number of studies and prepared a number of strategies to improve the urban transport environment. The focus of these

strategies is aimed at improving transport across the city through the following activities:

- Investments in the creation of ring roads;
- Improvements in traffic management;
- Creation of bus lanes and prioritization at traffic lights;
- Creation of cycle lanes;
- Remodelling of the bus system.

A number of initiatives have been pursued at a municipal level, with Tirana in particular seeking to renew its bus fleet through the updating of transport concessions as well as considering the introduction of a bus rapid transit system and/or a tram. The Municipality of Tirana has also introduced a bike-sharing scheme.

#### *Pipelines*

The amount of oil transported in pipelines has been decreasing in recent years, falling from 7.7 billion tkm in 2004 to 1.5 billion tkm in 2011. The total length of oil pipelines has also fallen over the same period, from 130 km to 83 km. This trend will soon be reversed as construction is currently under way on the Trans-Adriatic Pipeline, which will add 215 km onshore and 37 km offshore to the network on the Albanian

territory. The pipeline will carry natural gas to southern Europe and is expected to make its first deliveries in 2018.

### **10.2 Environmental pressures from different modes of transport and from transport infrastructure**

#### *Air*

According to the country's Third National Communication on Climate Change, transport is the single largest producer of CO<sub>2</sub> emissions in Albania, with 2,306 Gg of CO<sub>2</sub> emissions in 2009. By far the largest contributor to this is road transport, accounting for 97.72 per cent.

According to the draft sustainable transport plan, air pollution from transport has continued to increase between 2009 and 2014, with the exception of 2012. CO<sub>2</sub> emissions from non-urban transport have risen from about 1.2 million tons of CO<sub>2</sub> to over 1.3 million tons. Other air pollutants, including PM, SO<sub>2</sub>, NO<sub>x</sub> and VOCs pollutants, have increased from just under 7,600 tons in 2009 to over 8,700 tons in 2014. However, both of these figures are likely to be significant underestimations as they exclude urban transport.

**Photo 10: Bike sharing in Tirana**



Figures 10.1 and 10.2 show the breakdown of emissions for the different sectors. The biggest emitter of CO<sub>2</sub> is the passenger road vehicles segment, followed by good vehicles travelling by road, which, when light and heavy goods vehicles are combined, account for 35 per cent of CO<sub>2</sub> emissions. In terms of other air pollutants, the maritime sector is the largest emitter, accounting for 34 per cent of all emissions, followed by road-based goods vehicles (32 per cent) and passenger vehicles (22 per cent).

#### Other

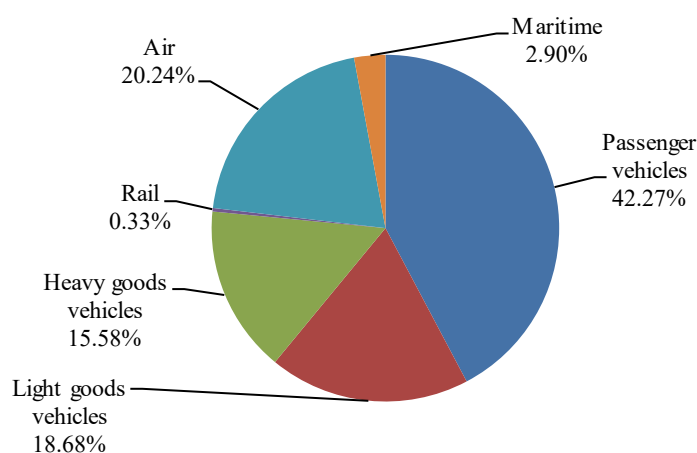
There are no assessments of the impact from any mode of transport on water, land, soil, landscape,

biodiversity or human health.

#### For Future Inland Transport Systems

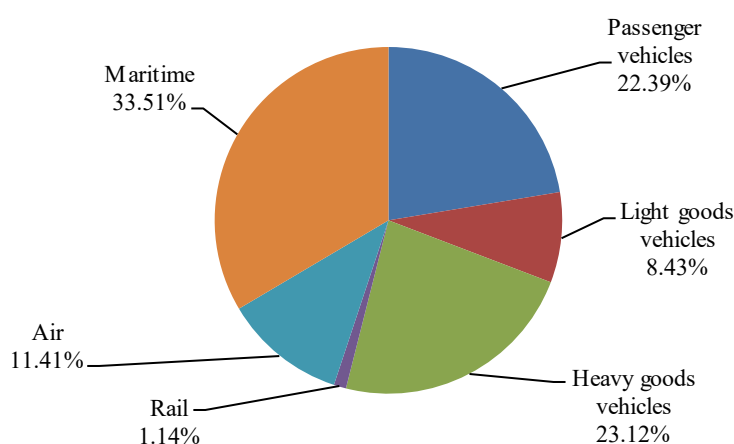
The For Future Inland Transport Systems (ForFITS) tool (annex IV) provides projections of transport sector CO<sub>2</sub> emissions for the reference scenario and four additional scenarios: shift to public transport, shift to electric vehicles, shift to freight rail, and a combination of all three. The estimated well-to-wheel (WTW)<sup>10</sup> CO<sub>2</sub> emissions in 2014 from the transport sector in Albania show that emissions from freight vehicles were approximately 40 per cent more than those from passenger vehicles (2.3 billion kg vs 1.7 billion kg).

**Figure 10.1: CO<sub>2</sub> emissions from transport, excluding urban transport, 2014**



Source: Draft sustainable transport plan, 2016.

**Figure 10.2: Transport sources for other air pollutants, excluding urban transport, 2014**



Source: Draft sustainable transport plan, 2016.

<sup>10</sup> Well to wheel (WTW) refers to CO<sub>2</sub> emissions from vehicle operation as well as emissions from the production of the fuel used for vehicle operation.

The reference scenario accounts for the expected evolution of socioeconomic parameters such as population and GDP. It includes default data in ForFITS on the expected evolution of fuel consumption characteristics by powertrain, to reflect future improvements in vehicle technology and their associated costs. Other characteristics defining the transport system in the base year (e.g. fuel taxation schemes, road pricing, passenger/freight transport system structure, fuel characteristics and behavioural aspects) remain unchanged in projections. The four additional scenarios are characterized as follows:

- *Shift to public transport*: Based on ongoing projects intended to improve public transport services, this scenario simulates a shift from personal vehicles to public transport modes as a result of structural changes in the passenger transport system. This is mimicked through the ForFITS input "passenger transport system index";
- *Shift to electric vehicles*: Electric cars and electric buses are currently non-existent in the vehicle fleet. This scenario simulates that the share of electric powertrain in the fleets of passenger cars and of buses will be 8 per cent and 20 per cent respectively by 2030;
- *Shift to freight rail*: Rail plays an insignificant role in the freight transport system as it moves only 3 per cent of the total tonnage of goods transported by large-freight modes (medium-duty trucks, heavy-duty trucks, rail and pipelines). This scenario simulates an increase of up to 15 per cent of the tonnage transported by rail at the expense of medium- and heavy-duty trucks by 2030;
- *Combined*: This reflects an interconnected scenario in which the three previous scenarios each come into effect.

The projections of future CO<sub>2</sub> emissions under the five scenarios show the emissions increases in Albania through to 2030 (table 10.3).

Under the *reference* scenario, projections of CO<sub>2</sub> emissions from the transport sector in Albania show an overall increase of more than 150 per cent by 2030, with higher increases in emissions resulting from passenger transport in comparison with freight transport. Despite a projection that per capita GDP will more than double between 2014 and 2030, this level remains lower than levels historically associated with an economy in which personal vehicle ownership rates are at their ceiling. This explains the projected increase in passenger transport activity. As tons of goods

transported in the freight sector are proportional to GDP, the expected GDP growth explains the increase in freight transport activity. Emissions from freight transport are projected to be 7 per cent more than emissions from passenger transport in 2030 (as compared with 40 per cent more in 2014).

Under the *shift to public transport* scenario, the decrease in WTW CO<sub>2</sub> emissions in 2030 compared with the reference scenario is approximately 4 per cent. The impact of this scenario on energy use and WTW CO<sub>2</sub> by 2030 is the same (8 per cent decrease in passenger transport only, and 4 per cent decrease in the whole transport sector, since passenger and freight transport are weighted similarly by 2030). This scenario does not have an effect on freight transport.

Under the *shift to electric vehicles* scenario, the decrease in WTW CO<sub>2</sub> emissions in 2030 compared with the reference scenario is approximately 4 per cent. This scenario reduces energy use of passenger transport by approximately 5 per cent by 2030 compared with the reference scenario (2.5 per cent decrease for all transport). The impact of this scenario is greater on WTW CO<sub>2</sub> emissions as the emission factor for electricity is much lower than that of gasoline and diesel for Albania, for two primary reasons. First, as in all electric vehicles, tailpipe/tank-to-wheel emissions are zero. The second reason is specific to Albania as the well-to-tank<sup>11</sup> emission factor accounting for the upstream emissions is very low in the country, due to its use of hydropower in generating electricity. This scenario does not have an effect on freight transport.

Under the *shift to freight rail* scenario, the decrease in WTW CO<sub>2</sub> emissions in 2030 compared with the reference scenario is approximately 6 per cent. The impact of this scenario on energy use and WTW CO<sub>2</sub> emissions by 2030 is the same (12 per cent decrease in freight transport only, and 6 per cent decrease in the whole transport sector, since passenger and freight transport are weighted similarly by 2030). This scenario does not have an effect on passenger transport.

The *combined* scenario projects a total decrease of approximately 14 per cent by 2030 in total WTW CO<sub>2</sub> emissions for the transport sector in Albania in comparison with the reference scenario. This is the result of adding up the reductions achieved in each of the previous scenarios, since the scenarios are not interconnected.

<sup>11</sup> Well to tank (WTT) refers to CO<sub>2</sub> emissions from vehicle operation.

These results together show the effect of steps that can be taken by Albania to limit emissions from the transport sector. Albania faces challenges in that its expected future economic growth would typically correspond with an increase in CO<sub>2</sub> emissions. However, improvements in the efficiency of its transport sector could help mitigate these issues.

The results provided in table 10.3 (and further developed in annex IV) demonstrate the potential impact of improving transport infrastructure and increasing the efficiency of the transport sector through a shift to public transport, electric vehicles and transporting freight by rail more frequently, respectively.

Projections generated by ForFITS based on these scenarios demonstrate the potential impact of increasing the share of public transport in passenger transport activity, increasing the share of electric vehicles in the fleet, and reducing the share of road trucks in freight transport activity. They show that pursuing such policies can temper the current trend of increasingly high WTW CO<sub>2</sub> emissions stemming from the transport sector of Albania. With the aim of mitigating the impact of future CO<sub>2</sub> emissions from the country's transport sector, the following measures can moderate future CO<sub>2</sub> emissions from the transport sector:

- Developing conditions and policies so that cities are more favourable for the use of public transport and less favourable for the use of personal vehicles;
- Developing policies, such as fiscal instruments, to facilitate the deployment of electric vehicles in the fleet;
- Developing alternatives to road trucks in the freight transport sector, such as the development of freight railways.

### *Waste from the maritime sector*

According to the General Maritime Directorate, significant efforts have been made to bring Albania in line with international conventions in this field. In particular, investments are under way in the Port of Durrës to install the necessary equipment to gather and treat waste from vessels.

Currently, all vessels are required to declare waste stored on board when entering Albanian waters and ensure that all the waste is disposed of when in port. To date, as the investments have not been completed, this is carried out through road vehicles, which load waste from the vessels and take it to appropriate treatment facilities on land.

### 10.3 Road safety

Data on road-safety-related incidents are collected based on reports prepared by the traffic police and hospitals.

According to INSTAT, 269 fatalities were registered on Albanian roads in 2016. A further 2,509 injuries and 2,032 accidents causing casualties were recorded in the same year (figure 10.3). Between 2000 and 2016, fatalities in road accidents fell by 4 per cent, although injuries have increased 7.5 times over the same period (figure 10.4). However, the number of fatalities has decreased compared with the growth in vehicle numbers over the same period.

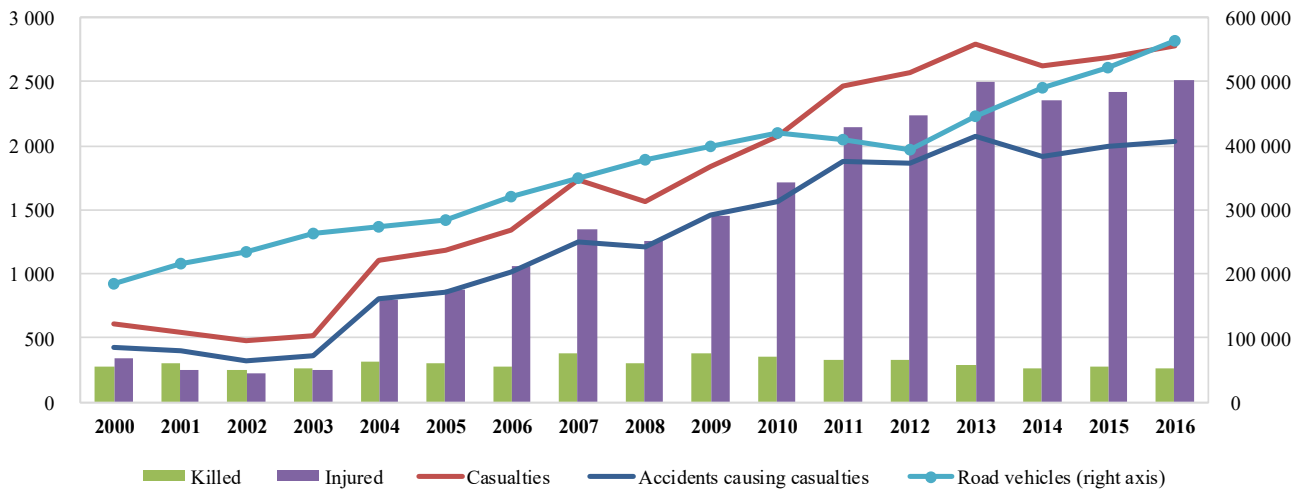
As part of the ongoing work aimed at improving road safety in Albania, the Transport Division of ECE is preparing a road safety performance review funded by the United Nations Development Account.

**Table 10.3: Main ForFITS output: reference and alternative policy scenarios**

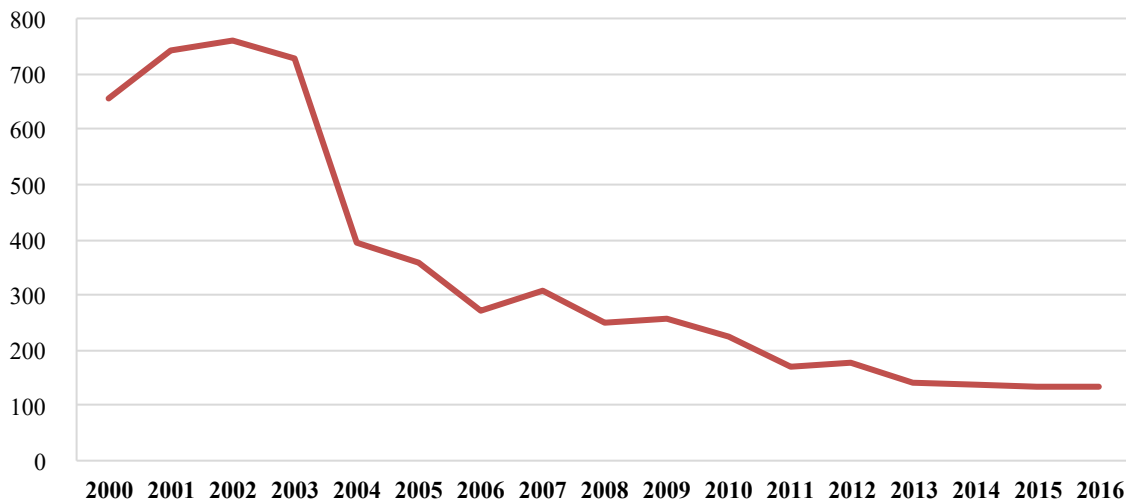
	Unit	2014	2030				
			Reference	Shift to Public Transport	Shift to electric vehicles	Shift to freight rail	Combined
Passenger-kilometres	billion pkm	23.83	55.71	53.40	55.95	55.71	53.63
Ton-kilometres	billion tkm	17.01	36.91	36.91	36.91	36.73	36.73
Energy use	million toe	1.09	2.74	2.64	2.67	2.58	2.41
WTW CO <sub>2</sub> emissions	billion kg CO <sub>2</sub>	3.97	9.96	9.59	9.55	9.37	8.62
WTW CO <sub>2</sub> emissions per capita	kg CO <sub>2</sub> / person	1 370.20	3 378.20	3 253.70	3 238.80	3 179.40	2 923.00
WTW CO <sub>2</sub> emissions intensity	kg CO <sub>2</sub> / GDP * 1 000	123.20	143.50	138.20	137.50	135.00	124.10

Note: GDP is measured in purchasing power parity (PPP) units at 2014 prices.



**Figure 10.3: Casualties in road accidents, 2000–2016**

Source: INSTAT, 2017.

**Figure 10.4: Road traffic accidents, 2000–2016, fatalities per 1,000 injury accidents**

Source: INSTAT, 2017.

## 10.4 Legal, policy and institutional framework

### *Legal framework*

The legal framework of the transport sector depends on a number of laws and regulations that are specific to each transport mode. This section sets out the most relevant of these in relation to the environment.

### Road Transport

The Road Code No. 8308/1998 regulates the conditions necessary for operators to undertake national and international passenger and freight activities on the road network.

DCM No. 147 dated 21.03.2007 "On the quality of gasoline and diesel fuel", requires the following:

- Only unleaded petrol that fulfils the requirements of the DCM can be sold;
- From 1 January 2009, diesel fuel must meet Albanian standard S SH EN 590, with the exception of sulphur content;
- From 1 January 2009, the sulphur content in fuel for diesel engines is not allowed to exceed 350 mg/kg;
- From 1 January 2011, the sulphur content in fuel for diesel engines is not allowed to exceed 10 mg/kg;
- From January 1, 2009, all points of sale must advertise the quality of fuel, petrol and diesel in a clear and visible way;
- Compliance with environmental parameters for gasoline in Albanian standard EN 228, in force, or with other equivalent standards;

- Compliance with the maximum sulphur content permitted, and compliance with diesel environmental parameters in Albanian standard EN 590 or other equivalent standards;
- Appropriate testing parameters for each of the above.

DCM No. 705 dated 10.10.2012 "On waste management of end-of-life vehicles" sets out:

- The process for the approval of applications for prevention, minimization and reuse of waste from end-of-life vehicles, thus contributing to the protection, preservation and improvement of environmental quality, as well as the promotion of economic operators involved in the life cycle of the vehicle to set up systems for the collection, treatment, reuse and recycling of end-of-life vehicles;
- The vehicles covered, i.e. all vehicles designated as category M1<sup>12</sup> and N1<sup>13</sup> vehicles with at least three wheels kept in working order, excluding motor tricycles, the spare and replaced parts of vehicles, historic vehicles or vehicles of value to collectors or intended for museums.

DCM No. 781 dated 14.11.2012 "On the quality of certain liquid fuels for thermal, civil and industrial use, as well as for use in water transport (sea, river and lake)" sets out the following requirements:

- From 31 December 2012, only gas oil will be allowed to be traded as fuel for thermal, civil and industrial use, of the following types and/or parameters:
  - Kerosene;
  - Liquid fuels, middle fractions;
  - Diesel with a sulphur content exceeding 0.001 per cent of mass but not more than 0.002 per cent;
  - Diesel with a sulphur content exceeding 0.002 per cent of mass but not more than 0.1 per cent;
  - Diesel with sulphur content exceeding 0.1 per cent of mass but not more than 1 per cent, that meets the requirements of the Albanian standards;
  - Heavy fuel oil, gas oil and maritime fuel can be used for non-road mobile machinery and tractors and other agricultural machinery, provided that the sulphur content is less than 0.1 per cent of mass.

<sup>12</sup> M1: Vehicles used for the carriage of passengers, comprising not more than eight seats in addition to the driver's (i.e. nine).

- For thermal, civil and industrial use, only heavy fuel oil will be allowed that meets the demands of the Albanian standard SSH UNI 6579 or other standards equivalent to it, except the requirement for sulphur content as provided in Annex 2 attached to this Decision;
- The sulphur content in heavy fuel oil:
  - After 31 December 2013 should not exceed 3 per cent of mass;
  - After 31 December 2014 should not exceed 1 per cent of mass;
  - The above points shall not apply to entities that control air emissions;
- Starting from 31 December 2012, only marine fuel that meets the requirements of the Albanian standard SSH ISO 8217 will be allowed for use in waterway transport (sea, river or lake).

Guideline No. 2/2010 dated 11.03.2010 "On technical inspection of road vehicles" (amended) sets out the following requirements in relation to vehicle inspections:

- All road vehicles registered and circulating in Albania are subject to mandatory technical inspections. Inspections are annual for all vehicles except taxis, driving school vehicles, ambulances, buses and road vehicles carrying dangerous goods, for which inspections are biannual;
- The individual tests that are carried out depend on the vehicle category but are all in line with the requirement of EU Directive 2009/40;
- The technical control authority is required to keep a record of all inspections and reinspections that are carried out on vehicles.

#### Air Transport

The Air Code No. 10040/2008, as amended, sets out the common rules for the operation of air services, reflecting the laws in place within the EU. This Law implements the requirements of ICAO in relation to air transportation.

DCM No. 686 dated 02.06.2010 establishes the basic requirements and principles for the investigation of accidents and incidents in civil aviation.

#### Rail Transport

The Railway Code No. 9317/2004 sets out the requirements for the railway sector, including the responsibilities of the various entities in relation to

<sup>13</sup> N1: Vehicles used for the carriage of goods and having a maximum mass not exceeding 3.5 tons.

operations and safety. The Code is currently being revised to take into account recent developments in the EU acquis and in particular in relation to ensuring the appropriate institutional structure for the industry (horizontal and vertical separation) and adherence to optimal safety standards as per EU Railway Package requirements.

### Maritime Transport

The Maritime Code No. 9251/2014, amended by Law No. 10483/2011, has a significant environmental function, through its regulations related to preventing water pollution and in particular oil leakage. The Maritime Code also specifies the penalties for those who pollute and those who omit to report a polluter.

### Environmental protection

The Law on Protection of Ambient Air Quality No. 162/2014 includes several sections relevant to transport. It requires the Council of Ministers to approve decisions: on emissions from mobile sources; on the reduction of air emissions from the use of certain products, specifically the quality of fuels; and on the reduction of air emissions through road infrastructure development.

The Law on Environmental Protection No. 10431/2011 requires an SEA for plans and programmes in the transport sector. The Law on Environmental Impact Assessment No. 10440/2011 requires an EIA of transport-related projects.

The Law on Integrated Waste Management No. 10463/2011 addresses the transport of wastes in accordance with the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).

Although applying across the economy, the following DCMs relate to the release of harmful emissions and also relate to the transport sector:

- DCM No. 352 dated 29.04.2015 "On air quality assessments and requirements concerning certain pollutants" (chapter 6);
- DCM No. 865 dated 10.12.2014 "On reduction and stabilization of fluorinated greenhouse gas emissions";
- DCM No. 248 dated 24.04.2003 "On approval of temporary air emissions norms and their implementation";
- DCM No. 435 dated 12.9.2002 "On approval of norms for emissions into the air".

### *Policy framework*

#### National Strategy for Development and Integration for the period 2015–2020

The National Strategy for Development and Integration for the period 2015–2020 (NSDI-II), adopted in 2016, addresses the development and modernization of the transport infrastructure. It notes the importance of transport in creating preconditions for further development of the economy and provides an overview of the current situation in the country. The Strategy describes the challenges, vision and strategic objectives for each of road, rail, maritime and air transportation.

#### First Five-year Review of Albanian National Transport Plan

The transport strategic framework is currently defined in the 2010 First Five-year Review of Albanian National Transport Plan. The Plan was a review and update of the 2005 National Transport Plan. Three underlying themes identified in 2005 continue to be followed in managing the transport sector:

- Institutionally, the governmental organizations need to be leaner and to focus on policy, planning and regulating the sector, and to be structured in line with international norms;
- Legislation and regulations need to be oriented towards European norms in anticipation of Albania's future accession to the EU;
- The private sector has to become a more vital participant and partner in providing transport services for the sector.

The 2010 Plan presents an update for each of the transport subsectors of the 2005 Plan for the period 2010–2015 and an indicative programme for the longer term. This update builds upon the recommendations of the 2005 Plan. The subsector plans cover road transport, rail transport, maritime transport and civil aviation. Each plan includes a review of institutional structure, the overall setting of each subsector and a brief review of demand, including forecasts. Added to these plans are the intermodal and multimodal options available to Albania at the present level of development of the transport system. The 2010 Plan comprises a recommended investment programme. Of major concern is how the demand (traffic) will interact with the infrastructure.

### National Transport Strategy and Action Plan for the period 2016–2020

The overall objectives of the National Transport Strategy and Action Plan for the period 2016–2020 are to: (i) further develop the national transport system; and (ii) significantly improve its sustainability, interconnectivity, interoperability and integration with the international and European wider transport system and region.

The Strategy provides a framework for the development of an efficient, sustainable and environmentally friendly transport system and supports the objective of furthering Albania's economic and social development as well as the country's future integration into the EU. The Strategy identifies 43 interlinked policies as priority actions for the five-year period. These policies include both soft measures and investments and their implementation would ensure that the Strategy would meet the following criteria:

- **Relevance:** relation of objectives to the changing needs and priorities at national and EU level;
- **Effectiveness:** likelihood of achieving specific and global objectives by 2020;
- **Efficiency:** allocation of resources with respect to outputs or results;
- **Consistence and coherence:** logic of links between proposed objectives and measures and socioeconomic analysis, mutually consistency, coherency with regional, national and Community (e.g. SEETO 2020 Objectives) policy objectives and interventions;
- **Utility:** global satisfaction with expected and unexpected effects in the context of wider social, environmental and economic needs;
- **Sustainability:** permanence of the effects obtained in the proposed programmes after the end of the Strategy's implementation;
- **Management and monitoring arrangements:** effect of achieving the Strategy's objectives.

The recommendations of the Strategy are aligned with the NSDI-II and take into consideration the Single Sector Project Pipeline for Transport and other cross-cutting strategies promoted by the Government in the fields of business, trade, tourism, environment, energy and social inclusion.

### National Road Safety Strategy (2011–2020)

In February 2011 the Government approved the National Road Safety Strategy (2011–2020) for Albania. The document is in support of and harmonized with the Regional Road Safety Strategy developed by SEETO. The document outlines how road safety in Albania can be improved to the levels currently found in the best-performing countries in the Balkan Region and draws upon the successful experiences and best practices from around the world.

The overall success of the Road Safety Strategy will be assessed against the following goals:

- Reduction of average speeds;
- Seat belt use;
- Drink-driving-related traffic injury crashes;
- Monitoring of aggressive driving, including tailgating, jumping red lights, aggressive lane changing in dense traffic;
- Driver observance of pedestrian priorities;
- Commercial vehicles involved in traffic violations;
- Reduction in traffic crash deaths and fatality rates in relation to numbers of vehicles and population.

