UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

# Albania

## Environmental Performance Reviews

## Second Review

UNITED NATIONS

ECE/CEP/167

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

# ENVIRONMENTAL PERFORMANCE REVIEWS

# ALBANIA

## Second Review

UNITED NATIONS
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# *Foreword*

In 1993, Environmental Performance Reviews (EPRs) of the United Nations Economic Commission for Europe (UNECE) were initiated at the second Environment for Europe Ministerial Conference, in Lucerne, Switzerland. They were intended to cover the UNECE States that are not members of the Organisation for Economic Co-operation and Development (OECD). Subsequently, the UNECE Committee on Environmental Policy decided to make them part of its regular programme.

At the fifth Environment for Europe Ministerial Conference (Kiev, 2003), the Ministers affirmed their support for the EPR Programme, and decided that the Programme should continue with a second cycle of reviews. This second cycle, while assessing the progress made since the first review process, puts particular emphasis on implementation, integration, financing and the socio-economic interface with the environment.

Through the peer review process, EPRs promote dialogue among UNECE member States and the harmonization of environmental conditions and policies throughout the region. As a voluntary exercise, an EPR is undertaken only at the request of the country concerned.

The studies are carried out by international teams of experts from the region working closely with national experts from the reviewed country. The teams also benefit from close cooperation with other organizations in the United Nations system, for instance the United Nations Environment Programme (UNEP) and the World Health Organization (WHO), and other organizations.

This is the second EPR of Albania published by UNECE. The review takes stock of progress made by the country in the management of its environment since the country was first reviewed in 2002. It assesses the implementation of the recommendations in the first review (annex I). This second EPR also covers 10 issues of importance to the country related to policymaking, planning and implementation, the financing of environmental policies and projects, and the integration of environmental concerns into sectoral policies.

I hope that this second EPR will be useful in supporting policymakers and representatives of civil society in their efforts to improve environmental management and to further promote sustainable development in Albania, and that the lessons learned from the peer review process will also benefit other countries of the ECE region.

Sven Alkalaj
Executive Secretary
Economic Commission for Europe

# *Preface*

The second EPR of Albania began in June 2011 with a preparatory mission. During this mission, the final structure of the report was discussed and established. A review mission took place on 4-10 October 2011. The team of international experts taking part included experts from Bulgaria, Germany, Hungary, Poland, the Republic of Moldova and Slovakia as well as from the European Environment Agency (EEA) and the ECE secretariat.

The draft EPR report was submitted to Albania for comments and to the Expert Group on Environmental Performance Reviews for consideration in March 2012. During its meeting on 3-4 April 2012, the Expert Group discussed the report in detail with representatives of the Government of Albania, focusing, in particular, on the conclusions and recommendations made by the international experts.

The EPR recommendations, with amendments from the Expert Group, were then submitted for peer review to the eighteenth session of the UNECE Committee on Environmental Policy on 18 April 2012. A delegation from Albania participated in the peer review. The Committee adopted the recommendations as set out in this report.

The Committee on Environmental Policy and the UNECE review team would like to thank the Government of Albania and its experts who worked with the international experts and contributed their knowledge and assistance. UNECE wishes the Government of Albania further success in carrying out the tasks involved in meeting its environmental objectives, including the implementation of the recommendations in this second review.

UNECE would also like to express its appreciation to the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and to the German Federal Environment Agency for their support of the EPR Programme through the Advisory Assistance Programme for Environmental Protection in the Countries of Central and Eastern Europe, the Caucasus and Central Asia; and Germany, UNEP and the EEA for having delegated their experts for the review; and UNDP for their support of the EPR Programme and this review.

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# LIST OF ABBREVIATIONS

| | |
|---|---|
| AIC | Aarhus Information Centre |
| ASCI | area of special conservation interest |
| CANP | Centre of Applied Nuclear Physics |
| CARDS | Community Assistance for Reconstruction, Development and Stabilisation |
| CBD | United Nations Convention on Biological Diversity |
| CDM | Clean Development Mechanism |
| CEEC | Central and East European countries |
| CEMSA | Consolidation of the Environmental Monitoring System in Albania |
| CITES | Convention on International Trade in Endangered Species of Wild Fauna and Flora |
| CLRTAP | Convention on Long-range Transboundary Air Pollution |
| CPR | Commission for Protection from Radiation |
| DCM | Decision of the Council of Ministers |
| DFP | Directorate of Forests and Pastures |
| DFSD | District Forestry Services Directorate |
| DNA | Designated National Authority |
| DPSIR | Driving force–Pressure–State–Impact–Response |
| DSDC | Department of Strategy and Donor Coordination |
| EC | European Commission |
| ECS | Environmental Cross-cutting Strategy |
| EEA | European Environment Agency |
| EFA | Environment and Forest Agency |
| EI | Environmental Inspectorate |
| EIA | environmental impact assessment |
| EIMS | environmental information management system |
| EIONET | European Environment Information and Observation Network |
| ENVSEC | Environment and Security Initiative |
| ERE | Energy Regulatory Entity |
| ESD | Education for Sustainable Development |
| EU | European Union |
| FDI | foreign direct investment |
| GDEP | General Directorate of Environmental Policies |
| GDWA | General Directorate of Water Administration |
| GEF | Global Environmental Facility |
| GIS | Geographic Information System |
| GSA | Geological Survey of Albania |
| HCFC | hydrofluorocarbon |
| HPP | hydroelectric power plant |
| IEMS | integrated environmental monitoring system |
| IMF | International Monetary Fund |
| IPA | Instrument for Pre-Accession |
| IPA | important plant area |
| IPH | Institute of Public Health |
| IPPC | Integrated Pollution Prevention and Control |
| ISRDS | Intersectoral Rural Development Strategy |
| ISTAT | Institute of Statistics |
| IUCN | International Union for Conservation of Nature |
| LGU | local government unit |
| MDG | Millennium Development Goal(s) |
| MEA | multilateral environmental agreement |
| MoAFCP | Ministry of Agriculture, Food and Consumer Protection |
| MoEFWA | Ministry of Environment, Forests and Water Administration |
| MoES | Ministry of Education and Science |
| MoETE | Ministry of Economy, Trade and Energy |
| MoFA | Ministry of Foreign Affairs |
| MoH | Ministry of Health |

| | |
|---|---|
| MoI | Ministry of Interior |
| MoLSAEA | Ministry of Labor, Social Affairs and Equal Opportunities |
| MoPWTT | Ministry of Public Works, Transportation and Telecommunications |
| MSW | municipal solid waste |
| NBSAP | National Biodiversity Strategy and Action Plan |
| NES | National Environmental Strategy |
| NGO | non-governmental organization |
| NLC | National Licensing Centre |
| NRC | national reference centre |
| NRL | national reference laboratory |
| NSDI | National Strategy for Development and Integration |
| NSWSS | National Strategy of Water Supply and Sewerage Services Sector |
| NTFP | non-timber forest products |
| NWC | National Water Council |
| ODA | Official Development Assistance |
| ODS | ozone-depleting substance |
| OSCE | Organization for Security and Cooperation in Europe |
| PEBLDS | Pan-European Biological and Landscape Diversity Strategy |
| PEEN | Pan-European Ecological Network |
| PHARE | Poland and Hungary Assistance for the Restructuring of the Economy |
| POP | persistent organic pollutant |
| PoWPA | Programme of Work on Protected Areas |
| PRTR | Pollution Release and Transfer Register |
| RBMP | river basin management plan |
| REA | regional environment agency |
| REACH | Registration, Evaluation, Authorization and Restriction of Chemicals |
| REC | Regional Environmental Center for Central and Eastern Europe |
| RENA | Regional Environmental Network for Accession |
| REReP | Regional Environmental Reconstruction Programme for South-East Europe |
| RPC | Radiation Protection Commission |
| SAA | Stabilization and Association Agreement |
| SAC | special area of conservation |
| SEA | strategic environmental assessment |
| SEE | South-East Europe |
| SEIS | shared environmental information system |
| SER | State of Environment Report |
| SPA | strictly protected area |
| SSAF | Sector Strategy of Agriculture and Food |
| StEMA | Strengthening of the Environmental Monitoring System in Albania |
| TAIEX | Technical Assistance and Information Exchange Instrument |
| TPP | thermal power plant |
| UNCCD | United Nations Convention to Combat Desertification |
| UNFCCC | United Nations Framework Convention on Climate Change |
| UNIDO | United Nations Industrial Development Organization |
| WMC | watershed management council |

## SIGNS AND MEASURES

| | |
|---|---|
| .. | not available |
| - | nil or negligible |
| . | decimal point |
| °C | degree Celcius |
| $ | dollar |
| Ci | Curie |
| GWh | gigawatt-hour |
| ha | hectare |
| kg | kilogram |
| kJ | kilojoule |
| km | kilometre |
| $km^2$ | square kilometre |
| $km^3$ | cubic kilometre |
| kgoe | kilogram of oil equivalent |
| ktoe | kiloton of oil equivalent |
| kV | kilovolt |
| kW | kilowatt |
| kWh | kilowatt-hour |
| l | litre |
| m | metre |
| $m^2$ | square metre |
| $m^3$ | cubic metre |
| MW | megawatt |
| PJ | petajoule |
| ppm | parts per million |
| s | second |
| t | ton |
| TJ | Terajoule |
| toe | ton of oil equivalent |
| tofe | ton of fuel equivalent |
| TWh | terawatt-hour |

## CURRENCY CONVERSION TABLE

### Albania
### Exchange rates:
### Monetary unit: lek

| Year | lek / US$ | lek /EUR |
|---|---|---|
| **2000** | 143.71 | 132.73 |
| **2001** | 143.49 | 128.50 |
| **2002** | 140.16 | 132.53 |
| **2003** | 121.86 | 137.85 |
| **2004** | 102.78 | 127.85 |
| **2005** | 99.87 | 124.25 |
| **2006** | 98.10 | 123.18 |
| **2007** | 90.43 | 123.92 |
| **2008** | 83.89 | 123.39 |
| **2009** | 94.98 | 132.47 |
| **2010** | 103.94 | 137.79 |
| **2011** | 104.00 | 138.77 |
| **2012*** | 110.56 | 138.69 |

*Source:* UNECE common database and Bank of Albania at http://www.bankofalbania.org/web/Welcome_to_Bank_of_Albania_webpage_5186_2.php (accessed on 12.6.2012)
*Note:* *National Bank's echange rates on 13.6.2012

# Executive summary

***The first Environmental Performance Review (EPR) of Albania was carried out in 2002. This second review intends to measure the progress made by Albania in managing its environment since the first EPR and in addressing upcoming environmental challenges.***

## Introduction

***Since 2000 the Albanian economy has improved substantially.*** Reforms in infrastructure development, tax collection, property law and business administration have worked well. The average growth of Gross Domestic Product (GDP) between 2003 and 2010 was 4.8 per cent. Albania was in 2010 the only country in the region to see a net increase in foreign direct investment (FDI), with total foreign investment surpassing US$ 1 billion.

***The per capita income measured by Purchasing Power Parity (PPP) has more than doubled from US$ 4,545 in 2003 to US$ 9,102 in 2010.*** This development has diminished poverty levels markedly. The proportion of people living below the poverty line dropped from 25.4 per cent in 2002 to 12.4 per cent in 2008. However, Albania still remains a poor country by Western European standards. Its GDP per capita (PPP) stood at 27.7 per cent of the European Union (EU) average in 2010.

## Policymaking framework for environmental protection and sustainable development

***In recent years, the process of drafting national environmental legislation and policies has been based on requirements defined by the approximation to the EU legislation and to EU environmental policies.*** Albania has considered this to be an important task, although the existing conditions and capacity within the country are not always adequate to adapt the new requirements. The present challenge is thus for the approximation to be feasible and rapid enough, taking into account the capacity of the country.

***A number of initiatives have been taken in the area of strategic environmental policymaking.*** The 2006 National Environmental Strategy (NES) sets objectives in order to solve the existing environmental problems. The 2007 Environmental Cross-cutting Strategy (ECS) provides general guidance on solving problems arising from sectors having an influence on the environment.

***Since the first EPR, the structure of the Government has changed, strengthening overall the national environmental authority, which is now the Ministry of Environment, Forests and Water Administration (MoEFWA), and reallocating responsibilities for environmental issues.*** Specifically, the 2002 Law on Environmental Protection defined the Institutional Network Serving the Environment, consisting of the following institutions and bodies: MoEFWA, the Environment and Forest Agency (EFA) with regional environment agencies (REAs), the Environmental Inspectorate (EI), environmental institutions at central and local levels, and inter-ministerial bodies.

***Albania has received support from international organizations and donor countries for its legislative and planning activities.*** However, monitoring progress, evaluation of data and indicators, and assessment of policy efficiency need to be strengthened as these steps are required for decisions on new timing and allocation of financial resources. This challenge necessitates an improved institutional background and the improved operation of responsible institutions.

## Compliance and enforcement mechanisms

***Although environmental monitoring and inspection are stipulated in the environmental legislation, there are problems in their practical implementation.*** Implementation and enforcement levels are low due to inappropriate and weak legislation, fragmented responsibilities, a lack of human and financial resources, and lack of awareness in government, business and society in general.

***Inter-institutional and vertical coordination for inspection is lacking or remains at a poor level.*** Albania lacks administrative capacity, in particular well-trained staff and appropriate technical equipment.

***Even though the scope of inspected activities is increasing and the work of the enforcement authorities has improved, the environmental inspection system is only partly aligned with international good practices.*** Many installations still operate without environmental permits or do not exercise their activity in compliance with the requirements.

***The environmental permitting legislation is complex.*** On the one hand, the technical aspects of the permit such as air protection, waste management, wastewater treatment and biodiversity protection are regulated in separate legislative acts. On the other hand, most permits need to integrate relevant legislative requirements and thresholds. These conditions make it necessary that competent and careful screening be conducted by adequately qualified and trained staff.

***Actual environmental permitting is based on the country's only assessment system, the environmental impact assessment (EIA).*** However, the final EIA document does not contain all necessary conditions and is in practice not fulfilling its purpose, i.e. full environmental protection. A gap is also evident in the absence of public access to EIA documentation and public hearings for all EIA procedures. Strategic Environmental Assessment (SEA), and Integrated Pollution Prevention and Control (IPPC) exist in the law, but flaws in the national legislation hinder their implementation. No environmental audits exist in the country, and neither does relevant legislation on the subject.

***Environmental quality standards are not clearly defined and major pollutants are not identified.*** Air quality standards are under preparation but not yet operational, and emissions from vehicles and the quality of fuel are not a priority. The process of elaboration and adoption of water standards is ongoing, and there are draft decisions on urban wastewater treatment, on priority substances in water and for water quality standards.

**Monitoring, information, public participation and education**

***The engagement of Albania in many EU and international activities implies a substantial increase in reporting obligations, including those related to monitoring.*** However, environmental monitoring activities have not demonstrated great improvement in recent years in spite of a number of dedicated assistance projects, supply of modern equipment and specialized capacity-building for national experts.

***The development of environmental indicators is progressing, especially within various international frameworks such as cooperation with the European Environment Agency (EEA) and under the UNECE Joint Task Force on Environmental Indicators.*** However, the regular updating and use of such indicators for national needs, or further development of indicators to serve national policy needs, are still in the early stages.

***The current monitoring process is fragmented and the related data flows are unstable because monitoring activities are carried out by governmental bodies and institutions on the basis of annual contracts.*** The situation is even more critical at the local level where monitoring capacities are scarce and where there are signs of institutional tensions. Nevertheless, an integrated environmental monitoring system (IEMS) is gradually being developed.

***Some progress has been made in establishing a shared environmental information system (SEIS).*** This is due to long-lasting cooperation with EEA, the standardization of data reporting procedures, capacity-building and involvement in the development of the European Environment Information and Observation Network (EIONET) encompassing several national reference centres.

***Although annually prepared, the national State of Environment Report (SER) presents a rather traditional structure and approach.*** The SER is mainly a description of the current situation rather than an analysis of the entire Driving force–Pressure–State–Impact–Response (DPSIR) chain. Consequently, the SER has limited relevance and input to the policymaking process.

***Progress was registered in engaging the public in environmental issues at both national and local levels, in particular through consultations on draft legislation.*** However, the involvement of NGOs and of the public at large during the practical implementation of legislation remains weak. That is why improving public participation in the decision-making process will continue to be a key challenge and priority in the coming period.

***The entire education system is subject to massive reform.*** Manuals and teaching materials for both students and teachers have been produced covering topics such as water, air and soil. As first steps toward transposing the UNECE Strategy on Education for Sustainable Development (ESD) into the national context, Albania designated a National Focal Point for implementation of ESD and adopted the National Strategy and Action Plan for ESD. An inter-agency coordination mechanism for ESD was established. In contrast, adult environmental education remains practically non-existent.

## Implementation of international agreements and commitments

***Since the first EPR in 2002, the Government has integrated several multilateral environmental agreements (MEAs) into the national legal framework.*** Lately, the process of international environmental integration has strongly resonated with the political objective of European integration and, ultimately, EU membership. Furthermore, the Government put efforts into improving domestic institutions and extending its interaction with bilateral and multilateral partners. All this has resulted in a policy and legal framework that is broadly based on MEA requirements and international practice.

***The process of international cooperation on the environment and implementation of MEAs is nuanced.*** It is characterized by institutional fragmentation. Mechanisms to oversee the implementation of international commitments are often limited. An Inter-ministerial Environment Committee was recently established by MoEFWA, at the level of deputy ministers, in an attempt to introduce a coordination platform to address environmental concerns in other sectors. However, several such platforms previously created under the auspices of the environmental authority did not last. To achieve better cooperation, authorities thus require substantial training, and guidance.

***There is a tendency to concentrate efforts on adopting new MEAs while implementation is still falling behind.*** No compliance assessment has ever been done for an MEA. Consequently, MoEFWA has only a very general understanding of where it stands with the implementation of international commitments. It remains questionable whether the intensive process of joining new MEAs and transposing them into the national legislation corresponds to the national capacity to implement them, the Regulatory Impact Assessment (RIA) of new legal requirements being limited to an assessment of the budgetary burden on the Government.

***Since the first EPR, the national environmental authority has undergone several reorganizations that have generally increased its capacity.*** However, during this process, several MEAs' focal points were changed and their tasks reallocated to new people. Sometimes this resulted in a decrease in the capacity to manage the country's international obligations on the environment.

## Economic instruments and expenditures for environmental protection

***Economic instruments have been strengthened in some areas since 2002, although environmental management is mainly based on command-and-control regulatory instruments.*** Permitting and inspections are used largely as income generators, although there are cases where their structure supports environmental objectives. Therefore, it is important to strengthen existing instruments, establish new ones or re-establish abolished ones.

***The "polluter pays" principle is recognized in legal terms; however, in practice*** there are notable problems in the collection of economic instruments, and tariffs for some utilities are still below cost recovery levels. As a result, the "polluter pays" principle is compromised and it is very difficult to achieve resource conservation and rational use of natural resources.

***The environmental sector is very much dependent on international financing and a very high proportion of public environmental expenditure is coming from external sources.*** Several development partners – bilateral donors in particular – are considering scaling down or phasing out their assistance in coming years due to the financial crisis. This will likely reduce the availability of donor aid, thus affecting the implementation of environmental programmes.

***Despite a rather difficult macroeconomic environment, environmental expenditures and investments in key areas have increased.*** However, resources for implementation of the country's strategic goals on the

environment, defined in the ECS, are still limited. To increase resources for the environment, the establishment of an environmental fund has been foreseen. The fund, if and when established, will finance environmental investment projects in a cross-sectoral approach, i.e. within the competence of several ministries, including activities like solid waste management, wastewater collection and treatment, and energy efficiency.

### Sustainable management of water resources

***Albania is endowed with surface water and groundwater resources which far exceed its use.*** On the other hand, much of Albania's economic activity is dependent on the utilization of water resources. Over 90 per cent of energy production comes from hydropower plants (HPPs), while agriculture is fully dependent on irrigation. Moreover, the mining and industrial sector, as well as the tourism sector, are strongly dependent on clean and sufficient fresh water.

***The monitoring of water resources is inadequate and suffers from a fragmented institutional framework.*** Monitoring activities have been very rudimentary for many years, and there is little recent, factual information on the status of both the quality and quantity of water resources. Furthermore, data are not adequately handled and analysis of data and comprehensive regular reporting are lacking. Thus, the implementation of both the EU Water Framework Directive and inventory and assessment mechanisms of the status of water resources require improvement.

***The relevant governmental authorities have recently prepared various strategic documents to set out an appropriate legal framework for the protection and management of water resources.*** However, an updated water resources management strategy, including mid-term and long-term financial planning and corresponding prioritization for investments in the different sectors, is lacking. As a result, investment decisions are made on the basis of single-sector consideration and priority, leading at best to suboptimal investments and lost opportunities for capturing multi-purpose benefits, and at worst to a waste of limited resources.

***Despite being naturally rich in water, Albania suffers from a lack of fresh water in the required quantity and quality, and most of the existing water utilities are not able to cover operating costs.*** This is linked with a series of causes: an inadequate and poorly maintained infrastructure in each of the water-using sectors with exorbitant water losses in the supply network, water abuses due to illegal connections to the main pipelines, the lack of individual water metering and operational control, low collection rates, inappropriate pricing of water and the absence of institutional coordination.

***Taking into account the high sensitivity of the Mediterranean region toward impacts of climate change, the continuous growth in population and the necessary future economic growth, the scale of the high dependence on clean fresh water for sustainable economic and social development is obvious.*** It is indispensable for Albania to develop and implement efficient methods and technologies for the rational use of water resources, taking both the quality and quantity into account, and to control the impacts of resource use on the environment.

### Waste management

***Waste management is at a low level.*** Systems for the collection of municipal solid waste (MSW) are provided in most cities and towns, but not in rural areas. Urban waste is mostly disposed of at designated landfill sites, but large quantities are also dumped at unauthorised locations at the edges of settlements and along roads. Furthermore, little recycling of waste is undertaken.

***The management of industrial and mining waste is focused on clean-up and remediation of hot spots and mining sites waste, and improvements have been achieved in the main polluted areas.*** However, data are limited only to this context, constraining the country's ability to comply with all requirements of related MEAs, especially with the Basel Convention. The current level of industrial waste generation is considered low, but data to assess the current situation do not exist. The same problem applies to the country's hazardous waste management.

***The National Waste Management Strategy for the period 2010-2025 aims at the full implementation of the EU Framework Directive on Waste Management.*** However, most of work on formulation of this document

was done by international consultants, resulting in a lack of ownership and implementation problems on the part of the authorities. Although investments in waste management facilities are one of the preconditions for upgrading waste management, equally important is to build up national expertise and involve country's experts in the preparation and implementation of waste management plans.

***In general, the institutional framework for waste management is not strong enough to support efficient implementation due to distributed responsibilities among several authorities and a weak central authority.*** The conditions for improvement of future waste management include the introduction of at-source waste separation, increased producer responsibility and improvement of the waste data system.

### Forestry, biodiversity and protected areas

***Since 2002, the national legislation related to forestry, biological diversity and protected areas has been improved.*** Albania has recently adopted new national legislation related to the EU *Acquis Communautaire* regarding biodiversity and nature protection (Habitats and Birds Directives), which also had a direct imprint on the new Albanian regulations concerning forests.

***Currently, the most important national policy related to forestry is the transfer of ownership, rights to use, and responsibilities for the management of a major part of previously State-owned forests to the local communes.*** This process has changed the land ownership structure, as well as the division of forestry land management rights between the State authorities and the local government units (LGUs). However, long-term, effective implementation will require continuous support and capacity-building for the new communal forest owners.

***The accessible forest stands have been significantly degraded through overharvesting and overgrazing, which changed the forest age structure and species composition, and reduced the forest underwood.*** For several years tree felling has exceeded the net annual increment, resulting in a decrease in the growing stock, and forest fires, often human induced, still pose a threat to the forest ecosystems.

***Albania currently does not have a national programme for forestry.*** However, the National Plan for the Implementation of the Stabilization and Association Agreement (SAA) provides for the elaboration and approval of such a programme in 2011, which would also have to result in adopting a new national strategy on forests.

***The 2000 National Biodiversity Strategy and Action Plan is the main strategic document focusing on biological diversity; however, the current status of biodiversity monitoring can be characterized as rather incomplete and fragmented.*** Biodiversity inventory and monitoring has recently (in 2009) been enhanced by a Decision of the Council of Ministers (DCM). Several biodiversity monitoring and research programmes are being implemented, and some progress has been achieved with the inventory and mapping of natural and semi-natural habitats. At the same time, however, management of biodiversity is not based on the use of an adequate information system. Instead, information is dispersed among many agencies, institutions and stakeholders, which hinders the homogeneity, compatibility, quality, reliability and comprehensiveness of available data.

***The growth of the protected area network surface partly results from the legal designation of spacious protected landscape areas, which have more than tripled since 1996.*** However, these are much less effective for habitat and species conservation than strictly protected areas, the current size and proportion of which is almost negligible. This development may be hampered by the limited capacities of protected area administrations, taking into account the available level of funding, and inadequate staffing and equipment of the field services.

### Energy and environment

***In the recent past, the Albanian electric power system has experienced serious problems due to unfavourable weather conditions (drought).*** The underlying reason for this is that hydropower represents more than 95 per cent of Albania's domestic generation and there are plans to extend the capacities of HPPs. A development reliant on this energy source may cause a significant decrease in power generation in the future in the event of reduced water flow. Furthermore, HPPs have environmental impacts due to the construction of dams and the

creation of artificial water reservoirs behind them, which affect a river's ecosystems and habitats. Affected plants, fish and wildlife should therefore be identified for every project implementation.

***Albania possesses many mineral resources, including fossil fuels such as coal and petroleum.*** The latter can become an essential component of the energy sector if or when one of the largest onshore oil fields in Europe, the Patos–Marinza, renews its operations. However, the recent limited production of domestic fossil fuels, together with an ageing existing energy infrastructure and incomplete market structures, are barriers to the successful functioning of the sector.

***The Government intends to increase installed capacity of electricity generation plants as well as electricity production in order to reduce dependence on imports and adverse hydrological conditions.*** However, an additional way to meet national electricity demand is the implementation of energy efficiency measures. Currently, there is potential for these measures, including reductions in energy consumption and losses in power production and distribution, and energy conservation in housing and communal services, industry, agriculture and transport.

***Albania has the potential to develop other renewable energies within the country.*** Biomass energy will possibly play a noticeable role, and could involve the four main resources: urban wastes, agricultural residues, forest residues and animal wastes. There is also a potential increase in energy generation capacity for solar water heating, wind energy and small hydro power.

### Human health and environment

***Despite an overall improvement in acknowledging the impacts of degraded environment on health, progress in implementing and enforcing the legislation and policy programmes which benefit health and the environment has been limited.*** Reporting obligations under the existing environmental regulations have been restricted to compliance with environmental quality standards without including any information about policies' effects and effectiveness. The lack of policy-oriented monitoring and information support tools hinders intersectoral collaboration throughout the entire policy process. Integrated assessments on the population's health involving the environmental and other economic sectors are lacking.

***The quality and reliability of the existing health statistics present several challenges.*** Morbidity and mortality statistics are not available on single disease conditions, there is discontinuity in reporting key mortality-based data to the World Health Organization (WHO), and there is no reliable data on injuries and traumatism in transport and occupational settings. Moreover, the Albanian Early Reporting Tool (ALERT) system is limited in its ability to support preventive measures on the sources of food- and waterborne disease and outbreaks, and to address emerging environmental health issues related to climate change.

***Sanitation is a long-standing problem in the country.*** The poor state of existing sewage collection and treatment systems is a risk for secondary contamination of drinking water and soil. The huge investment necessary for the development and extension of sewerage systems requires prioritization. In particular, public buildings such as schools and hospitals should be given priority.

***Climate change can impede progress in ensuring access to safe drinking water and sanitation if policy actions on adaptation to climate change do not include measures on the resilience of the water sector.*** These should be based on the differential resilience of various water and sanitation technologies. Albania has prepared tools to advance the relevant policymaking. A national climate change health adaptation plan has just been released as an overarching platform for the health system's preparedness and response within wider sector efforts.

***Ambient air pollution is now recognized as a serious health problem in main cities.*** The rapid urbanisation and associated major increase in residential and commercial building construction contribute significantly to air pollution, together with the current bad condition of streets and roads within the urban areas. The action plan of reducing air pollution in Tirana is a good example of introducing health-based environmental quality management with intersectoral involvement.

# *Introduction*

## I.1 Physical context

Albania is situated in the south-western region of the Balkan Peninsula (Map I.1). The country has a total area of 28,748 km$^2$, which makes it one of the smallest countries in Europe. The neighbouring countries are Montenegro to the north-west (with a 172 km border), Serbia to the north-east (115 km border), the former Yugoslav Republic of Macedonia to the north and east (151 km border), and Greece to the south and south-east (282 km border) ( Map I.1). Italy is less than 100 km away to the west on the other side of the Strait of Otranto. The Strait divides Albania's 487 km-long coastline to the northern Adriatic Sea coast and to the southern Ionian Sea coast.

Albania has very mountainous topography. Over 70 per cent of the country is mountainous, very rugged, and largely inaccessible. Mountains which are the southern continuation of the Dinaric Alps run parallel to the Adriatic coast. The highest peak is the Maja e Korabit (altitude 2,751 m) in the Korab Mountains on the border of the former Yugoslav Republic of Macedonia. In 2009, four small glaciers were discovered in the 'Cursed' mountains in Northern Albania. These glaciers are situated at the relatively low altitude of 2,000 m.

The country has four main geographical regions: the Northern Mountain Range, which is the Albanian part of the Prokletije mountain range, the Southern Mountain Range, the Western Lowlands, and the Central Mountain Range.

The climate varies with the topography. The main climatic regions of the country are the coastal lowlands with typically Mediterranean weather and the highlands with a Mediterranean-continental climate. These general climatic patterns are markedly affected by the geographic latitude and by variations in altitude.

The lowlands have mild winters. The annual average temperature is about 7°C while the summer average is 24°C. Inland temperatures are affected more by differences in elevation than by any other factor. The continental air mass that dominates the weather pattern in Eastern Europe and the Balkans causes low winter temperatures in the mountains. Northerly and north-easterly winds are dominant most of the time. The average summer temperatures in the highlands are lower than in the coastal areas and the daily fluctuations are greater. Daytime maximum temperatures in the interior river valleys can be very high, but the nights are almost always cool.

Due to the convergence of the airflow from the Mediterranean Sea and the continental air mass, the average precipitation is heavy. Because these air masses usually meet at the point where the terrain rises, the heaviest rain falls on the central uplands. The higher inland mountains receive less precipitation than the intermediate upland mountain ranges where – although estimates vary – the annual averages are probably about 1,800 mm and can be as high as 2,550 mm in some northern areas. The western Albanian Alps, which receive about 3,100 mm of rain annually, are among the wettest areas in Europe. Lowland rainfall averages from 1,000 mm to more than 1,500 mm annually, with the higher precipitation levels in the north. Rain is very seasonal and nearly 95 per cent of the rain falls during winter.

Because the water divide is to the east of Albania a lot of water from the neighbouring countries drains through Albania to the Adriatic Sea. The longest river in the country, the Drini River (length 285 km) has stable, constant flow while most rivers have irregular seasonal flow patterns. Some are totally dry in the summer season while the flow of others can be as small as one tenth of the normal average winter flow.

Albania's three main lakes, Ohrid, Shkoder and Prespa, are all situated on the country's borders. The biggest, Lake Ohrid, has an area of 358.2 km$^2$.

## I.2 Human context

The total population of the country was 3.2 million in 2010 and the average population density 111 inhabitants/km$^2$ – practically the same as that of the European Union (EU) (112 inhabitants/km$^2$). However, the population density varies considerably within the country; it is highest in the lowlands between the capital, Tirana (800,199 inhabitants), and the important port and manufacturing city of Durrës (310,442 inhabitants). In the Durrës prefecture the average population density is 402 inhabitants/km$^2$ while in the mountainous northern Kukes region it is much lower, at 33 inhabitants/km$^2$. The urbanisation of the country has been very rapid. The 2010 estimations put the urban population at 52

per cent of the total population – as recently as 1989 it was 36 per cent.

Albania's demographic profile is changing. About 10 years ago it had Europe's highest total fertility rate (2.8), double the European average (1.4). In 2003, the country's birth rate of 14.7 per 1,000 was also one of the highest in Europe and much higher than in Western Europe (11.3 per 1,000 in 2003). The latest available total fertility rate is 1.5 for 2010, while the crude birth rate had declined to 12.8 per 1,000 (Table I.1). The infant mortality rate has diminished significantly from 22.4 per 1,000 live births in 2003 to 16.4 per 1,000 in 2010 (the EU27 average in 2009 was 4.2 per 1,000). Over the same period, the total population crude death rate has increased slightly.

With an estimated median age of 29.9 years (in 2009), the Albanian population is relatively young. This, however, is changing. Between 2003 and 2010, the life expectancy at birth for both females and males increased a little and the number of the people over 65 years old has grown by 24.2 per cent over the past seven years and now stands at 9.7 per cent of the total population.

According to the *Human Development Report 2011* of the UNDP, Albania has had continuous human development over the past 10 years and it now belongs to the group of High Human Development countries. The country's Human Development Index (HDI) rose from 0.670 in 2000 to 0.719 in 2010, placing it 64th of the 169 countries reviewed.

## I.3 Economic context

Albania's main agricultural products are wheat, corn, tobacco, figs and olives. Agriculture is an important economic sector, employing some 58 per cent of the labour force and generating nearly 19 per cent of gross domestic product (GDP) in 2010.

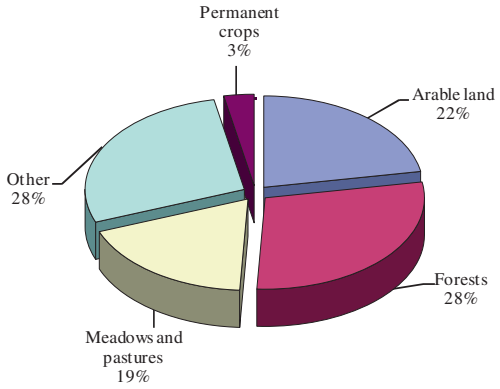
Albania is rich in mineral resources, especially chromium, copper and nickel. Mineral production collapsed during the early 1990s but was revived between 2005 and 2008 when higher prices in international markets led to a doubling of export volumes of chromium, iron, copper and related products. Other important mineral resources include coal, bauxite and iron ore.

**Table I.1: Demographic and health indices, 2003-2010**

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|
| Population (in millions) | 3.107 | 3.125 | 3.142 | 3.157 | 3.170 | 3.181 | 3.193 | 3.205 |
| Birth rate, crude (per 1,000) | 14.7 | 14.1 | 13.6 | 13.3 | 13.0 | 12.9 | 12.8 | 12.8 |
| Total fertility rate | 1.9 | 1.8 | 1.8 | 1.7 | 1.6 | 1.6 | 1.6 | 1.5 |
| Life expectancy at birth (in years) | 75.5 | 75.9 | 76.1 | 76.3 | 76.5 | 76.6 | 76.8 | 76.9 |
| Life expectancy at birth: female (in years) | 78.8 | 79.1 | 79.4 | 79.6 | 79.7 | 79.8 | 80.0 | 80.1 |
| Life expectancy at birth: male (in years) | 72.5 | 72.8 | 73.0 | 73.2 | 73.4 | 73.6 | 73.7 | 73.9 |
| Percentage of population under 15 years old | 27.8 | 27.0 | 26.3 | 25.5 | 24.8 | 24.1 | 23.4 | 22.7 |
| Percentage of population above 65 years old | 8.0 | 8.2 | 8.4 | 8.7 | 8.9 | 9.2 | 9.4 | 9.7 |
| Death rate, crude (per 1,000 people) | 5.8 | 5.8 | 5.8 | 5.9 | 5.9 | 6.0 | 6.1 | 6.1 |
| Mortality rate, infant (per 1,000 live births) | 22.4 | 21.4 | 20.3 | 19.6 | 18.7 | 17.8 | 17.2 | 16.4 |

*Source:* World Bank databank at http://databank.worldbank.org/Data/Home.aspx accessed on 13.6.2012.

**Figure I.1: Land use**




*Source*: FAO stat at http://faostat3.fao.org/home/index.html#VISUALIZE_BY_AREA (accessed on 8.6.2012).

The country has deposits of petroleum and natural gas. Oil production in 2010 was 11,096 barrels per day, covering about 30 per cent of national consumption. Foreign oil companies have shown interest in developing onshore deposits, but offshore drilling has been less successful. Oil extraction is centred in the Berat and Fier districts. Natural gas production, estimated at about 37 million $m^3$ in 2010, is sufficient to meet local demand.

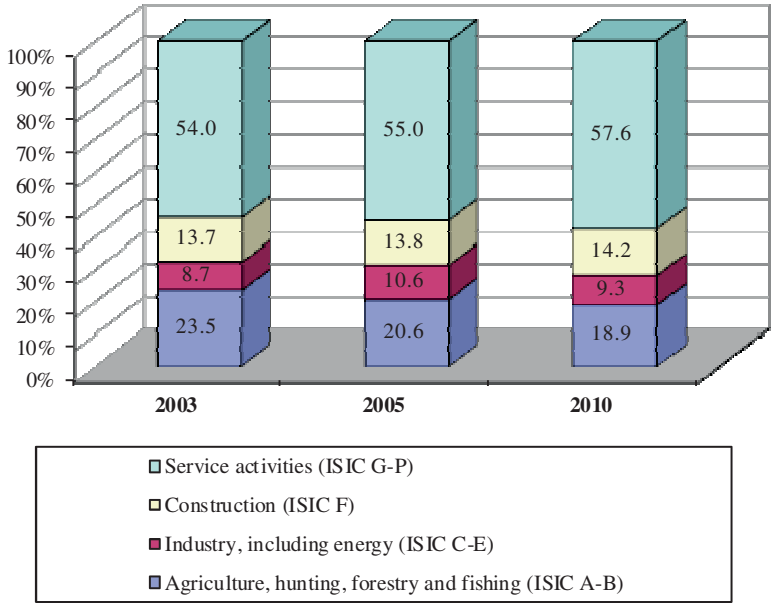
In 2010 Albania produced 7,714 billion kWh of electricity - all produced by hydroelectric power plants (HPPs). This covered 89 per cent of the country's electricity consumption. Most of the sector's ageing production capacity was installed about 30 years ago and is in need of investment in new generating capacity. Albania periodically suffers from energy shortages owing to rapid increase in demand and droughts.

Since 2003, Albania's economy has improved substantially; reforms in infrastructure development, tax collection, property law and business administration have worked well and the country's economy has outperformed many others in the region. The average annual growth of GDP between 2003 and 2010 was 4.8 per cent.

The growth of GDP has been good for the Albanian people. Per-capita income as measured by Purchasing Power Parity (PPP) has grown from US$ 4,545 in 2003 to US$ 9,102 in 2010. This development has diminished poverty levels markedly. According to preliminary data by the World Bank's Poverty Assessment Programme, the proportion of people living below the poverty line has dropped from 25.4 per cent in 2002 to 12.4 per cent in 2008.

In spite of the advances in income levels, Albania still remains a poor country by Western European standards. Its GDP per capita (PPP) stood at 27.7 per cent of the EU average in 2010. Official GDP figures may, however, give too negative view of the average living standard since the per-capita GDP figures do not fully capture either remittance income from Albanians abroad or income from the informal market, which the International Monetary Fund (IMF) estimates to be 30 to 40 per cent of GDP.

**Figure I.2: GDP by sector in 2003, 2005 and 2010, percentage of total GDP**




*Source:* UNECE database (accessed on 11.6.2012).

Remittances have helped economic growth in the past but, after peaking in 2008, have declined over the last few years. According to the World Bank Albanian remittances fell by 12.3 per cent in 2010 compared with 2009, and their proportion of GDP declined to 10.9 per cent in 2010. However, the descending trend seems to have stopped as the World Bank estimates for 2011 predict a small increase in remittances. Figure I.2 represents GDP by sector in selected years.

The Albanian banking sector survived the 2008 global financial crisis and economic downturn with sufficient liquidity, and the system has recovered from the sharp decline in deposits at the beginning of the crisis. Fiscal and monetary discipline has kept inflation relatively low, averaging roughly 2.8 per cent per year during 2003-2011.

Unemployment is still a problem, although the registered unemployment rate has dropped from 15.5

per cent in 2003 to 12.5 per cent in 2010. It is, of course, hard to say what is hidden partial unemployment when almost 60 per cent of the work force is employed by the diminishing agricultural sector.

Albania's export base is small, narrow and undiversified, which makes the economy import oriented. In 2010, imports averaged 52 per cent of GDP and exports 31 per cent. Since 2003 the value of Albania's exports and imports have had a noticeable expansion. Export grew in that period over 40 per cent and import 57 per cent.

Attracting foreign direct investment (FDI) is a top priority for the Albanian Government, especially in light of the steady decrease in workers' remittances. FDIs have increased continually and significantly over the past 10 years, reaching almost US$ 1 billion in 2009, up from US$ 178 million in 2003. In 2010, Albania was the only country in the region to see a net increase in FDI, with total foreign investment surpassing US$ 1 billion.

The Government has invested almost US$ 2 billion in the country's main road corridors, and has pledged to invest at least another billion up to 2013. Electricity supply has also improved, while the distribution system has been privatized. Selected economic indicators for the period 2003-2010 are given in Annex III.

## I.4 Political organization and institutions

Albania is a multiparty parliamentary democracy. The head of state is the President of the Republic, who is elected to a five-year term by Parliament (Kuvendi i Republikës së Shqipërisë), otherwise known as the National Assembly. The presidential election is conducted by secret ballot, and the nomination requires a simple majority of the votes of all deputies. The President can be re-elected once.

The President acts as the Commander in Chief of the Albanian Armed Forces, exercises the duties of Parliament when it is not in session, and appoints the Chairman of the Council of Ministers (Prime Minister).

Executive power rests with the Council of Ministers (Cabinet). The Chairman of the Council (Prime Minister) is appointed by the President and approved by a simple majority of Parliament. Other ministers are nominated by the President on the basis of the Prime Minister's recommendation. The National Assembly must give final approval of the composition of the Council. The Council is responsible for both foreign and domestic policies, and it directs and controls the activities of the ministries (Table I.2) and other state organs.

The legislative body is the unicameral Parliament which has 140 members, each elected for a four-year term. The country has a closed list proportional representation electoral system. In closed list system the party pre-decides which one of its candidates will receive the votes given to the party in the elections. The candidates positioned highest on the party's list have better chances to be elected to the Parliament than those positioned low on the list.

Parliamentary elections are held at least every four years. Albania has 12 multi-member constituencies corresponding to the country's 12 administrative regions. Within constituency, parties must meet a threshold of 3 per cent of votes, and pre-election coalitions must meet a threshold of 5 per cent of votes.

Parliament elects the Supreme Court, and the Attorney General and his or her deputies; and controls the activity of state radio and television, the state news agency and other official information media.

Albania's civil law system is similar to that of other European countries. The court system consists of a Constitutional Court, the Court of Cassation, appeals courts and district courts. The Constitutional Court comprises nine members appointed by Parliament for maximum nine-year terms. The Constitutional Court interprets the Constitution, determines the constitutionality of laws, and resolves disagreements between local and federal authorities.

The Court of Cassation is the highest court of appeal and consists of 11 members appointed by Parliament who serve seven-year terms. The other courts are each divided into three jurisdictions: criminal, civil and military. Albania does not have jury trial and court verdicts are rendered by a college of three judges. This college, however, is sometimes referred to in the Albanian press as the "jury".