Albania has embraced the philosophy of Vision Zero<sup>14</sup> and this is mentioned in the National Road Safety Strategy. The goal is to reduce fatalities over the long term by 50 per cent.

### National Energy Efficiency Action Plan for the period 2011–2018

The National Energy Efficiency Action Plan for the period 2011–2018 addresses energy efficiency improvement measures in the transport sector. Its focus is on road transport as this represents a large majority of the total energy consumption of the sector. Specifically, the following measures are highlighted as being necessary to reduce energy consumption:

- New road construction and increasing the quality of roads;
- Road rehabilitation;
- Adoption of the EU-wide energy labelling system for new cars with classes A-G according to CO<sub>2</sub> emissions;
- Obligation for car importers/dealers to present the energy label to customers;
- Increased share of public transport;

<sup>14</sup> Vision Zero is a multinational road traffic safety project that aims to achieve a highway system with no fatalities or serious injuries involving road traffic.

- Improvement of railway infrastructure in order to increase train transport;
- Introduction of a levy on CO<sub>2</sub> emissions of cars to be paid when registering the car;
- Energy-efficient driving behaviour.

#### Draft sustainable transport plan

As part of efforts to modernize the transport sector, an EBRD-funded project has developed a draft sustainable transport plan. It was completed at the end of 2016 but has not yet been approved by the Government. It seeks to address the spectrum of sustainability issues but does not specifically refer to the SDGs. The focus is on the following measures aimed at reducing the environmental impact of road transport, with only a passing mention of other transport modes:

- Improvement of road paving conditions;
- Road paving innovations;
- Road capacity expansion on congested sections;
- Integrated transport and land-use planning;
- Public transport improvements;

- Integrated freight management;
- Efficiency-based passenger car registration fees and financial incentives for fleet renewal.

The draft plan estimates that its implementation will lead to a reduction in CO<sub>2</sub> emissions of between 8 and 14 per cent (between 181.5 kt and 307.6 kt of CO<sub>2</sub>) by 2020 and a fall in energy consumption of between 10 and 18 per cent (between 47.8 ktoe and 87.8 ktoe of energy) by 2020.

#### *Sustainable Development Goals and targets relevant to this chapter*

Transport has a direct impact on 14 of the 17 SDGs. Initiatives are being undertaken at national and local levels that could be related to the achievement of these Goals. It should be noted that discussions with stakeholders in the transport sector did not identify the SDGs as part of the current transport policy. However, some initiatives are under way and directly address many of the issues addressed in the SDGs. Albania's current position vis-à-vis targets 3.6, 9.1, 11.2 and 14.1 is described in box 10.1.



**Box 10.1: Targets 3.6, 9.1, 11.2 and 14.1 of the 2030 Agenda for Sustainable Development**

#### **Goal 3: Ensure healthy lives and promote well-being at all ages**

##### **Target 3.6: By 2020, halve the number of global deaths and injuries from road traffic accidents**

Albania is focusing attention on road safety and has adopted the same target as set out in the UN Decade of Action (equal to the SDG) to halve the number of deaths by 2020. In 2010, there were 353 fatalities, which means that, for this target to be achieved, the number of deaths should have fallen below 177 by 2020. In 2016, there were 269 fatalities, a fall of about 25 per cent from 2010. Therefore, although there have been significant improvements in road safety, there is still significant work that needs to be done to reach the target set for 2020. In terms of injuries, the picture is considerably worse, as they have actually increased by almost 50 per cent between 2010 and 2016. The implementation of policies aimed at reducing bad driving behaviour, and their enforcement, as well as the introduction of suitable safe vehicles and infrastructure, will be fundamental to ensuring that the targets can be achieved.

#### **Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation**

##### **Target 9.1: Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all**

Albania, in cooperation with a number of international donors, is improving transport infrastructure. Investments cover road, rail, maritime and airport infrastructure. These investments are aimed at improving national and international connectivity as well as improving access for the population and for business. Municipalities are also seeking to invest in sustainable infrastructure by building cycle lanes and bus lanes and improving railway lines (both within cities and on the national level). This is being coupled with an increase in the focus of transport policy aimed at improving multimodal transport. To date, however, the infrastructure shortfall is significant across the transport sectors (with the possible exception of aviation), given the size of the country, and the focus of activities needs to be on both improving national links and developing international links to facilitate regional integration.

**Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable**

**Target 11.2: By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons**

Albania has put in place a strategy to improve road safety. It is also investing at a local and national level in public transport. A draft sustainable transport plan has been prepared with the aim of improving the environmental impact of the sector and facilitating the use of public transport across the country.

**Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development**

**Target 14.1: By 2025, prevent and significantly reduce maritime pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution**

Albania has become a contracting party to the Convention for the Prevention of Pollution from Ships and is taking a number of steps aimed at ensuring the compliance of shipping companies with requirements on waste disposal. Currently, however, there remains a shortfall in the infrastructure necessary in ports to deal with marine waste and, therefore, temporary measures using road vehicles have been adopted. There are no appropriate laboratory facilities for the testing of the quality of water. This is currently having an impact on the effectiveness of Albania to ensure environmental protection of its waterways and the Adriatic Sea.

*Institutional framework*Ministry of Infrastructure and Energy

Prior to the institutional restructuring of September 2017, the overall responsibility for the governance of the national transport sector was vested with the Ministry of Transport and Infrastructure. In September 2017, this competency was assigned to the new Ministry of Infrastructure and Energy.

Among other responsibilities, the Ministry of Infrastructure and Energy develops policies, designs strategies and is charged with the implementation of the activities and programmes of all transport modes. It also develops legislation on road safety, issues secondary legislation and prepares national programmes for improvement of road safety. It also coordinates transport related cross-cutting activities with other ministries and represents Albania on international bodies dealing with transport.

In the road sector, the Ministry supervises the Albanian Roads Authority and the General Directorate of Road Transport Services. The former is responsible for the management, upgrading, maintenance and rehabilitation of the national road network, and the latter is responsible for vehicle registration and the issuing of driving licences, all documents and certificates under the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) and Agreement on the International Carriage of Perishable Foodstuffs and on the Special Equipment to be Used for such Carriage (ATP), as well as documents for the implementation of the digital tachograph. The Directorate also supervises, on behalf of the Ministry, the activities of the Société Générale de Surveillance SA, which has a 10-year

concession contract to carry out the technical inspection of road vehicles.

In the rail sector, the Railway Inspection Directorate is responsible for ensuring safety on the network and Albanian Railways for infrastructure management and the operation of rail services.

In the maritime sector, the General Maritime Directorate is responsible for the implementation and monitoring of national legislation and international conventions. Environmental aspects are carried out in close cooperation with the Ministry of Tourism and Environment and four port authorities (with the Durrës Port Authority set up as a landlord authority leasing out freight and passenger terminal facilities to private operators).

In the air transport sector, the Albanian Civil Aviation Authority – an independent authority under the supervision of the Ministry of Infrastructure and Energy – is responsible for the regulation of the sector, safety and security oversight, certification and implementation of the legislation related to air transport.

A further subordinated agency to the Ministry of Infrastructure and Energy is the Albanian Institute of Transport. It provides the Ministry with support in relation to policies, strategies and the collection of transport-related data and has a transversal role across the transport sectors.

Others

The Directorate of Traffic Police, reporting to the Ministry of Interior, is responsible for traffic enforcement.

The Interministerial Road Safety Council is the body that is charged with coordinating road safety policy. It has been established by the Government to address road safety across ministries and is chaired by the Prime Minister. The Traffic Police and Road Safety Directorate in the Ministry of Infrastructure and Energy form the technical secretariat of the Council.

The maritime sector also includes the Coast Guard and the Inter-institutional Maritime Operational Centre.

There are a number of other entities in the air sector: the National Investigation Body of Air Accidents/Incidents in Civil Aviation, which, in future, will also deal with the investigation of accidents in the rail and maritime sectors; ALBCONTROL, the air navigation services provider; and the Search and Rescue Body, Tirana International Airport.

Local authorities are responsible for local transport (e.g. urban transport).

#### *Regulatory and fiscal instruments*

Taxation in the road sector is based around an annual tax that is charged at each annual technical inspection and a circulation tax that is included in the per-litre price of fuel. The first of these is calculated based on the formula:  $Tax = "Engine\ size" \times "fixed\ vehicle\ age\ coefficient" \times "fixed\ tax\ on\ fuel\ type"$ , where the engine size is measured in  $cm^3$ , the vehicle age coefficient is greater than zero only for vehicles that were produced more than three years prior to the inspection date, and the fixed tax is 12.5 leks for diesel and 10 leks for petrol.

The circulation tax, on the other hand, is equivalent to about a 39 per cent mark-up on the cost of petrol and about a 40 per cent mark-up on the price of diesel.

#### *International agreements and processes*

Albania is a contracting party to 30 United Nations transport-related conventions under the purview of the ECE, of which 14 are road-safety-related conventions. Of particular importance from an environmental point of view is the fact that, in 2004, Albania acceded to the 1997 Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and the Reciprocal Recognition of Such Inspections. Participation in the 1997 Agreement will contribute towards the improvement of the roadworthiness of vehicles travelling on the roads of Albania.

Albania is also party to United Nations agreements governing the transport of dangerous goods (the ADR and the 1993 Protocol to the ADR) and special cargoes, including perishable foodstuffs (the ATP). Given its strategic position on the Adriatic coast and on the international corridors, as well as the high impact of accidents involving such cargoes on the environment and human health, participation in these instruments strengthens the regulatory framework and the capacity of the country to meet the challenges of the modern transport sector.

In helping to provide decent working conditions for those in the transport sector, Albania is a contracting party to the European Agreement concerning the Work of Crews of Vehicles engaged in International Road Transport (AETR), which ensures appropriate working hours for drivers.

Annex 16 of the Convention on International Civil Aviation (ICAO) covers environmental protection related to civil aviation; volume 1 covers aircraft noise and volume 2 covers aircraft engine emissions. Albania has implemented the requirements of this Convention through Decree No. 7438/1990 and the Air Code – Law No. 10040/2008.

Albania is party to the International Convention for the Prevention of Pollution from Ships (MARPOL) and all annexes except Annex VI on air pollution: Albania is currently considering adhering to Annex VI. If implemented, this would lead to a reduction in atmospheric pollutants, which are the largest component from the non-urban transport sector. In order to implement this annex effectively, Albania requires technical assistance. Albania has come a long way in implementing the requirements of the other maritime conventions but MARPOL Annex VI requires more resources in order to prepare the implementing acts in an effective manner, as well as access to appropriate laboratories to be able to test pollutants effectively.

Albania acceded in 2009 to the International Convention for the Control and Management of Ships' Ballast Water and Sediments. This Convention enters into force in September 2017. According to the General Maritime Directorate, a request has been sent to the International Maritime Organization for assistance in the implementation of this Convention, in particular in relation to the preparation of the Ballast Water and Sediments Management Plan for ships.

The Transport, Health and Environment Pan-European Programme (THE PEP), coordinated by ECE and WHO/Europe, seeks to bring together these three important areas of the economy to ensure

sustainable growth. Albania, as part of ECE, has access to THE PEP activities and can contribute through its experiences, in particular in relation to cycling.

## 10.5 Assessment, conclusions and recommendations

### *Assessment*

Road transport accounts for 99 per cent of freight and passenger inland transport volumes and dominates the transport sector. With a share of no more than 1 per cent, rail transport has been falling dramatically in recent years. Maritime volumes and air travel have been growing steadily.

The transport sector received governmental focus through a number of policy initiatives aimed at aligning Albania's policies with the EU. In particular, the National Transport Plan was prepared in 2006 and, subsequently, the First Five-year Review of Albanian National Transport Plan was published in 2010, followed by the 2016 National Transport Strategy and Action Plan for the period 2016–2020.

Albania has benefited from significant investment in the transport sector in recent years. The prioritization of investments is based on SEETO priorities. Although there have been investments in the transport sector, since 2012, Albania has seen a significant deterioration in its Logistics Performance Index scores and rank.

### *Conclusions and recommendations*

#### Development of sustainable transport

Albania has taken significant steps to improve its transport sector over recent years, with major investment projects and policy changes stimulating the growth of the sector. The number of national investment projects in the road sector has improved the connectivity of the country, as have investments in port facilities. However, to date, not enough has been directed at facilitating the development of sustainable transport. Road transport remains the largest polluter, and in particular, freight transport. Also, the fact that about 60 per cent of newly registered cars are actually second hand means that passenger transport also has a lower environmental performance than it could have. Furthermore, the rail sector suffers from underinvestment, limiting the potential environmental benefits from a modal shift.

The draft sustainable transport plan has been prepared in 2016 to improve the performance of the transport

sector by focusing on improving national, road-based, public transport; however, the emphasis is still narrow and multimodal public transport is not the main focus. The draft plan sets out a number of national, road-specific measures that have not yet been implemented to improve the environmental impact of the road sector. These measures are focused on the road sector and but are not supplemented by interventions in other transport sectors. Their implementation would lead to a reduction in CO<sub>2</sub> and energy volumes and would contribute to achieving target 9.1 (Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all) of SDG 9 (Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation).

#### Recommendation 10.1:

*The Government should adopt the draft sustainable transport plan and implement its provisions.*

#### Public transport

The provision of public transport, especially rail services, remains low, even with an urban population that uses significant non-car modes of transport. The rail sector's performance is very poor, with maximum speeds significantly lower than road transport outside the city centres. Work continues on rehabilitating the rail network, and particularly its infrastructure, to improve the competitiveness of rail with other transport modes, as well as other investment projects aimed at reversing such things as the lack of multimodal facilities, which are limiting the potential use of public transport and stifling the use of more sustainable modes of transport. These initiatives would help achieve the requirements set out in target 9.1 of SDG 9 relating to transport infrastructure. Continuing this point, there are not enough measures aimed at ensuring that the railways are made safe through improved signalling and the removal of unauthorized crossings. At a local level, municipalities have yet to complete measures aimed at improving urban public transport services through the introduction and extension of bus lanes and/or cycle lanes.

#### Recommendation 10.2:

*The Government should:*

- (a) *Invest in the upgrading of railway lines and related facilities;*
- (b) *Ensure that investments in public transport stations seek to maximize multimodal transport possibilities;*



- (c) *Encourage municipalities to procure public transport services that maximize environmental performance (e.g. by ensuring that private concession companies improve the environmental performance of buses).*

#### Vehicle fleet

The majority of newly registered vehicles are second hand, leading essentially to more polluting cars entering the Albanian market than would otherwise occur. Car scrappage schemes may be difficult and costly to implement, but modifying the taxation and circulation tax structure to better reflect the environmental impact of different cars are steps that would improve the situation. The same also holds true for trucks and other commercial vehicles.

#### Recommendation 10.3:

*The Government should:*

- (a) *Adapt the road and vehicle ownership taxation structure to ensure that owners of vehicles that emit more pollutants pay higher taxes;*
- (b) *Ensure that only vehicles of a level equivalent to the most recent Euro standards are allowed to be imported into the country, with a gradual increase of this level over time;*
- (c) *Ensure that the gap between the number of registered vehicles and the number of vehicles subjected to a technical inspection is closed by introducing strict monitoring and enforcement following the end of an amnesty period.*

#### Road safety

Since the turn of the century, there has been a significant fall in road fatalities and the change in road fatalities has been decoupled from the growth in traffic. In the past two years, the significant fall in the number of deaths on the roads has plateaued and in 2016 the number has actually increased, calling into question whether target 3.6 (by 2020, halve the number of global deaths and injuries from road traffic accidents) of SDG 3 (Ensure healthy lives and promote well-being at all ages) can actually be achieved. A number of actions are currently being undertaken, with international support, to improve road safety through infrastructure and policy initiatives.

Albania would benefit from fully implementing these initiatives to ensure that the number of deaths on the roads starts falling again.

#### Recommendation 10.4:

*The Government should:*

- (a) *Dedicate sufficient resources to the enforcement of traffic rules;*
- (b) *Implement all recommendations in relation to road safety as set out in the National Transport Strategy and Action Plan for the period 2016–2020.*

#### Maritime transport

Significant steps forward have been taken in greening the maritime sector in recent years, in particular since 2011. This has come through greater attention being placed on the disposal of waste from ships and the development of contingency plans in case of environmental incidents. However, although investments to install adequate equipment to gather and treat waste from vessels are ongoing, waste is carried by road vehicles to appropriate treatment facilities on land. By becoming a contracting party to Annex VI: Regulations for the Prevention of Air Pollution from Ships of the MARPOL Convention, Albania would further reduce the environmental impact of the sector to help achieve target 14.1 (by 2025, prevent and significantly reduce maritime pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution) under SDG 14 (Conserve and sustainably use the oceans, seas and marine resources for sustainable development). However, without an increase in the number of resources dedicated to this activity, the implementation of the requirements of this and other conventions will be difficult.

#### Recommendation 10.5:

*The Government should:*

- (a) *Continue the programme of investments aimed at improving the environmental performance of the transport sector in ports (e.g. the treatment of waste);*
- (b) *Complete accession to Annex VI (Regulations for the Prevention of Air Pollution from Ships) to the International Convention for the Prevention of Pollution from Ships.*

## Chapter 11

# ENERGY, INDUSTRY AND ENVIRONMENT

### 11.1 Trends in energy balance

In 2015, total produced energy amounted to 2,073 ktoe, while available energy including import and losses amounted to 2,131 ktoe, showing a deficit between available production and effective consumption (table 11.1).

The main source of energy production derives from crude oil, which covers approximately 61.69 per cent of the total energy balance of the country.

Hydroelectric power production has a share of about 24.45 per cent of the energy balance, while biofuels (mainly fuelwood) account for 10.32 per cent. The residual value is to be divided into natural gas and other renewable sources (1.32 per cent and 0.6 per cent of total production respectively).

In 2015, oil production equalled 1,279 ktoe. Of this, 276 ktoe (about 21.56 per cent of production) is routed to oil refining, with the remainder dedicated to export. Consequently, the fuel products for industrial, transportation, residential, agricultural and other public use (about 1,220 ktoe) are entirely imported from abroad. These figures show a very weak position in the energy balance for liquid fuels, due to the country's significant dependence on imports of fuels, mainly caused by its poor capacity to refine oil for production of liquid fuels.

Coal use for energy depends entirely on imports from abroad. The imported coal represents about 2.8 per cent of the total energy balance of the country.

The general balance of electrical energy shows some vulnerable elements:

- The total production of electrical energy in the country depends on HPP production;
- The capacity of electrical power generation is insufficient for the country's needs and requires energy imports from the international grid. For example, in 2014, the 279.5 ktoe imported represents a peak share (68 per cent) of the total produced energy in the country;
- The figures attributed to energy losses in the grid (96 ktoe) are high, at approximately 24 per cent of production.

The energy balance for biofuels is to be attributed almost exclusively to fuelwood, which represents an important source of energy production, given that the country is rich in forestry. The capacity of this source of energy is limited due to constraints on forestry, such as the 2016 moratorium on forest logging and environmental protection considerations.

The very low figures for natural gas use are due to limited production and the unavailability of a natural gas network in the country. It is mostly industry that uses natural gas for its own production needs.

Other renewable sources have very low capacity, amounting to 0.6 per cent of the total balance of production. The most diffused application is linked to solar hot water production, associated with residential and commercial use.

The distribution of energy consumption is: other, which includes residential, commercial and public services, agriculture/forestry and fishing, 40.80 per cent; transport, 40.68 per cent; industry, 14.82 per cent; and non-energy use, 3.70 per cent.

#### *Electrical energy production*

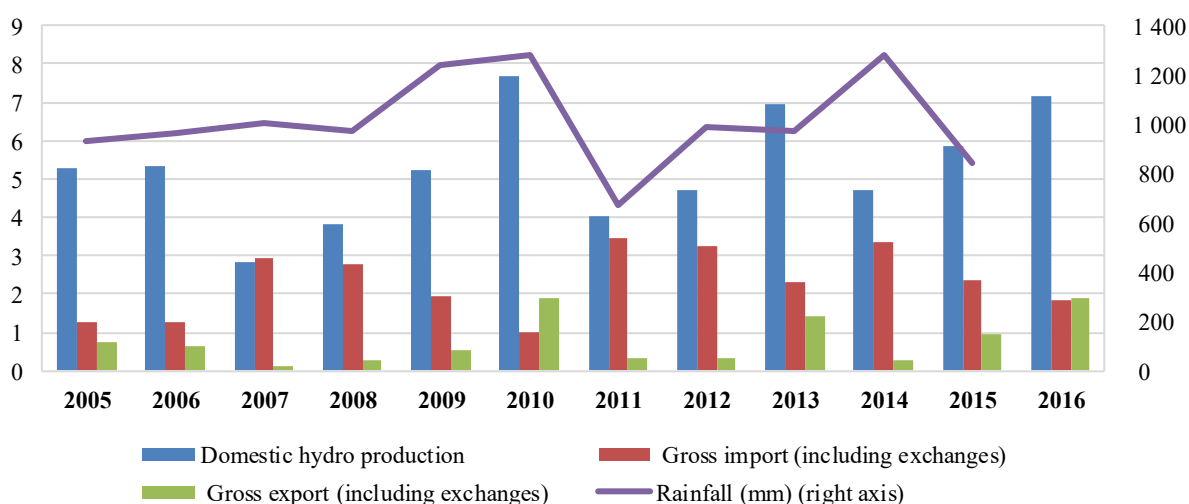
The fluctuation of domestic production based on hydropower is mainly associated with the availability of rainwater. Similarly, increased domestic electricity production capacity corresponds to an increase in exports and a decrease in imports (figure 11.1).

The three main power generation plants are state owned and located along the Drini River. These plants include the Koman HPP, the largest power station, with a total installed capacity of 600 MW, the Fierza HPP, with a total installed capacity of 500 MW, and the Vau i Dejës HPP, with a total installed capacity of 260 MW. The total capacity of energy production in these HPPs (equal to 1,360 MW) corresponds to 79 per cent of the installed electrical power in the country. Small-scale HPPs, mainly operated by private companies, ensure the rest of the production. The Government policy has moved towards a regime of simplification and incentives for small-scale power generation by private investors, allowing electrical energy production to increase in the face of the progressive increase of demand in the country.

Table 11.1: Energy balance, 2015, ktoe

	Crude, NGL and					Solar, tide, wind, etc.	Biofuels and waste	Heat output from non-specified			Total
	Coal	feedstocks	Oil products	Natural gas	Hydro			comb fuels	Electricity	Heat	
Production	33.778	1 279	0	27.36	506.97	12.37	213.97	0	0	0	2 073.44
Imports	61.30	0	1 220.33	0	0	0	31.269	0	202.53	0	1 515.43
Exports	0	-987	- 164.34	0	0	0	-11.056	0	- 82.22	0	- 1 244.61
International marine bunkers	0	0	- 20.35	0	0	0	0	0	0	0	- 20.35
International aviation bunkers	0	0	- 2.05	0	0	0	0	0	0	0	- 2.05
Stock changes	0	-16	- 116.18	0	0	0	0	0	0	0	- 132.18
<b>Total primary energy supply (TPES)</b>	<b>95.08</b>	<b>276</b>	<b>917.41</b>	<b>27.36</b>	<b>506.97</b>	<b>12.37</b>	<b>234.18</b>	<b>0.00</b>	<b>120.31</b>	<b>0.00</b>	<b>2 189.68</b>
Statistical differences	0	0	- 0.83	0	0	0	0	0	0	0	- 0.83
Electricity plants	0	0	0	0	-506.97	0	0	0	506.97	0	0.00
Oil refineries	0	-276	264.04	0	0	0	0	0	0	0	- 11.97
Energy industry own use	0	0	- 13.81	- 16.20	0	0	0	0	- 12.64	0	- 42.65
Losses	0	0	0	0	0	0	0	0	- 107.50	0	- 107.50
<b>Total final consumption</b>	<b>95.08</b>	<b>0</b>	<b>1 166.81</b>	<b>11.15</b>	<b>0</b>	<b>12.37</b>	<b>234.18</b>	<b>0</b>	<b>507.14</b>	<b>0</b>	<b>2 026.73</b>
Industry	92.08	0.00	79.40	11.15	0.00	0.60	10.01	0.00	107.07	0.00	300.30
Iron and steel	0	0	3.31	0	0	0	0	0	15.14	0	18.45
Chemical and petrochemical	0	0	7.28	0	0	0	0	0	7.74	0	15.02
Non-ferrous metals	0	0	0	0	0	0	0	0	7.65	0	7.65
Non-metallic minerals	92.08	0	35.92	0	0	0	0	0	8.34	0	136.34
Mining and quarrying	0	0	0	0	0	0	0	0	9.20	0	9.20
Food and tobacco	0	0	15.396	8.467	0	0.6	10.006	0	24.51	0	58.98
Paper, pulp and print	0	0	1.017	0	0	0	0	0	10.06	0	11.08
Wood and wood products	0	0	0	0	0	0	0	0	0.95	0	0.95
Construction	0	0	1.02	0	0	0	0	0	7.91	0	8.93
Textile and leather	0	0	0.96	0	0	0	0	0	12.21	0	13.17
Non-specified (industry)	0	0	14.50	2.686	0	0	0	0	3.35	0	20.54
Transport	0	0	794.65	0	0	0	29.88	0	0	0	824.53
Road	0	0	758.90	0	0	0	29.88	0	0	0	788.79
Rail	0	0	2.04	0	0	0	0	0	0	0	2.04
Domestic navigation	0	0	33.71	0	0	0	0	0	0	0	33.71
Other	3.01	0	217.82	0	0	11.77	194.29	0	400.07	0	826.96
Residential	0	0	88.99	0	0	6.38	159.97	0	274.43	0	529.77
Commercial and public services	3.01	0	46.10	0	0	5.40	22.33	0	118.08	0	194.91
Agriculture/forestry	0	0	52.07	0	0	0	11.988	0	7.57	0	71.63
Fishing	0	0	30.66	0	0	0	0	0	0	0	30.66
Non-energy use	0	0	74.94	0	0	0	0	0	0	0	74.94
in industry/transformation/energy	0	0	74.94	0	0	0	0	0	0	0	74.94
in transport	0	0	1.04	0	0	0	0	0	0	0	1.04

Source: International Energy Agency, 2017.

**Figure 11.1: Balance of electric power, 2005–2016, MWh**

Source: INSTAT, 2017.

However, production is not yet sufficient to meet energy needs. The balance is therefore completed by the import of electrical power from the interconnecting network from neighbouring countries.

The most important project under development foresees the installation of two new HPPs along the Devoll River, with a total capacity of 256 MW, which will lead to an increase of about 17 per cent in the production of electrical energy in the country. The projects have undergone EIA procedures and new HPPs are planned to enter into production in 2018. Their completion is not going to solve the issue related to fluctuation in energy production and will leave Albania vulnerable to energy shortage.

One possible alternative for diversification of electrical production is the installation of a small-scale thermo-power plant in Vlorë (100 MW), to be fed with distillate fuel. Construction was completed in 2011 but the plant has never come into production due to unsolved technical problems that rendered the project not economically self-sufficient, considering also the cost of distillate fuel.