The High Council of Justice (HCJ) chaired by the President of the Republic is charged with appointing and dismissing other judges.

Albania is divided into 12 administrative regions for which the official, singular Albanian term is *qark* but which are often referred to as *prefekturë* and sometimes translated as prefectures. Each region contains several districts which are sometimes described as subprefectures.

**Photo I.1: Ruins of Skanderbeg's[1] castle in Kruja**

**Table I.2: List of ministries**

| |
|---|
| Ministry of Foreign Affairs |
| Ministry of Health |
| Ministry of Interior Affairs |
| Ministry of Defence |
| Ministry of European Integration |
| Ministry of Finance |
| Ministry of Economy, Trade and Energy |
| Ministry of Justice |
| Ministry of Public Works, Transportation and Telecommunications |
| Ministry of Education and Sciences |
| Ministry of Labor, Social Affairs and Equal Opportunities |
| Ministry of Agriculture, Food, and Consumer Protection |
| Ministry of Tourism, Cultural Affairs, Youth and Sports |
| Ministry of Environment, Forests and Water Administration |
| Ministry of Innovation and Information and Communication Technology |

*Source:* webpage of the Albanian Council of Ministers at http://www.keshilliministrave.al/?fq=showcabzvm%20accessed%20on%2026.10.2011&gj=gj2 (accessed on 12.6.2012).

[1] Skanderbeg, (Gjergj Kastrioti in Albanian) born 1405, northern Albania—died Jan. 17, 1468, Lezhë, Albania, national hero of the Albanians.

**Map I.1: Albania**

*Note:* The boundaries and names shown on this map do not imply official endorsement or acceptance by the United Nations.
*Kosovo (UN-administered region, Security Council resolution 1244)

# *PART I: POLICYMAKING, PLANNING AND IMPLEMENTATION*

# Chapter 1

# POLICYMAKING FRAMEWORK FOR ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT

## 1.1 Developments since the first Environmental Performance Review

In April 2009, Albania submitted its application for EU membership and became a potential candidate country for EU accession. It was obvious that in order to reach this goal, important efforts were required in all fields of the national economy, including the environmental field. In recent years it was the prospect of EU accession that determined work on legislation. The progress report on the performance of Balkan countries aspiring to join the EU for the year 2011 found that Albania had made no progress that year on its course to EU adhesion. Based on this report, on 12 October 2011 the European Commission (EC) announced it had refused Albania the status of candidate country. Environmental issues were not among the factors that contributed to this refusal. As Albania will probably not change its intention regarding EU membership, the approximation of Albanian laws to the *Acquis Communautaire (acquis)*, and the transposition and adaptation of directives and limit values will continue to be in focus for the Government in the coming years.

In the accession process the strategies, programmes and plans for the environment as a whole or selected sectors of the environment play important roles, as do action plans, which directly determine the course of implementation. In recent years, Albania has prepared several policy documents on the environment and it continues to prepare new documents. In this regard, adequate harmonization of national documents and integration of environmental aspects into sector policies and plans are of the utmost importance. To make successful progress, attention has to be given to cooperation among the different relevant institutions in the course of planning and implementation. The relevance of monitoring progress, proper evaluation of data and indicators, and assessment of the efficiency of policies is continuously increasing as these steps are required for decisions on timing and allocation of limited financial resources. The challenge necessitates not only an improved institutional background but also the improved operation of responsible institutions.

## 1.2 Strategies and policies

*Sustainable development*

Albania prepared a National Assessment Report for the Johannesburg World Summit on Sustainable Development (2002). The report provided several recommendations, e.g. establishing a national commission of sustainable development, and preparing a national strategy for sustainable development accompanied by a medium-term action plan. Though the National Assessment Report gave relevant analysis and provided important recommendations, it did not represent an important milestone in the process towards sustainable development.

Before 2008, no development occurred in this field. The National Strategy for Development and Integration for the period 2007-2013 (NSDI) was adopted in 2008. Sector strategies and cross-cutting strategies, which required the coordinated activity of different stakeholders, provided the basis for developing the NSDI itself, so the NSDI is considered to take the place of the sustainable development strategy and poverty reduction strategy paper. The Department of Strategy and Donor Coordination (DSDC), working under the Council of Ministers, was responsible for coordinating preparation of the strategy. The NSDI established national priorities and goals in line with the Government Programme for the period 2005-2009, intended first and foremost to facilitate the country's integration into the EU and to effectively apply the foreign support available to Albania.

The NSDI dealt with different policies: justice and home affairs; modernisation of administration; infrastructure; market economy; social policy; and urban, rural and regional development, and paid special attention to EU integration and NATO membership. In the long list of strategic priorities, the NSDI mentioned the "achievement of rapid, balanced

and sustainable economic, social and human development". Regarding environmental protection, it identified three priorities:

- Development of water supply and sanitation;
- Reduction of emissions of road vehicles;
- Construction of regional landfills and general improvement of waste management.

Environment was generally included in other topics, e.g. legal approximation and adoption of EU standards. For all priorities, the NSDI identified challenges, vision, strategic priorities and goals, and defined necessary policy measures.

According to the NSDI's chapter on macroeconomic and fiscal perspectives, the budget allocation for water and sanitation for the period 2007-2010 would be 3.7 per cent, and for the environment, 0.9 per cent. For the full period, the indicative NSDI implementation cost of the same sectors would be 4.9 per cent and 1.3 per cent respectively. The NSDI determined indicators (Table 1.1) to monitor progress.

The DSDC is responsible for preparing annual progress reports on the NSDI. These reports follow the rules of the Integrated Planning System (IPS), which is a set of operating principles to ensure that Government policy planning and monitoring as a whole takes place in as efficient and harmonized a manner as possible. Progress reports for 2005, 2006-2007 and 2008 are available on the DSDC website.

Following the IPS rules, reports should assess progress made in the implementation of the strategy – mainly in terms of trends in the monitoring indicators – utilise other available statistical information and identify issues that are of critical importance in the process of achieving the country's long-term targets. However, progress reports contain mostly factual information without further comment. Beyond the provision of new indicator values, a comparison of data in successive reports would be important, and would provide opportunity for analysis of the processes behind the figures.

Since 2008, no progress report has been made available.

There were some attempts in Albania in order to transform the concept of sustainable development into targets, measures and regular monitoring activity. A good example was the preparation of the National Assessment Report (2002) for the World Summit, mentioned above. Despite the important steps made since that time, progress as a whole was not permanent and balanced as a key element of the implementation, namely an advisory council was lacking. In many countries of the ECE Region such high-level coordinating bodies have been established with participation of representatives of all responsible parties to provide:

- Good cooperation of sectors and social groups, taking into account of the different interests and cross cutting impacts of measures, and with special attention on the integration of environmental aspects in sector programmes;
- Regular assessment of progress made and review or modify the course of development, if necessary.

*Environmental protection*

The Government programmes for the periods 2005-2009 and 2009-2013 set priorities for environmental protection and sustainable use of natural resources, providing a strong basis for environmental management.

The second National Environmental Strategy for the period 2006-2020 (NES2) was adopted in 2006. The NES2 followed the sustainable development concept used the Driving force–Pressure–State–Impact–Response (DPSIR) methodology.

NES2 summarised the main problems:

- Non-compliance with European and international environmental (especially air and water) quality standards;
- Generally high impact on the environment due to different human activities (urban areas and economic activities, except electricity generation);
- Low level of expenditure by the public and private sectors;
- Lack of concordance between Albanian and European legislations;
- Low level of enforcement and implementation of many environmental laws.

NES2 set 41 objectives and provided more than 100 measures requiring implementation in order to solve existing problems in 10 environmental fields (air quality, climate change, waste management, water resources management, soil protection, biodiversity, land use and planning management, environmental damage, noise and radiation). In addition, it presented many important horizontal measures – legislation, environmental management, economic instruments, investments, information and public participation, education and training – necessary for its successful implementation.

**Table 1.1: Indicators for the water supply and sanitation sector, and environment sector in the National Strategy for Development and Integration**

| Sector | Indicator | Breakdown | Source |
|---|---|---|---|
| Water supply and sanitation | Proportion of households with water supply and sanitation inside the dwelling | By income level | Living Standards Measurement Survey (every three years) |
| | Proportion of samples of 54 water utilities tested negative for coliform and chlorine residual | | Monitoring and Benchmarking Unit, General Department of Water and Sanitation |
| Environment | Average yearly concentration of $PM_{10}$, $SO_2$, $NO_2$ in four cities | Tirana, Shkodra, Durrës, Elbasan | Institute of Public Health; Ministry of Environment, Forests and Water Administration |

*Source:* National Strategy for Development and Integration for the period 2007-2013.

NES2 focuses mainly on short-term measures and presents a list of institutions responsible for implementation of each measure and the estimated cost. Finally, it underlined the importance of coordination among relevant institutions, monitoring progress and reporting. NES2 recommended establishing new bodies, e.g. an environment commission, inter-ministerial task groups, environmental units and environmental officers. However, this recommendation was not fully implemented.

In 2007, a new strategic document was adopted, the Environmental Cross-cutting Strategy (ECS). Its development was based on NES2 in order to provide a document on the environment for the NSDI. The ECS was drafted and discussed with the broad participation of ministries and interested groups.

The document provided a general review of the state of the environment pointing out the impacts on the environment of different sectors. The document identified measures to tackle these impacts. General goals set by the ECS were:

- Compliance with EU and WHO standards (air, water supply and treatment, noise, urban waste, protected areas);
- Reduction of greenhouse gas emission and ozone-depleting substances;
- Protection and maintenance of all surface and underground water resources;
- Protection and improvement of soil (maximising fertility, minimising erosion and preventing pollution);
- Protection of biodiversity and protected zones;
- Development of more effective and integrated regional planning;
- Restoration of seriously damaged areas.

The ECS defined the tasks of institutions and groups responsible for the environment and also outlined institutional and technical requirements. It identified a range of indicators for monitoring the process (Table 1.2). The document estimated the tools and financial resources required. It also provided investment scenarios in different fields, e.g. waste management and sanitation infrastructure for the period 2007-2014.

In 2011, the Ministry of Environment, Forests and Water Administration (MoEFWA) prepared the Report on Monitoring of the Environmental Cross-cutting Strategy which identified important developments in environmental performance indicators in the period 2007-2010.

For example, cases of compliance with air quality standards increased from 54.5 per cent in 2007 to 63.5 per cent in 2009. Cases of compliance with water quality standards increased from 86.3 per cent in 2007 to 87.16 per cent in 2009. The amount of waste going to sanitary landfills compared with that disposed of in dumpsites increased from 0 per cent in 2007 to 40 per cent in 2010.

In 2011, the Government adopted the National Waste Management Strategy for the period 2010-2025 which will be implemented in five-year phases. The document outlines the phases and sets strategic objectives of each. The Government has also developed a National Waste Management Plan. Based on this Plan, regional waste management plans for the districts of Tirana and Elbasan have been drafted (Chapter 7).

The National Action Plan for the Management of Environmental Noise was approved in 2011 by the Decision of the Council of Ministers (DCM) No. 123.

**Table 1.2: Indicators in the Environmental Cross-cutting Strategy**

| | Element | Indicator |
|---|---|---|
| Environmental indicators | Air | Compliance with air quality standards<br>Basic parameters: PM, ozone, $SO_2$, $NO_x$ |
| | Water | Compliance with bathing water standards at coastal resorts<br>Basic parameters: bacteriologic contamination<br>Compliance with freshwater fish objectives in rivers (oxygenation, biotoxicity) |
| | Biodiversity | Percentage of protected land area<br>Percentage of protected species which are in serious risk of extinction |
| Environmental infrastructure performance indicators | Wastewater collection | Population connected to central wastewater collection |
| | Wastewater treatment | Percentage of wastewater subject to appropriate treatment |
| | Waste | Collection and disposal of waste<br>Recycling of waste |
| Financial indicators | Wastewater | Annual investment in wastewater infrastructure |
| | Waste management | Annual investment in solid waste infrastructure |
| | Contaminated land | Annual investment in restoration of contaminated land |
| | Environmental management | Annual operational expenditure on environmental protection |
| Administrative indicator | Transposition of legislation | Degree of concordance between national and EU legislation |

*Source:* Environmental Cross-cutting Strategy.

Another important document was the 2010 Guideline on Standards and Procedures to Endue with Simple Environmental Permit to Activities that Release Noises into the Environment. The Guideline facilitated the protection of health and the environment from noise, determining how to avoid and prevent noise, and to reduce and eliminate the harmful effects of exposure to noise.

Implementation of programmes usually requires preparation of progress reports with prescribed content. These reports are to provide important basis for evaluation of programme implementation in comparison with targets and support decisions on the following steps.

Reports also have to underpin decisions on modification of the programme, if it is necessary. In some regards, the current reporting system as a whole has to be improved in order to fulfil its role:

- Content of progress reports of the ongoing programmes has to be reviewed in order to extend it beyond the simple data collection with evaluation of data and trends, and explanation of the results;
- Preparation of progress reports has to be controlled and enforced more seriously;
- Programmes in the future should have targets in figures (targets of descriptive nature are not enough) which can be calculated from data collected regularly and of high quality.

*Sectoral and cross-sectoral policy documents*

The inclusion of environmental aspects in sectoral policies, strategies, action plans and development programmes at the national, regional or local levels is considered essential for the efficient protection of the environment.

This principle is reflected in Article 7 of the 2002 Law on Environmental Protection, No. 8934: "State organizations in charge of national and local policies relating to transport, energy, agriculture, tourism, industry, services, urban planning, and economic and social development ensure harmonization of economic and social development with environmental protection and improvements in the quality of life".

The 2011 National Strategy of Water Supply and Sewerage Services Sector (NSWSS) for the period 2011-2017 defines the following objectives:

- Expand and improve the quality of water supply and sewerage services;
- Orient the water utilities towards principles of cost control and full cost recovery;
- Improve governance and regulation in the sector
- Invest in enhancing the capacities of the sector work force;
- Move towards convergence of Albanian legislation with EU water directives.

**Photo 1.1: Skanderbeg Museum, Kruja**

The Strategy sets specific targets such as:

- Extension of urban and rural areas with public water supply service from 90.7 to 96.0 per cent and from 57.0 to 82.0 per cent respectively;
- Increase in the urban and rural areas where a sewerage system is working from 83.0 to 87.0 per cent and from 10.9 to 35.0 per cent respectively;
- Increase in the volume of sewage treated in treatment plants to 35 per cent.

The Stategy presented outlines of action plans, which had to be developed into detailed implementation plans, in order to achieve the targets.

The 2003 National Energy Strategy and Plan of Action (updated in 2005) reviewed the main environmental loads due to the energy sector (particulate matters and oil pollution, refinery residues, unpleasant smell) which had to be reduced.

Respecting the principles of environmental protection, the Strategy underlined the importance of efficient use of energy, reduction of greenhouse gases and increasing use of renewable energy sources (Chapter 9).

The 2008 Sector Strategy of Transport for the period 2008-2013 consisted of strategies for separate transport modalities (road, rail, marine and air) without comprehensive analysis and mid-term targets for the whole sector. Mitigation of vehicle emissions and protection of the marine environment are mentioned; however, environmental aspects in general had not been considered important issues in the Strategy.

The 2008 Sector Strategy of Tourism for the period 2007-2013 is a revision of the Strategy of Tourism for the period 2002-2012. It is based on principles derived from the statements of the European Tourism Forum on:

- Development of sustainable tourism;
- Growth and sustainable development of the cultural tourism market, and enterprises for undertaking positive steps towards long-term plans aimed at increasing the number of tourists;
- Need for recognition and investment in culture tourism spaces.

The 2007 Sector Strategy of Agriculture and Food (SSAF) for the period 2007-2013 was prepared for the sector that can be considered one of the most important of the Albanian economy. Although, the sector's contribution to GDP has been decreasing over recent years, agriculture remains the main work option for people living in rural areas (50 per cent of the total population). The list of priorities identified in the SSAF included the following:

- Improve the management of irrigation and drainage systems – as water is the main input for increasing agricultural production;

- Further develop the marketing of agricultural and agroprocessing products – in order to ensure investments for environment-friendly technology;
- Increase the level and quality of technologies, information, and knowledge of farmers and agroprocessors – using these tools for dissemination of environment-friendly production and processing methods.

The 2007 Strategy for the Development of Business and Investments pays special attention to the development of the mining sector and stresses the importance of environmental protection and rehabilitation.

The strategic priority of the 2007 Intersectoral Rural Development Strategy (ISRDS) for the period 2007-2013 is to contribute to the balanced development of all rural regions in Albania, improve the quality of life in a sustainable way and reduce poverty among the rural population. It was founded on the principles of sustainable management of renewable natural resources, paying special attention to the maintenance of cultural landscape and environmental protection, as well as the maintenance of settlement and rural identity in the countryside. One of the targets of the ISRDS was directly aimed at the environment: protect and enhance the environment through sustainable management of natural resources in rural areas (Table 1.3). Implementation of measures to achieve these targets is not sufficiently supported by annual budgets.

The National Cleaner Production Programme (NCPP-Albania), part of the United Nations Programme of Cooperation for the period 2012-2016, was aimed at building the capacities of Albanian industries to be more resource efficient and to reduce their environmental impacts by promoting Resource Efficient and Cleaner Production (RECP). The project is being jointly implemented by MoEFWA and the Ministry of Economy, Trade and Energy (MoETE) with technical support from UNEP and the United Nations Industrial Development Organization (UNIDO).

NCPP-Albania consists of two components which are being implemented in parallel:

- Industrial support component: aimed at building capacities for RECP demonstration and application in Albanian industries (supported by UNIDO);
- Policy component: aimed at developing the necessary institutional framework for the effective promotion of RECP (supported by UNEP).

## 1.3 Legislation

In recent years, the process of drafting national environmental legislation and policies has been based on requirements defined by the approximation of EU environmental legislation. Albania considered this task extremely important and concentrated its efforts on fulfilling the obligations, sometimes paying less attention to the existing conditions and capacity within the country which, in the short term, are not always sufficient to adapt to the new requirements.

The National Plan of Action for Approximation of Environmental Legislation was prepared and the Implementation of National Plan for Approximation of Environmental Legislation project was launched with the financial support of the EU's Community Assistance for Reconstruction, Development and Stabilisation (CARDS) 2006 Programme to facilitate the implementation of the Plan.

**Table 1.3: Selected environment-related indicators in the Intersectoral Rural Development Strategy**

| Indicator | Baseline value | Target value |
|---|---|---|
| Percentage of protected land with special bird species | | 1% of the territory |
| Percentage of the cultivated land of protected area | 6% (183,400 ha) | 12% of total agricultural land (367,000 ha) |
| Percentage of protected water resources area | 1% ( 27,300 ha) | 2% (54,600 ha) |
| Percentage of organic production area of total utilized agricultural area (UAA) | Less than 0.1% | Around 0.12% |
| Percentage of renewable energy production in agriculture and forestry sector | 13.2% of the total source of energy (2011) | 14% (+5%) |
| Percentage of area with adverse natural conditions of total agricultural area | Has not been designated | Introduction is envisaged for the first time for the year 2010 |
| Area of organic farming | 1,200 ha (estimation) | 2,000 ha |

*Source:* Intersectoral Rural Development Strategy, 2007.

The project provided different kinds of support, e.g.:

- Preparation of drafts of new laws;
- Preparation of a new manual for environmental inspectors to incorporate all recommendations for minimum criteria on inspections;
- Conduct of a study taking into consideration the composition of urban waste in eight main cities;
- Preparation of the Draft Air Quality Action Plan for Tirana.

Any draft law or draft decree of the Council of Ministers is accompanied by the approximation table. This identifies transposed EU directives or parts thereof, and the degree to which they were incorporated into the proposed legislation, and this is reviewed by the Ministry of European Integration. Proposed legislation is vetted by the Ministry of Integration prior to consideration by the Council of Ministers and the National Assembly. The approximation table does not include information on costs of implementation and other required information such as technical capacities. Since 2002, a number of major laws have been adopted (Annex IV). Some key laws are described below.

The 2011 Law on Environmental Protection, No. 10431, substitutes the 2002 Law No. 8934 and transposes the Directive 2004/35/EC on environmental liability. The Law entered into force in 2012. It provides a clear legal basis and framework for further transposition of a large number of environmental directives which are relevant to the protection of the environment. Many new by-laws are required for the implementation of the new Law. Drafts of some have already been prepared, e.g. DCM on the Implementation of Pollutant Release and Transfer Register and DCM on Access to Public on Environmental Information.

The 2011 Law on Environmental Impact Assessment, No. 10440, aims at improving the existing environmental impact assessment (EIA) system. It fully transposes the Directive of 27 June 1985 "On the assessment of the effects of certain public and private projects on the environment" as amended by Directive 97/11/EC, Directive 2003/35/EC and Directive 2009/31/EC (Chapter 2).

The 2011 Law on Environmental Permitting, No. 10448, establishes measures for permitting the operation of certain groups of polluting activities, measures designed to prevent or, where that is not practicable, to reduce emissions to the air, water and land from such activities, including measures also concerning waste. This Law aims at prevention and control of pollution arising from certain categories of activities in order to achieve a high level of protection of human health and the environment as a whole (Chapter 2).

The preparation of by-laws, which are required for implementing newly adopted laws, is ongoing. The Law on Integrated Waste Management transposes the Waste Framework Directive 2008/98/EC completely. The draft law was approved by Parliament in October 2011, but on 3 November 2011 the President refused to decree it and returned it to Parliament for further consideration (Chapter 7). Most important legal documents were at different stages of preparation in 2011, as described below.

<u>Horizontal legislation</u>

- Draft Law on Strategic Environmental Assessment (SEA) – transposition of Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment. The draft is being distributed for consultation to other ministries and will undergo public consultation before its final adoption.