The strategic picture for energy is completed with the foreseen construction of the Trans-Adriatic Pipeline, which was launched in May 2016 and will provide the country with direct access to natural gas. Natural gas will further increase energy availability in Albania and will create a cleaner alternative fuel than those currently used the most – distillate from crude oil and wood. The successful use of such a new source of energy requires specific investment in building the gas network and providing the necessary legislative

framework for safe and economic access to gas for consumers.

## 11.2 Trends in industrial development

### *Production*

In the period 2005–2015, overall GDP grew steadily, from 804,163 leks in 2005 to 1,434,739 leks in 2015. In the same period, industrial production grew from 46,793 leks in 2005 to 120,502 leks in 2015 with a peak of 142,687 leks in 2014 (figure 11.2). The contraction in industrial production between 2014 and 2015 is mainly due to important contraction in mining activity, after several years of growth; contraction can mainly be associated with reduction of the value of chromium in the international market, which depressed Albanian production. During the same period, manufacturing industry contributed 5.11 per cent of GDP on average, with a peak of 5.66 per cent (73,640 leks) in 2011.

### *Developments in main industrial branches*

#### Manufacturing industry

This sector maintained the lead in industry sector revenue in the period 2005–2015. The main activities include production of:

- Cement and construction materials;
- Metals (in particular iron and ferrochromic alloys);
- Leather goods;
- Textile goods and footwear;
- Aluminium for construction.

### Oil industry

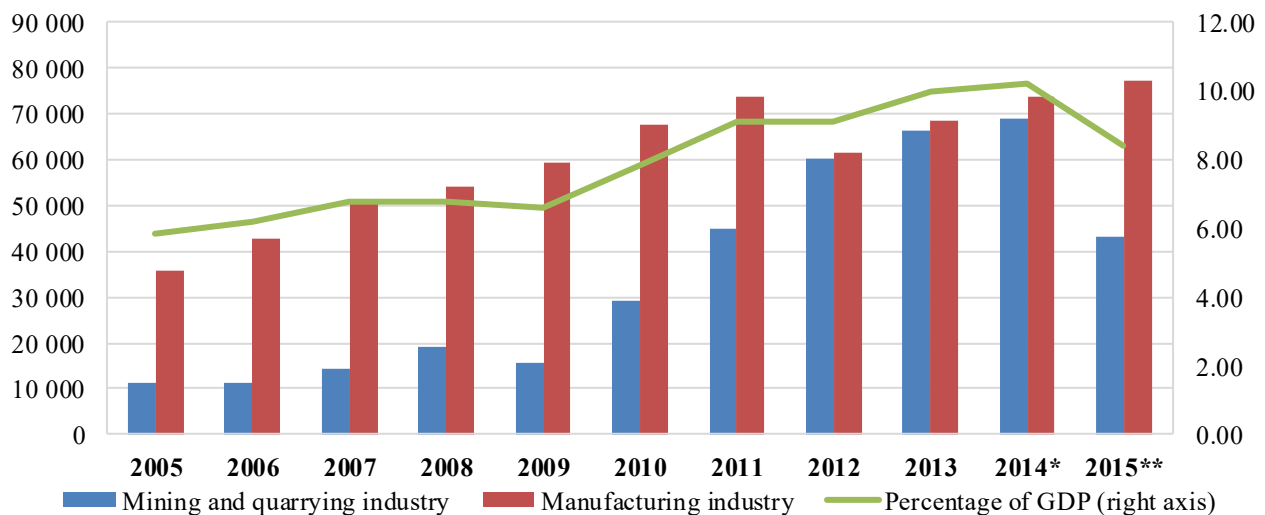
Albania owns two of the largest onshore oilfields in Europe. The largest is located in Patos-Marinza near Fier in the south-west. Oil production increased significantly in the period 2011–2014, during which the peak was reached, before contraction in 2015 (table 11.2). In 2015, Patos-Marinza covered about 88.5 per cent of domestic production.

The country has two refineries: Ballsh, with a processing capacity of one million tons per year, and Fier, with a processing capacity of half a million tons per year. The refineries have not developed a process of modernization and, consequently, they currently have limited capacity for oil treatment and refining. Moreover, the old, unmodernized units pose the risk of having a negative impact on the environment.

Albanian oil is heavy and rich in bitumen and asphaltenes. This typology of oil guarantees limited conversion into white fuel products such as diesel oil and gasoline. Approximately 74 per cent of crude oil is exported for further refining abroad, while 26 per cent of crude oil is refined in the country, the main yield being bitumen production. The limited yield of diesel oil and gasoline are also routed to export for blending in refineries elsewhere, since Albanian refineries do not have suitable processing capacities for vehicle fuels meeting the EU standards.

As of early 2017, the strategy of the former Ministry of Energy and Industry was to enhance the capacity of oil extraction to improve exports and improve the capacity of bitumen production, which can be obtained in high yields from Albanian oil, leading to competitive pricing. Projects for developing this type of plant are already in train.

**Figure 11.2: Trend of manufacturing industry and mining and quarrying industry, 2005–2015, billion leks at current prices**



Source: INSTAT, 2017.

Notes: 2014\* Semi-final data. 2015\*\* Preliminary data.

**Table 11.2: Production of oil and gas, 2011–2015, tons**

Oil and gas field	2011	2012	2013	2014	2015
Patos-Marinza	761 000	879 200	1 061 000	1 211 832	1 131 625
Ballsh-Hekal	5 900	7 640	5 900	6 185	5 793
CakranMollaj	28 300	41 600	35 250	29 570	21 761
Gorisht-Kocul	39 200	41 100	45 920	45 442	36 618
Delvina	..	..	..	..	8
Kuçove	..	300	100	190	2 688
Visoke	350	14 950	22 300	24 529	27 190
Amonicë-Pekisht-Finiq	..	..	1 510	5 053	5 996
Other	59 000	45 000	37 320	45 386	47 574
<b>Total</b>	<b>893 750</b>	<b>1 029 790</b>	<b>1 209 300</b>	<b>1 368 222</b>	<b>1 279 253</b>

Source: US Department of Commerce, International Trade Administration, Albania: Oil and Gas, 2016, as at 26 October 2016 (<https://www.export.gov/article?id=Albania-Oil-and-Gas>).

## Mining

The mining sector is an historic pillar of Albanian industrial production due to the relative abundance of minerals in the territory. According to the then Ministry of Energy and Industry, in 2016, there were 610 active mining permits in Albania. The mining industry mainly produces chrome, copper and nickel silicate for the metal production industry, and limestone and clay for the construction industry (table 11.3).

Albania is well known for its deposits of chromium ore. The main chromium deposits are located in the ophiolites of the eastern belt area, which runs in the direction of Tropoja-Kukës-Bulqiza-Shebenik-Pogradec. Copper deposits are located in six districts in northern Albania: Has, Korçe, Kukës, Mirdita, Pukë and Shkodër. Iron nickel and nickel silicate are located near the eastern border of the country.

## **11.3 Modernization and technological development**

At present, the industrial sites in the country have not undergone a significant process of modernization, due to the lack of capital and basic infrastructure, apart from some specific modernization projects (box 11.1).

Modernization and technology development are based on capital attraction (in particular, foreign capital). In this framework, the Government has established the Albanian Investment Development Agency, chaired by the Prime Minister. The main objectives of the Agency are to:

- Provide services and support to foreign companies in order to facilitate their investments in Albania;
- Promote the competitiveness of small and medium-sized local enterprises by means of the installation of new and innovative technologies;
- Enhance the capacity of the local enterprises to create efficient import–export routes.

**Table 11.3: Production of mineral commodities, 2010–2014**

	2010	2011	2012	2013	2014
Chromium (tons)	328 322	330 322	380 349	521 080	652 463
Copper (tons)	139 926	305 284	479 720	507 105	259 137
Iron nickel and nickel silicate (tons)	269 300	270 000	75 017	215 086	493 867
Limestone (m <sup>3</sup> )	2 363 445	2 400 000	2 727 451	1 811 378	3 232 937

Source: US Mineral Resources Program, 2014 Minerals Yearbook: Albania, June 2016 (<https://minerals.usgs.gov/minerals/pubs/country/2014/myb3-2014-al.pdf>).

### **Box 11.1: Selected modernization projects financed by the World Bank and International Finance Corporation**

#### Energy production

The World Bank financed a Dam Safety project, effective in the period 2008–2016, for the rehabilitation and modernization of selected dams along the Drini River. The results include the development of geological, seismic and geodetic monitoring systems in three dams; rehabilitation and refurbishment of Komani HPP, including the dam toe and scour area; and completion of rock fall danger identification and protection for the Fierza and Komani dams.

#### Manufacturing industry

The International Finance Corporation financed specific projects aimed at improving the capacity of cement production with dry technology in the province of Frushë-Krujë, in 2004 and 2008. The projects were aimed at improving Albania's capacity for cement production with modern and environmentally sound technology.

#### Oil industry

The International Finance Corporation financed the Bankers II project, supporting a private company whose activity includes drilling vertical and horizontal wells, reactivation and remediation of some existing wells, and testing and application of additional strategies aimed at enhancing oil recovery. In the framework of this project, in the period 2011–2013, the company successfully cleaned up 62 contaminated leases, 26 spill areas and five pump stations in 2011, and some 200 contaminated well leases in 2012.

The most significant modernization project in the oil industry is the installation of a new bitumen production refinery in the Elbasan province, developed on the basis of Chinese design and experience. The plant is aimed at production of high quality bitumen with modern technology following international standards.

Source: World Bank Albania Partnership: Country Program Snapshot, April 2016.

### *Reuse of abandoned industrial sites*

In 2016, the then Ministry of Energy and Industry has launched a call to the private sector for investment in the reuse of abandoned industrial buildings. The objective is to bring new production activities into the old abandoned buildings and recover the industrial purpose of former sites.

An investor might take advantage of the following elements:

- Availability of existing infrastructure (electrical power supply, water supply, sewerage system, road accessibility);
- Very competitive prices for renting the buildings when the new owner intends to bring new investment and employment to the area. The campaign slogan is "Rent at the symbolic price of 1 euro".

### *Recycling*

Another strategic field of intervention by the Government is focused on enhancing the capacity to recycle waste as raw materials, strengthening the connection with urban solid waste collection (especially metals and plastics).

The increase in recycling capacity has a direct impact on reducing environmental pollution due to the

dangerously widespread existing practice of dumping used materials, and a secondary impact on the economics of companies that might use low-priced raw materials from the recycling process.

At present, the recycling industry is scarcely growing. The main problem to be faced is the unavailability of appropriate waste on the internal market, given that differentiated recycling is very limited in Albanian towns. The first concrete project for improving the capacity of waste differentiation was launched in Tirana in October 2016, with the creation of a public company dedicated to differentiated waste collection in the capital city.

### *Modernization of the mining industry*

The Government has identified the following objective for the mining industry: enhance the capacity of processing natural resources such as chromium, copper, quartzite and nickel silicate and invest in new technology with the objective to complete the production chain from the mineral ore to final product.

Mining ores are currently extracted and refined. What is lacking is the capacity to treat refined minerals to produce the metal to be provided to manufacturing industry for production of final metallic goods (mainly for construction uses).

**Photo 11.1: Abandoned site near Lake Ohrid**





One typical example is chromium mineral production. Albania has extensive capacity for extraction of the mineral and dedicated plants to transform the mineral to the ferrochrome alloy, which is the basic element for the production of high quality stainless steel. However, this last step is not yet operational in Albania and production companies sell the ferrochrome alloy abroad.

The installation of downstream steel production sites might close the production circuit and increase the final added value – this activity adds the most value

and has the least impact on the environment of all phases of the mining industry.

#### 11.4 Environmental management and corporate social responsibility

In accordance with provisions of the Law on Environmental Protection No. 10431/2011, the industrial sector is moving towards better environmental management. These efforts are not yet systematic but numerous positive examples exist, such as at the Antea Cement plant (box 11.2).

##### Box 11.2: Environmental management at Antea Cement plant

The Antea Cement factory is established in the region of Frushë-Krujë, in the proximity of the limestone quarry, which is the source of raw material for the processing plant. The plant was established in 2011 with a production capacity of 1.5 million tons of cement per year. The company is certified according to ISO 14001 standard, which establishes the criteria for the implementation of the environmental management system.

##### Quarry rehabilitation

The company is making efforts to rehabilitate the limestone quarry while it is in operation. This includes planting endemic trees and shrubs with the objective of repopulating the quarry area while maintaining the endemic biodiversity. The company has set a dedicated management system for quarry rehabilitation to guarantee that the process is continuously monitored and reaches its objectives.

##### Development and well-being of the local community

The company is engaged in the development of projects to promote communication, cooperation and support to local communities. It aims to share with the local population the benefits and added value deriving from the cement production. The projects cover various aspects of everyday life, from family strengthening to blood donation, building a children's playground and reforestation.

##### Gender, health and safety

The company is certified SA8000 for Social Accountability, which guarantees, according to the accredited standard, that the activity is carried out with no gender or other type of discrimination, no child labour, and full respect for the health and safety of the workers, including working hours and salary levels.

Photo 11.2: Antea Cement plant





Corporate social responsibility (CSR) is also developing in the country. The Situation Analysis on Corporate Social Responsibility in Albania conducted by the Organization for Security and Co-operation in Europe (OSCE) in 2012 focused on eight main international and local companies operating in four essential extractive sectors: oil and gas, mining, cement production and hydropower. The Situation Analysis showed that almost all companies that participated in the survey take responsibility under three main pillars of the CSR policy and actions, such as staff/employees, community/society and environment. Some of the companies are more responsive to some specific areas than others, but in general all of them deal with CSR issues. Almost all companies are members of various business associations active in the country. One of the gaps noticed was that the companies do not usually draft and publish an annual report related to their operations and CSR policy.

### 11.5 Pressures from energy and industry

#### *Air*

The figures on pollutant emissions have been calculated directly from the consumption of fuels by operators of stationary combustion processes in manufacturing industries. There is a progressive increase in emissions until 2014, followed by a reduction in 2015 due to the contraction of industrial activity (figure 11.3). The increase in emissions in 2014 appears to be higher in comparison with the increase in industrial production in that year, but variation in the steepness of the curve can be attributed to differences in collecting data from industrial sites on effective fuel consumption year by year.

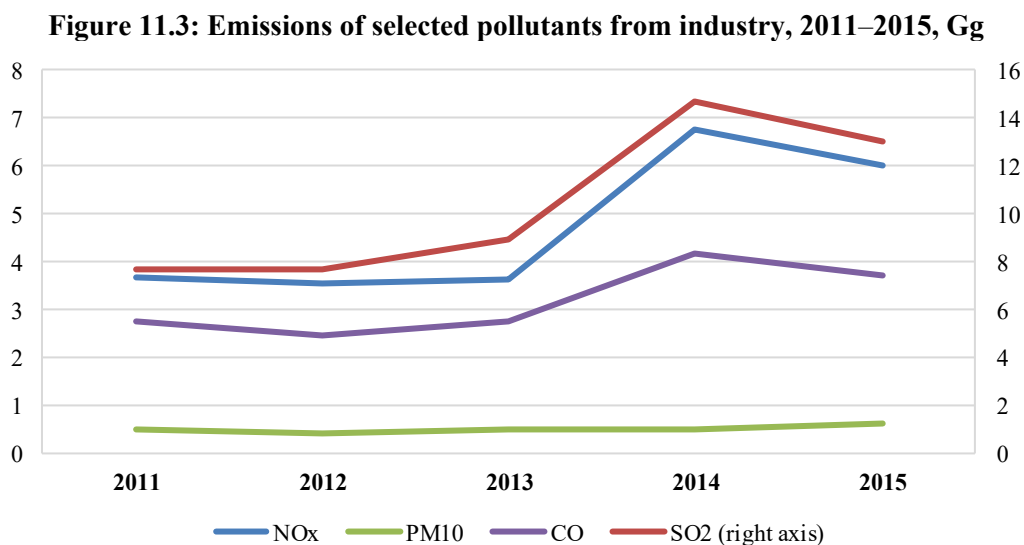
The average contribution of industry to total national emissions of SO<sub>2</sub> is about 52.76 per cent in the period 2011–2015, increasing from 49.52 per cent in 2011 to 57.52 per cent in 2015. SO<sub>2</sub> emissions are mainly linked to the typology of fuels that are used for combustion. In the absence of a national network for natural gas distribution, the choice for combustion is reduced to liquid and/or solid combustibles, which naturally have higher sulphur content.

The average contribution of industry to total national emissions of NO<sub>x</sub> is about 15.82 per cent in the period 2011–2015, increasing from 13.90 per cent in 2011 to 18.09 per cent in 2015. For the same period, the average contribution of industry to total emissions of CO is about 2.39 per cent and its contribution to PM<sub>10</sub> is about 3.63 per cent.

#### *GHG emissions*

Industrial GHG emissions have increased in recent years, following the increase in industrial production. From 2000 to 2009, GHG emissions due to industrial processes increased overall by a factor of 3.27, while the value of production increased by only a factor of 2.6, giving the clear indication of inefficient growth (table 5.1).

However, current data were calculated before the entrance into force of the more recent laws on environmental protection, which envisage the requirement for the most efficient combustion methods and will determine benefits for reducing the ratio between GHG emissions and the GDP value of the industrial sector.



Source: National Environment Agency, 2017.

*Water*Energy production

HPPs represent the largest consumer of fresh water in the industrial sector. Water is used by HPPs exclusively to generate circulation in the power turbines and is then returned to the river. Albania has extensive availability of fresh water and is presently exploiting about 35 per cent of its hydroelectric power potential.

Currently, the environmental impact of HPPs is often not properly assessed to ensure compliance with international standards and relevant EU environmental legislation. In addition, the cumulative impact of hydropower investments on the landscape, water resources, fauna and flora is not considered as part of the current procedures.

Manufacturing industry

There is a trend to follow international best practices in manufacturing industry. Few companies applied a specific technical solution for reduction of water consumption, i.e. the installation of closed-loop circuits for cooling water in the industrial process, instead of previously installed open circuits. In closed-loop circuits, the water recirculates continuously throughout the process and the losses are only due to the limited evaporation of water into the atmosphere. The new closed-loop system can guarantee a reduction in water consumption of approximately one tenth of the original values in open-loop circuits.

*Land and soil*Past industrial and mining activity

One of the most critical aspects associated with land use is the significant number of industrial plants that ceased production immediately after 1990. In many cases, termination of the activity was not followed by the necessary environmental restoration; consequently, the industrial ruins still occupy the territory and prevent use of the land for other activity. Past industrial pollution hotspots include:

- Elbasan complex, due to 35 years' activity leading to 1.5–2.0 million tons of ferronickel slag and ferrochromium waste, with consequent contamination of soil and water in the Shkumbini River;
- Rrëshen, a major centre for copper mining and copper ore concentration located in both arms of the Mati-Fani River;

- Kurbnesh, another copper mining complex in the Mati-Fani River basin;
- Fushë Arrëz area, the largest copper mining activity in the country, which produced and concentrated more than 320,000 tons per year of copper ore;
- Pogradec, where ferronickel deposits have been dumped in the vicinity of Lake Ohrid, with contamination of the shore and sands with heavy metals;
- Kalimash/Kukës/Gjëjan, copper mining in the middle of the Drini River basin.

Mining activities cause significant impacts on soil. The following pressures on the soil posed by past mining activities have been identified (chapter 8):

- Sterile deposits (especially chrome) from the activity of underground mines; in the Bulqiza area (eastern Albania) alone, by 2000, there was approximately 15 million m<sup>3</sup> of sterile deposits, covering 15 ha. This material has modified the nature of the local green area into barren land. Moreover, the stocks are subject to atmospheric agents, especially under the action of water erosion, and can therefore be transported through water bodies to much wider regions;
- Dumpsites resulting from the activity of copper enrichment. Of the 12 dumps inherited from the past mining sector, only one is active and only one has been fully rehabilitated in the context of a UNDP programme. The remaining dumps, containing more than 10 million tons of sterile (with a not negligible concentration of copper) are not managed correctly and might become a significant source of environmental pollution.

Cement production

Cement production also has significant impact on land and soil, due to soil erosion associated with quarry activity for the extraction of limestone as raw material. Since 2011, the companies active in cement production are implementing the requirements in the environmental legislation for progressive rehabilitation of quarries to maintain the biodiversity typical of the area.

Mining activity

The almost 700 active mines pose a risk for soil degradation. Mining activities raise the concern of heavy metal (e.g. chrome, manganese, nickel, arsenic) accumulation in tailing dumps, as residues of copper extraction and enrichment processes.

### Oil industry

Oil extraction activity has a long history in Albania since the discovery of Patos-Marinza oilfield in 1928. The pressure on land use and soil is associated with the spillage of oil from the well and from associated piping, which can contaminate the soil and, ultimately, water bodies.

The Patos-Marinza site experienced an oil well blast event in April 2015, with a leakage of oil onto the terrain. The event resulted in the suspension of the environmental permit until sufficient measures for remediation and environmental management were put in force by the operator.

### Waste

#### Past industrial and mining activity

Former industrial production has left hazardous wastes. At present, Albania does not have the technological capacity for their safe treatment. The most critical industrial wastes from former activities have been stored and secured in two dedicated landfills: Vlorë for hazardous industrial wastes containing mercury and Fier for hazardous industrial wastes containing arsenic.

#### Active industrial and mining activities

According to the 2011 National Waste Management Strategy and Action Plan for the period 2010–2025, industrial waste generation in Albania is estimated at 170,000 tons per year.

### Biodiversity

A direct threat to biodiversity is provided by the electrical energy sector, which is entirely based on HPPs. The installation of artificial dams along the rivers has altered the natural ecosystems of the water bodies. The installation of several dams in series along the same river has created river fragmentation and fish species separation; for example, six separate dams have been installed along the Drini River. Sedimentation in different water ponds has, moreover, reduced the quality of water in terms of oxygen and nutrients in downstream sections of the river.

## **11.6 Impact of and adaptation to climate change**

### *Impact of climate change*

#### Water resources

Water demand in the industrial sector is specifically concentrated in hydroelectrical energy production. According to the 2016 Third National Communication on Climate Change, Albania will face a reduction in annual rainfall and an increase in the number of intensive rainfall events during the year.

These two factors will both contribute to a situation of reduced availability of water, with a consequent increase in the instability of energy production and, eventually, an overall reduction in electrical energy production. Moreover, the increase in the number of intensive rainfall events will not create more production capacity; on the contrary, it will pose additional structural pressures on the dams.

**Photo 11.3: Ferrochrome storage facility**



Water is also vital for both the manufacturing and oil industries. The reduced availability of fresh water would mean reduced efficiency of processes reliant on water, which would lead to potential production instability, which itself can directly affect the economic value of production. Side effects on industrial activity in these circumstances might include a potentially increased risk of flooding, which could cause direct damage to production facilities and also environmental pollution in the event that hazardous substances are dispersed into water bodies.

### Temperature

The potential increase in atmospheric temperature has a direct impact on the electrical energy sector, since higher temperature leads to the increased vaporization rate of water in the dams, which can result in:

- Direct reduction of available energy;
- Acceleration of the sedimentation process in the dams, which might boost the population of living organisms growing with the nutrients from the sediments. This could also cause increased oxygen consumption from the water in the dam. Consequently, waters downstream of the dam will be poorer in oxygen and nutrients, which will have an impact on the related ecosystem.

### *Adaptation to climate change*

At present there is no evidence of specific technical efforts being made by the industrial sector to adapt to the potential impact of climate change. The effects of climate change, in particular the increased strength of natural phenomena, could be disastrous for production activity. Potential effects can be associated with flooding due to increased rainfall intensity, flooding due to elevated sea level, landslides due to increased rainfall intensity, and tornadoes. No evaluation of the possible effects on industrial production of natural disasters caused by climate change has been made.

### *Mitigation*

Emissions of CO<sub>2</sub> are linked to the use of energy in processing industries and associated facilities (office buildings and warehouses). The reduction of emissions can be reached through the optimization of energy use. The approach to energy efficiency might include the following measures:

- Applying the concept of energy efficiency in all business activities;
- Reducing the generation of waste (including that generated by non-industrial activities such as the

canteen) in order to reduce the energy associated with its treatment and disposal;

- Investing in innovation and cleaner technology with the objective to reduce the consumption of raw materials and of energy;
- Investing in sources of renewable energy (e.g. large industrial warehouse roofs can provide suitable surfaces for installation of solar panels).

## **11.7 Legal, policy and institutional framework**

### *Legal framework*

In recent years, the Government has developed a complex legal structure for the regulation of the industrial sector in terms of environmental protection. The general framework is based on the Law on Environmental Protection No. 10431/2011, complemented by other laws and subsidiary legislation. The relevant legal framework aims to:

- Establish the criteria for EIA of new activities, including the provision of information to the public and public participation in the decision-making process;
- Establish the criteria for awarding concessions and obtaining an environmental permit to undertake industrial activities;
- Manage the pressure of industrial activities on the environment (air emissions, waste, chemicals).

### Energy sector

The Law on the Energy Sector No. 43/2015 regulates the energy market and establishes the regulations for electrical energy production, transmission, distribution, export/import and supply/trade. The activity of electrical energy production is subjected to licensing by the Ministry of Infrastructure and Energy, or the Council of Ministers if the power produced is in excess of 2 MW.

The Law on Energy Efficiency No. 124/2015 creates the regulatory relationship between state authority and public/private entities conducting economic activities in order to promote the efficient use of energy. The Law establishes the Agency for Energy Efficiency as the institutional body responsible for creating and maintaining the national database on energy. The large energy consumers with consumption of more than 3 million KWh per year are obliged to send to the Agency annual reports on their energy consumption.

The Law on the Promotion of the Use of Energy from Renewable Sources No. 7/2017 provides the general framework for definition of national targets for energy produced by renewable sources. All entities that

produce energy from renewable resources have an obligation to submit data on annual production.

#### Mining industry

The Law on Mining No. 10304/2010 regulates the mining sector with the objectives to encourage mining activity in Albania, to maximize public benefit from mining activity and to protect the environment and public health from the risks of mining and mining waste. In order to operate in the market, any legal entity is obliged to obtain a concession permit from the Ministry of Infrastructure and Energy. The holder of the mining rights shall provide a financial guarantee, which may serve to guarantee the rehabilitation of the environment. The other obligations are related to preparation of the rehabilitation plan and the management of mining waste, site security measures and prevention of contamination. Closure and monitoring of mining sites is performed based on the closure and monitoring plan submitted in the permit application.

According to the Law on Protected Areas No. 81/2017, mining is not allowed in the core zones of protected areas.

#### Oil industry

The Law on the Production, Transportation and Trade of Oil, Gas and their By-products No. 8450/1999 provides the general framework for activities of the oil industry, from extraction to refining and distribution. In order to operate in the market, any legal entity is obliged to obtain a concession permit from the Council of Ministers.

#### Manufacturing industry

The Law on Safety of Material and Equipment Working under Pressure No. 32/2016 has the objective to define terms and major safety requirements, to be applied in the manufacture, assembly and use of equipment and installations under pressure, in order to guarantee the safety of the life and health of people, animals and the environment, and material assets. The Law also defines the framework for the inspections conducted by national and local authorities to guarantee compliance with legal requirements. The operator shall guarantee that the equipment working under pressure is certified by an accredited body.