<u>Air quality and climate change</u>

- Draft Law on the Protection of Air from Pollution – a new law which will replace existing 2002 Law on Protection of Air from Pollution, No. 8897, amended in 2010. The new law will transpose Directive 2008/50/EC .
- Draft DCM on Air Quality Management transposes Directive 2008/50/EC on ambient air quality and cleaner air for Europe, and Directive 2004/107/EC relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air.

<u>Nature protection</u>

- Draft DCM on the designation of the natural ecosystem Korab–Koritnik as a Managed Nature Reserve, including study and digital map.
- Draft DCM on the rules and procedures for the designation of Specially Protected Areas, which will transpose annexes III and IV of the Habitats Directive 1992/43/EC.

<u>Industrial pollution, risk and accident management</u>

- Draft Law on Accidents Control from Risks related to Hazardous Substances transposes the directives 96/82/EC, 2003/105/EC, 1999/314/EC and 91/692/EC.
- Draft Decision on Safety Reports and Emergency Planning, under the Law on the Control of Major Industrial Accident Hazards Involving Hazardous Substances, transposes Directive 96/82/EC, as amended by Regulation EC/1882/2003, Directive 2003/105/EC and Regulation EC/1137/2008.

- Draft Decision on Industrial Accidents Notification.

Chemicals
- Draft Law on Bans and Restrictions of Production to be placed on the Market and Use of Certain Hazardous Substances, Mixtures and Articles partially transposes Regulation EC/1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).
- Draft Law on Persistent Organic Pollutants fully transposes Regulation EC/850/2004, as amended by Directive 79/117/EEC.

Forestry
- Draft Law on Forests and Pastures.
- Draft Law on Genetic Material and Pastures.
- Draft Law on the Identification of the Criteria and Procedures for the Creation of Strategic Wood Material in Stands and the Treatment of Virgin Forests.

The Albania 2011 Progress Report published in October 2011 in the Communication from the Commission to the European Parliament and Council covers the period from October 2010 to September 2011. Progress is measured on the basis of decisions taken, legislation adopted and measures implemented, since phases of preparation have not been taken into account.

As regards the environment, the report observes some progress that has been made in the area of horizontal legislation with the adoption of new laws on environmental protection, environmental impact assessment and environmental permitting. There was no progress in transposition of the legislation on strategic environmental assessment or in the areas of access to justice and facilitation of public participation. The National Waste Strategy was adopted, though the management and control of landfills and uncontrolled dumpsites remains one of the main problems to be solved.

Modest progress is reported in the field of nature protection. Two new protected areas were established in 2010; however, further efforts are required for transposition and implementation of the EU nature legislation, and on preparations for the establishment of the Natura 2000 network. Improvement can be seen in the area of industrial pollution control and risk management with transposition of the pertinent directive.

According to the report, no progress was made with regard to air quality. Transposition and implementation of key EU water legislation is at an early stage. The Law on Integrated Management of Water Resources has not yet been adopted. There is no progress with regard to environmental noise policies. Progress is very limited with regard to climate change, and preparation and adaptation of the climate change *acquis* is at an early stage. Albania has no national climate change strategy and no formulated pledges for greenhouse gases emissions reduction.

The report underlined that while concentrating on the fulfilment of obligations, sometimes less attention is given to existing conditions and capacity in Albania. Especially in the short-term, the country is not always ready to comply with the new requirements immediately, e.g. technical equipment, educated human staff and financial resources to comply with limit values, institutional network of enforcement, extended and well-equipped monitoring system.

## 1.4 Institutional framework

Since the first EPR, the structure of the Albanian Government has changed and the provisions of reorganization also brought about changes in the fields of responsibilities and tasks of the ministry responsible for environmental issues.

The current network of insitutions responsible for the environment in Albania is presented in figure 1.1. The main environmental bodies are:
- MoEFWA (Figure 1.2);
- Environment and Forest Agency (EFA) with regional environment agencies (REAs);
- Environmental Inspectorate (EI).

The Ministry of Environment was established in 2001. In 2002, there were 40 employees working in 6 directorates of the Ministry. Since 2002, the tasks and structure of the Ministry has been changed several times. The 2011 Law on Environmental Protection and laws relating to protection of air, water, biodiversity define the responsibilities of MoEFWA. At the same time, according to the Law on Environmental Protection, other entities (ministries, councils) also serve “as legal administrators of various parts and components of the environment”. In cooperation with the MoEFWA and on defined scope of duty, they provide important contribution to the protection of environment.

Currently, the MoEFWA is responsible also for forestry issues. About 120 employees work in 3 general directorates and 3 directorates. The establishment of the General Directorate of Environmental Policies and the General Directorate

of Water Administration (GDWA), and separate sectors for environmental sub-sectors reflects the adaptation to the extended task of the MoEFWA.

Until 2006 the Ministry of Environment had a subordinate institution, the Environment Protection Agency (EPA). After extension of the responsibility of the Ministry to include forestry, the same provision was made in respect of the subordinate institution as well, so the Environment and Forest Agency (EFA) was established in 2006. EFA is a legal, public and budgetary institution working under MoEFWA and:

- Provides technical support, services and consultation to MoEFWA;
- Performs monitoring activities;
- Collects, processes and publicizes information on environment and forestry;
- Prepares and publicizes the State of Environment Report;
- Organizes and participates in training programmes and project implementation.

The main duties of the Environmental Inspectorate are to:

- Prepare annual programme of inspections;
- Collect evidence and information;
- Impose fines and other administrative infringements;
- Represent the MoEFWA in trial process;
- Prepare training programmes and direct the training with the inspectors;
- Serve as the national coordinator for Albania in the Environment Compliance and Enforcement Network for Accession process.

*Regional and local levels*

EFA has 12 regional agencies which are members of decision-making bodies at the regional and municipal levels, and participate in the land use management councils. The latter have the authority to approve regional and general land use plans. Participation in these bodies ensures the inclusion of environmental considerations in the decision-making process.

Territorial units, which work according to an integrated annual and monthly plan supervised by the Ministry, include:

- 12 regional inspectorates (Chapter 2);
- 36 district forestry services directorates (with some 1100 employees) (Chapter 8);
- 6 watershed agencies (with about 20 employees) (Chapter 6).

The tasks of the regional institutions of MoEFWA are complex. The current conditions are not always adequate to requirements. The implementation of environmental policy, compliance with environmental legislation and permitting depend on their work. Capacity of regional institutions of MoEFWA satisfies neither the current nor the expectedly higher requirements in the future.

Local government units (LGUs, comprising municipalities and communes) represent an important element for environmental protection. With regard to waste management, they are required to:

- Designate sites for the collection and processing of production waste in accordance with environmental criteria and development plans;
- Organize the dumping of waste and hazardous substances, and the protection of green areas in urban zones and their surroundings;
- Administer management of urban waste, including water treatment plants and solid waste management.

With regard to noise management, it is the LGUs which:

- Lead the formulation and implementation of local action plans for noise control that are approved by councils of municipalities and communes;
- Lead the process of noise mapping;
- Declare quiet zones in populated or open environments and place limitations on noise in accordance with local action plans.

The local government environmental inspection and control structures are responsible for implementing the law at the local level.

*Institutional responsibilities by media*

Water

The management of water resources at the national level is within the competence and responsibility of the National Water Council (NWC), an institutional body with several ministers, headed by the Prime Minister. At the regional level responsibility lies with the watershed management council (WMC) headed by the Prefect.

Albania's territory is divided into six watershed basins. MoEFWA provides the technical secretariat of the NWC and coordinates the WMCs (Chapter 6). The Ministry of Public Works, Transportation and Telecommunications (MoPWTT) is responsible for water supply management, sewage and wastewater treatment. The Ministry of Economy, Trade and Energy manages water used for the production of electricity through hydropower, while the Ministry of

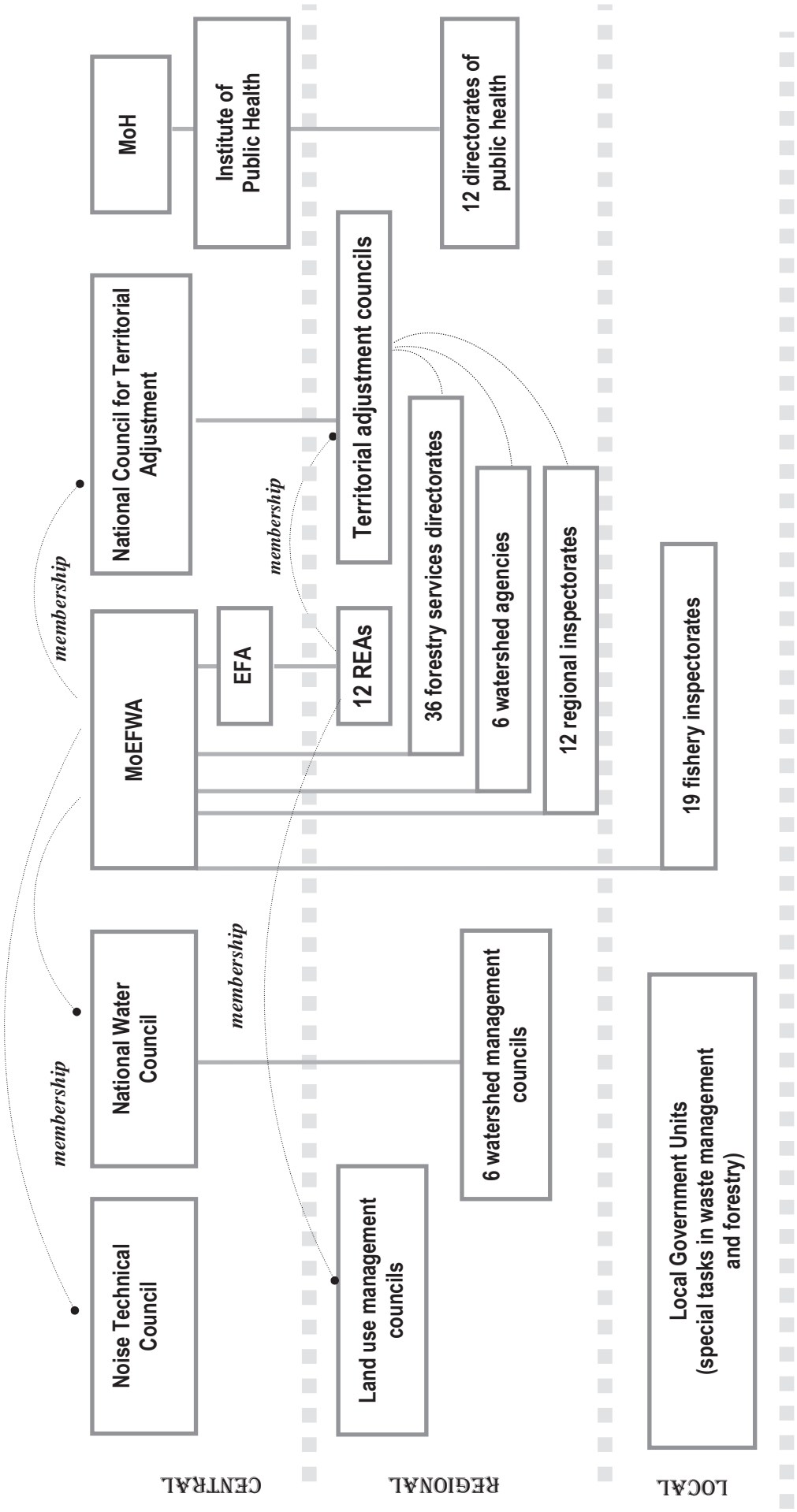
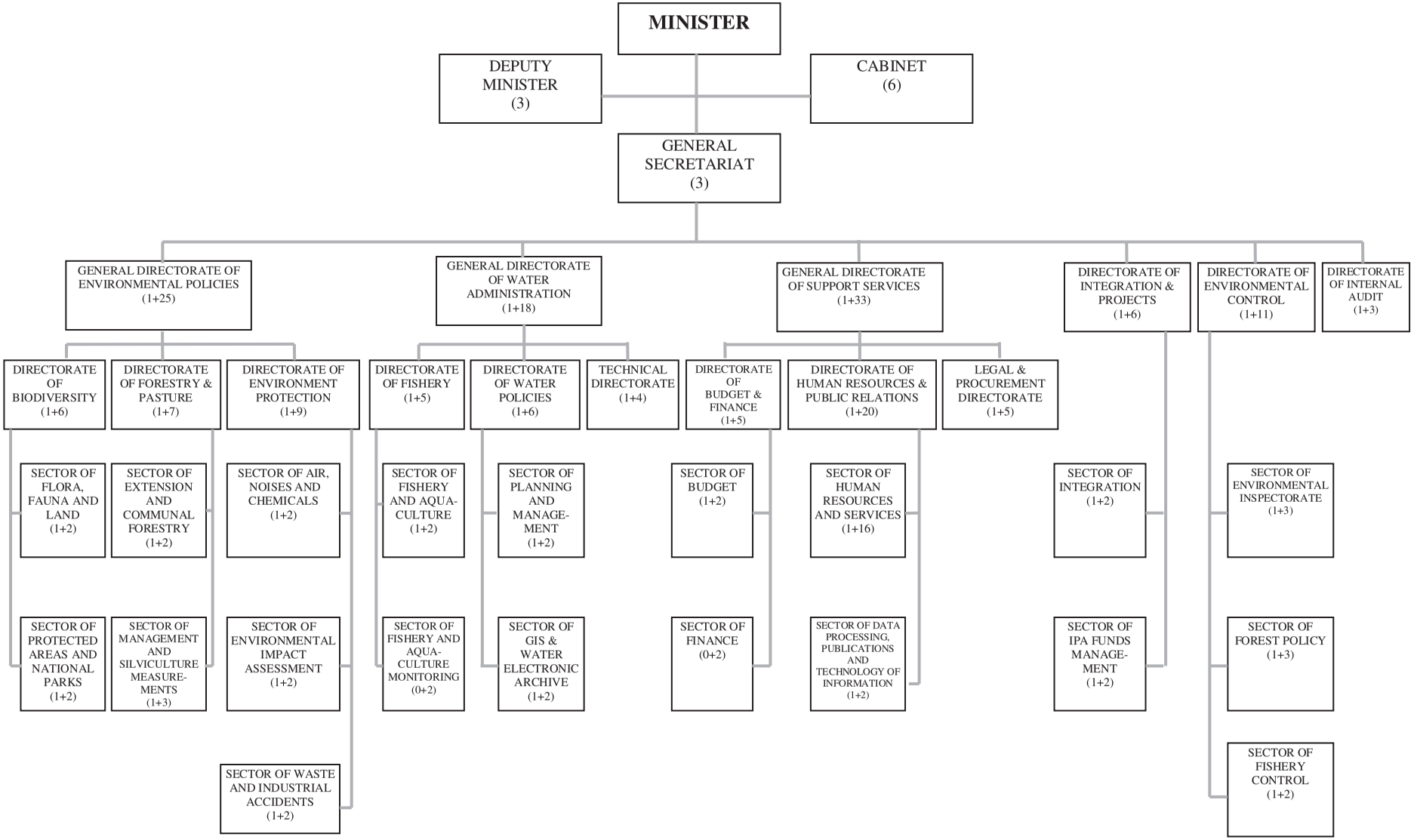



**Figure 1.1: Network of institutions responsible for the environment**

**Figure 1.2: Structure of the central apparatus of the Ministry of Environment, Forests and Water Administration**




*Source:* Ministry of Environment, Forests and Water Administration, October 2011.

Agriculture, Food and Consumer Protection (MoAFCP) manages water used for irrigation in agriculture.

Air

MoEFWA is responsible for: drafting and implementing policies, strategies, national action plans and legislation that protect urban air from pollution; formulating measures for reducing the level of air pollution; and guaranteeing the organization and functions of the air quality monitoring process. MoH is responsible for health issues related to air quality. The Institute of Public Health (IPH) under MoH is continually engaged in urban air quality monitoring. MoH operates the Directorate of Public Health which is responsible for air monitoring at the regional level.

Radiation protection

This responsibility lies with the Commission for Protection from Radiation (CPR), an inter-ministerial commission chaired by the Minister of Health. The Commission's Office of Protection from Radiation prepares and updates the inventory of radiation waste found in Albania and the Nuclear Physics Institute deals with radioactive wastes.

Waste

The administration of wastes is the responsibility of several central and local organizations, each having responsibility for specific elements of the complex process of waste management (See chapter 7). MoEFWA is responsible for drafting policies and legislation concerning waste management, and for ensuring compliance. MoPWTT is responsible for the practical implementation of various phases of the waste administration process.

Nature protection

MoEFWA is responsible for nature and landscape protection including the network of protected areas. It is also responsible for managing forests and pastures. The Forestry Police, a specialized control organization, monitors compliance with legal requirements regarding all forests and pastures, whether in public, private or communal ownership. LGUs, through their controlling and inspecting mechanisms, are responsible for communal forests.

Noise control

MoEFWA is responsible for environmental protection from noise through the definition of limit levels and the implementation of protection measures. Managing noise in the workplace is the responsibility of the Ministry of Labor, Social Affairs and Equal Opportunities (MoLSAEA) while MoH is responsible for health protection from the negative impacts of noise. The IPH defines base units for the measurement, monitoring and assessment of noise.

*Intersectoral cooperation*

There are some high-level decision-making bodies whose legal competence includes approval of documents concerning economic and social development throughout the country. Specific legislation regulates the organization and activity of these bodies, and guarantees the participation of environmental public authorities and organizations. The Council of Ministers, the National Council of Territorial Adjustment, and the NWC are organizations of which MoEFWA is a member.

Inter-ministerial consultation at an expert level can be initiated by MoEFWA in the course of preparation of a new legal document, programme or action plan. Horizontal cooperation among ministries cannot always work perfectly without mandatory regulations and assigned units on all sides.

An important element of NES2 was that it prescribed the establishment of a unit in all line ministries which would be responsible for environmental issues, representing its ministry in consultations dealing with environmental topics. Having a responsible unit, or at least an expert providing capacity for integration of environmental aspects into sector strategies and programmes and for consultation with MoEFWA and other interested parties, does not work in all ministries.

The MoEFWA has some employees (experts) who represent the Ministry in consultations on e.g. transport, health, tourism, regional development issues, organized by other ministries. There is no unit in the Ministry in cooperating and communicating with other ministries. Experts working in different units of the MoEFWA cannot directly exchange information on the ongoing consultations with other sector ministries.

As Albania has already received, and presumably will receive, much financial and in-kind support from international organizations and countries, it is very important to apply this support effectively. DSDC, that was established by the Council of Ministers in December 2005, provides a one-stop-shop for donors with respect to strategic matters related to external assistance. The Department has established a donor

database. Together with the Ministry of Finance, DSDC co-leads negotiations with donors on policy-based conditions for loans or credit. In cooperation with donors and line ministries, the Department established 10 sector working groups (one is the Environment Working Group), whose aim is to ensure that external assistance is effectively coordinated and supports sector strategy targets. These high-level working groups play an important role in inter-ministerial cooperation with special attention on appropriate allocation and utilization of financial resources. In order to make the work of these working groups more efficient, expert groups should be established providing support in preparation of high-level consultations and following-up the decisions taken.

## 1.5 Conclusions and recommendations

Albania made some progress in including environmental aspects in policies, strategies, action plans and sector development programmes at national, regional or local levels.

Some line ministries do not have a responsible unit, or at least a focal point for integration of environmental aspects into sector strategies, programmes and for consultation with MoEFWA. There is no unit in the MoEFWA responsible for the cooperation and communication with other ministries.

The Albania 2011 Progress Report underlined that strengthening administrative capacity and inter-institutional cooperation require further efforts. Since progress towards sustainable development requires participation of all parties concerned, it is very important to establish a high-level coordinating and decision-making body. An advisory council could be established with participation of representatives of all responsible parties in order to promote good cooperation of sectors and stakeholders, control of implementation and regularly assess progress made.

*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.*

Inter-ministerial working groups are relevant high-level fora for cooperation among different sectors. As working groups meet infrequently, appropriate meeting preparation and the early transmission of the results of consultation into instructions for the further work of ministries and other governmental institutions are very important. In order to make the work of these high-level groups more efficient, expert groups should be established to provide these functions.

*Recommendation 1.2:*
*The Government should instruct relevant Ministries and public authorities to establish expert groups providing direct support to inter-ministerial 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.*

In recent years, Albania has prepared several comprehensive documents, related to the environment and the preparation of new documents is on-going. Strategies and action plans usually determine targets and indicators for the purpose of monitoring progress. The relevance of progress monitoring, the regular collection of data and the calculation of indicators, and analysis and evaluation of data and indicators is increasing as these steps are required for decision-making on timing and allocation of limited financial resources. This is extremely important for progress reports prepared on the implementation of different cross-cutting strategies and the NSDI.

*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.*

In coming years, approximation of Albanian laws to the EU environmental *acquis*, and the transposition and adaptation of directives and limit values will continue. In the course of future activities, selecting the optimal speed for the adaptation of directives and limit values will be a big challenge. The speed of law-making has to be rapid enough to result in definite progress; however, it must be feasible to be able to fulfil the goals in time, taking into account the capacity of the country.

*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.*

The tasks of the regional institutions of MoEFWA are very complex and current conditions are not always adequate to requirements. As monitoring activity is based on the work of regional agencies, their human and technical capacity is indispensable for systematic data collection and processing, and must always be of high quality. Enforcement of legislative requirements and control of the operation of entities and individuals are key to the work of regional inspectorates.

The implementation of environmental policy, compliance with environmental legislation and environmental permitting depend on their work. Capacity of regional institutions of MoEFWA satisfies neither the current nor the expectedly higher requirements in the future. Improving measures cannot be limited to increasing the number of staff, as specialized gradual and post-gradual education, provision of modern tools and equipments and general use of IT tools and methods in data collection and processing are other important points for improvement.

*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.*

# *Chapter 2*

# *COMPLIANCE AND ENFORCEMENT MECHANISMS*

## 2.1 Introduction

Although environmental monitoring and inspection are stipulated in the environmental legislation, there are significant problems in practical implementation related to a lack of cooperation between institutions with inspection competencies. There is also a lack of administrative capacity.

The current environmental permitting system cannot be considered an effective instrument to ensure reduction of pollution to the environment. There are various issues, e.g. lack of competence in permit application development, lack of permitting administration capacity and low levels of law enforcement.

A more effective system for prosecuting breaches of the environmental legislation is required. This is not just a matter of adopting the relevant laws but also of ensuring they are applied. This is a long process which needs time for the organizational landscape to be improved.

## 2.2 Institutional framework

The Environmental Inspectorate (EI) functions as a specialized body on environmental control. The activities of EI are based in the 2011 Law on Environmental Protection and the 2004 DCM on the Functioning of Environmental Inspectorate, No. 24. The Recommendations of European Parliament and Council providing for Minimum Criteria of Environmental Inspections in the Member States (2001/331/EC) of 4 April 2001 also serve as a basis for the work of the EI.

EI is led by the Sector of the Environmental Inspectorate of the Directorate of Environmental Control. The Sector consists of a chief inspector and three inspectors. At regional level, there are 39 inspectors at the 12 REAs. The main duties of the EI inspectors are to:

- Control the compliance of entities with the requirements of environmental legislation and conditions of environmental permits;
- Monitor the environmental impact of the entities and determine measures to be taken for environmental protection;
- Draft the annually programme of inspections;
- Draft orders, regulations, decisions for the Council of Ministers;
- Collect evidences and information from inspectorate units and prepare summary reports for the Minister;
- Collect data about fines and other administrative infringements;
- Represent inspectorate in a trial process;
- Prepare training programs and direct training for the inspectors.

The REAs control and ensure the implementation of the environmental legal framework, issue permits and control compliance with their conditions, and collect and process data on the environmental situation. REAs conduct environmental inspections and participate in the process of releasing environmental declarations in the context of specific projects.

There is a conflict of interest in the obligations of the inspectors – on the one hand, they issue permits and, on the other, they control their practical application.

The budget for EI is usually insufficient to cover EI's responsibilities. The possibility of increasing the number of personnel is rather limited since it is established policy to restrict the number of employees of public authorities. The technical resources available to EI are very limited. Until recently, 7 of the 12 REAs did not have their own offices. At most of the REAs there are no cars, computers or phones. This renders the work of the inspectors very difficult.

In order to ensure better coordination and implementation of environmental legislation, bilateral agreements and joint instructions were signed between EI and other control bodies such as the State Police, the Construction Inspectorate, the Plant Protection Inspectorate, the General Directorate of Taxation, the State Sanitary Inspectorate and the State Labor Inspectorate. However, in practice, inter-institutional coordination is lacking or remains at a very poor level. The main reason is lack of financial support, staff and technical resources. Workshops and seminars for training staff are not held. MoEFWA provides training to its staff mainly through foreign institutions and organizations. The improvement of coordinating mechanisms would increase the efficiency of joint actions.

**Photo 2.1: Highway construction in Tirana**

The Judicial Bailiff Office, attached to the courts of first instance, enforces executive orders in cases established by the Civil Procedure Code. The Judicial Bailiff Office exercises its functions through judicial bailiff officers who, in the course of their duty, represent the State.

## 2.3 Enforcement of environmental legislation

In the framework of enforcement of the environmental legislation the following legal acts have been approved by the Minister of the Environment, Forests and Water Administration (MoEFWA):

- 2011 Order on the Allocation of Inspection Functions and Technical Functions of Environmental Impact Assessment, Permits and Environmental Monitoring in the Regional Environmental Agencies, No. 139;
- 2010 Guideline on Organization and Functioning of the Regional Environmental Agencies, No. 2;
- 2011 Order on Sending of the Self-monitoring Data Results of Industrial Operators from the Regional Environmental Agencies to the Ministry, No. 247.

Based on the 2004 DCM on the Functioning of Environmental Inspectorate, No. 24, environmental inspections are carried out according to an annual plan that is approved by MoEFWA. Inspection plans are designed to support common agreements with inspectorates from other sectors. The intention is to link and coordinate the interventions of all inspectorates. However, in practice, coordination does not work. Plans are drafted at the national and regional levels. Regional plans form part of the national plan. Inspection plans must be visibly promulgated in the buildings of the relevant authority (the regional inspectorates or MoEFWA) but this is not regularly performed. There is no information on environmental inspection plans on the website of MoEFWA.

Since 2006, an annual working plan has been implemented by EI. From 2002 to 2005 there was no such planning of activities. Based on the annual general plan, REAs draft detailed plans and submit them to MoEFWA every month. Planned or routine inspections are taking about 70 per cent of inspectors' time, and unplanned inspections up to about 20 per cent of their effective work time. Inspectors use the 2005 Environmental Inspectors' Manual. A new manual developed under the project on the Implementation of National Plan of Action for Approximation of Legislation in Albania, financed by the EU, was drafted in 2010 but is not yet approved.

There is no requirement of a minimum frequency of inspections. Frequency is flexible and depends on performance and operational changes. This means

that some enterprises have not been inspected at all. One possible reason is that there is no list of industrial enterprises and there is no clear view what kind of existing activities must be inspected most often.

Unplanned inspections mainly arise from alerts or other information given by citizens, complaints from public and civil organizations and non-governmental organizations (NGOs), or complaints posted by public institutions and the People's Advocate (Ombudsman). In addition, in the course of travelling to undertake a planned inspection, inspectors carry out ad-hoc inspections along the way, e.g. at construction sites, factories, fuel stations, excavation works on a river.

In practice, an inspection starts with checking the site for visible signs of emissions into air and discharges to water. The inspector then reports to the enterprise to make his or her presence known. During the inspection the operator's performance is assessed against the permit conditions; however, the lack of detailed conditions in the permits may hamper this process. The inspector examines raw material storage, analyses soil contamination, and assesses fire and explosion risks, employee safety, waste generation, emissions, existing monitoring procedures.

While carrying out an inspection, the inspector often takes the opportunity to raise the awareness of the site operator to the environmental consequences of the activities.

A written site inspection report form is completed by the inspector on the site following each routine inspection. The report is discussed with the manager or a legal representative of the operator and a copy of this form remains on the site. MoEFWA does not keep records of written site inspection reports. While different types of inspections are outlined in the *Environmental Inspectors' Manual*, the preparation of checklists would make site inspections more efficient.

Inspectors have the obligation and duty, in case of non-compliance, to undertake measures and sanctions against the offender or to press administrative and criminal charges (Table 2.1). Inspectors have also a role in informing and advising the operator.

**Table 2.1: Measures and sanctions for non-compliance**

| | Administrative sanctions | | | Criminal prosecution instigated by the inspecting authority | | Civil/administrative court actions instigated by the inspecting authority | |
|---|---|---|---|---|---|---|---|
| Type of action | Warning letter | Issue of notices/orders requiring the operator to take action | Administrative fines | Reports to prosecutor | Prosecution taken | Reports to prosecutor | Civil/administrative cases taken |

*Source:* Ministry of Environment, Forests and Water Administration, 2011.

Some forms of damage to the environment constitute a criminal act. The Criminal Code has a specific chapter (chapter IV) on Criminal Acts against Environment, to deal with such cases. The legislation creates the obligation to pursue penal proceedings when notice is given of a criminal act in the environmental field.

Pursuant to the Criminal Procedure Code, officials are bound to lodge a penal proceeding when, during the course of their work or because of their functions or service, they receive notice of a criminal offence. The same obligation is placed on citizens as defined in article 283 of the Criminal Procedure Code.

In the course of an inspection, an inspector may take samples. These samples are given to authorized laboratories for analysis. EI does not have equipment for undertaking laboratory analysis itself. Results from analyses are given to EI and the operator of the facility from where the sample was taken. The results may be challenged by the operator in which case a new analysis may be undertaken at another authorized laboratory. Standards exist only for air, water and noise. When a facility is non-compliant, the inspector may prescribe certain measures (Table 2.1).

There are no available annual reports or data on the total number of inspections undertaken during the period from the first EPR until now. Only those inspections which have financial consequences for the operator are documented (Table 2.2).

The scope of inspection activities is increasing. For 2003 and 2004, there is no information about the

factual reasons either for imposing sanctions and issuing decisions or for their real consequences. From 2005, such information is available along with information on subsequent action.

The main types of violation are working without an environmental permit or working in non-compliance with the permit. The consequences of decisions on fines vary from "paid" (i.e. paid within the legal deadline) to "forgiven" (i.e. forgiven by the Minister of Environment, Forests and Water Administration) and "burned" (which means expired). In some cases, orders for suspension were issued.

Closure of an enterprise is possible only where the activity is illegal. If an operator is working without an environmental permit or licence, the activity must cease until a permit is issued, and a fine is levied also.

The total number of inspections during the period from January to September 2011 was 5,710. An evaluation of the activities of EI reveals that its work has improved compared with earlier years, but still much remains to be done. There are many installations which operate without environmental permits or do not undertake their activity in compliance with environmental permit requirements.

The environmental inspection system is only partly aligned with good practice. There is a lack of administrative capacity, in particular well-trained staff and appropriate equipment for proper implementation of the whole environmental inspection cycle.

## 2.4 Environmental permitting and assessment tools

The main provisions on environmental permitting are set out in the 2011 Law on Environmental Protection. The procedures are stipulated in the 2003 Law on Environmental Impact Assessment, No. 8990.

*Environmental permitting, impact assessment and licensing*

Permissions for activities with significant negative impact are approved at the central level, i.e. by MoEFWA, and activities with minor negative impact fall within the competence of REAs. Those activities which require an environmental permission for their development are listed in specific normative acts.

Environmental permitting is based on the environmental impact assessment (EIA) process. The national EIA system follows common EIA practice but without maintaining the typical features of this assessment tool, which are that it is to be applied only to: (i) new activities; (ii) projects included in a special list of activities based on the lists from the EIA Directive, the Espoo Convention on Environmental Impact Assessment and the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters.

Activities subject to EIA are industrial, construction and trade, such as exploitation of inert materials, construction of roads, oil refineries, brick factories, petrol stations, bakeries, bars, cafes, restaurants and disco clubs. There is no distinction made between investment proposals, projects, plans, programmes and strategies, and existing activities, facilities and installations. The EIA procedure applies to all of them. So the final document does not fulfil its purpose. There are no conditions with threshold limit values for pollutants and emissions to air, water and soil.

At the end of the EIA process, based on the activity type, one of three types of environmental permit is issued:

- Integrated environmental permit (MoEFWA competence);
- Environmental permit (MoEFWA competence);
- Environmental consent or authorization (issued by REAs).

A permit is valid for a certain period of time – one, two or five years. Its validity is related to commencement of the activity – issuing of the final licensing document – or whether it is for new or existing activity. The basic document for decision-making on environmental permission is the EIA report prepared by independent environmental experts certified by MoEFWA or consulting companies licensed by the National Licensing Centre (NLC).

Environmental permissions approved by MoEFWA are issued for activities listed in the 2003 DCM on the Approval of the List of Activities with an Environmental Impact for which an Environmental Permit is Needed, No. 805. The 2007 Instruction of MoEFWA on the List of Activities with Environmental Impacts, Rules and Procedures of Approval of the Environmental Authorization and Consent from REAs, No. 2, prescribes the activities that are approved by REAs at the local level.

The licensing process is centralized. The NLC, under MoETE, was established in 2009 to issue licences.

**Table 2.2: Inspections having financial consequences for the operator**

| Year | Number of inspections and administrative sanctions | Activities subject to control |
|---|---|---|
| 2003 | 36 | fuel stations, inert materials production line, footwear production, stone quarry, poultry farming, concrete production, auto repair shop and car wash |
| 2004 | 16 | sponge productions, mechanical work, dairy products, forest exploitation, poultry farming, munitions dismantling, river quarry, oil refining, electricity production, footwear production, fuel stations |
| 2005 | 106 | similar to those described above, most for river quarry and fractions plants for inert materials |
| 2006 | 106 | similar to those described above |
| 2007 | 83 | similar to those described above and also bakery, dough products, sewage and soil transport, soil dumping, road reconstruction, urban waste cleaning, multifunctional buildings, shrimp farming |
| 2008 | 126 | natural resource exploitation activities, urban waste cleaning, industrial activities |
| 2009 | 99 | working in "restricted area", bad management of hospital waste, not giving data for monitoring and noise exceeding the norms in coffee bars and restaurants |
| 2010 | 265 | similar to those described above including aquaculture cultivation |
| 2011 (Jan.-Sept.) | 134 | similar to those described above |

*Source:* Ministry of Environment, Forests and Water Administration, 2011.

With its one-stop-shop services, the NLC is the authority where all applications for licences must be made; no application shall be submitted to another institution even if it is the competent authority for approving the licence. The necessary legislation and regulations were approved in order to legitimate and empower the NLC in its role in the licensing process. The 2009 Law on Licences, Authorizations, and Permits, No. 1008, provides the basic principles of permitting, which apply also to environmental permitting. According to the written rules, which are not fully applied in practice, the NLC's functions are to:

- Handle licensing and permitting application procedures, compliant with the Law No. 10081;
- Keep and administer the National Registry of Licences and Permits;
- Provide free public access, as per provisions of the Law;
- Inform and advise applicants and the public at large on licensing and permitting criteria.

Since October 2009, all applications for environmental permissions have been submitted to NLC. At present it has 10 functioning regional offices. NLC checks documents according to the project characteristics, then transfers the applications to MoEFWA for review and final decision. To enable electronic communication with NLC, a specific programme was built and installed in each institution with licensing competence, although this is only working partially, and only in Tirana. It cannot work within the regional structures because they have no computers and no access to the internet.

Under the pressures of NLC timeframes and an enormous volume of applications (approximately 1,100 cases in 2010), the environmental administration is struggling to meet the tight approval timeframe and ensure quality in the environmental permitting process. The environmental permitting procedure in Albania may be divided into three phases:

Phase I: Preparation of the necessary documentation by the project developer

In this stage the developer is assisted by its project team to prepare the technical documentation necessary for an application for an environmental permission. The 2010 Instruction on the Necessary Documents Needed when Applying for an Environmental Permit, No. 2, provides a set of necessary documentation, which is completed and submitted to NLC by the project developer.

Phase II: Administration of the application procedure by NLC

It is regulated in accordance with specific functional legislation and does not interfere with technical legislation related to a specific licence or permission.

Although each application must be published on the NLC website, it is not available or does not exist yet.

Within four days of receiving the necessary documentation, NLC transmits either scanned or hard copies to MoEFWA for review (an internal procedure) and final decision. After reviewing the application, MoEWFA communicates its decision to NLC. The decision may be: (i) refusing the application on the grounds that information is missing or there is incorrect data, or (ii) approving and issuing the necessary environmental permission with specific conditions. NLC then notifies the project developer of the decision.

Phase III: Technical review and decision-making by MoEFWA

The review and decision-making procedure constitutes the environmental technical appraisal process for every application for environmental permission. After the application is transmitted from NLC it is handled by the Department of EIA within MoEFWA. Based on the project type, an application received from NLC may:

- Be sent to the respective REA in the region where the project is proposed, for final decision in the case of environmental consent or authorization if the project is listed under the 2007 Instruction of the MoEFWA on the List of Activities with Environmental Impacts, Rules and Procedures of Approval of the Environmental Authorization and Consent from REAs, No. 2;
- Follow the MoEFWA internal review procedure in the case of an integrated environmental permit or environmental permit.

The existing environmental permits do not meet the requirements to set emission norms and pollution management conditions. In practical terms, the conditions do not guarantee that the installations or facilities comply with the emission standards. Criteria and requirements are somewhat general and refer to relevant laws. Thus, the environmental permit conditions do not guarantee full environmental protection.

Procedure of approval for environmental consents or authorization (REAs' competence)

The 2002 Law on Environmental Protection gives competence to MoEFWA to determine the lists of projects with local (minor) environmental impacts, which are approved by REAs. Based on this provision, MoEFWA has given some decision-making competencies to REAs. REAs are then entitled to decide and issue environmental consents or authorizations based on the project type.

The 2008 DCM on Public Participation in Environmental Decision-making, No. 994, is the legal basis for public participation in the environmental decision-making process. The DCM establishes the public consultation procedure in the EIA process and obliges local government institutions to enable public access to the following documents:

- Summary of the project and EIA report prepared by the project developer;
- Draft environmental permit;
- Full copy of documents presented by the developer, in order that members of the public may review all the details of the project.

The local government must notify the public, for a period of at least 20 days, of where the documentation is available for examination, the timeframe (not less than one month from the notification date) within which members of the public can make comments, and the date and time of public debate. Public notification of the consultation process is ensured through local radio and television outlets, websites and periodical journals, if possible. The local government is obliged to publish the notice at its notification stand.

Not all these legal requirements are applied to all permitting procedures – and not because of any legal prescription but because the legislation is infringed. This could be considered "decision as appropriate" rather than "decision on the legality". Permitting documents may be appealed before the court according to the Code of Administrative Procedures.

*Integrated pollution prevention and control*

The 2011 Law on Environmental Permitting transposed the requirements of Directive 96/61/EC on Integrated Pollution Prevention and Control. Notwithstanding its adoption, there is no such permitting regime in Albania yet. Furthermore, there is no list of installations for which such types of permits must be issued.

*Environmental audit*

Environmental audit does not exist in Albania and there is no relevant legislation.

*Self-monitoring*

According to the legislation, operators are obliged to control environmental emissions of their activities

based on the conditions set out in the respective environmental permission. The monitoring indicators are mainly for air emissions, wastewater effluent quality and, recently, noise levels. The monitoring indicators, monitoring frequency and reporting requirements must be in accordance with the operator's environmental permission. The operator is required to monitor its emissions either by having specialized staff or contracting specialized laboratories. The environmental monitoring data are reported periodically to REAs and EFA, which is the technical authority in charge of evaluating monitoring compliance.

Operators obliged to monitor their emissions in accordance with their environmental permission are inspected by EI. In certain cases, an on-site check to assess emissions compliance may be undertaken in cooperation with EFA.

These legal requirements do not work in practice. The conditions for self-monitoring set in the permits are rather weak. Only large industrial operators conduct some periodic emission monitoring. Technical capacity to conduct industrial monitoring and produce reliable data is lacking. There are no guiding documents to facilitate and enforce environmental self-monitoring. Another difficulty arises from high costs of conducting emissions monitoring which cannot be covered by operators. A pollutant release and transfer register has not been established yet.

*Environmental management systems in enterprises*

The environmental management system in Albania is still unclear. There is no list of industrial installations and polluters in the country. Therefore, there is no target group for promotion of an environmental management system.

## 2.5 Enforcement tools

*Administrative sanctions*

Environmental inspectors have the competence to impose administrative sanctions which are provided by the laws on Environmental Protection, on Protected Areas, on Environmental Impact Assessment, on Environmental Treatment of Solid Waste, on the Protection of Transboundary Lakes, on Chemical Substances and Preparations, on the Environmental Treatment of Polluted Waters and on Protection of Air from Pollution.

The environmental legislation does not provide for a single competent body charged with enforcement of administrative sanctions. Where the legislation does not define the competent body responsible for enforcement, the latter shall be performed in conformity with the general rules provided in the 1993 Law on Administrative Violations.

*Penal sanctions*

The Albanian environmental legislation does not specify rules for environmental inspectors in respect of penal sanctions. The obligation on inspectors to request penal proceedings is provided in the penal legislation (Criminal Code and Criminal Procedure Code). Pursuant to the Criminal Procedure Code, public officials are bound to lodge penal proceedings when, in the course of their work or because of their functions or service, they receive notice of a criminal offence.

In practice, once inspection has been completed and non-compliance has been determined, EI uses enforcement mechanisms to secure compliance with the environmental legislation. A protocol or report is produced and based on its conclusion or conclusions a bill of indictment is prepared. This usually calls for an application for an environmental permit to be lodged, or closure of the facility. If this is not fulfilled a fine is imposed or a proposal for closure is given to the Minister. MoEFWA issues a decision and order for the fine or suspension of the activity. The number and value of fines are imposed by EI from 2003 to 2011 is given in Table 2.3. This decision may be appealed in court, which usually happens. The fees for legal proceedings are very high and the State authorities do not have financial resources for legal protection. This is why until recently, in most cases, the orders of MoEFWA imposing a fine as suspension of the activity have been abolished. To resolve the situation, MoEFWA has proposed that the public institutions should not pay fees for such cases and this proposal has been recently introduced into the legislation.

Fines, penalties and non-compliance fees

Requirements with regard to the collection of fines are set in the 2010 Law on Administrative Violations, No. 10279. The Law provides that:

- Fines shall be collected by the Judicial Bailiff Office;
- State Inspectorates and central government bodies shall be exempt from paying the judicial fees and the service fee retained by the Judicial Bailiff Office.

The income from penalties goes to the State budget. In the majority of cases the imposed fines are not collected. There is not yet an efficient mechanism for collection. However, pursuant to the penal legislation, if fines are not paid, environmental inspectors can:

- Impose supplementary punishments (Article 30 of the Criminal Code);
- Replace the fine with imprisonment (Article 34 of the Criminal Code).

In spite of these legal provisions, fines imposed by environmental inspectors are not paid by the due date or are simply not recovered (table 2.4). The main reason is the weakness of the state institutions.

The Criminal Code can be applied: "When the fine is not paid in due time, the court decides on replacing the fine with imprisonment, calculating 5,000 lek for each day of imprisonment".

### 2.6 Environmental standards and their enforcement

The 2007 Environmental Cross-cutting Strategy sets a number of objectives for alignment with EU and WHO standards, but these are not yet operational. Air emission norms were approved by the 2002 DCM on the Approval of Norms of Emissions into the Air, No. 435. Air quality standards are under preparation.