#### Waste management

The Law on Integrated Waste Management No. 10463/2011 is particularly focused on mining activities, which are subject to specific mineral concession by the Ministry of Infrastructure and

Energy. The concession requires specific constraints on mining activity for the management of waste. The companies are subject to specific controls on this aspect, in order to obtain the renewal of the concession.

#### Chemical management

The aim of the Law on Chemicals Management No. 27/2016 is the implementation of Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and CLP Regulation (EC No. 1272/2008) on classification, labelling and packaging of substances and mixtures. At present, the Ministry of Tourism and Environment is working on developing the necessary legislation for law enforcement and application and the required capacity at national and local levels for compliance control. The objective is to install a complete framework for chemical management in the country in the period 2017–2019.

#### Prevention of risks of major industrial accidents

The legal framework on industrial accidents involving dangerous substances is under development. The draft law on the control of major accident hazards involving dangerous substances has been prepared, to transpose the requirements of Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC.

#### *Policy framework*

#### National Strategy for Development and Integration 2015–2020

The NSDI-II provides guidelines, among other themes, for European integration, enhancing competitiveness and sustainable use of resources. Improving the economic competitiveness of the country is based on attracting foreign capital and expanding scientific research and innovation, which are not satisfactory at present.

In terms of sustainable use of resources, a fundamental chapter related to the energy sector identifies specific goals for the efficient use of energy and production from renewable sources, and subgoals dedicated to the development of a gas network in the country.

#### Business and Investment Development Strategy for the period 2014–2020

The 2014 Business and Investment Development Strategy for the period 2014–2020 provides that

industrial development policies should focus on: (i) promoting local and foreign investment in the use of natural raw materials with the aim of developing a national manufacturing industry for products that are competitive in the region and globally, and stimulating innovative activities to help industry and increase its productivity; and (ii) promoting the transfer of technologies and stimulating the transfer of new technologies.

#### National Waste Management Strategy and Action Plan

The aim of the 2011 National Waste Management Strategy and Action Plan is to support waste management. Waste management can succeed through working simultaneously on the identification of major waste producers, increasing awareness of the potential risks associated with waste and strengthening the control and enforcement authorities with particular reference to the environmental inspectorate.

#### National Action Plan on Renewable Energies for the period 2015–2020

The 2016 National Action Plan on Renewable Energies for the period 2015–2020 contains targets aimed at increasing the use of carbon-free and/or low-carbon energy sources by 2020. It sets a target of 38 per cent share of RES in gross final energy consumption in 2020. This target is split into targets of 10.8 per cent for heating and cooling, 23.67 per cent for electricity and 3.65 per cent for transport.

#### National Energy Efficiency Action Plan for the period 2011–2018

The National Energy Efficiency Action Plan for the period 2011–2018 identifies the need for improvement of energy efficiency, as energy intensity is relatively high in Albania. A specific chapter is dedicated to industry, which will make a decisive contribution to energy efficiency by improving the management, maintenance and modernization of technologies and by the introduction of concepts such as "clean technology".

#### National Strategy of Science, Technology and Innovation 2016–2020

The National Strategy of Science, Technology and Innovation for the period 2016–2020 is focused on the need to improve the quality of scientific research, with

particular reference to the development of innovation and technology transfer, in order to respond to the needs of the productive sector.

#### Draft environmental cross-cutting strategy for the period 2015–2020

The draft environmental cross-cutting strategy for the period 2015–2020 establishes the environmental protection objectives, which include specific targets for the industrial sector, covering:

- Integrated pollution and risk prevention and control;
- EIA of development projects;
- Integrated waste management.

#### Draft strategic plan for industry for the period 2015–2025

The draft strategic plan for industry for the period 2015–2025 contains an action plan in eight strategic chapters for development, ranging from rehabilitation of abandoned former industrial sites to the technological progress of new industries.

#### *Sustainable Development Goals and targets relevant to this chapter*

Albania's current position vis-à-vis targets 6.4, 8.2, 9.2, 9.4, 9.5 and 9.b is described in box 11.3.

#### *Institutional framework*

#### Ministry of Infrastructure and Energy

As part of the institutional restructuring of September 2017, the responsibilities for energy and industry of the former Ministry of Energy and Industry were transferred to the new Ministry of Infrastructure and Energy. This Ministry now has the duty to define the national policy for energy and industrial development.

The State Inspectorate for Oil, Gas and Derivatives under the Ministry checks compliance with legal requirements.

The Department for Mine Inspection and Rescue is dedicated specifically to the mining sector. It ensures the implementation of the provisions of the laws on safety at work in mining activities and prepares and develops emergency and rescue operations related to mining activities.





**Box 11.3: Targets 6.4, 8.2, 9.2, 9.4, 9.5 and 9.b of the 2030 Agenda for Sustainable Development**

**Goal 6: Ensure availability and sustainable management of water and sanitation for all**

**Target 6.4: By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity**

According to the legislation, the environmental permit obliges industrial operators to carry out environmental self-monitoring, which includes the mandatory requirement to measure the quality of discharged water, but not water consumption. Field visits by the EPR team to a cement factory and a metallurgical factory highlighted the application of specific measures for the reduction of water consumption by application of the principle of water recycling in the production process. It is important that, in future, the environmental permit obliges industry to monitor water consumption in order to determine the best solutions that will progressively decrease freshwater intake and increase the efficiency of water use.

As information related to indicator 6.4.2 (level of water stress: freshwater withdrawal as a proportion of available freshwater resources) is available only for 2002 and 2007, no reliable assessment can be done. For the recorded years, the indicator value (maximum 6.1 in year 2002) is significantly lower than in various EU countries (where it lies around 10 or more).

**Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all**

**Target 8.2: Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high value added and labour-intensive sectors**

The value for indicator 8.2.1 (annual growth rate of real GDP per employed person) decreased from 5.1 in 2006 to 1.54 in 2015, with negative fluctuation in 2012. This fluctuation is also a result of the uncertain international market conditions and financial crisis that destabilized the economic indicators.

The draft strategic plan for industry for the period 2015–2025 promotes the exchange of knowledge between public academic researchers and private industry with the aim to increase innovation in the industrial sector and promote new technologies and new products. Specific targets to assist in monitoring progress are, however, lacking in this policy document.

**Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation**

**Target 9.2: Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries**

In the period 2006–2015, indicator 9.2.1 (manufacturing value added as a proportion of GDP and per capita) increased from 5.61 per cent in 2006 to 6.04 per cent in 2015. In the period 2006–2013, indicator 9.2.2 (manufacturing employment as a proportion of total employment) increased from 3.54 per cent in 2006 to 5.26 per cent in 2015. Both indicators have increased in recent years, but they both show that the industry sector makes a limited contribution to total GDP. Increasing the share of industry will need to derive from innovation in manufacturing. These indicators should reach a level of at least 8–9 per cent in 2030 in order to reduce the gap between Albania and the EU countries (which work around 12–14 per cent).

As part of the draft strategic plan for industry for the period 2015–2025, the then Ministry of Energy and Industry has identified a specific target to increase processing capacity in the country in order to close the production chain from the mine (in the case of minerals) or tannery (in the case of leather) to the market. The objective is, respectively, to produce metallic panels and shoes or bags. Completion of the production chain will lead to high-added-value products with limited environmental impact, at least in comparison with mining activity.

**Target 9.4: By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities**

In the period 2006–2013, indicator 9.4.1 (CO<sub>2</sub> emission per unit of value added) decreased from 3.79 in 2006 to 3.64 in 2013, showing substantial stability. The calculated value is much lower of those in other European countries (e.g. France, Germany and Italy are above 300). This is mainly associated with the availability in Albania of electrical energy produced by hydropower without any emission of CO<sub>2</sub>. Albania should proceed with this pattern to increase the renewable sources of energy, with diversification into other sources such as solar energy and wind energy, since both are suitable for the country.

**Target 9.5: Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending**

Information on indicator 9.5.1 (research and development expenditure as a proportion of GDP) is available only for 2007 and 2008 (being about 0.1 per cent), which is considered insufficient for supporting innovation in the context of sustainable development.

**Target 9.b: Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities**

For the period 2006–2013, indicator 9.b.1 (proportion of medium and high-tech industry value added in total value added) decreased from 0.2 in 2006 to 0.17 in 2013, indicating substantial stability. This indicator should reach a level of at least 0.3 in 2030 in order to reduce the gap between Albania and the EU countries (which work around 0.4). The possible way to reach this target is linked to Albania's capability to attract foreign capital for the installation of production sites for high-added-value products with clean technology.

The National Agency of Natural Resources under the Ministry works on:

- Implementation of government policy in the field of mining, oil and energy;
- Promotion of mineral, hydrocarbon, hydro and renewable energy sources;
- Negotiation of petroleum and mining agreements;
- Preparation of necessary documentation and procedures for issuing permits, licences and authorizations to enable the licence agreements, and conducting petroleum operations under signed agreements;
- Monitoring the implementation of agreements on hydrocarbons;
- Monitoring the concessionary contracts for hydropower.

The Albanian Geological Service under the Ministry guarantees specific support for development of the energy and industrial sector, providing the expertise and knowledge of Albanian geology and making available specific maps of the territory. The presence of such an institution in the decision-making phase is strategic, in order to minimize the risks of environmental impact of new production activity (with particular reference to oil exploitation, mining and dam construction for the hydropower sector).

Ministry of Tourism and Environment

The NEA under the Ministry of Tourism and Environment reviews EIA applications and sets the conditions for environmental permits. It also verifies self-monitoring reports submitted by the operators.

Other institutions

The Investment Council is a platform set up by the Albanian authorities with support from the EBRD to intensify the dialogue between the Government and the private sector and improve the business climate. The Council has a direct mandate to support the activity of the Albanian Investment Development Agency (AIDA).

The National Economic Council (NEC) – a consultation body in the area of economic and tax policies, chaired by the Prime Minister – was established in 2014 to guarantee institutional collaboration and public–private partnership for the development of economic policies, ensure dialogue and consultation between government administration bodies and the private sector, and ensure increased transparency in public decision-making and representation of the private sector.

*Regulatory, economic, fiscal and information measures*

Environmental permits and self-monitoring

The main industrial activities are classified as type A, the category with potential to have the most significant impact on the environment. Type A activities shall ensure that:

- Necessary measures for pollution prevention have been put in place, through the implementation of best available techniques (BAT);
- Waste generation is prevented in accordance with the relevant legislation for waste integrated management; generated waste is to be reused or, when this is not technically and economically feasible, treated to prevent or mitigate its effects on the environment;
- Energy is used efficiently;
- Water is used efficiently;
- Specific measures have been taken to prevent accidents or reduce their effects;
- In the final closure of the operation, necessary measures shall be taken to avoid the pollution risks and to return the site of the installation to an acceptable environmental state, as specified in the Law on Environmental Protection.

In this framework, once the industrial activity has been granted an environmental permit, the owner shall undertake self-monitoring and reporting.



Industrial sites have to provide periodic self-monitoring reports (on emissions, water discharges, wastes) to the NEA for control and approval. For most impacting industries (type A), the report is produced every three months. The regional inspectorates of environment and forestry have the duty to inspect the sites and identify any critical factors in terms of environmental protection.

#### Cleaner production methods

The legal framework, based on the Law on Environmental Permits, requires industry to move towards the application of BAT. An application for a type A environmental permit must make reference to the use of BAT. The NSDI-II envisages that the work on drafting the BAT reference documents will be carried out from 2018 onwards.

The process to introduce cleaner production methods is under development. The field visits by the EPR team to a cement factory and a metallurgical factory highlighted the installation of specific measures to reduce the emission of pollutants into the atmosphere, in particular:

- NO<sub>x</sub> reduction from the cement factory furnace stack by a selective non-catalytic reduction (SNCR) process using urea as the chemical for reduction of NO<sub>x</sub> to elementary nitrogen, to reduce emissions to below the EU standards (lower than Albanian standards);
- Particulate reduction from the metallurgical factory furnace stack by use of a specific filtering system.

#### Green investments

Awareness about opportunities for greening the economy is low in the industrial sector. Some investments in promoting energy efficiency (directed also towards reducing the costs of production) can be noted. Other measures, such as the use of renewable sources for energy production or improving capacity to reuse waste in the production industry, are at an initial stage of development.

#### Training for industry on environmental issues

The field visits by the EPR team to a cement factory and a metallurgical factory found that each of the

companies has a team dedicated to health and safety issues, which is responsible for periodic training of the personnel.

In one case, the company is operating according to ISO 14001 standard and therefore the training courses are part of the environmental management system and procedures for planning, executing and recording are in place.

The presence of foreign capital in the operating companies has generally boosted their objectives for environmental awareness and personnel training. The attitude towards environmental matters applied by these international companies should stimulate the public authorities and private Albanian production companies to replicate their approach in similar industrial contexts.

#### Reduction of major industrial accident risks

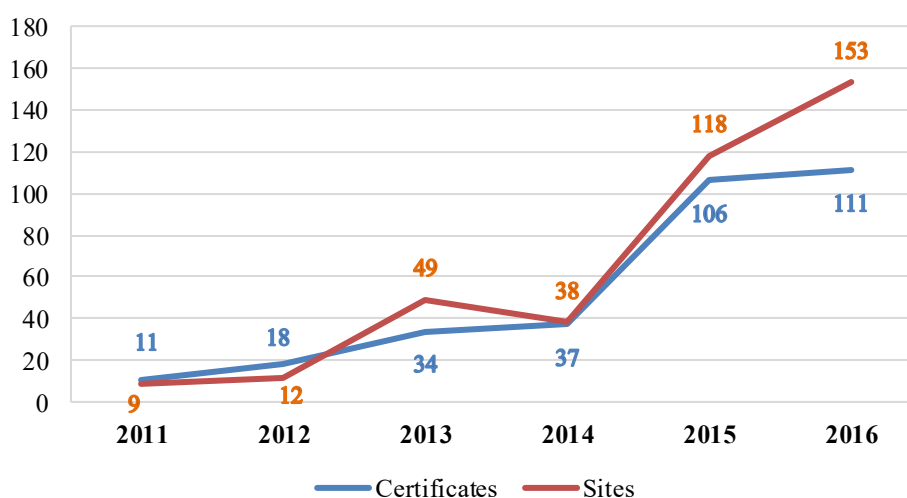
The involvement of industry in the process of industrial risk assessment and emergency preparedness in case of industrial accident is very limited. Cooperation with public institutions on emergency planning is still lacking.

#### Innovations

Innovation is slowly entering the industrial sector as there is a need for sustainable activity in the international market. The field visits by the EPR team to a cement factory and a metallurgical factory provided evidence that investments in innovation need to be planned with care because of uncertainties in the international market. The main efforts are focused on: energy efficiency, in order to reduce environmental impact and production costs; technology improvements, in order to add value to existing products or to offer the same product at a lower market price; and reducing emissions into the atmosphere given the need to reduce environmental impact.

#### Voluntary agreements

From 2011, the number of ISO 14001 certifications on environmental management has increased significantly, peaking in 2016 with 111 certificates (figure 11.4). This is a clear result of increased awareness of environmental matters by the production sector of the country.

**Figure 11.4: ISO 14001 certificates and sites, 2011–2016, number**

Source: International Organization for Standardization. ISO Survey ([https://www.iso.org/the-iso-survey.html?certificate=ISO per cent209001&countrycode=AF](https://www.iso.org/the-iso-survey.html?certificate=ISO+per+cent209001&countrycode=AF)), 2017.

### 11.8 Participation in international agreements and processes

#### Convention on Transboundary Effects of Industrial Accidents

Albania ratified the Convention on Transboundary Effects of Industrial Accidents in 1994. For the reporting periods 2012–2013 and 2014–2015, the country submitted its implementation reports past the deadline.

The country participates in the Assistance Programme of the Convention. The self-assessment report of 2015 highlighted gaps in the identification of necessary mechanisms and procedures for implementation of the Convention. In 2016, in cooperation with the operators of hazardous sites, the Government prepared an action plan to advance implementation of the Convention that includes the following aspects:

- Creating an institutional framework for identification, validation and notification of industrial sites handling hazardous substances with the potential for transboundary effects in the event of accident;
- Training public authority personnel in collecting and validating the data relevant to hazardous sites, exchanging information with operators and notification of the identified sites to the Convention and to neighbouring countries;
- Training operators on developing a risk assessment study on hazardous chemicals and particularly on the elaboration of safety reports and associated internal emergency plan (for activities related to the EU Seveso Directive);

- Organizing a workshop in order to inform the public about their rights under national legislation regarding public participation in decision-making.

Along with other South-Eastern European countries, Albania participated in the Subregional Workshop on Industrial Accidents Prevention in February 2017. In October 2014, a training session on the use of indicators and criteria under the Convention was held in Tirana.

In the framework of the Assistance Programme, Albania is eligible to submit a project proposal addressing the current needs and challenges in implementation of its obligations under the Convention. The country currently lacks mechanisms for consultation with neighbouring countries on the identification of hazardous activities with possible transboundary effects and has not notified the neighbouring countries of such hazardous activities.

The parallel implementation of the EU Seveso Directive (already identified as a main issue in the action plan for implementation of the Convention) should enhance the identification of necessary procedures at the institutional level and consequently at the level of industrial sites.

#### Energy Charter Treaty

Albania ratified the Energy Charter Treaty in 1997. It signed the International Energy Charter in 2015. The country has undergone an in-depth review of energy efficiency policy in 2013. The review document provided detailed analysis of energy, energy efficiency and renewable energy policies and a set of recommendations for strengthening the capacity of

Albania in this sector. The main topics that require government action are:

- Reduction of electrical energy transportation losses and application of an appropriate tariff system that better reflects end consumers' capacity to pay and consumption patterns, and includes fines for non-payment;
- Regulation of products for use in the electricity market, by introducing minimum energy performance standards and banning/differentiating custom duties for low-efficiency products;
- Continuation of improvements to the framework conditions and investment climate for renewable energy development.

### 11.9 Assessment, conclusions and recommendations

#### *Assessment*

Industrial production in Albania makes a limited contribution to total GDP (about 11 per cent in 2015), with a trend of increasing slightly in the period 2011–2015.

Since 100 per cent of Albania's electrical power is produced by HPPs, the country is vulnerable because of its overdependence on a single source of energy. Developing renewable sources of energy other than hydropower is an evident priority in this sector but is progressing very slowly.

Manufacturing industry provides the main contribution to the economic value of production. Investments in modernization and clean technological processes, including waste recycling, are not yet in place.

The oil industry is presently working at low capacity relative to the size of available oilfields. Priority investment should be routed to innovation in production of specific products such as bitumen.

The mining industry is historically a major sector of industrial production. The first environmental priority is the rehabilitation of abandoned mines and associated dumps. For future development, focus should be directed to installation capacity to complete the production chain from the mineral to final metallic product.

Albania is in the process of developing the legal framework for environmental protection. The institutional structure is under development and might require some further years to reach full capacity in terms of organization and resources. The availability

of a defined legal framework and functional institutions on environmental protection is likely to help industry identify appropriate activities to develop in order to achieve the best results in reducing environmental impact.

#### *Conclusions and recommendations*

##### Alternatives in energy supply

Electrical power production is a priority for the country since existing capacity is not sufficient to satisfy national needs. New HPPs are already under construction but they do not solve the issue of the country's vulnerability by being dependent on a unique source of energy that does not guarantee constant production.

The former Ministry of Energy and Industry has already carried out studies for the development of solar or wind energy sites for production of electrical energy. These plans are not yet in place together with the associated legal and institutional framework.

Natural gas distribution is linked to the successful implementation of the Trans-Adriatic Pipeline project, which will transport gas from Turkey to Italy, passing through Albanian territory. This is a strategic opportunity to connect the country to the international gas network and consequently to promote the use of gas-fired combustion systems for industrial activity for the progressive substitution of the liquid heavy fuel widely used at present. This solution, together with the adoption of high-efficiency combustion systems, would reduce the emission of pollutants such as SO<sub>2</sub>, NO<sub>x</sub> and CO from industrial sites.

##### Recommendation 11.1:

*The Ministry of Infrastructure and Energy should promote:*

- The production of electrical energy from alternative sources to hydroelectric power plants, with particular reference to other renewable sources;*
- The use of natural gas as a cleaner combustible input for industrial activities, when a natural gas network becomes available in the country.*

##### Oil extraction

Oil extraction activity has a long history in Albania. The pressure on land use and soil is associated with the spillage of oil from the well and from associated piping, which can contaminate the soil and, ultimately, water bodies. The Patos-Marinza site experienced an oil well blast event in April 2015, with a leakage of oil onto the terrain.

Recommendation 11.2:

*The Ministry of Infrastructure and Energy should carry out an environmental analysis of the oil extraction industry in order to propose improvements to its efficiency and environmental sustainability.*

Permitting

The Law on Mining No. 10304/2010 regulates the mining sector with the objectives to encourage mining activity and to protect the environment and public health from the risks of mining. In order to operate in the market, any legal entity has to obtain a concession permit from the Ministry of Infrastructure and Energy. The Law on the Production, Transportation and Trade of Oil, Gas and their By-products No. 8450/1999 provides the general framework for activities of the oil industry, from extraction to refining and distribution. In order to operate in the market, any legal entity is obliged to obtain a concession permit from the Council of Ministers. The main industrial activities are classified as type A, the category with potential to have the most significant impact on the environment. An application for a type A environmental permit must make reference to the use of BAT.

Recommendation 11.3:

*The Government should amend the relevant legislation to ensure that the permitting process includes an environmental permit, an exploration licence and a concession agreement, in line with the European Union Industrial Emissions Directive.*

Abandoned industrial sites

Albania has inherited several industrial installations that operated until the early 1990s. The current objective is to attract capital to reuse such industrial buildings for new production, taking advantage of the already existing infrastructure (electrical power supply, water supply) and establish new and greener production activities on former industrial sites. However, the plan lacks specific support in terms of both economic and fiscal incentives and technical assistance on environmental protection.

Albania has millions of tons of sterile soil derived from both the excavation of underground mines and dumpsites resulting from the activity of mineral enrichment (mainly copper). These objects are a source of soil contamination. The rehabilitation of these areas is a priority for environmental protection.

Recommendation 11.4:

*The Government, in cooperation with relevant municipalities and the private sector, should develop*

*best practices to use the abandoned industrial sites, at the same time ensuring their environmental rehabilitation and landscape improvement.*

*See Recommendation 8.4.*

Recovery of waste

Industrial waste management in Albania is at a poor level. At the same time, waste (specifically metal and plastics) can be used as a secondary raw material for manufacturing industry. The reuse of waste aims to reduce the direct environmental impact of waste and to potentially reduce the cost of production of specific goods.

Recommendation 11.5:

*The Ministry of Infrastructure and Energy, in cooperation with the Ministry of Tourism and Environment and municipalities, should create an enabling legal and institutional framework for the recovery of waste to be used as raw materials in the manufacturing industry.*

Innovation in the processing industry

The Government pays specific attention (within policy documents and legislation) to the need to speed up the process of innovation in the processing industry as a direct element in improving environmental protection. This process has taken very few steps forward, in part because of economic constraints.

There are no specific incentives to make attractive investments in the industrial sector, in particular for those willing to invest in new technology. This might hamper the implementation by Albania of target 8.2 (achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value-added and labour-intensive sectors) of Goal 8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all) of the 2030 Agenda for Sustainable Development.

Recommendation 11.6:

*The Ministry of Infrastructure and Energy, in cooperation with the Ministry of Tourism and Environment, should promote (also by using fiscal incentives and fast authorization processes) the installation of innovative processing plants based on the use of cleaner production methods, focused on energy efficiency and the reduction of waste, following the criteria established by best available techniques.*

Convention on Transboundary Effects of Industrial Accidents

Albania is a party to the Convention on Transboundary Effects of Industrial Accidents since 1994. Albania participates in the Assistance Programme of the Convention and has prepared a self-assessment report in 2015 and an action plan in 2016. In the framework of the Assistance Programme, Albania is eligible to submit a project proposal addressing the current needs and challenges in implementation of its obligations under the Convention. The country currently lacks mechanisms for consultation with neighbouring countries on the identification of hazardous activities with possible transboundary effects and has not notified the neighbouring countries of such hazardous activities. For the reporting periods 2012–2013 and 2014–2015, the country submitted its implementation reports past the deadline.

Recommendation 11.7:

*The Ministry of Tourism and Environment should:*

- (a) Prepare and submit a project proposal in the framework of the Assistance Programme of the Convention on the Transboundary Effects of Industrial Accidents to address needs and challenges in the implementation of the Convention;*
- (b) Proceed with the identification of hazardous activities with possible transboundary effects and their notification to neighbouring countries;*
- (c) Ensure timely submission of implementation reports under the Convention.*

## *ANNEXES*

**Annex I: Implementation of the recommendations in the second Environmental Performance Review**

**Annex II: Participation of Albania in multilateral environmental agreements**

**Annex III: List of major environment-related legislation**

**Annex IV: Results of the For Future Inland Transport Systems (ForFITS) tool**



# **IMPLEMENTATION OF THE RECOMMENDATIONS IN THE SECOND ENVIRONMENTAL PERFORMANCE REVIEW<sup>15</sup>**

## **Chapter 1: Policymaking framework for environmental protection and sustainable development**

### Recommendation 1.1:

*The Government should ensure that:*

- (a) *Relevant line ministries establish environmental units or designate environmental officers;*
- (b) *The Ministry of Environment, Forests and Water Administration establishes a unit specialized to the tasks of cooperation with sectoral ministries;*
- (c) *An Advisory Council on Sustainable Development is set up with broad stakeholder participation to advise the Government on the future development of its sustainable development policy.*

This recommendation has largely not been implemented.

- (a) There are no environmental units in sectoral ministries. There is an Environment and Health Department in the Institute of Public Health. As of early 2017, there was a Department of Renewable Energy Sources and Energy Efficiency in the then Ministry of Energy and Industry. In other relevant line ministries, some officers have environmental issues as part of their responsibilities.
- (b) The Ministry of Tourism and Environment does not have a unit specialized in the tasks of cooperation with sectoral ministries.
- (c) No Advisory Council on Sustainable Development has been set up.

### Recommendation 1.2:

*The Government should instruct relevant Ministries and public authorities to establish expert groups providing direct support to interministerial working groups, established by the Government, in the preparation of documents to be discussed, and in the transmission of instructions on further steps to be taken by the ministries and governmental institutions.*

This recommendation was implemented. All integrated policy management groups (IPMGs) have thematic groups, which meet more frequently. Also, ministries leading the interministerial working groups usually provide secretariat functions to those groups.

### Recommendation 1.3:

*The Government should consider modifying regulations on the content of progress reports on the implementation of environment-related strategies and action plans in order to include analysis and evaluation.*

The implementation of this recommendation is ongoing. The rules for monitoring the implementation of the sector and cross-cutting strategies (Order of the Prime Minister No. 139 dated 01.07.2010), which provide for the use of the Performance Assessment Matrix instrument for monitoring cross-cutting strategies within the Integrated Planning System have not been changed. The work to rethink the system of strategic planning and reporting is ongoing under the SIGMA Programme.