**Table 2.3: Legal sanctions issued by the Environmental Inspectorate, 2003-2011**

| Year | Fines, number | Comments |
|---|---|---|
| 2003 | 71 | N/A |
| 2004 | 16 | N/A |
| 2005 | 101 | Most for working without an environmental permit |
| 2006 | 106 | Most for working without an environmental permit and some for working in non-compliance with the environmental permit |
| 2007 | 83 | Most for working without an environmental permit and some for working in non-compliance with the environmental permit |
| 2008 | 126 | A new development is that some of the sanctions have been applied for violations observed, mainly for natural resource exploitation activities, urban waste cleaning and industrial activities. |
| 2009 | 99 | Some of the fines are for not supplying self-monitoring data and violation of the norms for noise from bars and restaurants |
| 2010 | 265 | There are some sanctions for pollution and marine discharge |
| 2011 (Jan.-Sept.) | 134 | Some sanctions were issued to State operators, hospitals, LGUs, municipalities and the Directorate of Roads at MoPWTT. |

*Source:* Ministry of Environment, Forests and Water Administration, 2011.

**Table 2.4: Collection of fines, 2003-2011**

| Year | Fines | | | Method of fine collection |
|---|---|---|---|---|
| | Number | | Value, million lek | |
| | Collected | Forgiven | Forgiven* | |
| 2003 | N/A | N/A | N/A | |
| 2004 | N/A | N/A | N/A | |
| 2005 | 19 | 14 | 5.00 | Cashed at the bank account of MoEFWA |
| 2006 | 4 | 4 | 1.20 | Paid voluntarily |
| 2007 | 12 | 5 | 1.18 | Paid voluntarily |
| 2008 | 2 | 7 | 3.10 | Paid voluntarily |
| 2009 | 0 | 1 | 2.00 | None paid |
| 2010** | 9 | 6 | 5.80 | Paid voluntarily |
| 2011 | N/A | N/A | N/A | |

*Source:* Ministry of Environment, Forests and Water Administration, 2011
*Notes:* * Forgiven according to articles 83-84 of the Law on Environmental Protection.
** In 2010 two fines were cancelled by the competent court, to a total value of 1.7 million lek.

Wastewater effluent norms were approved by the 2005 DCM on Allowed Norms for Wastewater Effluent before Discharge into Environment, No 177 and the 2005 DCM on Allowed Norms of Liquid Releases and the Zoning Criteria of Receiving Water Environments. At the moment the process of elaboration and adoption of water standards is ongoing. There are draft decisions on urban wastewater treatment, priority substances in water and on standards of water quality.

Environmental quality standards are not clearly determined and major pollutants are not detected.

## 2.7 Conclusions and recommendations

Although the inspectors follow the description of the different types of inspections in the *Environmental Inspectors' Manual*, the preparation of checklists would make site inspections more efficient.

Despite bilateral agreements and joint instructions were signed between EI and other control bodies (the State Police, the Construction Inspectorate, the Plant Protection Inspectorate, the General Directorate of Taxation, the State Sanitary Inspectorate and the State Labor Inspectorate), inter-institutional coordination is lacking or remains at a very poor level.

The annual reports or data on the undertaken inspections are not uploaded to Internet and are not easily available to the public.

*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.*

New legislation is either under preparation or in force but practical implementation is still very weak and inconsequential. There are insufficient financial and technical resources to meet the legal requirements. Administrative capacity is insufficient.

The conflict of interest remains in the mandate of the inspectors – on the one hand , they issue permits and on the other, they control their practical application.

MoEFWA provides training to its staff mainly through foreign institutions and organizations operating both within and outside Albania. Budget funds allocated for training purposes are quite limited.

*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 2011 Law on Environmental Permitting transposed the requirements of Directive 96/61/EC on Integrated Pollution Prevention Control. The draft law on SEA transposed EU Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment. However, the effective implementation of these two laws is not feasible without developing secondary legislation. The legislation on environmental audit does not exist in Albania and there is no list of industrial installations and polluters in the country.

There are no permit conditions with threshold limit values for pollutants. Permits do not regulate emissions to air, water and soil.

*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.*

Despite an increase in the number of fines imposed, in the majority of cases fines are not collected. Many imposed fines are not paid by the due date or simply not recovered. There is no efficient collection mechanism. Moreover, according to articles 83 and 84 of the 2002 Law on Environmental Protection the Minister of the Environment, Forests and Water Administration has the right to forgive imposed fines.

*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.*

Air emission norms were approved in 2002 and wastewater effluent norms were approved in 2005. The elaboration of air and water quality standards is still on-going.

There are draft decisions on urban wastewater treatment, on priority substances in water and for standards of water quality. As environmental quality standards are not clearly determined, major pollutants are not detected.

*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.*

# Chapter 3

# INFORMATION, PUBLIC PARTICIPATION AND EDUCATION

## 3.1 Environmental monitoring

*Legal and policy framework*

The engagement of Albania, especially in recent years, in many EU and international activities, such as cooperation with EEA since 1996, the Stabilization and Association Agreement followed by application for EU membership in 2009, and ratification of nearly 60 international environment agreements and programmes (Chapter 4), implies a substantial increase in reporting obligations and related monitoring by existing institutions.

With commitments stemming from national policy demands adding to these obligations, it became extremely challenging for the existing institutional framework to respond without systematic and continual external assistance. Moreover, although ambitious and trying to address this new development stage, neither the 2007 ECS nor the 2008 NSDI for the period 2007-2013 were able to match the growing demands with available financial and human resources.

The current legal framework for monitoring activities is based on the 2002 Law on Environmental Protection, No. 8934 (amended in 2008) and is further enhanced by the new Law on Environmental Protection, No. 10431, adopted in June 2011. According to the 2008 amendment to the Law on Environmental Protection, environmental monitoring is mandatory and is to be performed in accordance with the National Monitoring Programme. The rules and procedures for drafting and implementing the National Monitoring Programme were adopted in 2009 through the DCM on Rules and Procedures for Drafting and Implementing the National Monitoring Programme, No. 1189. Furthermore, the establishment and related institutional structure of the Integrated Environmental Monitoring System (IEMS) are under preparation and are expected to be formalised shortly by a new DCM.[2] The areas as well as the parameters to be monitored will be subsequently regulated through secondary legislation.

Despite a favourable legal framework, an IEMS is not fully operational in Albania. The overall structure and main components of a monitoring system were outlined in the 2006-2008 EU-funded project, Strengthening of the Environmental Monitoring System in Albania (StEMA), where a nationwide, modern and cost-effective IEMS covering all environmental topics was designed. Nevertheless, priority for implementation was given only to air and water, for which partial developments have been achieved.

The IEMS was based on EU requirements and EEA recommendations for monitoring and reporting to ensure harmonization and comparability of data as the basis for future integration of the system at various levels. It also took into account the specific conditions of Albania and actual monitoring practices. Furthermore, Albania gained important practical experience in working with EEA and in being part of EIONET. However, the implementation of IEMS as designed by the StEMA project has proven to be slow and weak after the project completion due to the complexity of the monitoring system against the existing environmental status, the institutional framework for monitoring and economic constraints.

In order to accelerate the implementation of the proposed IEMS and to support MoEFWA and EFA in this task, a new EU/IPA (Instrument for Pre-Accession)-funded project was put in place building on StEMA project recommendations. This new project, Consolidation of the Environmental Monitoring System in Albania (CEMSA), was launched in 2010 and will run for three years. Among its expected outcomes are:

- Expansion of the existing databases for water, air and soil pollution and water uses;
- Establishment of monitoring stations nationwide, covering (a) spatial monitoring of pollution sources and (b) time trend monitoring of chemical and microbiological parameters, biological quality elements and biodiversity;

[2] The new decision is in preparation under the new EU project, Consolidation of the Environmental Monitoring System in Albania (CEMSA).

- Support for the formal establishment of thematic national reference centres (NRCs) following EU and EEA requirements (as part of EIONET);
- Provision of further equipment, training and manuals of procedures for monitoring activities;
- Support for the certification and accreditation process for the main institutions and laboratories.

*Current institutional framework*

The main feature of the current environmental monitoring landscape in Albania is fragmentation, with a mosaic of governmental bodies and specialized institutions involved in the process, with MoEFWA at the centre.

MoEFWA is appointed as the responsible authority for environmental monitoring in the country and, with the support of EFA, supervises the monitoring activities carried out by relevant institutes. At the same time, it is the main beneficiary and custodian of the monitoring data collected.

According to the provisions of the 2011 Law on Environmental Protection, EFA will become the competent authority for the management of the National Monitoring Network for the Environment, which includes all institutions performing environment-related monitoring tasks. Currently, the Agency has among its main tasks the collection, processing and dissemination to the public of information on monitoring data related to the environment and forestry. EFA is directly performing a number of monitoring tasks, as follows:

- Air quality in Tirana and Elbasan for six parameters: TSP, $PM_{10}$, Pb, $SO_2$, $NO_2$, $O_3$;
- Municipal wastewater discharges in surface waters for eight major cities;
- Hazardous substances in surface waters, currently taking place in 35 stations;
- The state of forests, forest biodiversity, biomonuments, aromatic–medicinal plants and wild fauna.

EFA is coordinating its monitoring activities with other specialized institutions.

A number of specialized institutions (some of them having modern monitoring equipment, regional networks and laboratories for analysis) have traditionally performed monitoring tasks and consequently acquired a high level of expertise in given environmental topics. These institutions belong hierarchically to various governmental bodies and academia and are contracted by MoEFWA on an annual basis as a result of a tendering process. One example is the IPH (under MoH) which has a good regional institutional network and monitors drinking and bathing waters, air quality and noise in some cities. Another is the Geological Survey of Albania (GSA) which traditionally monitors groundwater quality and, on an ad hoc basis, also monitors the quality of sea and coastal waters, and lakes. Other relevant structures with environmental monitoring activities include the Faculty of Natural Sciences and the Faculty of Agriculture and Environment at the University of Agriculture.

In an effort to strengthen the research capacity of various institutions, some new structures have emerged including the Centre for Flora and Fauna Research (CFFR), which provides the biodiversity inventory and monitoring services. The Centre brings together two former institutions, namely the Museum of Natural Sciences and the Botanical Garden.

A full picture of the institutions dealing with monitoring activities in 2011 is presented in table 3.1.

The annual basis of the tendering process for contracts to carry out monitoring activities makes the monitoring process and related data flows very unstable, making it difficult to implement improvements, and means that a proper mechanism for sharing, exchange and storage in well-established and managed databases is lacking. In 2011, 14 separate contracts were concluded by MoEFWA for performing monitoring tasks. As a consequence, in spite of its coordinating role, EFA does not have regular information flows in place from the various institutions performing monitoring tasks. The Agency is also recognized by law as primary user of the monitoring data for reporting and assessment tasks (such as drafting the SER, reporting to the Institute of Statistics (ISTAT) and EEA, etc.), so its competence is hampered by the present situation.

In practical terms, the Agency is facing difficulties (both human and financial) in properly performing all the tasks assigned to it. One possible solution would be to detach the monitoring tasks from EFA and focus the work of the Agency on coordinating the information flows from various monitoring institutions (as NRCs) and on using the information available for analysis, reporting and support for policy implementation.

In turn, the specialized institutions working for MoEFWA on annual contracts do not have the motivation to develop and maintain databases for storing the collected data, nor the possibility of putting in place systematic information flows to

regularly feed the needs of the Agency. This fragmented situation leads to the scattered delivery of monitoring data, with no quality control ensured in the various departments and units of MoEFWA or EFA.

At the moment there is no clear overview of what environmental data and information is available and where it is located. Such an overview is a top priority and one of the main tasks envisaged by the CEMSA project. With regard to the annual tendering of monitoring activities, standardized technical specifications prepared by MoEFWA with EFA support, and attached to the monitoring contracts, together with clear requirements of the contractors, could help in ensuring consistency and continuity in the monitoring process, even in the event of a change of contractor.

In parallel, it is foreseen that assistance will be given to the specialized institutes performing monitoring activities to become thematic national environment reference centres (NERCs) and create their thematic databases as part of the IEMS. A proposal for medium-term (a minimum of three years) contracting of NERCs is also under consideration.

Over time these institutions have acquired a high level of expertise in given environmental topics and their unique knowledge and experience will be difficult to transfer to another institution, and definitely not within a short time. This proposal, which will, hopefully, be formalised soon by a new decision on IEMS, will increase stability in the monitoring regime and provide continuity and increased responsibilities to various partners.

*Equipment and methodologies*

There has not been a sizeable improvement in environmental monitoring activities registered in recent years in spite of a number of dedicated assistance projects, supply of modern equipment and specialized capacity-building for the local experts.

Table 3.1 provides an overview by environmental topic of the parameters measured, the frequency and location of measurements, and the norms and standards on which the measurements are based.

Traditional partners continue to play an important role in monitoring environmental topics, having improved equipment and methodologies (e.g. IPH, University of Agriculture, GSA, Faculty of Natural Sciences, etc.). EFA has specific monitoring tasks for air, waste and lakes, alongside validation tasks (for water) and overall coordination and organization of monitoring activities. Some improvements can be observed in both the number of parameters measured and the frequency of sampling. For air quality, a number of automatic stations were provided under various international projects leading to an increased number of parameters monitored (e.g. CO, $PM_{2.5}$).

There is still no systematic monitoring for biodiversity and soil issues. Monitoring activities are mainly carried out within the framework of international projects (EU/EEA, UNDP) when they are available. No monitoring for municipal waste is yet in place – data are provided by a number of municipalities based on estimates. Finally, there is a mixed picture of the use of norms and standards for various thematic areas and parameters, ranging from EU or international ones (for air, biodiversity, water and wastewater) to national ones (for groundwater) or a lack of standards (for waste and soil).

In terms of air monitoring equipment, in recent years four fixed stations and one mobile station were provided under various projects (two stations under the EU/StEMA project in Elbasan and Tirana and two by WHO in Tirana). Of these stations, only the WHO ones have reported data since May 2010.

The monitoring equipment available is neither calibrated annually nor regularly serviced. Dedicated resources to ensure regular servicing and annual calibration need to be allocated as part of the EFA budget. Currently, the mobile monitoring station provided under the StEMA project is not functioning properly and consequently does not measure all the parameters required.

Under the framework of the CEMSA project four new automatic and semi-automatic stations were installed in October 2011 in four main cities (Durrës, Shkodra, Vlora and Korca), and the air database in EFA was developed. It is foreseen that some monitoring stations will be connected online with the central database where all information will be stored. For the rest, the monitoring of air quality is done manually and covers a few major cities.

EFA monitors urban discharges into the surface water through manual stations located around the biggest cities in the country. Sampling is organized on a cyclical basis with one city being monitored each week. The frequency of sampling and the parameters measured are in line with international requirements. All water data collected are stored in an Excel database in the Agency. The Agency also receives the groundwater monitoring data collected by GSA.

**Table 3.1: Measurements requested by the Ministry of Environment, Forests and Water Administration from other institutions, 2011**

| Subject | Institution | Measurements | Frequency | Place | Norms and standards |
|---|---|---|---|---|---|
| Groundwater | Geological Survey | Na+, K+, Ca2+, Mg2+, Fe2+, Fe3+, NH4+, HCO3-, CO3 2-, Cl-, SO4 2-, NO3-, NO2-, mineralization, hardness, dissolved oxygen, pH<br><br>Cu, Pb, Zn, Cr ,Cd,Ni,Mn,Co | Twice a year | 40 stations in 6 water basins<br><br>10 stations | STASH 3904-88(P.M.L)<br>E.C. 80/778 (P.M.L.) |
| Rivers | Geological Survey<br>(in process of designation by CEMSA project) | TOC, pH, alkalinity, dissolved oxygen, P-total, NO3-, NO2-, NH4+, BOD, COD. PO4, conductivity, flow | Six times a year | 30 stations in 6 basins | European Commission Directive CEE/CEEA/CE 78/659 on the quality of freshwater fish farming<br>Classification of quality natural freshwater by the Institute for Water Research Norway-NIVA |
| Urban discharges into rivers | Environment and Forestry Agency | TOC, pH, P-total, NO3-, NO2-, NH4 , BOD, COD, PO4, salinity, conductivity suspended matter, dissolved oxygen<br><br>Microbiological analyses (Faecal Coli, Faecal Streptococcus) | Four times a year<br><br>Four times a year | 35 stations in rivers near Tirana, Shkodër, Durrës, Fier, Lezhe, Elbasan, Sarandë, Vlorë | UNECE classification scheme<br>Directive 2000/60/EC limit values for chemical parameters in rivers<br>DCM No. 177 dated 31.03.2005 under European Community Directive on wastewater discharges (76/160/EEC) |
| The dynamics of the estuaries of rivers Drin, Mat, Erzen, Shkumbin, Seman and Vjose | Geological Survey | The quality of sea and coast (COD, NO3 and P-total)<br>• Movement of the coastline, erosion and accumulation<br>• Communication between the sea and lagoon<br>• The dynamics of the estuaries of rivers. | | 6 stations | |
| Lakes | Environment and Forestry Agency | TOC, pH, P-total, NO3, NO2, NH4, conduktivity, dissolved oxygen, transparency, oxygen saturation | Once a month | Lake Ohrid - 2 stations | No standards |
| | Geological Survey<br>(In process of designation by CEMSA project) | TOC, pH, P-total, NO3, NO2, NH4, conduktivity, dissolved oxygen, transparency, oxygen saturation | Four times a year | Lake Shkodra - 4 stations<br>Lake Prespa -1 station | No standards |
| Sea, coastal water, lagoons | Institute of Public Health | Microbiological analyses (Intestinal Enterococcos, Faecal Coli) | Once a month: April-May<br><br>Twice a month: June-September | 70 stations in the coastal area beaches | European Community Directive 2006/7/EC<br>WHO/NEP (Criteria and Standards for Bathing Waters in Mediterranean Countries (WHO/UNEP 2010)) |
| | Faculty of Natural Sciences Department of Biology | Chlorophyll-a, Chlorophyll-b, Chlorophyll-c, caratenoide<br>TOC, pH, P-total, BOD5, dissolved oxygen, transparency | | Lagoons - 8 stations<br>Lake Shkodra - 4 stations | Karlson trophic state index (TSI) and Håkanson criteria |
| Water for irrigation | Agricultural University of Tirana (Department of Agroenvironment and Ecology) | Hardness, alkalinity, acidity, pesticides, nitrogen, nitrate, TDS, conductivity, Na, K,Ca, Mg, Cl, SO4 | Twice a week: June-September | 6 stations in rivers<br>7 stations in reservoirs | |
| Air | Institute of Public Health | Suspended particulate matters (SPM), PM10, SO2, NO2, O3, Pb<br>PM10, PM2.5, PM1, SO2, NO2, O3, Pb, CO, benzen | 16 days a month<br>Automatic stations | Korça -1 station, Durrësi -1 station, Shkodra -1 station, Fier - 1 station, Vlora - 1 station,<br>Tirana - 2 stations | DCM No. 803 dated 4.12.2003, Air quality norms<br>BE norms |
| | Environment and Forestry Agency | PM10, SO2, NO2, O3, Pb, CO2, BTX | Automatic and semiautomatic stations | Tirana -2 stations,<br>Elbasan -2 stations | DCM No. 803 dated 4.12.2003, Air quality norms<br>BE norms |
| Elements in aerosols | Faculty of Natural Sciences. (Centre of Applied Nuclear Physics) | PM10, PM2.5, Pb, As, Mn, Cu, Zn, Cd | 3 months per year (25 days per month) | Tirana - 2 stations,<br>Korçe -2 stations | DCM No. 803 dated 4.12.2003, Air quality norms |
| Noise | Institute of Public Health | Noise day and night | 3 days/month<br>28 days/year<br>14 days/year<br>14 days/year<br>14 days/year<br>14 days/year<br>14 days/year<br>14 days/year | Tirana - 15 stations<br>Durrësi - 6 stations<br>Shkodra - 4 stations<br>Fier - 4 stations<br>Vlora - 4 stations<br>Saranda - 4 stations<br>Korçe - 4 stations<br>Elbasan - 4 stations | Law No. 9774 dated 12.07.2007 |
| Urban waste | Environment and Forestry Agency | The data collected by the municipalities in amounts ton/year and ton/inhabitants | | | |
| Soil erosion | Agricultural University of Tirana, (Department of Agroenvironment and Ecology ) | Soil losses from erosion<br>Soil erosion on river banks, and solid deposits during floods<br><br>Quality and quantity: salt of nitrogen, potassium, phosphorus and sodium flow, mineralization, suspended matter | Every year | 4 stations<br>Shkumbin and Vjose<br><br>Drin, Mati, Shkumbin, Seman and Vjosë Rivers | |
| Biodiversity | Museum of Natural Sciences | Monitoring of fauna (molluscs, insects, amphibians, reptiles, birds and mammals) | | Lagoons / 6 coastal stations | No standards |
| | Faculty of Natural Sciences. National Centre for Flora and Fauna | Vegetation associations, rare and endangered species, alien species, anthropogenic stress on indicator plants | | Park area of the Alps and Velipoja | |
| Monitoring of radioactivity | Institute of Geological Sciences | Radon-222 in drinking water, land and air in building interiors | Three times a year<br><br>Once a year<br><br>Three times a year | Korçe - 4 stations<br>Kruje<br><br>Himare, Konispol - 2 stations<br><br>Tirana, Korçe, Kruje, Himare, Konispol - 92 stations | |
| Monitoring of fish stocks in marine waters | | Determination of quantity and biometric measurements of fish terminal | Once a year | 3 stations in the ports of Durrës, Vlora and Shengjin | |

*Source*: Ministry of Environment, Forests and Water Administration, 2011.

**Photo 3.1: Laguna Karavastasa**

The institutional structures created at regional level (12 REAs, and six river basin authorities) have practically no monitoring capability (when assigned), their budgets and human resources being more symbolic than operational. Furthermore, basic testing equipment for checking the situation in the field or for taking samples is lacking. IPH operates at the local level through its regional network for monitoring both air quality and drinking water. Sampling is done manually and the frequency is within normal requirements, although with limited parameters in comparison with the automatic stations.