<sup>15</sup> The second review of Albania was carried out in 2012.



**Recommendation 1.4:**

*The Government should continue to require for all draft environment-related legal documents a feasibility study that includes measures, capital and running costs, investments, technical and human resources available for the implementation and enforcement of these legal documents.*

This recommendation has been implemented. Two documents – an explanatory memorandum and a budgetary assessment – are to be developed for all draft laws. Their content is prescribed by the legislation (DCM No. 584 dated 28.08.2003). The explanatory memorandum should include: (a) The aims and objectives of the draft legal act; (b) Explanation of how the draft law is related to the country's development strategy and policy objectives; (c) Assessment of possible benefits, economic costs and level of effectiveness; (d) Problems of enforcement; (e) Conformity with existing laws and harmonization with EU legislation; (f) Details of persons and institutions consulted and contributing to the drafting process; (g) Specification of institutions and/or bodies responsible for enforcing the legal act. The budgetary assessment should foresee: (a) The total amount of annual expenses for implementation of the act; (b) Analysis of budgetary expenses for the first three years of implementation; (c) Where public funds are used, an indication of budgetary allocation. However, the system did not progress towards a fully fledged regulatory impact assessment (RIA) system.

**Recommendation 1.5:**

*The Ministry of Environment, Forests and Water Administration should strengthen the capacity of its regional institutions, especially the regional agencies and regional inspectorates.*

Efforts to implement this recommendation have been applied to the extent possible. Due to reorganizations, e.g. the dissolution of the 12 regional forestry directorates and the creation of regional administrations of protected areas (RAPAs), the numbers of staff at various environmental institutions at regional level are not indicative. Efforts to enhance the use of IT tools and methods in data collection and processing were applied (e.g. the online reporting tool for the PRTR was established). Efforts were applied to enhance the equipment, although it remains insufficient, especially for environmental and forestry inspectors at regional level and for rangers in the RAPAs. Training activities are taking place but a comprehensive and systematic approach is lacking.

**Chapter 2: Compliance and enforcement mechanisms****Recommendation 2.1:**

*The Ministry of Environment, Forests and Water Administration and other relevant competent authorities should:*

- (a) *Prepare and adopt checklists for inspection and unified reporting forms;*
- (b) *Improve cooperation between the environmental inspection bodies and other control bodies;*
- (c) *Develop an informal network on information exchange and coordination between environmental inspectors at central and local levels, and other control bodies;*
- (d) *Define criteria for public access to inspection reports.*

This recommendation has largely not been implemented.

- (a) Checklists for type A and B environmental permit inspections and for hospital waste management were prepared with support from the IBECA project but are still to be formally introduced.
- (b) The situation has not substantially changed.
- (c) No network was developed.
- (d) No criteria for public access to inspection reports were established. Only annual inspection reports are publicized.

**Recommendation 2.2:**

- (a) *The Government should strengthen the administrative capacity of the Environmental Inspectorate and the regional environment agencies within the Ministry of Environment, Forests and Water Administration, in relation to improving enforcement of the legislation.*
- (b) *The Ministry of Environment, Forests and Water Administration should:*
  - (i) *Implement the separation of the permitting and inspection functions;*
  - (ii) *Provide appropriate staff training courses for inspectors.*

The implementation of this recommendation is ongoing.

- (a) The implementation of this part of the recommendation is ongoing.
- (b) This part of the recommendation has been implemented.
  - (i) Since 2014, there is a clear separation of permitting and inspection functions. The State Inspectorate of Environment and Forestry (later transformed into the State Inspectorate of Environment, Forestry and Water) was established as a separate institution subordinated to the Ministry of Environment (later, the Ministry of Tourism and Environment). The National Environment Agency is responsible for the permitting process.
  - (ii) During the last two years, training was conducted within the ECRAN project of the EU and the IBECA project of the EU, THEMIS and IMPEL Network, but no governmental system of training of the inspectors is in place.

Recommendation 2.3:

*The Ministry of Environment, Forests and Water Administration should:*

- (a) *Develop secondary legislation for each of the following instruments: Environmental Impact Assessment, Strategic Environmental Assessment, Integrated Pollution Prevention and Control and environmental audit, and ensure public access to these procedures;*
- (b) *Prepare a list containing all existing industrial installations subject to IPPC and establish a pollutant release and transfer register (PRTR);*
- (c) *Include threshold limit values for pollutants in environmental permits.*

The recommendation has been implemented.

- (a) Subsidiary legislation was developed to support the implementation of EIA, SEA and environmental audit, and to ensure public access to these procedures (e.g. DCM No. 598 dated 01.07.2015; DCM No. 686 dated 29.07.2015; DCM No. 1124 dated 30.07.2008; DCM No. 994 dated 02.07.2008; DCM No. 16 dated 04.01.2012; DCM No. 247 dated 30.04.2014; DCM No. 219 dated 11.03.2015).
- (b) A pollutant release and transfer register was launched in January 2017. The register is managed by the NEA.
- (c) According to the Law on Environmental Permits No. 10448/2011, threshold limit values for pollutants are included in environmental permits.

Recommendation 2.4:

*The Ministry of Environment, Forests and Water Administration, together with the Ministry of Finance, the Ministry of Justice and the Ministry of Interior, should draft amendments to the legislation for submission to the Government for approval in order to:*

- (a) *Apply appropriate measures for enforcement of sanctions and collection of fines to ensure compliance by operators;*
- (b) *Exclude the possibility of forgiving imposed fines which are not paid in due date or are simply not recovered.*

The recommendation has not been implemented.

Recommendation 2.5:

- (a) *The Government should adopt quality and emission standards for air, water, soil and noise, taking into account internationally agreed standards and guidelines.*
- (b) *The Ministry of Environment, Forests and Water Administration should monitor implementation of and compliance with the standards.*

The recommendation has largely been implemented.

- (a) Ambient air quality is regulated by DCM No. 352 dated 29.04.2015 "On air quality assessments and requirements concerning certain pollutants". Environmental quality norms for surface waters are adopted by DCM No. 246 dated 30.04.2014. The list of priority substances in aquatic environments was approved

by DCM No. 267 dated 07.05.2014. Hygienic-sanitary requirements for bathing water quality are regulated by DCM No. 797 dated 29.09.2010. Soil quality standards are not clearly determined. The protection of human health and the environment against adverse effect caused by noise emissions was strengthened with adoption of DCM No. 587 dated 07.07.2010 "On the monitoring and control of noise levels in urban and tourist centres".

- (b) The NEA and the State Inspectorate of Environment, Forestry and Water are responsible for monitoring implementation and compliance with the environmental standards (NEA during the permitting process, State Inspectorate of Environment and Forestry during the inspections).

### **Chapter 3: Information, public participation and education**

#### Recommendation 3.1:

*The Ministry of Environment, Forests and Water Administration should regularly review existing monitoring programmes and networks with a view of their modernization and optimization, and develop and implement an Integrated Environment Monitoring System.*

The implementation of this recommendation is ongoing.

#### Recommendation 3.2:

*The Ministry of Environment, Forests and Water Administration should streamline data and information collected through various monitoring activities and by various institutions and gradually formalize them in regular data flows by gradually developing a shared environment information system having the Environment and Forestry Agency as the central node of the system.*

This recommendation has not been implemented.

#### Recommendation 3.3:

*The Ministry of Environment, Forests and Water Administration should ensure sufficient financial and human capacities for good functioning of the environment-related network, EIONET.*

This recommendation has been largely implemented. Since 2012, the relationship between the NEA and EEA has become more regularized and Albania has received significant support from the EEA regarding capacity-building, in particular assistance on: the Corine land cover for Albania 2012; installing the software for air quality e-reporting; and technical assistance for water quality reporting. In addition, there has been improvement in the number of people engaged as National Reference Centres (NRCs) and their participation in meetings and workshops organized by EEA/EIONET. However, the EEA still financially supports one staff position at NEA to ensure the linkage to EIONET.

#### Recommendation 3.4:

*The Ministry of Environment, Forests and Water Administration should:*

- (a) *Improve regular reporting on the state of the environment by assessing the entire Driving forces–Pressures–State–Impact–Responses chain in order to be more connected with policy needs;*
- (b) *Review current production of the state of the environment report on an annual basis in favour of annual indicator-based reporting, preferably web-based, followed by comprehensive assessments every three to four years;*
- (c) *Ensure the production of an executive summary of the state of the environment reports to increase accessibility of the information for the general public and for decision-making bodies.*

Parts (a) and (b) of this recommendation have not been implemented. As for part (c), the reports include executive summaries, although their quality can be improved.

#### Recommendation 3.5:

*The Government should improve the implementation of the legal framework for the establishment and operation of NGOs in order to enhance their participation in environmental decision-making, policy implementation and awareness-raising.*

Some progress has been registered with implementation of this recommendation, although the systemic engagement of NGOs in environmental decision-making and awareness-raising is weak. Regarding the development of legislation, the extent of public participation is dependent on the topic. In 2016 (DCM No. 653 dated 14.09.2016), amendments were introduced in the Regulation of the Council of Ministers to require that all draft legislation submitted to the Council of Ministers by all public institutions includes, as part of the accompanying information, a summary of public comments and how they were, or were not, addressed. The process for public consultation regarding EIA is perceived to be well established and effective by the governmental officials, whereas public participation in SEA is relatively new.

Recommendation 3.6:

*The Ministry of Environment, Forests and Water Administration and the Ministry of Education and Science should:*

- (a) *Increase and expand adult education on environmental matters;*
- (b) *Implement a systematic long-term plan for implementation and monitoring of the National Strategy for Education for Sustainable Development at various levels with the participation of relevant decision-making bodies;*
- (c) *Assist the education of professional environmental journalists by organizing training courses.*

Parts (a) and (c) of this recommendation have not been implemented. Some progress was achieved with part (b), as the 2015 National Programme for Environmental Education in High Schools for the period 2015–2017, including an action plan, was approved by the ministers responsible for environment and for education.

#### **Chapter 4: Implementation of international agreements and commitments**

Recommendation 4.1:

*The Government should:*

- (a) *Establish an advisory body to the Government representing all relevant stakeholders to strengthen coordination and provide more opportunities for mainstreaming global environmental concerns into national planning and development;*
- (b) *Reorganize the National Council for Nature and Biodiversity, and the National Coordination Board for Land Degradation.*

This recommendation has not been implemented.

Recommendation 4.2:

*The Ministry of Environment, Forests and Water Administration should regularly update its website by uploading:*

- (a) *The texts of various multilateral environmental agreements (MEAs) and most recent reports on their implementation;*
- (b) *Regular reports on the status of implementation of international commitments.*

This recommendation has not been implemented.

Recommendation 4.3:

*The Ministry of Environment, Forests and Water Administration should adopt a more comprehensive and systematic approach to its international cooperation efforts, requiring:*

- (a) *Strengthening contacts between MEAs' focal points, and conducting regular reviews of the status of implementation of Albania's obligations under various MEAs;*
- (b) *Identifying areas of synergy between related MEAs so that excessive institutional fragmentation is avoided; specifically, a "chemicals bureau" or similar should be established to manage chemicals-related agreements in a coordinated way;*

- (c) *Strengthening administrative capacity for MEAs implementation, essentially by organizational measures including raising human capacity, retaining qualified staff and preserving sufficient institutional memory, thus assuring the necessary continuity in work.*

The implementation of this recommendation is ongoing.

The Government has established IPMGs to ensure coordination with broader priorities and objectives associated within six key priority areas, and specifically on integrated water management. The use of IPMGs is expected to strengthen overall government policy coordination, programming and the implementation of EU integration and national development initiatives in priority sectors. An Interministerial Working Group on Climate Change was also created, as well as the National Biosafety Council, the National Biodiversity Council and the Interministerial Committee for Integrated Waste Management. These structures can represent an opportunity to better coordinate the implementation of MEAs.

Although no structure has been created on chemicals management, this coordinated approach is present in the preparatory work being carried out in preparation for the ratification of the Minamata Convention. A Steering Committee has been created, including representatives from several ministries, as well as the academic and non-governmental sectors, which is responsible for the elaboration of the Minamata Initial Assessment for Albania.

Recommendations 4.4:

*The Government should:*

- (a) *Strengthen the Regulatory Impact Assessment (RIA) process leading to a more thorough assessment of the financial, economic, social and environmental impacts of new international commitments and related public policies and national laws;*
- (b) *Ensure that staff members dealing with RIA applications receive adequate training, especially staff from the Ministry of Environment, Forests and Water Administration.*

The recommendation was not implemented.

Recommendations 4.5:

*The Government should systematically consider how the country would fulfil its international obligations in the context of reduced international aid, and aim – within a longer-term perspective – to raise its capacity to act within a scenario in which most of the funds are provided from domestic sources.*

The recommendation was not implemented.

Recommendation 4.6:

*The Ministry of Environment, Forests and Water Administration should:*

- (a) *Continue passing laws concerning the ratification of the Protocol on Heavy Metals and the Protocol on Persistent Organic Pollutants to the Convention on Long-range Transboundary Air Pollution;*
- (b) *In cooperation with other relevant authorities, assess the costs and benefits of, and promote accession to, the Protocol Concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea to the Convention for the Protection of the Mediterranean Sea against Pollution.*

The recommendation was not implemented.

## **Chapter 5: Economic instruments and expenditures for environmental protection**

Recommendation 5.1:

*The Ministry of Environment, Forests and Water Administration together with the Ministry of Finance should:*

- (a) *Draft the necessary legislation introducing effluent charges, especially wastewater and air emission charges, in accordance with the "polluter pays" principle;*

- (b) *Adjust the level of environmental charges to make them high enough to have an effect on the behaviour of economic agents;*
- (c) *Consider strengthening tax incentives for more environmentally friendly vehicles.*

Implementation of the recommendation is ongoing. Some progress has been made in the water sector, where tariffs are set aiming at balancing the interests of consumers with the financial sustainability of the WSS companies. Electricity tariffs increased within a process of gradual liberalization of the electricity market, supported by large infrastructural private and public investment in the field. No express application of the "polluter pays principle" was fostered, with the tariffs for public utilities having been set with the ideal goal of achieving full cost recovery and improving company management. Thus, the increase in environmental charges, especially in the field of utilities, is limited and their behavioural effect is complex to detect. No tax incentives for low-emission vehicles have been introduced to date, nor has targeted taxation increased on used vehicles, which still represent a huge proportion of the fleet in circulation and are considered to provide affordable access to individual mobility for large proportions of the population. The limited amount of finance available did not allow for the introduction of any public support scheme for low-emission vehicles.

Recommendation 5.2:

*The Government should:*

- (a) *Ensure that tariffs for utilities are adjusted to allow full cost recovery and to help financing investments;*
- (b) *Improve collection rates and strengthen law enforcement and sanctions to discourage illegal behaviours;*
- (c) *Adopt a clear policy for providing affordable access to utilities services to the more vulnerable population groups.*

The recommendation is partly implemented. The legal framework was established to allow for setting tariffs aimed at full cost recovery in the utilities sector, taking note of the specific conditions faced by particular companies across the country, even though collection rates appear to be still unsatisfactory and problems such as "non-billed water" persist. Water companies that have applied new tariffs in 2015 across the country failed to increase the share of billed water compared with 2014. There continues to be cross-subsidization in the water sector, as well as differential, although decreasing, rates for electricity according to the user. Fees for environmental services appear to be still below the level of affordability, according to studies.

Recommendation 5.3:

*The Government should establish an environmental fund with the main purpose of supporting environmental investments and ensure that:*

- (a) *Adequate transparency and auditing rules are applied;*
- (b) *Its sources of funding incorporate an increased share of revenue from environmental economic instruments;*
- (c) *Its operations are consistent with the country's national accounting system and recommended international guidelines for environmental funds.*

This recommendation was not implemented.

## **Chapter 6: Sustainable management of water resources**

Recommendation 6.1:

*The National Water Council should:*

- (a) *Upgrade the capacity of river basin councils and river basin agencies to enable them to enforce legal and regulatory procedures, and ensure a sustainable management of water resources;*
- (b) *Strengthen river basin agencies' responsibilities, especially in terms of coordination of local sectors, and establish them as recognized partners in water resources management at the local level.*

The recommendation is largely implemented. The legal basis for the responsibilities and the functioning of river basin councils and river basin agencies has been formalized with the 2012 Law on Integrated Water Resources Management No. 111/2012. Capacities (in terms of expertise and numbers of staff) were increased.

**Recommendation 6.2:**

*The Ministry of Environment, Forests and Water Administration should develop secondary legislation to establish legal and institutional provisions for important procedures and approaches in integrated water resources management.*

The development of secondary legislation through DCMs supporting the Law on Integrated Water Resources Management No. 111/2012 is ongoing.

**Recommendation 6.3:**

*The Ministry of Environment, Forests and Water Administration should:*

- (a) *Finalize and adopt the national strategy for integrated management of water resources;*
- (b) *Implement the following components of the Mati River Basin Pilot Management Plan: development of specific quality objectives for all water body types, economic analysis of water pollution and water management, stakeholders' involvement, public participation and awareness;*
- (c) *Adopt a special regulation which defines and describes the procedures for drafting, reviewing and approving river basin management plans;*
- (d) *Develop river basin management plans for all river basins.*

The implementation of this recommendation is ongoing.

- (a) As of early 2017, the draft national strategy for integrated water resources management, designed for the period 2017–2027, has been developed under the leadership of the then Ministry of Agriculture, Rural Development and Water Administration. It is not yet adopted.
- (b) The Mati River Basin Management Plan (RBMP) has not yet been implemented accordingly.
- (c) As of early 2017, a subsidiary act on the content, development and implementation of national water strategies, RBMPs and flood risk management plans is under development.
- (d) Preparation of RBMPs for the Drini-Buna, Semani and Shkumbini River basins commenced in 2016.

**Recommendation 6.4:**

*The Government should ensure the implementation of the 2011 National Strategy of Water Supply and Sewerage Services Sector by:*

- (a) *Restructuring and reforming the existing water utilities, which are not able to cover costs, taking the water utilities in Elbasan and Kavaja as examples of best practice;*
- (b) *Investing in alternative low-cost facilities that are easy to maintain, extend and upgrade, and have low energy consumption;*
- (c) *Implementing integrated land-use planning which takes into account the water supply and sewerage infrastructure system; and connecting road construction activities with construction activities for new water supply and sewerage systems.*

The recommendation is not fully implemented. Targets for 2015 of the 2011 National Strategy of Water Supply and Sewerage for the period 2011–2017 were not achieved (chapter 7).

**Chapter 7: Waste management****Recommendation 7.1:**

*The Ministry of Environment, Forests and Water Administration should strengthen its capacity in waste management and work towards increasing waste management expertise.*

The recommendation was not implemented.

**Recommendation 7.2:**

*The Ministry of Public Works and Transport in cooperation with the Ministry of Environment, Forests and Water Administration, the Ministry of Economy, Trade and Energy, local authorities, and other relevant stakeholders should develop:*

- (a) *A long-term scenario to help planning how to meet the needs of future waste management capacities, and securing sufficient funding for their development;*
  - (b) *Regional and local waste management plans and identify the facilities required for safe management of industrial and municipal waste.*
- (a) The recommendation is not yet implemented, although certain steps were already taken that would result in its fulfilment. The lack of a long-term scenario and funding are the most significant factors hindering significant improvement in the field of waste management. This will change with completion of the review and update of the National Waste Strategy and draft national waste management plan. The draft plan is expected to be finished by the end of 2017.
- (b) The recommendation is not implemented because of the administrative reform that took place during the assessed period and the lack of both enforcement of related legislation and funding. It is expected that the draft national waste management plan will contain concrete proposals for the new landfill sites and facilities. Likewise, there is no strategy and action plan for the separate management of industrial waste. In most instances, industrial waste is treated together with municipal waste.

**Recommendation 7.3:**

*The Ministry of Environment, Forests and Water Administration should:*

- (a) *Start monitoring generated waste amounts, according to waste classification, from the key industries, including hazardous waste;*
- (b) *Expand the monitoring system to cover medium-size and small industries once satisfactory results are achieved.*

The implementation of the recommendation is ongoing.

On part (a), there is a very limited improvement, due to the transposition of the related EU legislation, but official monitoring systems still cannot provide data according to the required specification.

Part (b) was not implemented since the implementation of part (a) has been delayed.

**Recommendation 7.4:**

*The Ministry of Health, with the support of the Ministry of Environment, Forests and Water Administration, should analyse:*

- (a) *The cost of medical waste management and secure sufficient financing to cover the full cost of medical waste management in hospitals and other health-care facilities;*
- (b) *Options for safe disposal of medical waste and submit resulting proposals for action to the Government for adoption.*

Part (a) was not implemented, due to the lack of a long-term strategy for the sound management of medical waste. Consequently, the much-needed action plan to prioritize investments needed in this sector is also lacking; thus, part (b) was not implemented.

## **Chapter 8: Forestry, biodiversity and protected areas**

**Recommendation 8.1:**

*The Government should ensure that:*

- (a) *In connection with the transfer of forest land ownership to local government units adequate capacity and technical expertise are provided at the local government units level in order to fulfil new responsibilities related to forest management;*
- (b) *Enhance cooperation with other European countries on management of forests and biodiversity.*

Implementation of this recommendation is ongoing.



- (a) Forest land ownership is 85 per cent municipal, which is an increase of 15 per cent since 2012. The Government has provided some capacity-building and transfer of knowledge and tools. The 61 municipalities are newly formed, but they still lack operational capacities in the field, geo-informational tools, spatial information and other capacities to be able to gather data, analyse it and make evidence-based decisions.
- (b) Since 2014, the NEA produces annual state of environment reports. Cooperation with EU countries – especially in the form of reporting to the EEA – and the European Forest Fire Information System has been enhanced. However, Albania still lacks monitoring of forest biodiversity and monitoring of high-nature-value forests.

Recommendation 8.2:

*For sustainable management of forests, the Ministry of Environment, Forests and Water Administration should provide for further increase in the capacities of both the district forest service directorates and the communal users of forests, by training and transfer of technical expertise, which could be largely facilitated by establishing joint support centres.*

This recommendation has been partially implemented. Although numerous training events and capacity-building have been organized, overall, the municipalities still lack capacities for sustainable forest management. Furthermore, no joint support centres have been established.

Recommendation 8.3:

*The Ministry of Environment, Forests and Water Administration should develop an electronic information system on forests, biodiversity and protected areas, and make it easily accessible.*

The recommendation is not implemented. No electronic information system on forests, biodiversity and protected areas was established. However, since formation of the NEA, there have been annual state of environment reports, which include chapters on forestry and biodiversity. These reports are publicly available on the NEA website. They do not contain forestry or biodiversity indicators, but mainly qualitative description of forest health and biodiversity species counts. In terms of reporting to the EEA, Albania only reports one CSI indicator, 008: Protected Areas. The National Agency of Protected Areas established a new biodiversity information system called BIONA, which should start producing a biodiversity database.

Recommendation 8.4:

*The Ministry of Environment, Forests and Water Administration should assess the needs and potential for the further extension and appropriate designation of the national ecological network.*

The recommendation is not implemented. Albania still does not have a national ecological network and associated management plans. Natura 2000 is currently being implemented in the country.

## **Chapter 9: Energy and environment**

Recommendation 9.1:

*The Government should:*

- (a) *Assess changes to rivers' ecosystems (possible changes to fish and wildlife habitats) as environmental impacts possibly caused by hydropower plants (HPPs);*
- (b) *Conduct water quality monitoring in HPP reservoirs;*
- (c) *Improve inter-administration cooperation between hydropower and environmental authorities, particularly on water release issues.*

This recommendation was not implemented. The ambient water quality of reservoirs is not yet routinely monitored.

Recommendation 9.2:

*The Ministry of Environment, Forests and Water Administration should:*

- (a) *Strengthen environmental impact assessment for energy-related projects;*
- (b) *Gradually introduce environmental audit of energy-related activities.*

The recommendation has been partly implemented.

- (a) The EIA reports are still very weak, including those for energy-related projects.
- (b) Environmental audit is in place but it is of very low quality.

Recommendation 9.3:

*The Government should:*

- (a) *Continue to give priority to energy efficiency within energy policy;*
- (b) *Improve integration of energy efficiency into the reform of the energy sector and in other public policies, including using of economic instruments and tariff policy promoting energy efficiency;*
- (c) *Adopt policies to ensure high energy-efficiency standards for industry, construction and housing sectors as well as for efficient equipment, appliances and vehicles;*
- (d) *Continue to enhance diversification of energy sources.*

The implementation of this recommendation is ongoing.

- (a) The Government continued to give priority to energy efficiency within energy policy. The first National Energy Efficiency Action Plan for the period 2011–2018 was adopted in 2011 and its implementation is ongoing. One of two NAMAs is dedicated to energy efficiency issues: Financing Mechanism for Energy Efficiency in Buildings (2015–2020).
- (b) The core action of the NAMA Financing Mechanism for Energy Efficiency in Buildings (2015–2020) is to provide financial support, through grants or subsidized loans, for the upgrading of energy efficiency in buildings.
- (c) The National Energy Efficiency Action Plan for 2011–2018 aims at developing high energy efficiency standards for the industrial, construction and housing sectors, as well as for energy-efficient equipment, appliances, etc.
- (d) The 2016 National Action Plan on Renewable Energies for the period 2015–2020 names diversification of primary energy sources for electricity supply as one of its primary objectives.

Recommendation 9.4:

*Taking into account environmental sustainability, the Government should:*

- (a) *Conduct a comprehensive study of renewable energy sources (such as solar, wind, geothermal, biomass waste and residues, and agricultural waste);*
- (b) *Develop sound policies to promote the application of renewable energy.*

The recommendation is largely implemented.

- (a) The drafting process of the 2016 National Action Plan on Renewable Energies for the period 2015–2020 included a review of RES potential in Albania.
- (b) The 2016 National Action Plan on Renewable Energies for the period 2015–2020 was developed and adopted to promote the application of renewable energy.

Recommendation 9.5:

*The Ministry of Economy, Trade and Energy in cooperation with the relevant stakeholders should ensure:*

- (a) *Implementing a programme to decrease transmission and distribution losses;*
- (b) *Arranging for strict control of consumers, including increased collection of payments, reduction of illegal connections and the installation of electricity meters.*

The recommendation is largely implemented. The electricity sector reforms have been quite successful in cutting distribution losses from 45 to 28 per cent between 2014 and 2016 and in improving bill collection.