No clear cooperation links exist (in particular at the local level) between, for example, the REAs, the local health inspectorates, the food and agriculture inspectorate, GSA offices, etc. for working together, sharing expertise and equipment or performing joint inspection tasks. On the contrary, their relationships sometimes tend to become competitive.

Self-monitoring by enterprises, although anticipated in law, is hardly ever carried out. The REAs do not have the necessary resources and equipment to check such activities and assess compliance.

Since the regional environmental landscape is populated by several regional structures (belonging to MoEFWA, MoH, GSA, MoAFCP, etc.) with various monitoring abilities, a future partnership, formalised by law (e.g. association, merger, agreement for cooperation), could be beneficial in order to enhance both human and equipment-related capabilities and increase regional influence in relation to local enterprises, local authorities and other public organizations. Although associated within one structure, environment and forestry activities are currently disconnected within the REAs. A joint work plan (encompassing both environment and forestry), shared budgets and team cooperation on monitoring and inspection tasks would counteract the current lack of resources and increase the overall position and role of each agency at the local level.

*Procedures, intercalibration and accreditation*

The 2011 Law on Environmental Protection makes specific reference to the role of accredited laboratories in performing measurements and tests following standardized procedures (article 53). Concrete steps in this direction have been made for water issues; in fact, in May 2011, the EFA National Reference Laboratory (NRL) became the first accredited laboratory for water, initially covering seven parameters. Training is currently taking place for staff in the laboratory to perform analysis of heavy metals, as part of a programme under the Programme for the Assessment and Control of Pollution in the Mediterranean region (MED POL), with the prospect of increasing the number of

parameters checked. The laboratory is well equipped but suffers from a lack of sufficient human resources to perform all the tasks required for a reference laboratory (two staff are currently working on all tasks).

No reference laboratory is yet established for air quality. Despite the air database being already installed in EFA, it is not used and no quality assurance or quality control (QA/QC) is performed. There is insufficient staff in the Agency to perform all air monitoring, data processing and reporting tasks to the Ministry and other organizations such as EEA (only two staff are currently available).

Well-equipped laboratories exist in other institutions working under contract to MoEFWA. The IPH air laboratory, for example, is a potential candidate to become an NRL for air, with responsibility for the calibration and maintenance of air data. One objective of the EU/CEMSA project is to support the accreditation process.

GSA is also in the process of accreditation. It is contracted to perform monitoring tasks for groundwater[3] and has a well-equipped laboratory for undertaking analysis. GSA has good representation throughout the country, working through its local offices to take measurements in six river basins. It is expected that the CEMSA project will assist GSA in the accreditation process and in becoming an NRL for groundwater.

Under its Climate Change Programme, UNDP has designed an integrated monitoring system and implementation programme for the Drini–Mati river deltas in which several institutions are identified as key players and propose to work together in collecting and sharing relevant data on the ecosystems assessed. An important objective of the project is the consequent establishment of an integrated environmental network for this protected area, including NRLs for major environmental sectors and an associated body responsible for information, coordination and general management.

Accelerating the accreditation process; ensuring adequate budgets for calibration, spare parts and regular servicing of monitoring and analysis equipment; and ensuring sustainable human resources, are priorities to be considered. Most of the modern equipment and related services available for monitoring and analysis purposes was acquired through projects administered by donors. The long-term functioning and maintenance of such equipment need to be secured by national authorities (ministries, institutes and EFA).

*Data validity*

Data quality remains a key challenge for Albania across all thematic areas. As both human and financial resources available for sampling are limited, measurements are irregular, non-systematic and have high margins of error. In some cases, some parameters cannot be monitored at all due to the old equipment available; in other cases the norms and standards used are still not yet compatible with international standards. Where automatic stations have been installed and are functioning properly, the quality of data collected, frequency of measurement and number of parameters measured have substantially improved.

No databases except for air currently exist for the environmental topics monitored, and neither does a QA/QC system to certify the data collected in accordance with international standards. It is one of the objectives of the CEMSA project to establish an integrated database for air, water, soil and biodiversity. At present QA/QC of water data (for the parameters accredited) is undertaken by the newly established NRL for water within EFA. This is expected to be complemented by groundwater data from GSA once the accreditation of its laboratory is achieved.

Under the StEMA project a suite of Standard Operational Procedures (SOPs) was implemented through a series of workshops on QA/QC, field work and work in laboratories. This dedicated capacity-building of the Albanian institutions involved in monitoring aimed at improving data quality as a long-term foundation for a sustainable IEMS.

Over the past 15 years, Albania has been cooperating with EEA and EIONET[4] in various thematic areas such as air and climate change, water, biodiversity, land cover, etc. Hence, several Albanian institutions such as MoEFWA and, recently, EFA have benefited from technical assistance and the exchange of experience in the context of gradual compliance with EU requirements and other international obligations. The data delivered by Albania under the priority data flows were checked by dedicated European Topic Centres (ETCs) and included in European databases such as AirBase and WaterBase.

[3] Surface water is monitored on an ad hoc basis in the context of specific projects.

[4] EIONET Albania consists of all national institutions nominated to work with EEA, with EFA as the National Focal Point.

One of the problems affecting the quality, format and timeliness of data delivered is the fragmentation of the monitoring process. The various institutions carrying out monitoring activities as NRCs deliver the data to EFA or directly to EEA but, due to limited contractual arrangements, do not feel responsible for ensuring further data verification and validation, or do not have the time to do so. In practice, these annual contracts affect the continuity of data delivery and quality of data delivered, and hamper major progress in building capacity within the responsible national specialist institutions.

Under various EU funding instruments (PHARE, CARDS, and, currently, IPA), EIONET Albania has been invited to attend regular thematic workshops and training sessions organized annually by EEA to update its knowledge and broaden its expertise. Albania's overall participation over recent years is summarized in table 3.2 and figure 3.1 presents a breakdown of this participation by topic.

If MoEFWA and EIONET Albania make more targeted demands according to their specific needs in the area of data processing and validation, and increase their participation in EEA/ETC thematic events (Figure 3.1), it will assist in steering and better focusing the support EEA will continue to provide in the future.

A first emission inventory compliant with CORINAIR (Core Inventory Air Emissions) was completed under the StEMA project in 2007, along with a preliminary emission inventory for water. Under the CEMSA project these inventories are expected to be updated and extended, although there are severe data collection issues to be dealt with. The engagement of MoEFWA is essential in overcoming these difficulties. It is planned to develop a functional PRTR system – in which a number of pilot companies will be trained on reporting in compliance with the provisions of the PRTR Protocol to the Aarhus Convention and an IT system to be subsequently developed within EFA.

This activity will also translate into practice the provisions of article 31 of the 2011 Law on Environmental Protection which envisages that an "Environmental Pollutant Release and Transfer Register shall be administered by EFA. Furthermore each operator of activities shall record, update and report annually on the implementation of this article to the Environment and Forest Agency".

Another example of increased quality and validation of data collected is represented by the legal arrangements covering Albania's transboundary lakes, Ohrid, Prespa and Skhodra. All are monitored by all riparian countries with modern equipment, assisted by a large number of projects and initiatives.

Where transboundary environmental factors are measured according to the requirements of bilateral, regional or international agreements, validation of the data collected is complemented by an additional level of control by the specialized bodies supporting such arrangements.

An additional line of cooperation enhancing the quality of data collected will be the involvement of NGOs and the local population using local knowledge and expertise or project results. There is a substantial amount of expertise scattered throughout the community which is not sufficiently used or is simply overlooked at present. With local communities gaining an increasing role in the management of resources (such as forests as a result of restitution), it is expected that their role in validating or adding additional information to traditional measurement practices will not be neglected.

## 3.2 Data reporting and analysis, reliability of data and use of environmental indicators

*Information flows*

An environmental information management system (EIMS) still does not exist in Albania. In legal terms, the purpose, structure and functioning of the system is extensively developed in article 44 of the 2011 Law on Environmental Protection. EFA is the body responsible for administering the EIMS and it is the obligation of all public authorities to cooperate with EFA for the proper functioning of the system.

The Law also states that all tools, methodology and procedures for the exchange of information as the basis for the proper functioning of the system shall be endorsed by the Government, probably through secondary legislation. Another important provision relates to the content of the EIMS, which must cover data and information on environmental status, pressures, environmental impacts and public responses – in fact the entire DPSIR chain.

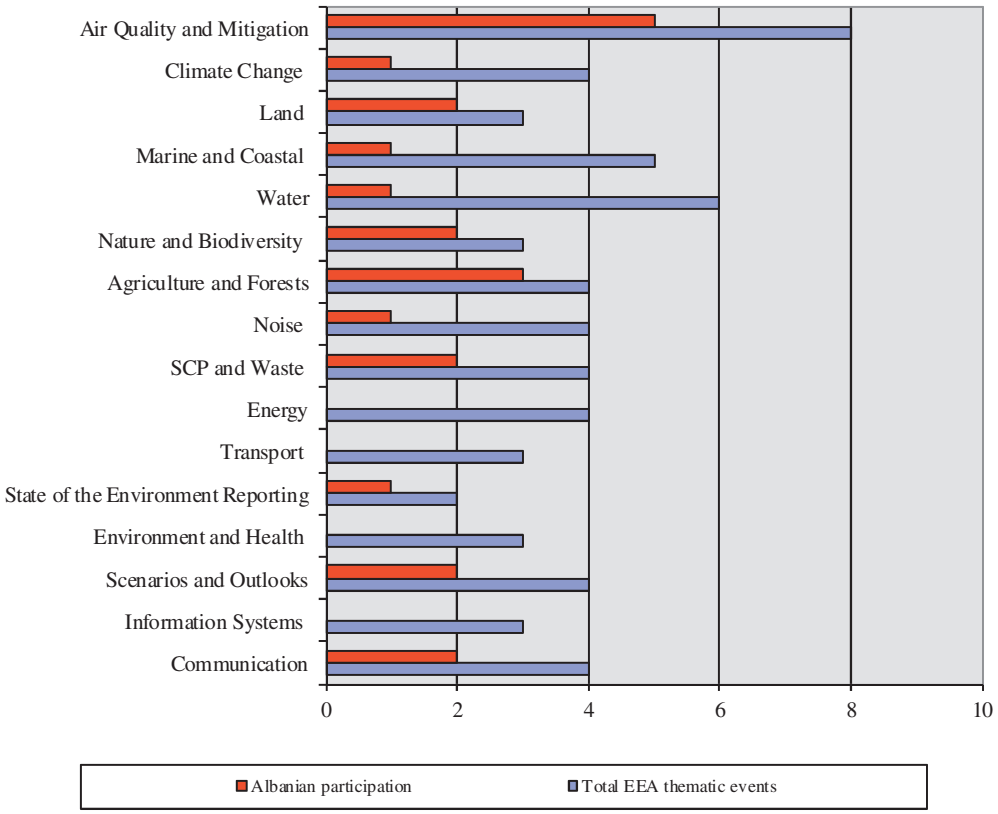
For data on forestry and protected areas, a project is in place to support the creation of a dedicated database with a GIS interface. For air and water, two databases are already developed and are currently in a fine-tuning phase. It is expected that an integrated database also including soil and biodiversity will be built by the end of the CEMSA project.

**Table 3.2: Albanian participation in EEA/ETC thematic events**

| | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|
| Total EEA/ETCs thematic events per year | 18 | 16 | 12 | 18 |
| Albanian participation (%) | 55 | 6 | 33 | 44 |

*Source:* European Environment Agency, 2011.

**Figure 3.1: Albanian participation in EEA/ETC thematic events by topics, 2008-2011**




*Source:* European Environment Agency, 2011.

**Box 3.1: Towards a Shared Environmental Information System (SEIS)**

Environmental information generated by sectors goes directly to the specific ministry, i.e. health data to MoH and soil data to MoAFCP. MoPWTT reports annually on urban waste for cities and the information provided is based on estimates. Environment-relevant data collected by line ministries (agriculture, transport, health, etc.) are provided to MoEFWA only upon request. No environment units exist in the sector ministries to ensure proper cooperation and coordination of the work and set up regular data flows to feed reporting or policy needs. At most there is a liaison person with environmental cooperation tasks in the sector ministries, but the position is rather low in the hierarchy and consequently the level of cooperation is limited. A first Memorandum of Understanding for air data and information exchange, developed under the CEMSA project, has been signed between EFA and IPH to fill the legal gap until the new decision on environmental monitoring is adopted and enforced. Strengthening cooperation and formalising regular data exchange between the line ministries and MoEFWA will be an important step towards implementing an IEMS in practice as the basis for the gradual development of an SEIS in the country.

According to article 8 (sections i and k) of the 2004 Law on Official Statistics, No. 9180, MoEFWA, through EFA, is the main source for environmental data. EFA reports data to INSTAT at various intervals depending on the contracts in place for data collection. But environmental statistics are still in their infancy in Albania, the current focus being on economic and social aspects. Current statistical data covers, amongst other things, water quality of rivers, soil erosion, forest ownership and investments, species of wild fauna and protected areas.

Currently, data collected by various institutions working under contract to MoEFWA are delivered to various departments in the Ministry or, in some cases, to the Agency. EFA processes data received using Excel or Word. No standardized templates or formats are used. No comprehensive overview of the data collected and available exists, either in MoEFWA or the Agency. The only well-established

formats for data delivery are those set in place by EEA or required under international reporting obligations such as the United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Long-range Transboundary Air Pollution (CLRTAP). Albania has been participating in annual EEA priority data flows for several years and this cooperation proved beneficial in improving and standardizing reporting procedures, the use of the Central Data Repository (CDR) for delivery and storage, and the training of national experts in this field.

Albania's contribution to the EEA priority data flows varied between 17 per cent in 2003 and 53 per cent in 2010, when the highest performance was achieved. EFA is the National Focal Point in relation to EEA activities and is in charge of reporting and data delivery to EEA. For air, Albania initiated reporting to EEA in 2010. The reported data for 2009 and the associated metadata may have to be revised at a future date because of the current lack of a reference laboratory and procedures. Nevertheless, active participation in the data flow is providing EFA staff with practical experience and they can see their data in an international context. With similar limitations, water data have been reported to EEA over the past seven years and are recorded in WaterBase for international comparisons and gradual compliance with EU reporting requirements.

With the current levels of delivery, Albania still occupies a modest place in the EIONET country ranking (Figure 3.2).

*Environmental indicators and state-of-the-environment reporting*

The development of environmental indicators is progressing well, especially under various international frameworks such as cooperation with EEA or under the UNECE Joint Task Force on Environmental Indicators. Several CARDS and IPA projects supported cooperation between the Western Balkans region (which includes Albania) and EEA, and subsequently UNECE, in gradually developing and producing a number of environmental indicators as defined in the EEA core set of indicators. Although not all the indicators are yet underpinned by available data and consequently not able to be produced, a lot of expertise has already been acquired in this area. The use of such indicators to meet national needs, or development of indicators to serve national policy needs, are still in the early stages. Most of the activities such as the indicator work are still driven by external demand or external funding and not primarily by national demand. Use of the indicators in the preparation of a national SER will be the first logical use of such an instrument for policy needs. Regular updating of a limited number of environment-related indicators, preferably using the EFA or MoEFWA website, will facilitate the preparation of SERs and give both the public and politicians clear messages on the current situation and the effectiveness of the measures taken.

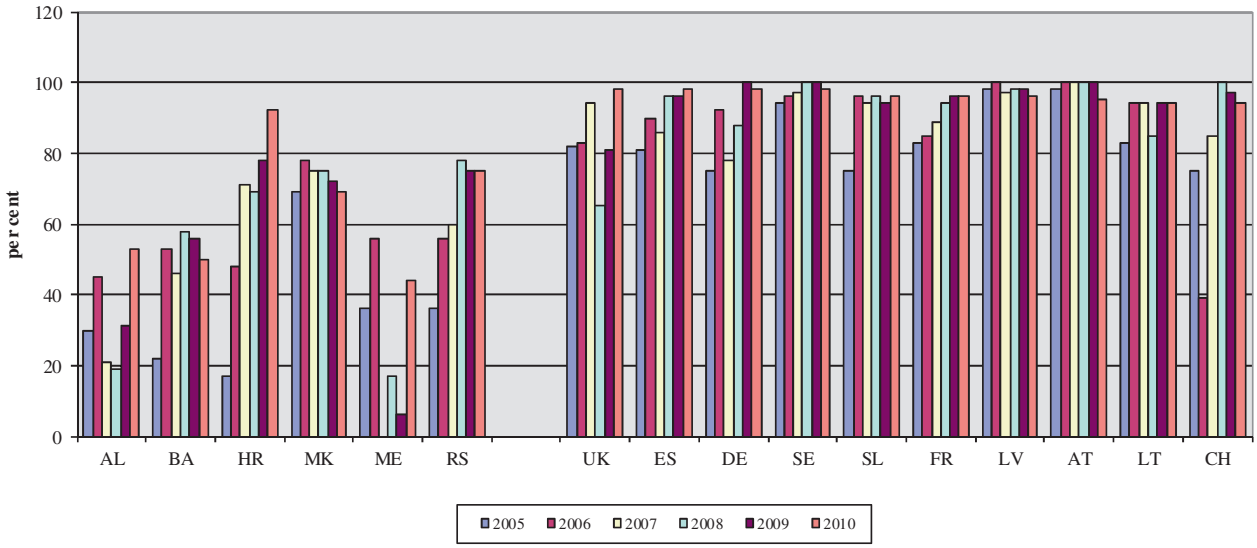
The preparation and publication of SERs in Albania is the responsibility of EFA, as regulated through the 2006 DMC No. 579 establishing the Agency. Within the structure of EFA, the Directorate for Environment was set up with responsibilities for environmental data and information, and elaboration and publication of monitoring results.

The national SER has to be prepared every year according to the provisions of Albanian law. EFA has prepared SERs for 2005-2007, 2008 and 2009. They are available on both the EFA and MoEFWA websites in Albanian, and for 2005-2007 in both Albanian and English.

The national SER covers main environmental themes (water, air, forestry). There are no chapters dedicated to economic sectors or their impact on the environment. Neither is there a cross-sectorial analysis. The DPSIR framework for analysis is not systematically applied, the focus being on describing the current state of the environment. Consequently, the report is mainly a description of the current situation rather than an analysis of the entire DPSIR chain, having limited relevance and input to the policymaking process. No stakeholder consultation is organized during the preparation of the report and no effectiveness evaluation on its use made at the end of each reporting cycle. Consequently, no progress can be seen in terms of increasing its relevance and use in the policy process. No executive summary of the SER has ever been produced, to ensure accessibility for the general public or ease of use by decision-making bodies. Since the SERs are for the most part available only in Albanian, to increase their accessibility to outside users an executive summary for each report might be published in both Albanian and English.

A less frequent exercise leading to the production of a comprehensive SER every three to four years which provides an integrated assessment along the entire DPSIR chain, might be an option to be considered. This would increase its policy relevance and valuable resources will be saved for performing other assessment tasks in the Agency.

**Figure 3.2: Albanian data reporting performance versus Western Balkans and Top 10 EEA member countries, by percentage**




*Source:* EIONET data flow progress report, EEA, 2011.
http://www.eea.europa.eu/publications/eionet-priority-data-flows-may-2

A complementary solution would be to produce only an indicator-based report each year, presenting main trends and the reasons for them. The work carried out by EFA in cooperation with EEA in the development and gradual update of a core set of indicators for EEA member and cooperating countries (Albania being in the latter group), as well as the regular production and update by EEA of sectoral indicators (agriculture, transport, energy), would represent a good basis for the gradual development of an indicator-based reporting mechanism.

Among EFA's reporting tasks, the Agency's contribution to the preparation of the EEA The European Environment – State and Outlook Report (SOER) every five years is also foreseen. Until now, Albania has participated in two such exercises, namely SOER 2005 and SOER 2010.

Within the context of SOER 2010, all EEA member and cooperating countries agreed to produce a "Part C: Country assessment" on various environmental topics. Thus, Albania contributed with sections on air pollution, climate change, freshwater and waste. The report is based on the DPSIR framework, which is a common assessment methodology.

## 3.3 Awareness-raising and access to environmental information

*Legal framework*

In Albania, public information on environmental issues is a constitutional right as referred to in article 56 of the 2002 Law on Environmental Protection that recognizes that "Everyone has the right to be informed on the status of the environment and its protection". The 2011 Law on Environmental Protection reconfirms this right in article 46 on the right to receive and/or use environmental information. In addition, Albania is one of the pioneers of the Aarhus Convention, having made a substantial contribution throughout its preparation process and been one of the first countries to ratify it in 2001.

In recent years, the legal landscape reconfirming this right to information has been gradually expanded to cover different information media, such as the internet. The 2005 Prime Minister's Order on Improving Transparency through an Increased Use of the Internet and Improvement of Existing Websites, No. 202, was issued to improve the transparency of the work carried out by public institutions through increased use of the internet and improvement of existing websites. Immediately afterwards, all administrative bodies were obligated to publish the contact details of the person or structure dealing with information issues and the deadlines for providing responses. The Order also lists the fundamental documents which must be available on each official website without any prior request from the public.

In institutional terms, the obligation to provide access to information covers the entire Institutional Network Serving the Environment established by the environmental law in 2002. It covers MoEFWA, EFA, the REAs, EI and all other bodies established and endorsed by the Council of Ministers to be in charge of important environmental issues.

With the 2008 amendment to the 2002 Law on Environmental Protection, No. 9890, the 12 REAs must compile and submit to their respective regional council bi-annual reports on the state of the environment in the region, and also make the report available to the public.

In line with the provisions of the 2004 DCM No. 24, all environmental inspectorates must display in their premises their annual implementation plans for public access. Furthermore, they also have obligations (under paragraph 16) to disclose the inspection reports carried out at companies in possession of an environmental permit, and publish the findings and any sanctions imposed.