## Chapter 10: Human health and environment

### Recommendation 10.1:

*The Ministry of Health and relevant Government departments should:*

- (a) *Identify priority environmental health issues and health-driven indicators through intersectoral mechanisms involving stakeholders from the environment, transport and public works, food safety, statistical and other sectors;*
  - (b) *Set mechanisms for regular policy-oriented monitoring and reporting on the health-and-environment situation, its determinants and trends, and the underlying information exchange among the different data-holding agencies;*
  - (c) *Introduce computerised databases in regional and local public health and environmental structures, and implement quality control and quality assurance systems to ensure the validity of the information on exposure to priority environmental health risks;*
  - (d) *Continue capacity-building and training in policy-relevant analysis and assessments, as well as in communication and information dissemination on public health and the environment to reach multiple user groups through international collaboration.*
- (a) A new health strategy for the period 2016–2020 was developed in cooperation with WHO from a Health 2020 perspective. The process involved all relevant governmental line ministries and health agencies, and representatives of international partners, health professionals' and patients' rights organizations, business and civil society. This strategy incorporates all aspects of environmental health without it being explicitly mentioned. The strategy is not yet adopted.
  - (b) The Ministry of Health and Social Protection relies on the mechanisms already in place, such as the 2016 National Strategy for Development and Integration (NSDI-II), to ensure that health concerns would be taken into account during the drafting of other policy documents.
  - (c) This part of the recommendation is not implemented.
  - (d) The implementation of this part is ongoing.

### Recommendation 10.2:

*The Ministry of Health and the Institute of Statistics should:*

- (a) *Strengthen mortality-based statistics, implement harmonized methods of data collection and processing, and reinforce their systematic reporting to the relevant international agencies;*
  - (b) *Enhance morbidity-based statistics to provide reliable data on single disease conditions;*
  - (c) *Develop national registers on injuries and traumatism at the workplace and in road transport;*
  - (d) *Expand and upgrade the Albanian Early Reporting Tool to include data on the causes and outbreaks of food- and waterborne diseases, and on health conditions related to heat waves.*
- (a) Over the last three years, the Ministry of Health and Social Protection and the Institute of Statistics have been improving mortality-based statistics by adapting internationally recognized methods of data collection and processing.
  - (b) Over the last three years, the Ministry of Health and Social Protection and the Institute of Statistics have been improving morbidity-based statistics by adapting internationally recognized methods of data collection and processing.
  - (c) This part of the recommendation is not implemented.
  - (d) This part has been implemented by the Institute of Public Health.

### Recommendation 10.3:

*The Ministry of Health, in cooperation with the Ministry of Environment, Forests and Water Administration and the relevant government bodies, should prepare the secondary legislation and a methodology relating to health impact assessment and submit it for approval to the Council of Ministers.*

This recommendation is not implemented.

Recommendation 10.4:

*The Ministry of Health, together with the Ministry of Public Works and Transportation, Ministry of Agriculture, Food and Consumer Protection, Ministry of Environment, Forests and Water Administration and relevant government departments, should:*

- (a) Implement WHO water safety plans progressively across the country;*
- (b) Undertake a national review of sewage collection and sanitary disposal facilities, in particular in schools and hospitals, and continue designating pilot projects, including hygiene education, with the help of adequate investment;*
- (c) Conduct a nationwide assessment of the resilience of the water supply and sanitation sector using the WHO methodology.*

This recommendation is not implemented.

Recommendation 10.5:

*The Ministry of Environment, Forests and Water Administration, together with the Ministry of Health, should:*

- (a) Strengthen air-quality monitoring, including indoor air quality, establish a database and online data availability, and disseminate air-quality information to the authorities and the public;*
- (b) Conduct research to quantify the health benefits of reducing air pollution exposure under different traffic change options in urban areas.*

This recommendation is not implemented.



*Annex II****PARTICIPATION OF ALBANIA IN MULTILATERAL ENVIRONMENTAL AGREEMENTS***

Year	Worldwide agreements	Albania	
		Year	Status
1958	(GENEVA) Convention on the Continental Shelf	1964	Ac
1958	(GENEVA) Convention on Fishing and Conservation of the Living Resources of the High Seas		
1958	(GENEVA) Convention on the Territorial Sea and the Contiguous Zone		
1958	(GENEVA) Convention on the High Seas	1964	Ac
1960	(GENEVA) Convention concerning the Protection of Workers against Ionising Radiations (ILO 115)		
1961	(PARIS) International Convention for the Protection of New Varieties of Plants	2005	Ac
1963	(VIENNA) Convention on Civil Liability for Nuclear Damage		
	1997 (VIENNA) Protocol to Amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage		
1968	(LONDON, MOSCOW, WASHINGTON) Treaty on the Non-Proliferation of Nuclear Weapons (NPT)	1990	Ac
1969	(BRUSSELS) Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties		
1971	(RAMSAR) Convention on Wetlands of International Importance Especially as Waterfowl Habitat	1995	Ac
1971	(GENEVA) Convention on Protection against Hazards from Benzene (ILO 136)		
1971	(BRUSSELS) Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage	1994	Ac
	1992 Fund Protocol	2006	Ac
1971	(LONDON, MOSCOW, WASHINGTON) Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea-bed and the Ocean Floor and in the Subsoil thereof		
1972	(PARIS) Convention concerning the Protection of the World Cultural and Natural Heritage	1989	Ra
1972	(LONDON) Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter		
	1996 (LONDON) Protocol		
1972	(LONDON, MOSCOW, WASHINGTON) Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons, and on their Destruction	1992	Ac
1972	(LONDON) International Convention on the International Regulations for Preventing Collisions at Sea	2004	Ac
1972	(GENEVA) International Convention for Safe Containers		
1973	(WASHINGTON) Convention on International Trade in Endangered Species of Wild Fauna and Flora	2003	Ac
	1979 (BONN) Amendment	2003	At
	1983 (GABORONE) Amendment		
1973	(LONDON) Convention for the Prevention of Pollution from Ships (MARPOL)		
	1978 (LONDON) Annex I on Prevention of Pollution by Oil	2007	Ac
	1978 (LONDON) Annex II on Control of Pollution by Noxious Liquid Substances in Bulk	2007	Ac
	1978 (LONDON) Annex III on Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form	2007	At
	1978 (LONDON) Annex IV on Prevention of Pollution by Sewage from Ships	2007	At
	1978 (LONDON) Annex V on Prevention of Pollution by Garbage from Ships	2007	Ra
	1997 (LONDON) Annex VI on Prevention of Air Pollution from Ships		
1974	(GENEVA) Convention concerning Prevention and Control of Occupational Hazards caused by Carcinogenic Substances and Agents (ILO 139)		

Ac = Accession; Ad = Adherence; Ap = Approval; At = Acceptance; De = Denounced; Si = Signature; Su = Succession; Ra = Ratification.

Year	Worldwide agreements	Albania	
		Year	Status
1977	(GENEVA) Convention on Protection of Workers against Occupational Hazards from Air Pollution, Noise and Vibration (ILO 148)		
1979	(BONN) Convention on the Conservation of Migratory Species of Wild Animals	2001	Ra
	1991 (LONDON) Agreement on the Conservation of Populations of European Bats (EUROBATS)	2001	Ac
	1992 (NEW YORK) Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS)		
	1995 (THE HAGUE) Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA)	2001	Ra
	1996 (MONACO) Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS)	2001	Ra
1980	(NEW YORK, VIENNA) Convention on the Physical Protection of Nuclear Material	2002	Ac
1981	(GENEVA) Convention Concerning Occupational Safety and Health and the Working Environment (ILO 155)	2004	Ra
1982	(MONTEGO BAY) Convention on the Law of the Sea	2003	Ac
	1994 (NEW YORK) Agreement related to the Implementation of Part XI of the Convention	2003	Ra
	1995 (NEW YORK) Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks		
1985	(GENEVA) Convention Concerning Occupational Health Services (ILO 161)		
1985	(VIENNA) Convention for the Protection of the Ozone Layer	1999	Ac
	1987 (MONTREAL) Protocol on Substances that Deplete the Ozone Layer	1999	Ac
	1990 (LONDON) Amendment to Protocol	2006	Ac
	1992 (COPENHAGEN) Amendment to Protocol	2006	Ac
	1997 (MONTREAL) Amendment to Protocol	2006	Ac
	1999 (BEIJING) Amendment to Protocol	2006	Ac
	2016 (KIGALI) Amendment to Protocol		
1986	(GENEVA) Convention Concerning Safety in the Use of Asbestos (ILO 162)		
1986	(VIENNA) Convention on Early Notification of a Nuclear Accident	2003	Ac
1986	(VIENNA) Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency	2003	Ac
1989	(BASEL) Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal	1999	Ac
	1995 Ban Amendment	2005	At
	1999 (BASEL) Protocol on Liability and Compensation		
1990	(GENEVA) Convention concerning Safety in the use of Chemicals at Work (ILO 170)		
1990	(LONDON) Convention on Oil Pollution Preparedness, Response and Cooperation	2008	Ac
1992	(RIO DE JANEIRO) Convention on Biological Diversity	1994	Ac
	2000 (MONTREAL) Cartagena Protocol on Biosafety	2005	Ac
	2010 (NAGOYA) Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization	2013	Ac
	2010 (NAGOYA - KUALA LUMPUR) Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety	2013	Ac
1992	(NEW YORK) United Nations Framework Convention on Climate Change	1994	Ac
	1997 (KYOTO) Protocol	2005	Ac
	2012 (DOHA) Doha Amendment to the Kyoto Protocol		
	2015 (PARIS) Paris Agreement	2016	Ra
1993	(ROME) Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas	2005	At
1993	(PARIS) Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction	1994	Ra
1994	(VIENNA) Convention on Nuclear Safety	2011	Ac
1994	(PARIS) United Nations Convention to Combat Desertification	2000	Ac

Ac = Accession; Ad = Adherence; Ap = Approval; At = Acceptance; De = Denounced; Si = Signature; Su = Succession; Ra = Ratification.

Worldwide agreements		Albania	
Year		Year	Status
1997	(VIENNA) Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management	2011	Ac
1997	(NEW YORK) Convention on the Law of Non-navigational Uses of International Watercourses		
1997	(VIENNA) Convention on Supplementary Compensation for Nuclear Damage		
1998	(ROTTERDAM) Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade	2010	Ac
2001	(STOCKHOLM) Convention on Persistent Organic Pollutants	2004	Ac
2001	(LONDON) Convention on Civil Liability for Bunker Oil Pollution Damage	2010	Ac
2003	(GENEVA) WHO Framework Convention on Tobacco Control	2006	Ra
2004	(LONDON) Convention for the Control and Management of Ships' Ballast Water and Sediments	2009	Ac
2013	(KUMAMOTO) Minamata Convention on Mercury	2014	Si

Regional and subregional agreements		Albania	
Year		Year	Status
1957	(GENEVA) European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)	2005	Ac
1958	(GENEVA) Agreement - Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts	2011	Ac
1968	(PARIS) European Convention - Protection of Animals during International Transport (revised in 2003)		
	1979 (STRASBOURG) Additional Protocol		
1969	(LONDON) European Convention on the Protection of the Archaeological Heritage (revised in 1992)	2008	Ra
1976	(STRASBOURG) European Convention for the Protection of Animals Kept for Farming Purposes		
1976	(BARCELONA) Convention for the Protection of the Mediterranean Sea against Pollution	1990	Ac
	1976 (BARCELONA) Dumping Protocol (as amended in 1995)	2001	At
	2002 (MALTA) Prevention and Emergency Protocol (replacing the 1976 Emergency Protocol )		
	1996 (SYRACUSE) Land-based Sources Protocol (replacing the 1980 Land-based Sources Protocol)	2001	At
	1994 (MADRID) Offshore Protocol	2001	Ra
	1995 (BARCELONA) Specially Protected Areas and Biodiversity Protocol (replacing the 1982 Specially Protected Areas Protocol)	2001	Ra
	1996 (IZMIR) Hazardous Wastes Protocol	2001	Ra
	2008 (MADRID) Integrated Coastal Zone Management Protocol	2010	Ad
1979	(BERN) Convention on the Conservation of European Wildlife and Natural Habitats	1999	Ra
1979	(GENEVA) Convention on Long-range Trans-boundary Air Pollution	2005	Ac
	1984 (GENEVA) Protocol - Financing of Co-operative Programme (EMEP)	2011	Ac
	1985 (HELSINKI) Protocol - Reduction of Sulphur Emissions by 30%	2009	Ac
	1988 (SOFIA) Protocol - Control of Emissions of Nitrogen Oxides	2009	Ac
	1991 (GENEVA) Protocol - Volatile Organic Compounds		
	1994 (OSLO) Protocol - Further Reduction of Sulphur Emissions		
	1998 (AARHUS) Protocol on Heavy Metals		
	1998 (AARHUS) Protocol on Persistent Organic Pollutants		
	1999 (GOTHENBURG) Protocol to Abate Acidification, Eutrophication and Ground-level Ozone		
	2009 (GENEVA) Amendments to the Text and to Annexes I, II, III, IV, VI and VIII to the 1998 Protocol on Persistent Organic Pollutants		
	2009 (GENEVA) Amendments to Annexes I and II to the 1998 Protocol on Persistent Organic Pollutants		
	2012 (GENEVA) Amendment of the text and annexes II to IX to the Protocol to the 1979 Convention on Long-range Transboundary Air Pollution to Abate Acidification, Eutrophication and Ground-level Ozone and the addition of new annexes X and XI		
	2012 (GENEVA) Amendments to the Text of and Annexes Other than III and VII to the 1998 Protocol on Heavy Metals		

Ac = Accession; Ad = Adherence; Ap = Approval; At = Acceptance; De = Denounced; Si = Signature; Su = Succession; Ra = Ratification.



Regional and subregional agreements		Albania	
Year		Year	Status
1991	(ESPOO) Convention on Environmental Impact Assessment in a Transboundary Context	1991	Ra
	2001 (SOFIA) First Amendment	2006	At
	2003 (KIEV) Protocol on Strategic Environmental Assessment	2005	Ra
	2004 (CAVTAT) Second Amendment	2006	At
1992	(HELSINKI) Convention on the Protection and Use of Transboundary Watercourses and International Lakes	1994	Ra
	1999 (LONDON) Protocol on Water and Health	2002	Ra
	2003 (MADRID) Amendments to Articles 25 and 26	2014	Ac
1992	(HELSINKI) Convention on the Transboundary Effects of Industrial Accidents	1994	Ra
	2003 (KIEV) Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters		
1993	(OSLO and LUGANO) Convention - Civil Liability for Damage from Activities Dangerous for the Environment		
1994	(LISBON) Energy Charter Treaty	1997	Ra
	1994 (LISBON) Protocol on Energy Efficiency and Related Environmental Aspects	1997	Ra
	1998 Amendment to the Trade-Related Provisions of the Energy Charter Treaty	2006	Ra
1998	(AARHUS) Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters	2001	Ra
	2003 (KIEV) Protocol on Pollutant Release and Transfer Register	2009	Ac
	2005 (ALMATY) Amendment on GMOs		
1998	(STRASBOURG) Convention on the Protection of Environment through Criminal Law		
2000	(FLORENCE) European Landscape Convention		

Ac = Accession; Ad = Adherence; Ap = Approval; At = Acceptance; De = Denounced; Si = Signature; Su = Succession; Ra = Ratification.

*Annex III****LIST OF MAJOR ENVIRONMENT-RELATED  
LEGISLATION*****Laws****1995**

Law on Protection from Ionizing Radiation, No. 8025/1995, amended No. 9973/2008, No. 10137/2009, No. 26/2013

**1999**

Law on the Production, Transportation and Trade of Oil, Gas and their By-products, No. 8450/1999, amended No. 9218/2004, No. 9574/2006, No. 9595/2006, No. 10137/2009, No. 12/2013, No. 71/2014

**2002**

Law on Protection of the Marine Environment from Pollution and Deterioration, No. 8905/2002, amended No. 10137/2009, No. 30/2013

Law on the Tax System, No. 8977/2002, amended No. 9158/2003, No. 9285/2004, No. 9301/2004, No. 9331/2004, No. 9455/2005, No. 9736/2007, No. 9769/2007, No. 9932/2008, No. 9975/2008

**2003**

Law on Protection of Transboundary Lakes, No. 9103/2003, amended No. 35/2013

Law on Environmental Treatment of Wastewater, No. 9115/2003, amended No. 10448/2011, No. 34/2013

**2005**

Law on Forests and the Forestry Service, No. 9385/2005, amended No. 9533/2006, No. 9791/2007, No. 9989/2008, No. 10137/2009, No. 15/2012, No. 36/2013, No. 48/2016

**2006**

Law on Biodiversity Protection, No. 9587/2006, amended No. 37/2013, No. 68/2014

**2007**

Law on Evaluation and Management of Environmental Noise, No. 9774/2007, amended No. 39/2013

**2008**

Law on the Rules and Procedures of International Trade of Endangered Species of Wild Fauna and Flora, No. 9867/2008, amended No. 40/2013, No. 5/2015

Law on National Taxes, No. 9975/2008, amended No. 10065/2009, No. 10131/2009, No. 10145/2009, No. 10280/2010, No. 10458/2011, No. 83/2012, No. 120/2013, No. 178/2013, No. 86/2014, No. 157/2014, No. 141/2015, No. 127/2016

Law on the Protection of Wild Fauna, No. 10006/2008, amended No. 10137/2009, No. 41/2013

Law on the Production, Transportation and Trade of Biofuels and Other Renewable Fuels, for Transport, No. 9876/2008, amended No. 10137/2009, No. 143/2014

Law on Tax Procedures, No. 9920/2008, amended No. 10137/2009, No. 10148/2009, No. 10209/2009, No. 10261/2010, No. 10415/2011, No. 62/2012, No. 124/2012, No. 179/2013, No. 43/2014, No. 84/2014, No. 164/2014, No. 91/2015, No. 99/2015, No. 110/2016, No. 112/2016

**2009**

Law on Licences, Authorizations and Permits, No. 10081/2009, amended No. 10137/2009, No. 6/2015, No. 37/2016

Law on Public Health, No. 10138/2009, amended No. 52/2013

Law on the Protection of Medicinal Plants, No. 10120/2009, amended No. 10137/2009, No. 42/2013

**2010**

Law on Mining, No. 10304/2010, amended No. 9/2013, No. 134/2014  
Law on Health and Safety at Work, No. 10237/2010, amended No. 161/2014  
Law on Hunting, No. 10253/2010, amended No. 43/2013

**2011**

Law on Environmental Protection, No. 10431/2011, amended No. 31/2013  
Law on Environmental Impact Assessment, No. 10440/2011, amended No. 12/2015  
Law on Environmental Permits, No. 10448/2011, amended No. 44/2013, No. 60/2014  
Law on Integrated Waste Management, No. 10463/2011, amended No. 156/2013, No. 32/2013  
Law on Protection from Non-Ionizing Radiation, No. 10469/2011, amended No. 27/2013  
Law on the Use of Fertilizers for Plants, No. 10390/2011, amended No.64/2013  
Law on Plant Genetic Material, No. 10416/2011, amended No. 67/2013, No. 105/2015  
Law on Accession to the Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone, No. 10476/2011  
Law on Inspections, No. 10433/2011

**2012**

Law on Integrated Water Resources Management, No. 111/2012  
Law on the Transport of Dangerous Goods, No. 118/2012  
Law on Fisheries, No. 64/2012, amended No. 80/2017  
Law on the Pre-University Education System, No. 69/2012, amended No. 56/2012

**2013**

Law on Strategic Environmental Assessment, No. 91/2013  
Law on Concessions and Public–Private Partnership, No. 125/2013, amended No. 88/2014, No. 77/2015  
Law on Civil Service, No. 152/2013, amended No. 178/2014, No. 41/2017

**2014**

Law on the Right to Information, No. 119/2014  
Law on Public Notification and Consultation, No. 146/2014  
Law on Protection of Ambient Air Quality, No. 162/2014  
Law on the Territorial and Administrative Division of Local Government Units, No. 115/2014, amended No. 180/2014  
Law on Prohibition of Hunting, No. 7/2014  
Law on Territorial Planning and Development, No. 107/2014, amended No. 73/2015, No. 28/2017

**2015**

Law on Biocidal Products and Services in Public Health, No. 95/2015  
Law on Local Government, No. 139/2015  
Law on Energy Efficiency, No. 124/2015  
Law on Tourism, No. 93/2015  
Law on Strategic Investments, No. 55/2015  
Law on the Energy Sector, No. 43/2015  
Law on 2016 Budget, No. 147/2015

**2016**

Law on the Moratorium in Forests, No. 5/2016  
Law on the Moratorium on Hunting, No. 61/2016  
Law on Organic Production, Labelling of Organic Products and Their Control, No. 106/2016  
Law on Chemicals Management, No. 27/2016  
Law on Energy Performance of Buildings, No. 116/2016  
Law on Aquaculture, No. 103/2016  
Law on International Agreements, No. 43/2016  
Law on Safety of Material and Equipment Working under Pressure, No. 32/2016  
Law on 2017 Budget, No. 130/2016

**2017**

Law on Promotion of the Use of Energy from Renewable Sources, No. 7/2017  
Law on Protected Areas, No. 81/2017  
Law on 2018 Budget, No. 109/2017  
Law on Irrigation and Drainage Administration, No. 24/2017

**Decisions of the Council of Ministers (DCM) and other subsidiary legislation****1990**

Decree on accession to the Convention on International Civil Aviation, No. 7438/1990

**1998**

DCM No. 145 dated 26.02.1998 "On the approval of the hygiene-health regulation on control of drinking water quality, projection, building and monitoring of drinking water supply systems"

**2002**

DCM No. 435 dated 12.09.2002 "On approval of norms for emissions into the air", amended by Law No. 164/2014

**2003**

DCM No. 584 dated 28.08.2003 "On approval of the Regulation on the Council of Ministers", amended by DCM No. 4 dated 07.01.2009, DCM No. 233 dated 18.03.2015 and DCM No. 653 dated 14.09.2016  
DCM No. 248 dated 24.04.2003 "On approval of temporary air emissions norms and their implementation"

**2005**

DCM No. 177 dated 31.03.2005 "On allowed norms of liquid releases and the zoning criteria of receiving water environments"  
DCM No. 99 dated 02.18.2005 "On approval of the Albanian Catalogue for Classification of Waste", amended by DCM No. 579 dated 03.09.2014  
DCM No. 453 dated 23.06.2005 "On approval of the list of equipment using substances that deplete the ozone layer which production and import is prohibited, and procedures for re-loading of existing equipment", amended by DCM No. 290 dated 28.04.2010 and DCM No. 353 dated 29.04.2015

**2007**

Guideline No. 6 on Approval of Rules, Content and Deadlines for Drafting of Plans for Solid Waste Administration (dated 27.11.2007)  
Regulation No. 1 on Treatment of Construction and Demolition Waste from Creation and Transportation to Disposal (dated 30.03.2007)  
DCM No. 147 dated 21.03.2007 "On the quality of gasoline and diesel fuel"  
Joint Order No. 6 dated 09.10.2007 "On collection and storing the data on fuel quality"  
Joint Guidance No. 8 dated 27.11.2007 "On noise limit values in certain environments"

**2008**

DCM No. 994 dated 02.07.2008 "On public participation in environmental decision-making", amended by DCM No. 247/2014  
DCM No. 1553 dated 26.11.2008 "On the establishment of the National Designated Authority under the Clean Development Mechanism, in the framework of the Kyoto Protocol"

**2009**

DCM No. 1189 dated 18.11.2009 "On rules and procedures for drafting and implementation of the national environmental monitoring programme"  
DCM No. 1304 dated 11.12.2009 "On adopting the regulatory model of water supply and sewerage"

**2010**

DCM No. 797 dated 29.09.2010 "On adopting the hygienic-sanitary regulation for administration of bathing water quality"  
DCM No. 546 dated 07.07.2010 "On the hunting season in the Republic of Albania"

DCM No. 10 dated 07.01.2010 "On the approval of the Regulation on licensing and inspection of activities with ionizing radiation"

DCM No. 543 dated 07.07.2010 "On the approval of the Regulation on safe handling of ionizing radiation sources"

DCM No. 587 dated 07.07.2010 "On the monitoring and control of noise levels in urban and tourist centres", amended by Normative Act No. 2 dated 25.07.2012

DCM No. 686 dated 02.06.2010 "On the establishment of a national body for investigation of accidents and incidents in civil aviation"

Guideline No. 2 on Organization and Functioning of the Regional Environmental Agencies

Guideline No. 5 on Standards and Procedures Applying to Simple Environmental Permit for Activities that Create Noise Pollution

DCM No. 798 dated 29.09.2010 "On the Regulation on Hospital Waste Management"

Guideline of the Minister of Public Works and Transport No. 2 dated 11.02.2010 "On technical inspection of road vehicles" and changed to Guideline No. 2 dated 17.04.2014

Order of the Prime Minister No. 139 dated 01.07.2010 "On the implementation of the monitoring process of the sector and cross-cutting strategies"

## 2011

DCM No. 835 dated 30.11.2011 "On the approval of hygienic and sanitary regulation of swimming pools"

DCM No. 590 dated 18.08.2011 "On the approval of the Regulation on the protection of workers occupationally exposed to ionizing radiation"

DCM No. 591 dated 18.08.2011 "On the approval of the Regulation on permitted levels of radon concentration in buildings and water, guide levels of radionuclides in building materials, and permitted levels of radionuclides in food and cosmetic products", amended by DCM No. 957 dated 25.11.2015

## 2012

DCM No. 16 dated 04.01.2012 "On public access to environmental information"

DCM No. 781 dated 14.11.2012 "On the quality of certain liquid fuels for thermal, civil and industrial use, as well as for use in water transport (sea, river and lake)"

DCM No. 765 dated 07.11.2012 "On approval of rules for separation, collection and treatment of used oils"

DCM No. 178 dated 06.03.2012 "On waste incineration"

DCM No. 177 dated 06.03.2012 "On packaging and packaging waste"

DCM No. 452 dated 11.07.2012 "On landfill of waste"

DCM No. 705 dated 10.10.2012 "On waste management of end-of-life vehicles"

DCM No. 866 dated 04.12.2012 "On batteries, accumulators and their waste"

DCM No. 957 dated 19.12.2012 "On waste electrical and electronic equipment"

DCM No. 313 dated 09.05.2012 "On approval of the Regulation on protection of the public from discharges into the environment, and determination of the sampling, regions and measurement frequency"

Guideline of the Minister of Public Works and Transport No. 9 dated 03.07.2012 "On audit and inspection of road safety"

Order of the Prime Minister No. 12 dated 02.02.2012 "On preparing and drafting the National Strategy for Development and Integration (NSDI) for the period 2013–2020"

Order of the Prime Minister No. 93 dated 07.08.2012 "On preparation of national sector and cross-cutting strategies for the period 2013–2020, as well as other strategic sectoral documents for the period 2013–2020, in the framework of the preparation of the National Strategy for Development and Integration 2013–2020"

Order of the Minister of Health No. 365 dated 03.08.2012 "On approval of the list and use of substances for use as disinfectants and rodenticides in public health"

## 2013

DCM No. 117 dated 13.02.2013 "On the main criteria defining when certain types of scrap metal cease to be waste", amended by DCM No. 52 dated 05.02.2014

Order of the Minister of Environment No. 1 dated 07.01.2013 "On the minimum requirements for strategic noise mapping"

Order of the Minister of Environment No. 2 dated 07.01.2013 "On the indicators, assessment methods, rules and technical methodological requirements for noise value assessment, as well as for verification of the interventions performed for the improvement and resolution of the situation"

Order of the Minister of Environment No. 1280 dated 20.11.2013 "On approval of the Red List of wild fauna and flora"  
DCM No. 229 dated 20.03.2013 "On approval of the Regulation on protection from medical exposure to ionizing radiation"  
DCM No. 402 dated 08.05.2013 "On the designation of management measures for the sustainable exploitation of fishery resources in the sea"  
DCM No. 407 dated 08.05.2013 "On establishing a control system for ensuring compliance with the rules of the fisheries management policy", amended by DCM No. 941 dated 18.11.2015 and DCM No. 494 dated 01.07.2016  
DCM No. 302 dated 10.04.2013 "On establishing a system to prevent, deter and eliminate illegal, unreported and unregulated fishing and establishing schemes for fish catch certification"

## 2014

DCM No. 247 dated 30.04.2014 "On determination of the rules and requirements of procedures for public information and involvement of the public in environmental decision-making"  
DCM No. 865 dated 10.12.2014 "On reduction and stabilization of fluorinated greenhouse gas emissions"  
DCM No. 229 dated 23.04.2014 "On approval of the rules for non-hazardous waste transfer and other requirements for the information to be included in the transfer document"  
DCM No. 371 dated 11.06.2014 "On approval of the rules for hazardous waste consignment and the consignment notes"  
DCM No. 418 dated 25.06.2014 "On the separate collection of waste at source"  
DCM No. 608 dated 17.09.2014 "On development of necessary measures for collection and treatment of bio-waste as well as criteria and rules to reduce the amount of bio-waste going to landfill"  
DCM No. 641 dated 01.10.2014 "On approval of rules for waste export and transportation of non-hazardous waste or inert waste"  
DCM No. 177 dated 26.03.2014 "On the establishment, content, functioning, duties and responsibilities of the national commission for transboundary water administration", amended by DCM No. 223 dated 11.03.2015  
DCM No. 267 dated 07.05.2014 "On adoption of the list of priority substances in aquatic environments"  
DCM No. 246 dated 30.04.2014 "On defining the environmental quality norms for surface waters"  
DCM No. 866 dated 10.12.2014 "On approval of the list of natural habitats, flora, fauna and birds of European community interest"  
DCM No. 419 dated 25.06.2014 "On approval of special requests to review applications for environmental permits of types A, B and C, for the transfer of licences from one subject to another, the relevant conditions of environmental permits, and the detailed rules for their review by the competent authorities for the issuance of these permits by the NLC"  
DCM No. 417 dated 25.06.2014 "On the environmental permit fee"  
DCM No. 47 dated 29.01.2014 "On rules for the organization and operation of the National Environment Agency and Regional Environmental Agencies"  
Order of the Prime Minister No. 121 dated 20.03.2014 "On the re-organization of the cross-sectoral working group, Man and Biosphere"  
Order of the Prime Minister No. 155 dated 25.04.2014 "On establishment and functioning of the Interministerial Working Group on Climate Change"

## 2015

DCM No. 352 dated 29.04.2015 "On air quality assessments and requirements concerning certain pollutants"  
DCM No. 1075 dated 23.12.2015 "On measures for the control of volatile organic compound (VOC) emissions resulting from the storage of petrol and its distribution from terminals to service stations"  
DCM No. 762 dated 16.09.2015 "On approval of the Intended Nationally Determined Contribution for the United Nations Framework Convention on Climate Change"  
DCM No. 387 dated 06.05.2015 "On approval of rules to control the disposal of PCBs, decontamination or disposal of equipment containing PCBs and/or disposal of used PCBs"  
DCM No. 742 dated 09.09.2015 "On the functioning and management of the pollutant release and transfer register, the adoption of the list of activities and pollutants that are the subject of this register, and the form of the declaration for data on releases and transfers of pollutants to be completed by the operator"  
DCM No. 220 dated 11.03.2015 "On approval of the procedure and criteria for granting an ecolabel, its use and its availability, and the composition and functioning of the commission to issue ecolabels"  
DCM No. 633 dated 15.07.2015 "On approval of procedures and requirements for granting eco-management and audit schemes"

DCM No. 127 dated 11.02.2015 "On requirements for the use of sewage sludge in agriculture"

DCM No. 507 dated 10.06.2015 "On approval of the detailed list of plans or programmes with significant adverse environmental effects, to be subject to the strategic environmental assessment process"

DCM No. 219 dated 11.03.2015 "On rules and procedures for consultation with stakeholders and the public and public hearings during the strategic environmental assessment process"

DCM No. 620 dated 07.07.2015 "On approval of rules, responsibilities and detailed procedures for strategic environmental assessment in a transboundary context"

DCM No. 598 dated 01.07.2015 "On rules and procedures for environmental impact assessment in a transboundary context"

DCM No. 686 dated 29.07.2015 "On the rules, responsibilities and time frame for the environmental impact assessment procedure"

DCM No. 102 dated 04.02.2015 "On the establishment, organization and functioning of the National Agency of Protected Areas and regional administrations of protected areas", amended by DCM No. 382 dated 25.05.2016

Order of the Prime Minister No. 129 dated 21.09.2015 "On institutional and operational measures for implementation of the sectoral approach and establishment of integrated policy management groups"

Order of the Prime Minister No. 47 dated 08.04.2015 "On setting up a working group on verification and evaluation of implementation of legal obligations for environmental rehabilitation of companies that operate in the energy and mining sector"

Decision of the National Water Council No. 4 dated 12.02.2015 "On the establishment, organization and functioning of the thematic subgroups in the field of integrated water management"

DCM No. 386 dated 06.05.2015 "On the establishment and organization and structuring of the State Water Inspectorate", amended by DCM No. 659 dated 10.11.2017

DCM No. 575 dated 24.06.2015 "On requirements on management of inert waste"

DCM No. 1104 dated 28.12.2015 "On approval of the requirements for the prevention and reduction of discharges of ship-generated waste and cargo residues into the sea"

DCM No. 360 dated 29.04.2015 "On approval of the list of persistent organic pollutants and the establishment of measures for their production, import, trade and use"

## 2016

DCM No. 488 dated 29.06.2016 "On the classification, labelling and packaging of chemicals"

DCM No. 665 dated 21.09.2016 "On the import and export of hazardous chemicals"

DCM No. 487 dated 29.06.2016 "On biocidal products classification"

DCM No. 428 dated 08.06.2016 "On the establishment of a state database for digital mapping of waste landfills"

DCM No. 379 dated 25.05.2016 "On approval of the Regulation on drinking water quality"

DCM No. 342 dated 04.05.2016 "On approval of territorial and hydrographic boundaries of water basins in the Republic of Albania and composition of their councils"

DCM No. 852 dated 07.12.2016 "On the establishment, organization and functioning of the Agency for Energy Efficiency"

DCM No. 438 dated 08.06.2016 "On the criteria and rules for forest exploitation and sale of timber and other forestry and non-forestry products", amended by DCM No. 438 dated 17.05.2017

DCM No. 653 dated 09.14.2016 "On some amendments to Decision No. 584 dated 28.08.2003 of the Council of Ministers 'On approval of the Regulation on the Council of Ministers', as amended"

DCM No. 47 dated 29.03.2016 "On some amendments to the Order of the Prime Minister No. 33 dated 12.03.2015 'For approval of the structure and organigram of the Ministry of Environment'"

DCM No. 63 dated 01.27.2016 "On the reorganization of operators that provide drinking water supply, collection, removal and treatment of wastewater services"

DCM No. 484 dated 29.06.2016 "On the protection of workers from exposure to risk from asbestos"

DCM No. 489 dated 29.06.2016 "On approval of the list of substances of very high concern (SVHC), criteria for inclusion of substances in the list of SVHC and issuing of a conditional authorization in order to continue using the SVHC"

DCM No. 215 dated 16.03.2016 "On establishment of the Green Guard task force to take emergency and protective measures for prevention of damage, reduction of forest loss and rehabilitation of public and private forests"

Order of the Prime Minister No. 119 dated 22.07.2016 "On some changes and additions to the Order of the Prime Minister No. 33 dated 12.03.2015 'On the approval of the structure and organization of the Ministry of Environment', as amended"

Order of the Prime Minister No. 49 dated 29.03.2016 "On approval of the structure and organization of the State Inspectorate of Environment and Forestry"

Order of the Prime Minister No. 50 dated 29.03.2016 "On approval of the structure and organization of the National Environment Agency"

**2017**

DCM No. 659 dated 10.11.2017 "On some amendments to the DCM No. 103 dated 04.02.2015 "On the establishment and the way of organization of the State Inspectorate of Environment and Forestry", amended"

Order of the Prime Minister No. 165 dated 05.10.2017 "On the organization and functioning of the Ministry of Tourism and Environment"

Order of the Prime Minister No. 63 dated 12.05.2017 "On the National Committee on SDGs"

**Strategic documents****2000**

National Biodiversity Strategy and Action Plan (DCM No. 532 dated 05.10.2000)

**2003**

National Energy Strategy for the period 2003–2015 (DCM No. 647 dated 11.09.2003)

**2004**

National Strategy for the Development of Forests and Pastures for the period 2004–2014 (DCM No. 247 dated 23.04.2004)

National Civil Emergency Plan (DCM No. 835 dated 03.12.2004)

**2005**

National Action Plan for Pollution Reduction in Coastal Areas of the Mediterranean Sea from Land-based Sources for the period 2005–2014

**2006**

National Action Plan for Reduction and Disposal of Persistent Organic Pollutants (DCM No. 860 dated 20.12.2006)

**2007**

Environmental Cross-cutting Strategy for the period 2007–2012

Agriculture and Food Sector Strategy for the period 2007–2013 (DCM No. 924 dated 14.11.2007)

**2008**

National Strategy for Development and Integration for the period 2007–2013 (DCM No. 342 dated 12.03.2008)

Sector Strategy on Tourism for the period 2007–2013 (DCM No. 844 dated 11.06.2008)

**2009**

Strategy for Science, Technology and Innovation 2009–2015 (DCM No. 863 dated 29.07.2009)

**2011**

National Waste Management Strategy and Action Plan for the period 2010–2025 (DCM No. 175 dated 19.01.2011)

National Strategy of Water Supply and Sewerage for the period 2011–2017 (DCM No. 643 dated 14.09.2011)

Hydrochlorofluorocarbons Phase-out Management Plan 2011–2040

National Action Plan for the Management of Environmental Noise (DCM No. 123 dated 17.02.2011)

National Energy Efficiency Action Plan for the period 2011–2018 (DCM No. 619 dated 07.09.2011)

National Strategy on Road Safety 2011–2020 (DCM No. 125 dated 23.02.2011)

Mining Strategy for the period 2010–2025 (DCM No. 479 dated 29.06.2011)

Strategy for Health System Adaptation to Climate Change

**2012**

National Emergency Plan for Responding to Marine Pollution (DCM No. 480 dated 25.07.2012)



**2013**

Mati River Basin Management Plan 2013–2019  
Programme of Official Statistics for 2012–2016

**2014**

National Strategy for Air Quality (DCM No. 594 dated 10.09.2014)  
Intersectoral Strategy for Agriculture and Rural Development for the period 2014–2020 (DCM No. 709 dated 29.10.2014)  
Business and Investment Development Strategy for the period 2014–2020 (DCM No. 635 dated 1.10.2014)

**2015**

National Plan of European Integration 2015–2020 (DCM No. 74 dated 27.01.2016, amended by DCM 42 dated 25.01.2017)  
National Programme for Environmental Education in High Schools for the period 2015–2017  
National Cross-cutting Strategy on Decentralization and Local Governance for the period 2015–2020 (DCM No. 691 dated 29.07.2015)

**2016**

National Strategy for Development and Integration for the period 2015–2020 (NSDI-II)  
National Transport Strategy and Action Plan for the period 2016–2020  
National Action Plan on Renewable Energies for the period 2015–2020  
Document of Strategic Policies for Protection of Biodiversity for the period 2016–2020 (DCM No. 31 dated 20.01.2016)  
Social Housing Strategy for the period 2016–2025 (DCM No. 405 dated 01.06.2016)  
General National Territorial Plan "Albania 2030"  
Integrated Cross-sectoral Plan for the Coast  
Integrated Cross-sectoral Plan for the Economic Zone Tirana–Durrës  
Strategy for Development of Pre-University Education for the period 2014–2020 (DCM No. 11 dated 11.01.2016)  
Albania's Economic Reform Programme 2016–2018 (DCM No. 52 dated 27.01.2016)

## *Annex IV*

# **RESULTS OF THE FOR FUTURE INLAND TRANSPORT SYSTEMS (ForFITS) TOOL**

## **IV.1 Introduction**

### *Methodology*

This annex addresses projected well-to-wheel<sup>16</sup> (WTW) CO<sub>2</sub> emissions stemming from the transport sector in Albania using the For Future Inland Transport Systems (ForFITS) tool. All references to emissions in this report refer to CO<sub>2</sub> emissions only.

The current impact of the transport sector on overall CO<sub>2</sub> emissions in Albania is quantified and future emissions are projected based on a reference scenario in which no major shifts in the development of the transportation sector take place.

Data were collected from official national sources as well as local experts. In some cases, data were adjusted when the scope of data provided did not match the required input definitions or where data were not internally consistent (box IV.1).

### **Box IV.1: General explanation of differences between ForFITS results and results from other methodologies**

ForFITS is a model used to estimate current and future transport activity as well as energy use and CO<sub>2</sub> emissions from the transport sector. CO<sub>2</sub> emissions under ForFITS are calculated on a well-to-wheel (WTW) basis, i.e. emissions from vehicle operation as well as emissions from the production of the fuel used for vehicle operation and the distribution of fuel.

All results in the model are calculated using a "bottom-up" methodology through the collection and estimation of data on the number of vehicles registered in a country by mode, and their average travel, average vehicle load and average fuel consumption, among other factors. Model input data are usually based on official national sources, and local or other expert knowledge where it is necessary to fill data gaps and ensure the cohesiveness of data used as inputs. As an example, official data on vehicle stock in some countries include vehicles that are registered but are no longer in use. In these cases, official data are often adjusted downward in order to better capture the true level of activity in a country's transport sector.

Differences with baseline official data, as well as the estimation of gaps in official data, can often result in differences in top-level official data on vehicle activity, such as passenger kilometres (pkm) or ton kilometres (tkm). When comparing official data with ForFITS data, it is important to note the scope of each estimate. In some cases, ForFITS excludes vessels, aircraft and/or pipelines in transport activity calculations, due to the lack of data or because of the purpose of the analysis. Conversely, official data from some countries exclude private vehicles in pkm calculations. Additional difficulties in comparing results can arise when official data on transport activity include travel within the country by vehicles registered in other countries or exclude international transportation by vehicles registered in the country.

Lastly, as methods of estimation and scopes of estimation differ in calculations performed by different entities, discrepancies between results on energy use and CO<sub>2</sub> emissions are also to be expected between ForFITS and other sources.

### *Description of model*

ForFITS is capable of satisfying two sets of key requirements:

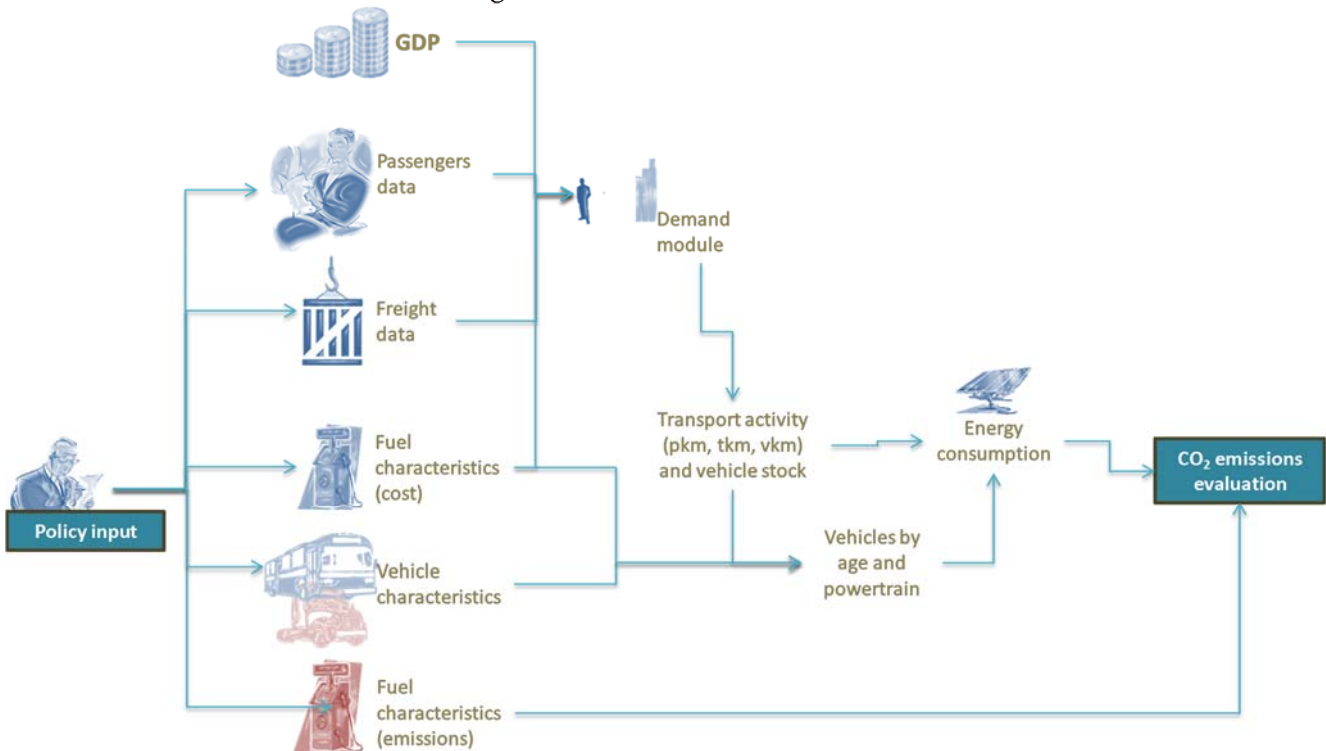
- The estimation/assessment of CO<sub>2</sub> emissions in transport;
- The evaluation of transport policies for CO<sub>2</sub> emission mitigation.

<sup>16</sup> Well-to-wheel (WTW) refers to CO<sub>2</sub> emissions from vehicle operation as well as emissions from the production and distribution of the fuel used for vehicle operation.

To achieve these targets, ForFITS evaluates transport activity (expressed in terms of passenger kilometres (pkm),<sup>17</sup> ton kilometres (tkm),<sup>18</sup> and vehicle kilometres (vkm)), related vehicle stocks, energy use and CO<sub>2</sub> emissions in a range of possible policy contexts (figure IV.1).

ForFITS covers both passenger and freight transport services on all transport modes (including aviation and maritime transport), but mainly targets inland transport (especially road, rail and inland waterways). Pipelines and non-motorized transport (walking and cycling) are also considered in the model. Each mode is further characterized in submodes (when relevant) and vehicle classes. Vehicle classes are further split to take into account different powertrain technologies and age classes. Finally, powertrains are coupled with fuel blends that are consistent with the technology requirements.

**Figure IV.1: ForFITS schematic**



ForFITS does not provide information on the evaluation of the overall effects of changes in the transport system on economic growth.

For the analysis of Albania, projections account for road vehicles, non-motorized transport, rail transport, aircraft and pipelines. Projections for vessels are excluded since no reliable data were available. Projections for freight transport by air are also excluded since airfreight is almost non-existent.

This annex provides projections of transport sector CO<sub>2</sub> emissions under a reference scenario and four additional scenarios:

- Scenario A (*reference*): Accounts for the expected evolution of socioeconomic parameters such as population and GDP. Includes default data in ForFITS on the expected evolution of fuel consumption characteristics by powertrain to reflect future improvements in vehicle technology and their associated costs. Other characteristics defining the transport system in the base year (e.g. fuel taxation schemes, road pricing, passenger/freight transport system structure, fuel characteristics, powertrain technology shares, behavioural aspects) remain unchanged in projections.
- Scenario B (*shift to public transport*): On the basis of ongoing projects intended to improve public transport services, this scenario simulates a shift from personal vehicles to public transport modes due to structural changes in the passenger transport system. This is mimicked through the ForFITS input "passenger transport system index" (detailed below in section IV.3 Alternative scenarios).

<sup>17</sup> A passenger kilometre is defined as a unit of passenger carriage equal to the transportation of one passenger one kilometre.

<sup>18</sup> A ton kilometre is defined as a unit of freight carriage equal to the transportation of one metric ton of freight one kilometre.

- Scenario C (*shift to electric vehicles*): Electric cars and electric buses are currently non-existent in the vehicle fleet. This scenario simulates that the share of electric powertrain in the fleets of passenger cars and of buses will be 8 per cent and 20 per cent respectively by 2030.
- Scenario D (*shift to freight rail*): Rail plays an insignificant role in the freight transport system, moving only 3 per cent of the total tonnage of goods transported by large-freight modes (medium-duty trucks, heavy-duty trucks, rail and pipelines). This scenario simulates an increase of up to 15 per cent of the tonnage lifted by rail at the expense of medium- and heavy-duty trucks by 2030.
- Scenario E (*combined*): A combined scenario reflects an interconnected situation in which scenarios B, C and D each come into effect.

## IV.2 Baseline status

### *Breakdown of base year ForFITS inputs*

Data were collected from official sources, from estimates based on available data and on the judgement of local transport experts.

Sources for road transport data obtained in early 2017 include the then Ministry of Transport and Infrastructure and the General Directorate of Road Transport Services. The primary sources for railway and aircraft transport data were the General Directorate of Railways and the Civil Aviation Authority, respectively. In all cases, data from these sources were adjusted or supplemented with estimations based on expert judgment.

Data were adjusted when the rate of new registrations was incongruous with vehicle stock. Transport experts in Albania estimated the average vehicle life for different transport modes and explained the seemingly high number of new vehicle registrations by the high turnover rate of previously used vehicles. Accordingly, the new registration data were adjusted to approximate the better known scrappage rate. Table IV.1 shows the breakdown of vehicle stock and historical new registration statistics used in the analysis of Albania. As input data for historical fuel consumption of newly registered vehicles were not always available or aligned with vehicle stock data, vehicle stock data were used in some cases.

The breakdown of powertrains in each vehicle type was also a required input for ForFITS and data for Albania are shown in table IV.2. Data for historical powertrain breakdowns were unavailable or unaligned with vehicle stock data. Consequently, vehicle stock data were used.

### *Baseline projections*

Socioeconomic data and data on final fuel price were also collected, as shown in table IV.3. Population projections are from INSTAT and the World Bank. Both sources project that the population will remain approximately the same until 2030.

The GDP data is taken from the World Bank. GDP projections are based on those available from the Organisation for Economic Co-operation and Development (OECD) and the World Economic Outlook published by the International Monetary Fund (IMF) and assume an annual growth of between 4 and 5 per cent through to 2030. This level of growth would lead to a more than doubling of GDP between 2014 and 2030.

Fuel price and taxation data were based on data obtained in early 2017 from the then Ministry of Finance and GIZ.

**Table IV.1: Vehicle stock and historical new registration data, 2004, 2009, 2014**

	Vehicle stock 2014				New vehicle registrations		
	Active vehicles	Avg fuel cons (lge <sup>1</sup> / 100 km)	Avg travel /veh. (km/y)	Avg load <sup>2</sup>	2014	2009	2004
<b>Non-motorized transport</b>							
Walking	2 604 289		1 460	1.0			
Cycling	56 000		2 190	1.1			
<b>Two-wheelers</b>	8 191	4.4	4 380	1.1	3 148	1 901	450
<b>Three-wheelers</b>	2 457	5.2	3 650	1.2	944	570	210
<b>Passenger LDVs<sup>3</sup></b>							
Personal	264 234	8.1	15 000	2.4	37 521	16 408	15 222
Public	11 393	12.2	50 000	4.2	1 148	1 641	1 438
<b>Buses</b>	4 349	38.8	65 000	24.7	390	435	348
<b>Passenger rail</b>	6	122.1	85 264	42.6	1	1	1
<b>Passenger air</b>	25	732.7	370 526	101.0	2	6	2
<b>Freight three-wheelers</b>	1 053	5.2	5 475	0.01	405	244	90
<b>Freight LDVs<sup>3</sup></b>	4 757	15.0	45 000	0.4	992	950	442
<b>Freight trucks</b>							
Medium-duty	31 594	24.0	54 000	3.2	3 791	3 159	2 528
Heavy-duty	14 414	32.0	75 000	10.2	1 730	1 441	1 153
<b>Freight rail</b>	13	222.0	72 715	463.3	1	1	1
<b>Pipelines<sup>4</sup></b>	17 441	0.3	80				

Source: EcoVolis, MOBALB (Mobiel 21), General Directorate of Road Transport Services, Institute of Transport, Ministry of Transport and Infrastructure, National Association of Public Transport, National Transport Plan 2015, Road Authority, General Directorate of Railways, Railway Inspection Directorate, Civil Aviation Authority, State Police, Albpetro, interviews with transport operators.

Notes: <sup>1</sup>lge = litres of gasoline equivalent. <sup>2</sup>Passengers/vehicle for passenger vehicles, ton/vehicles for freight vehicles. <sup>3</sup>LDV = light-duty vehicle. <sup>4</sup>For pipelines, each cubic metre transported is considered as a "vehicle". As a result, the figure for pipelines corresponds to the annual volume transported, expressed in cubic metres.

**Table IV.2: Powertrain shares for vehicle stock, 2014, per cent**

	Gasoline	Methane	Diesel
Passenger two-wheelers	100		
Passenger three-wheelers	99		1
Passenger LDVs			
Personal	24	1	75
Public	2		98
Buses	2		98
Passenger rail			100
Freight three-wheelers	99		1
Freight LDVs	2		98
Freight-trucks			
Medium-duty	1		99
Heavy-duty	1		99
Freight rail			100

Source: General Directorate of Road Transport Services.

Note: LDV = light-duty vehicle.

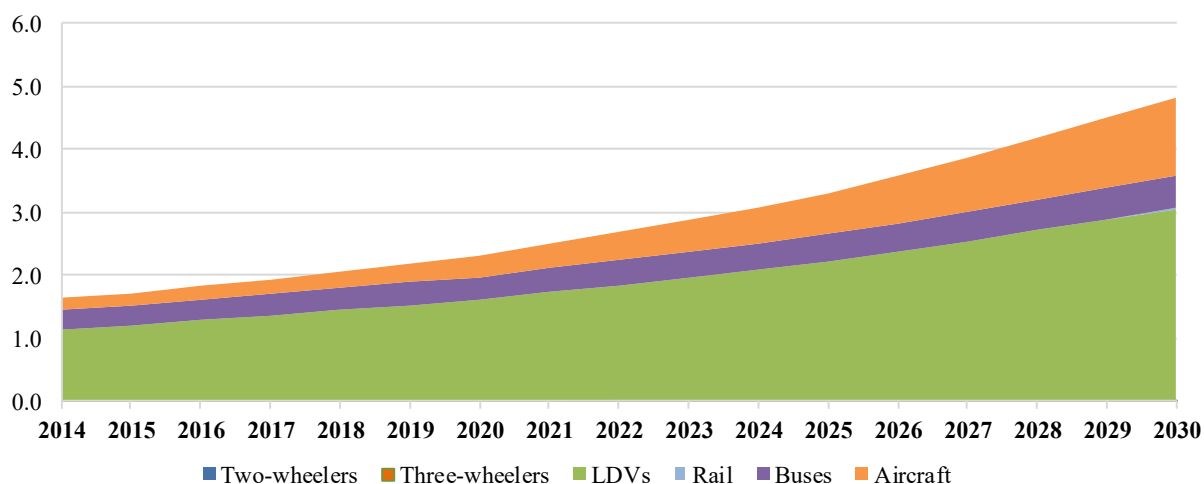
Figures IV.2 and IV.3 show the projected WTW CO<sub>2</sub> emissions from Albania's transport sector by mode within passenger and freight transport respectively. The ForFITS tool generated projections based on transport-specific inputs given in the tables IV.1 and IV.2, as well as projections of socioeconomic data as specified in table IV.3. This reference scenario also includes default data in ForFITS on the expected evolution of fuel consumption characteristics by powertrain in order to reflect future improvements in vehicle technology and their associated costs. The other characteristics defining the transport system in the base year (e.g. fuel taxation schemes, road pricing, passenger/freight transport system structure, fuel characteristics, powertrain technology shares, behavioural aspects) remain unchanged in projections.

**Table IV.3: Socioeconomic data and projections with fuel price data, selected years 2014–2030**

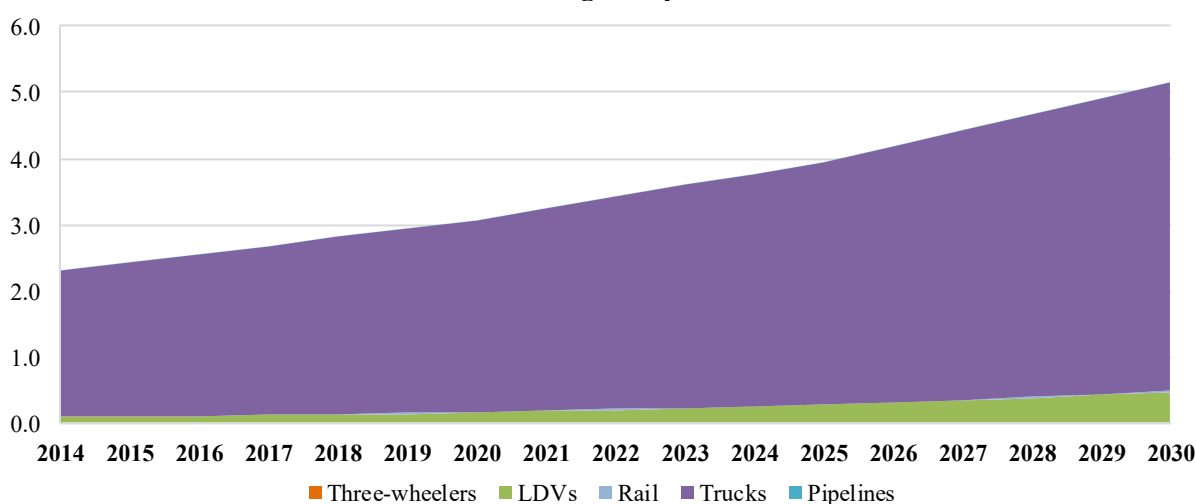
Value at base year & over time	2014	2020	2025	2030
Population (thousand)	2 894	2 928	2 953	2 948
GDP (2014, constant PPP million)	32 172	42 380	54 089	69 418
Fuel price after taxation (US\$/lge)				
Gasoline	1.76			
Methane	1.12			
Diesel	1.54			
Electricity	0.68			

Sources: GIZ, IMF, Ministry of Finance, INSTAT, OECD, World Bank, February 2017.

Note: lge = litres of gasoline equivalent.

**Figure IV.2: WTW CO<sub>2</sub> emissions by mode of passenger transport under reference scenario, 2014–2030, billion kg CO<sub>2</sub>/year**

Notes: LDV = light-duty vehicle. Two-wheelers, three-wheelers and rail represent a very small proportion of CO<sub>2</sub> emissions and are not visible in this figure.

**Figure IV.3: WTW CO<sub>2</sub> emissions by mode of freight transport under reference scenario, 2014–2030, billion kg CO<sub>2</sub>/year**

Notes: LDV = light-duty vehicle. Three-wheelers, rail and pipelines represent a very small proportion of CO<sub>2</sub> emissions and are not visible in this figure.

Albania's GDP per capita is projected to more than double (from 11,118 to 23,548 in constant 2014 purchasing power parity (PPP) units) between 2014 and 2030. The per capita GDP level over the time period analysed is lower than levels historically, coupled with a saturation of personal vehicle ownership. This explains the projected increase of passenger transport activity. The tonnage of goods transported in the freight sector is proportional to

GDP, so the expected GDP growth explains the increase in freight transport activity. In line with Albania's relatively low level of GDP per capita and the lack of alternatives to road trucks in freight transport, CO<sub>2</sub> emissions from freight transport were estimated to be 40 per cent more than emissions from passenger transport in 2013. This gap is projected to decrease to 7 per cent by 2030.

Energy use is projected to grow over time in line with projected transport activity. Fuel savings associated with the improving evolution of the powertrain technologies in terms of fuel consumption only partly offset the upward influence of growing transport activity.

The projected growth of WTW CO<sub>2</sub> emissions closely follows the trend of increased energy demand, since the emission factors remain constant. Throughout the period analysed, passenger emissions are expected to be lower than freight emissions. Projections of the shares of various modes of passenger transport in total emissions under the reference scenario show different trends: the share of LDVs remains somewhat constant (approximately 65 per cent of annual emissions), that of buses is halved (from 20 to 10 per cent of annual emissions), and that of aircraft is doubled (from 12 to 25 per cent of annual emissions). Overall, projections of passenger emissions are almost tripled compared with 2014.

Projections of shares of various modes of freight transport in emissions under the reference scenario remain somewhat constant over the period analysed, with trucks accounting for over 90 per cent of annual emissions. Overall, projections of freight WTW CO<sub>2</sub> emissions more than double between 2014 and 2030.

### IV.3 Alternative scenarios

This section is split into two different parts. The first provides explanations of the reasons and interest in each of the scenarios. This is followed by a summary of transport activity, energy use and CO<sub>2</sub> emissions projections through figures showing results under different scenarios.

#### *Scenarios*

##### Scenario B – Shift to public transport

The *shift to public transport* scenario projects future emissions assuming an evolution of the passenger transport system index towards a condition where an increased fraction of the passenger transport task is performed by public transport modes. The practical implementation of this input relies on the possibility of modifying the ForFITS passenger transport system index,<sup>19</sup> an instrument that was specifically developed to help understand the changes in the passenger transport system associated with shifts to/from personal vehicles from/to public transport.

In the *shift to public transport* scenario, the gap between the passenger transport system index value calculated in the base year and the 0.7 target value characterizing regions which trend towards high density and high use of public transport as GDP increases, is assumed to be progressively reduced by 13 per cent between the base year and 2030. The evolution of the passenger transport system index between the base year and 2030 is assumed to be linear, for the sake of simplicity. In practice, this assumption represents the implementation of a wide number of policies favouring public transport over personal vehicles, such as parking and access restrictions for personal vehicles, land use policies that encourage the vertical development of the city and mixed-use areas, and support for the provision of appealing, widely available and high-quality public transport services.

In Albania, the passenger transport characteristic index at the base year is 0.23. This highlights the low use of public transport compared with other countries at similar levels of economic development and reflects that there is some room for improvement through policy interventions aimed at creating conditions in which a public transport system could thrive.

<sup>19</sup> This index ranges from 0 (indicating that the share of personal vehicles in pkm tends towards 100 per cent when GDP increases) to 1 (indicating that the share of personal vehicles in pkm is 0 per cent). Between these extreme values, the index measures differences in modal choice independent of differences in GDP per capita, cost of driving and behavioural aspects. Index values represent the share of personal vehicles in pkm relative to countries or regions with similar socioeconomic characteristics. Changes in modal shares over time for a country or region with a constant index value (the default option) are attributed to changes in GDP per capita, cost of driving and behavioural aspects.

For this scenario, the gap between Albania's current passenger transport characteristic index and the 0.7 target is reduced by 13 per cent between 2014 and 2030 (from 0.23 to 0.29). It should also be noted that moving towards a higher passenger transport characteristic index does not affect freight transport.

#### Scenario C – Shift to electric vehicles

All powertrain technologies in Albania's vehicle fleet are conventional internal combustion engines, run by either diesel or gasoline, which are less energy efficient than electric motors. Additionally, electricity is a clean energy source in Albania since electricity is mainly generated by means of hydropower and, thus, the emission factor (well to tank) accounting for upstream emissions for electric vehicles is very low. This scenario assumes that new vehicle registrations of electric passenger cars and electric buses will increase linearly in such a way that the share of electric powertrain in the fleets of passenger cars and of buses will be 8 per cent and 20 per cent respectively by 2030.

#### Scenario D – Shift to freight rail

Road trucks dominate the freight transport sector in Albania, transporting almost 100 per cent of all freight goods. Road trucks are less energy efficient than other transport modes that have greater carrying capacities. This scenario simulates a shift from medium- and heavy-duty trucks to rail in such a way that the share of tonnage lifted by rail in the total of tonnage lifted by large-freight modes (medium-duty trucks, heavy-duty trucks, rail and pipelines) will increase linearly from 3 per cent to 15 per cent. The scenario assumes that the new trains in the fleet will be powered by diesel, as are trains in the fleet today, but they will be more energy efficient according to the technology improvements included by default in the model.

#### Scenario E – Combined

The *combined* scenario simulates the cumulative effect of the *shift to public transport* scenario, the *shift to electric vehicles* scenario and the *shift to freight rail* scenario. This scenario shows the result of implementing these policies concurrently.

#### *Scenario results*

Figures IV.4 to IV.7 show the evolution of passenger activity (pkm), energy use (toe) for passenger transport and total kg of CO<sub>2</sub> emissions (WTW) for Albania under the four scenarios described. All scenarios use the reference scenario as a starting point for evaluating policy changes.

Table IV.4 shows the values of the main outputs in the reference scenario for Albania, at the first and last year of the projections, as well as the projections for 2030 for the four additional scenarios described above.

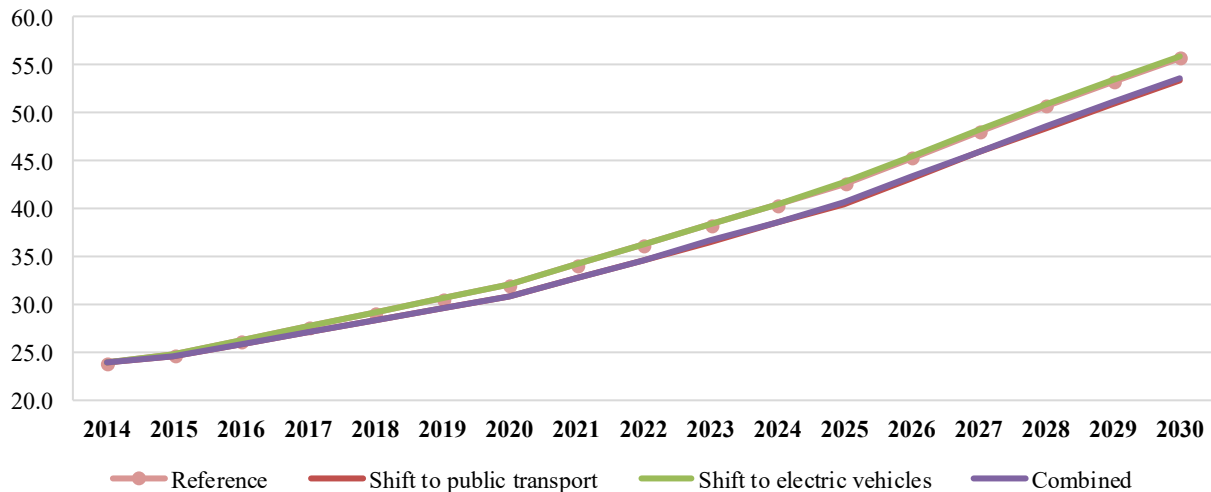
**Table IV.4: Main outputs: reference and alternative scenarios**

		2014	2030				
Unit			Ref	Shift to public transport	Shift to electric vehicles	Shift to freight rail	Combined
Total pkm	billion pkm	23.83	55.71	53.40	55.95	55.71	53.63
Total tkm	billion tkm	17.01	36.91	36.91	36.91	36.73	36.73
Total energy use	million toe	1.09	2.74	2.64	2.67	2.58	2.41
Total WTW CO <sub>2</sub> emissions	billion kg CO <sub>2</sub>	3.97	9.96	9.59	9.55	9.37	8.62
Total WTW CO <sub>2</sub> emissions per capita	kg CO <sub>2</sub> /person	1 370.2	3 378.2	3 253.7	3 238.8	3 179.4	2 923.0
Total WTW CO <sub>2</sub> emissions intensity	kg CO <sub>2</sub> /GDP *1 000	123.2	143.5	138.2	137.5	135.0	124.1

Note: GDP is measured in purchasing power parity (PPP) units at 2014 prices.

Figure IV.4 compares the passenger transport activity (measured by pkm) projected under the *shift to public transport*, *shift to electric vehicles* and *combined* scenarios with the reference scenario. The *shift to freight rail* scenario is not shown in figure IV.4 since this scenario has no impact on passenger transport.



**Figure IV.4: Projected passenger kilometers under various scenarios, 2014–2030, billion pkm**

Under the *shift to public transport* scenario, pkm is projected to slightly decrease in comparison with the reference scenario (to be approximately 4 per cent lower by 2030). This projected decrease in passenger travel is related to the assumption of movement towards conditions that are conducive to successful public transport systems, such as increased population density through urbanization. As the population is more centralized in 2030 under this scenario, the average distance travelled by residents is projected to decrease.

Passenger transport activity remains approximately the same under the *shift to electric vehicles* scenario and under the reference scenario. The slight increase (less than 1 per cent) is caused by changes in the cost of driving; electric vehicles tend to travel distances slightly above the fleet average, since the cost of driving is cheaper as electric motors are more energy efficient than internal combustion engines and the price of electricity is lower than that of fossil fuels.

The *combined* scenario is almost equivalent to the *shift to public transport* scenario and projects a total decrease of 4 per cent by 2030 in comparison with the reference scenario.

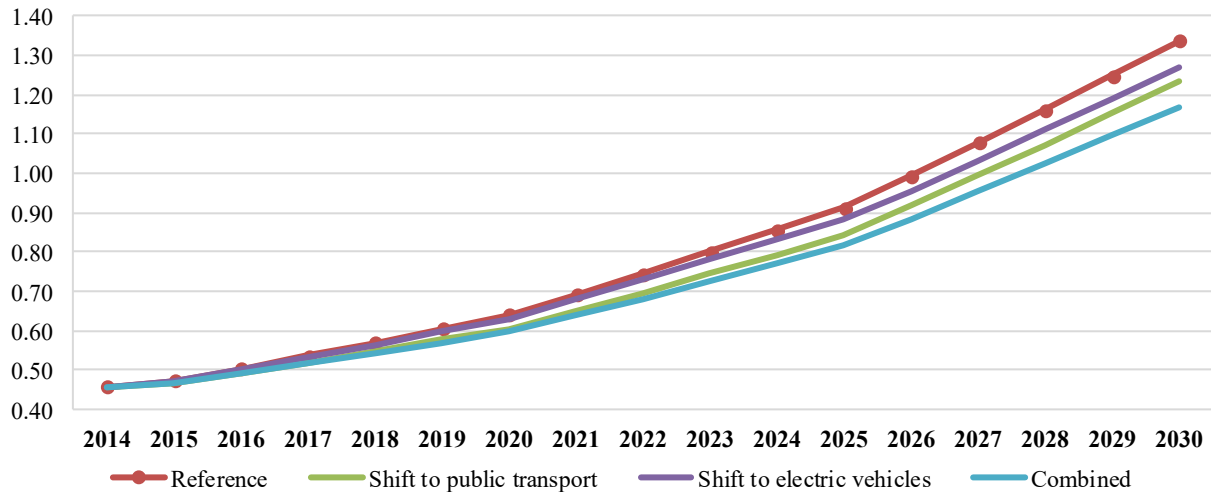
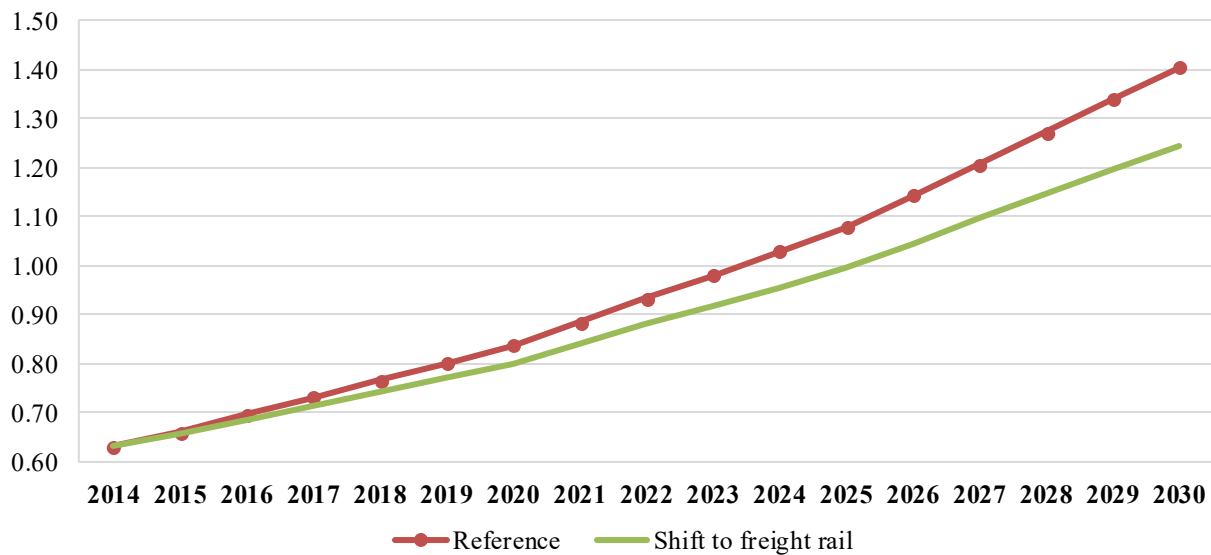
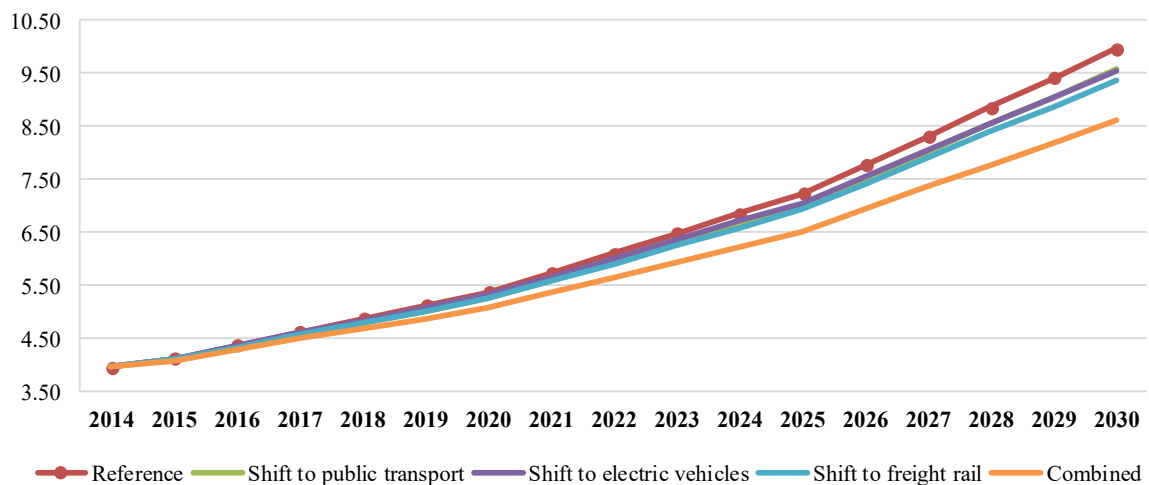
Projections of freight transport activity (measured by tkm) remain almost the same under all scenarios. The *shift to public transport* and *shift to electric vehicles* scenarios have no impact on freight transport. The *shift to freight rail* scenario does not consist of changing total tkm, but of changing how total tkm is distributed across different freight transport modes.

Figure IV.5 compares the passenger transport energy use projected under the *shift to public transport*, *shift to electric vehicles* and *combined* scenarios with the reference scenario. The *shift to freight rail* scenario is not shown in figure IV.5 since this scenario has no impact on passenger transport.

The passenger transport energy use in the reference scenario is reduced by 8 per cent by 2030 under the *shift to public transport* scenario, partly because of the reduction in passenger transport activity explained earlier (approximately 4 per cent lower by 2030) and partly because public transport modes are more energy efficient than personal transport modes. The *shift to electric vehicles* scenario achieves a reduction of 5 per cent by 2030, since internal combustion engines are replaced by more energy-efficient electric motors. The *combined* scenario projects a total decrease of approximately 13 per cent by 2030 in comparison with the reference scenario.

Figure IV.6 compares the freight transport energy use under the reference and *shift to freight rail* scenarios. The *shift to public transport* and *shift to electric vehicles* scenarios are not shown in figure IV.6 since they have no impact on freight transport. The *shift to freight rail* scenario projects a total decrease of approximately 12 per cent by 2030 in comparison with the reference scenario, since trains are more energy efficient than road trucks.

Figure IV.7 shows the total projected WTW CO<sub>2</sub> emissions from transport activity for each scenario.

**Figure IV.5: Projected passenger transport energy use under various scenarios, 2014–2030, million toe****Figure IV.6: Projected freight transport energy use under various scenarios, 2014–2030, million toe****Figure IV.7: Projected well-to-wheel CO<sub>2</sub> emissions for transport under various scenarios, 2014–2030, billion kg**

Under the *shift to public transport* scenario, the decrease in WTW CO<sub>2</sub> emissions in 2030 compared with the reference scenario is approximately 4 per cent. The impact of this scenario on energy use and WTW CO<sub>2</sub> by 2030 is the same (8 per cent decrease in passenger transport only and 4 per cent decrease in the whole transport sector, since passenger and freight transport are weighted similarly by 2030).

Under the *shift to electric vehicles* scenario, the decrease in WTW CO<sub>2</sub> emissions in 2030 compared with the reference scenario is approximately 4 per cent. As described earlier, this scenario reduces approximately 5 per cent of the passenger transport energy use by 2030, equivalent to a 2.5 decrease in total transport energy use. The impact of this scenario on energy use and WTW CO<sub>2</sub> emissions is not the same, but is greater on WTW CO<sub>2</sub> emissions. The reason for this is that this is the only scenario in which the fuel characteristics are changed; electricity replaces gasoline and diesel as fuel for some of the vehicles. The emission factor for electricity is much lower than that for gasoline and diesel, not only because the tailpipe/tank-to-wheel emissions are zero, but also because the well-to-tank emission factor accounting for the upstream emissions is very low in Albania, since electricity is mainly generated by hydropower energy.

Under the *shift to freight rail* scenario, the decrease in WTW CO<sub>2</sub> emissions in 2030 compared with the reference scenario is approximately 6 per cent. The impact of this scenario on energy use and WTW CO<sub>2</sub> by 2030 is the same (12 per cent decrease in freight transport only and 6 per cent decrease in the whole transport sector, since passenger and freight transport are weighted similarly by 2030).

Overall, the *combined* scenario projects a decrease of approximately 14 per cent by 2030 in total WTW CO<sub>2</sub> emissions for the transport sector in Albania in comparison with the reference scenario. This is the result of adding up the reductions achieved in each of the previous scenarios, since the simulated scenarios are not interconnected.

#### IV.4 Conclusion

The estimated WTW CO<sub>2</sub> emissions in 2014 from the transport sector in Albania show that emissions from freight vehicles were approximately 40 per cent more than those from passenger vehicles (2.3 billion kg vs 1.7 billion kg). Projections of CO<sub>2</sub> emissions from the transport sector in Albania show an overall increase of approximately 150 per cent by 2030, with a similar contribution by freight and passenger vehicles to total CO<sub>2</sub> emissions (5.1 billion kg and 4.8 billion kg). The increase in each sector shows the large impact of expected economic growth on CO<sub>2</sub> emissions.

While projections of future CO<sub>2</sub> emissions under the four alternative scenarios show this same increasing trend, several scenarios demonstrate opportunities to decrease future transport CO<sub>2</sub> emissions relative to the reference scenario.

The *shift to public transport* scenario results in an 8 per cent decrease in passenger transport energy use and a 4 per cent decrease in total WTW CO<sub>2</sub> emissions in 2030 compared with the reference scenario. This decrease is attributed to two factors: first, a decrease in total passenger transport activity associated with land use policies for denser cities and mixed-use areas; second, a shift in passenger transport activity towards more energy-efficient transport modes associated with policies favouring public transport over personal vehicles.

In comparison with the reference scenario, the *shift to electric vehicles* scenario reduces passenger transport energy use and total WTW CO<sub>2</sub> emissions by 5 and 4 per cent respectively in 2030. Not only are electric motors more energy efficient than internal combustion engines, but electricity is also a much cleaner energy source than diesel and gasoline fuels in Albania, since electricity generation relies almost entirely on hydropower.

Lastly, the *shift to freight rail* scenario projects a reduction in freight transport energy use and total WTW CO<sub>2</sub> emissions by 12 and 6 per cent respectively in 2030 compared with the reference scenario. The current freight transport sector in Albania is dominated by road trucks; this scenario shows the impact of shifting some freight transport activity to more energy-efficient modes such as rail.

These results together show the effect of steps that can be taken by Albania to limit emissions from the transport sector. Albania faces challenges in that its expected future economic growth would typically correspond with an increase in CO<sub>2</sub> emissions. However, improvements in the efficiency of its transport sector could help mitigate these issues.

The results provided in this annex demonstrate the potential impact of increasing the share of public transport in passenger transport activity, increasing the share of electric vehicles in the fleet and reducing the share of road trucks in freight transport activity. Projections generated by ForFITS based on these scenarios show that pursuing such policies can temper the current trend of increasingly high WTW CO<sub>2</sub> emissions stemming from Albania's transport sector. With the aim of mitigating the impact of future CO<sub>2</sub> emissions from its transport sector, Albania may wish to further investigate the relative cost of implementing the following measures:

- (a) Developing conditions and policies so that cities are more favourable for the use of public transport and less favourable for the use of personal vehicles;
- (b) Developing policies, such as fiscal instruments, to facilitate the deployment of electric vehicles in the fleet;
- (c) Developing alternatives to road trucks in the freight transport sector, such as the development of freight rail.



**Selected authors:**

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# Albania Environmental Performance Reviews

The United Nations Economic Commission for Europe Environmental Performance Review Programme assesses progress made by individual countries in reconciling their economic and social development with environmental protection, as well as in meeting international commitments on environment and sustainable development.

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