Based on the 2005 Prime Minister's Order No. 202, the sector ministries are also obligated to make available on their websites for public access any environmental information they possess. Local authorities also have environmental information and in big municipalities their public access could be ensured via their websites.

*Access to information*

One of the most dynamic areas in Albania's recent development relates to the 2010 Albania National Report on progress towards achieving Millennium Development Goals (MDGs), namely, "the investment in information and communication technology (ICT)".

Technological development also facilitated good progress on access to environmental information, in spite of limited budgets and human resources available for this purpose. Environmental information is currently provided by the state bodies charged with environmental responsibilities, the Aarhus Information Centres (AICs) established under the framework of the Aarhus Convention and other organizations.

As the main information provider, MoEFWA has established a Division for Public Information and Information Technology, which provides a number of services, such as:

- Passive dissemination of environmental information – by answering questions from interested members of the public and receiving visitors requesting environmental information. In doing so, the Division interacts with specialized thematic units in the Ministry and there is good cooperation established in this respect;
- Active dissemination of information – mainly via the Ministry's website but also through a monthly electronic newsletter. No information, links or guidance are available on the website, however, leading to the environmental network of institutions at national and regional levels which also provide environmental information. Consequently, it is extremely difficult to identify and gain access to all environmental information available in the country. Adding all relevant links to the MoEFWA website will increase its role and functionality and facilitate easy access and navigation for the public at large. The online monthly environmental newsletter sent to more than 700 addresses (projects, NGOs, the business community) is an excellent solution in view of the budgetary limitations of the Ministry.

EFA is an important player in the dissemination of environmental information and raising public awareness. As its main communication tool, EFA has a dedicated website. However, it is neither sufficiently developed in terms of content nor regularly updated. EFA drafts and publishes the annual SER which is available electronically on both the Ministry and Agency websites, along with a limited number of paper copies.

The three AICs based in Vlora, Shkodra and Tirana were set up within the framework of the Memorandum of Cooperation in the Field of Environmental Information and Implementation of the Aarhus Convention in Albania, between MoEFWA and the Organization for Security and Cooperation in Europe (OSCE) office in Albania, signed in July 2006. The AIC in Tirana is located in the Ministry as part of the Public Information and Information Technology Division. The public receives information via publications produced by the AICs (whose dedicated website is at: http://www.aic.gov.al) or through local media outlets. The centres are also involved in the training of local authority staff, raising their awareness and helping them to comply with the obligations under the Convention. The AICs' advisory boards bring together various stakeholders such as local and central authorities, environmental NGOs and interested members of the public. In 2010, a World Bank project on Strengthening Implementation of the Aarhus Convention was launched with the aim of linking the Ministry's Public Information and Information Technology Division, the Tirana AIC and REC Albania into a network able to ensure real-time exchange of information.

NGOs are also playing an increasing role in

facilitating public access to environmental information. An example is provided by Ecolëvizja (EcoMovement), a local network of environmental NGOs which publishes a weekly newspaper accessible online.

The environmental media in Albania are still in the early stages of development. There are very few newspapers (mainly in Tirana) which dedicate limited editions to environmental topics. Recent examples have related to "greening the local elections" or to environment- and health-related issues which have proved to be of high public interest. Environmental journalism is still driven by the "hot topics of the day" rather than trying to systematically raise awareness on various environmental problems the country is facing. Capacity-building and training of journalists in environmental matters is an important activity to be considered by MoEFWA, MoH and their local branches. This could be advanced by eventually organizing monthly thematic dialogues, question-and-answer sessions, press conferences and launches of key reports.

*Environmental education and education for sustainable development*

The formal education system in Albania is currently subject to massive reform. In this context a number of projects were and are still being implemented to improve the school curriculum from primary right through to tertiary level. Manuals and teaching materials for both students and teachers have been produced addressing different education levels and covering topics such as water, air, soil, etc.

A Memorandum of Cooperation between UNICEF, the Netherlands, and Albania's Ministry of Education and Science (MoES) and MoEFWA was signed in 2005, establishing the formal basis for the introduction of environmental education in the national curriculum. The first project within this framework addressing the secondary school level was facilitated by the Netherlands and implemented with the support of REC Albania.

The project partnership with UNICEF addressed the elementary level, primarily through a number of selected pilot schools across the country in which theoretical aspects of teaching were complemented by concrete practical activities. UNICEF also launched small grant projects to encourage the implementation of various environment-related activities in schools (e.g. ecogardens, collection, separation and re-use of paper and glass, etc.).

As part of the reform, students at various levels have been given the option to select topics of interest for study alongside the compulsory part of the curriculum. The environment is gradually becoming one of the subjects for study and in the coming years it has considerable potential to grow at all levels of education.

Future projects envisage the certification of "green schools", in which local government will have responsibilities to support and assist the school and provide financial support in the form of microgrants for the sustainability of the process.

In 2005, all UNECE Member States (including Albania) adopted the UNECE Strategy on Education for Sustainable Development (ESD) in order to promote ESD in the region. The Strategy is a practical instrument to incorporate key themes of sustainable development into the region's education systems. As first steps towards transposing the Strategy into the national context, Albania designated a National Focal Point for implementation of ESD and adopted the National Strategy and Action Plan for ESD. At the same time, an inter-agency coordination mechanism for ESD was established.

Steps towards the practical implementation of the ESD strategy were made with the support of international donors and international organizations. One example is the Green Pack initiative, building on the experience acquired in other countries of the UNECE region. The initiative was launched in Albania in 2003 as part of the UN Decade on Education for Sustainable Development and was implemented by Regional Environmental Center for Central and Eastern Europe (REC) with the support of REC Albania. In 2006, REC Albania prepared a teachers' handbook which contains lesson plans on 22 environmental topics, including information specific to Albania, structured to provide users with information on each theme as well as the lesson's objectives and methodology.

Since early 2007, the Green Pack has been used in secondary schools throughout the country. According to REC monitoring, supported by REC and teachers' feedback, the Green Pack is being used by teachers of different subjects in approximately 1,500 secondary schools throughout the country, reaching 2,000 teachers and 100,000 students in each academic year.

In the context of ESD Strategy implementation, a National Conference on Sustainable Development focusing on environmental education was held in November 2011. It was jointly organized by MoES, the National Agency for Education and Vocational

Training and Qualifications, and KulturKontakt Austria. For 2012, with a view to fulfilling the ESD Strategy obligations, REC Albania also plans to organize an annual conference for teachers and specialists on environmental education and the needs of national education in the context of the Strategy.

The Programme of Cooperation between the Albanian Government and UNDP for the period 2012-2016 foresees support for the expansion of the environmental education curricula and activities in schools. Programme objectives include to increase the capacity to mainstream environment into national policy frameworks, ensure participation and expansion of ESD in schools and implement public awareness of environmental issues.

Informal (adult) environmental education is practically non-existent in Albania.

An existing programme, Education for All, has the potential to assist people to acquire environmental knowledge. The programme mainly provides short training courses to companies, small enterprises and entrepreneurs interested in becoming familiar with environmental requirements as part of an economic activity. The courses are provided by MoES and MoLSAEA. A systematic, long-term adult education programme on the environment would be useful to raise local awareness (in particular in rural communities) of the importance of protecting and sustainably using natural resources, and on the benefits of such environmentally friendly practices such as as ecotourism and ecoagriculture.

*NGOs and public participation in decision-making*

In recent years, progress has been made in engaging the public in environmental issues at both national and local levels. A typical form of public participation is public consultation on draft legislation. MoEFWA regularly publishes new draft laws for public consultation on its website, and organizes regular meetings with interested members of the public and NGOs in order to discuss the new laws. A number of drafts for consultation are currently available on the MoEFWA website but the parameters and deadlines for commenting, and how comments will be handled, are not clear. Furthermore, the webpage is not regularly updated (the most recent entries are from 2010) making the actual status of consultation for various processes unclear for the public.

On several occasions, policy papers have been prepared by NGOs, discussed and agreed by a number of interested organizations and jointly addressed to MoEFWA for consideration. The exercise has proved positive and in some cases has led to the development of future legislation or regulations. There has also been progress in including NGOs in the decision-making process. One good example is the NGO involvement in the development of the new environmental legislation such as the 2011 Law on Environmental Protection.

At the local level the NGOs' presence is modest and patchy in contrast with their potential role in raising the awareness of local communities and supporting them in addressing specific local problems. REC Albania plays an important role in the national NGO landscape with various projects implemented in the area of environmental education, access to information, public awareness and support at the local level, including support to local NGOs.

Some small steps in improving public participation, especially in local government work, have been achieved through the support of World Bank. A two-year pilot project was initiated in 2004 with the Urban Research Institute to strengthen citizens' participation in local governance, specifically in budget formulation, execution and monitoring and in helping build a dialogue between citizens and their local governments.

Improving public participation in decision-making process throughout the entire policy cycle from framing, development and implementation to evaluation remains one of the key challenges in Albania and a priority for the coming period.

After the mushrooming of NGOs since 1991, their number has significantly reduced in recent years and they are mainly concentrated in big cities, especially in Tirana. The activity of environmental NGOs in Albania is strongly dependent on donors since no funding is received from the Government. Countries such as Austria, the Netherlands, Sweden and Switzerland which traditionally support the work of NGOs and REC are winding down their contributions, making the long-term perspective beyond 2015 extremely uncertain. This also affects the cooperation among NGOs, which is weakening due to the continuous struggle for funding. From a legal point of view, the establishment of NGOs is also becoming more difficult since certain financial requirements have to be met prior to registration (currently there is no distinction made by law (2001 Law No. 8788) between the financial conditions required to be met for the establishment of an economic and a non-economic activity (e.g an NGO) as long as they are labelled "non-profit").

Most of the NGOs' achievements or their impact remain unclear and their financial situation is not very transparent. Efforts to launch a code of ethics for NGOs have not materialised yet. Only a limited number of NGOs publish annual reports and are transparent about their financial situation, and the few available websites of NGOs are not regularly updated and do not contain this information. Efforts are made through projects to build capacities at NGO level. In this context, TACSO (Technical Assistance for Civil Society Organizations) Albania, with EU support, is organizing capacity-building courses for NGOs covering, e.g. media-related issues, cooperation between NGOs and local government, legal and financial issues, taxation issues). Capacity-building manuals for NGOs have also been developed by TACSO and REC with international support (from EU, World Bank and the Netherlands).

Cooperation between major environmental NGOs and MoEFWA has gradually developed on the basis of memoranda of cooperation. In June 2002, a Memorandum of Cooperation was signed between the former Ministry of Environment and most active environmental NGOs (42 NGOs at the time). In 2011, a new Memorandum of Understanding was prepared by MoEFWA to be concluded with the NGO Ecolëvizja and is now in the process of signature. Ekolëvizja is a network of 37 environmental NGOs with different profiles, covering the whole territory of Albania. The Ministry is currently drafting memoranda of cooperation to be concluded with other relevant environmental organizations.

*Access to justice*

Article 81 of the Law on Environmental Protection guarantees individuals and organizations the right to bring cases before a court of law. More specifically, "In case of a threat to, or damage or pollution of the environment, individuals, the general public and non-profit organizations are entitled to: (a) the right to make an administrative complaint, (b) start legal proceedings in a court of law".

In reality, there is still a low level of public access to justice on environmental matters in Albania. For instance, the national report on compliance with the Aarhus Convention shows a lower level of implementation of the third pillar compared with the other two. In practice, there are very few cases of NGOs having initiated administrative proceedings or addressed the People's Advocate[5] or a court of law on an environment-related issue.

In 2007, two environmental network organizations, Ekolëvizja and Në emër të jetës (In the Name of Life), lodged an administrative complaint against the harmful effects of the illegal burning of urban waste at the waste disposal field in Sharrë, Tirana. Following the provisions of the 2003 Law on the Environmental Administration of Solid Waste, No. 9010, EI issued a decision imposing a fine of 1,000,000 lek (approximately €8,000) on the perpetrator.

The People's Advocate recorded 35-40 environment-related reviews or appeals lodged between 2000 and 2005. The applications covered issues related to the high impact on communities of water pollution, emission of gases into the air, noise, electromagnetic pollution, etc. Cases included those concerning pollution caused by the cement factory in Fushë-Krujë, arsenic residues in Fier, and the urban waste processing plant in Shëngjin. In 2008, only three of nine environment-related complaints fell under the competence of the People's Advocate and were resolved in favour of the claimants.

Only one case was brought before a court of law in 2004. The legal action was taken by the Society for Organic Farming against the Ministry of Agriculture, Food and Consumer Protection, the Ministry of Environment, Forests and Water Administration and the International Fertilizer Development Center (IFDC) programme and concerned the introduction of genetically modified products as animal fodder. The court proceedings were stopped on 15 September 2004 on the grounds of the unclear legal status of IFDC in Albania.

There were also cases brought to the Compliance Committee of the Aarhus Convention, for example the case related to the construction of a power station in the city of Vlora in Southern Albania. Aleanca e Vlorës (Vlora Alliance), an environmental movement bringing together a considerable number of Albanian NGOs, lodged a complaint against the decision of the Albanian Government (2002-2003) to build a power station in the Bay of Vlora and to use 550 ha of land as a site for a new energy and industrial park. According to the Vlora Alliance, the decision-making

[5] The People's Advocate Institution safeguards the rights, freedoms and lawful interests of individuals from unlawful or improper actions or failures to act of public administration bodies and the third parties acting on their behalf. Its duty is to prevent conflicts between the public administration and the individual.

process had not taken into account the mandatory procedures of public consultation. Based on the recommendations received from the Compliance Committee, the Albanian Government (through MoEFWA) developed an action plan for the proper implementation of the second pillar of the Convention. Furthermore, the 2008 DCM on Public Participation in the Environmental Decision-making, No. 994, was supported by the 2009 Instruction of the MoEFWA on the Duty of Environmental Bodies to Ensure the Participation of the Public and Environmental NGOs in the Process of Environmental Impact Assessment, No. 1.

### 3.4 Conclusions and recommendations

An IEMS is gradually being developed within the framework of evolving and increasingly enabling legal provisions. Currently, monitoring activities are carried out by governmental bodies and institutions on the basis of annual contracts with MoEFWA. This short-term contracting mechanism makes the monitoring process fragmented and the related data flows unstable. Data quality control is usually not performed, data quality being constrained by limited human and financial resources as well as by the unavailability of modern equipment for monitoring and analysis.

Additionally, there is no information system for sharing, exchange and storage of information and data. However, some progress has been made in the establishment of an SEIS, especially through long-term cooperation with EEA which has led to, among other things, increased standardization of data reporting procedures, capacity-building and the development of an EIONET network encompassing several NRCs.

There are no cooperation mechanisms between MOEFWA and sectoral ministries involved in monitoring, and no units dedicated to environment exist within such ministries. This negatively affects coordination and the regular feeding of reporting requirements and policy needs. The situation is even more critical at the local level where monitoring capacities are scarce. In addition, the regional offices dealing with health, environment and agriculture may tend to become competitive rather than cooperative, leading to institutional tensions. The accreditation of NRLs has started but the process is very slow, with a single NRL – for water – being currently accredited.

*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.*

*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.*

*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.*

The development of environmental indicators is progressing well, especially under various international frameworks such as cooperation with EEA and under the UNECE Joint Task Force on Environmental Indicators. However, the regular updating and use of such indicators for national needs, or further development of indicators to serve national policy needs, are still in the early stages.

The national SER has to be prepared every year according to the provisions of Albanian law. The structure and approach are rather traditional, the report being mainly a description of the current situation rather than an analysis of the entire DPSIR chain.

*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.*

The technological development recorded in recent years facilitated good progress in the field of access to environmentalinformation, in spite of limited budgets and human resources available for this purpose. Environmental information is currently provided by the State structures charged with environmental responsibilities, the AICs and other organizations.

Progress was registered in engaging the public in environmental issues at both national and local levels, in particular, through consultation on draft legislation. However, the involvement of NGOs (and the public at large) during the practical implementation of legislation remains weak.

*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.*

The entire education system in Albania is subject to massive reform. In this context, a number of projects have been implemented to improve the school curriculum at all levels. In contrast, adult education on the environment is practically non-existent in Albania. The level of awareness of the general public is relatively low and in rural areas the situation is even more critical.

Adult education on environmental matters is a top priority in the context of privatization and the restitution of natural resources to communities and citizens. Increased responsibility in the protection and sustainable use of natural resources can be achieved only through a systematic long-term education plan elaborated by MoEFWA and implemented at various levels with the participation of all stakeholders. The development of environmental journalism could be an additional instrument in supporting this objective.

*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.*

# Chapter 4

# IMPLEMENTATION OF INTERNATIONAL AGREEMENTS AND COMMITMENTS

## 4.1 Main developments since the first Environmental Performance Review

The first EPR of 2002 revealed a rapid expansion of Albania's international obligations in the 1990s. The turn of the century marked a change in this context, most factors being beneficial to a further strengthening of international relations.

In particular, the perspective of EU integration has contributed to Albania's progress in implementing international commitments.

Since 2002, several bilateral environmental agreements and memoranda of understanding have been signed. Bilateral cooperation with neighbouring countries on environmental protection and management of transboundary waters has been significantly strengthened.

Following the EPR's recommendation, the 2007 Environmental Cross-cutting Strategy (ECS) outlined, *inter alia*, the environmental priorities for international cooperation.

Having demonstrated a strong commitment to environmental protection in the international context, the Government has been quite proficient in the adoption of policies and legislation but much less convincing in fulfilling its international obligations in practical terms. MoEFWA's capacity for implementing international commitments remains insufficient. Inter-institutional cooperation and coordination still needs improvement.

International partners and donors have provided significant support over the review period to the point of becoming a predominant source of environmental expenditure. For instance, in 2007-2008, external funding accounted for more than 50 per cent of public investments in the environmental sector (Chapter 5).

The Government made efforts to ensure that the Official Development Assistance (ODA) received by the country was administered in an effective manner.

## 4.2 Framework for international cooperation on environment

The framework for Albania's international cooperation on environmental matters has been evolving, mostly positively, over the reviewed period. It has been driven by several contextual factors of which the perspective of integration into the EU has been the strongest. The convergence with the EU *acquis* is one of the main drivers for adopting high environmental standards and ensuring compliance with MEAs.

*Policy framework*

The Government defines the process of European integration as an absolute priority of its development strategy, foreign policy and domestic reforms. In addition, this process is a key driver of environmental policies. A new European partnership with Albania was adopted by the Council of the European Union in 2008. Environmental priorities contained in this sgreement call, *inter alia*, for implementation of MEAs to which Albania is a Party.

The following short-term priorities concerning the environmental sector were included in the Partnership:

- Strengthen administrative capacity and coordination at national and local levels;
- Fully implement legislation on EIA;
- Adopt a further strategy to approximate environmental legislation with the acquis and implement existing legislation properly, especially as regards enforcement;
- Continue to address environmental hotspots at the Sharra solid waste landfill and the Patos–Marinez oil extraction area;
- Further develop and implement the national water and sanitation strategy and the rural strategy for water supply and sewerage, and develop and start implementing a strategy for progressive approximation to the acquis in the area of water supply and sanitation;
- Implement international conventions on nature protection to which Albania is party.

**Photo 4.1: Minaret in Kruja**

As concerns medium-term priorities, the Partnership requires Albania to:

- Establish a full inventory of hotspots and continue efforts to address hotspots already identified;
- Reduce pollution produced by the Balsh refinery, including discharges into the River Gjanica, and take measures to tackle water pollution in general;
- Strengthen environmental monitoring and ensure sufficiently dissuasive sanctions against polluters;
- Continue to implement regional and international environmental commitments.

While outlining the priorities for international cooperation, neither the NSDI nor the ECS have particular chapters devoted to MEAs. However, the country's international obligations are occasionally mentioned in different parts of both documents in relation to matters considered of both national and global importance. In addition, the Strategic Action Plan on Cross-cutting Capacity Issues for Global Environmental Management was produced in 2006 as a result of a national capacity self-assessment exercise. The Action Plan was accompanied by a pertinent analysis of capacity constraints, needs and priorities for the implementation of the three Rio conventions on biodiversity, climate change and desertification. Thus, despite the absence of a formal strategy on international environmental cooperation, this theme is integrated into existing policy papers. This is judged sufficient for conveying the priorities of international environmental cooperation to governmental institutions and other relevant parties.

*Legal framework*

Any ratified international agreement becomes an integral part of the national legal framework after publication in the Official Journal. An international agreement that has been ratified by law prevails over the other laws that might be in conflict with that international agreement.

Albania has put in place a system that requires analysis and consultation among Government agencies in relation to the implementation of the

national legislation transposing MEAs. The focus of this process is to clarify financial implications for the Government. Besides a fiscal impact assessment, explanatory statements that accompany draft laws are supposed to contain an assessment of social and economic impacts related to its implementation, as well as an analysis of priorities and potential problems in implementing the draft law, and implementation capacity issues. In consequence, although regulatory impact analysis (RIA) has not yet been officially introduced into the Albanian legislative system, some elements of such analysis should be carried out in conjunction with explanatory statements preparation. There is no evidence, however, that such statements were developed for MEAs ratified by Albania. A World Bank-financed project is currently assisting the Government in realizing the 2007 Action Plan on Regulatory Reform, including the systematic use of RIA.

*Institutional framework*

MoEFWA has remained the principal authority responsible for the implementation of Albania's environmental commitments. The Directorate of Integration and Projects within MoEFWA has the overall responsibility for international cooperation. MoEFWA experts responsible for relevant environmental areas, e.g. biodiversity, chemicals and climate change, are the focal points for international agreements. Several focal points stay, however, with the public health, agriculture and maritime transport authorities.

MoEFWA has undergone several reorganizations and its staff dealing with environmental issues has almost doubled. However, given the widened scope of environmental authorities' activities, it remains questionable whether real capacity for managing the country's international obligations on environment has increased.

In terms of international environmental cooperation, MoEFWA shares responsibility with MoFA, which has the authority to initiate the ratification of MEAs, as well as the Ministry of European Integration, which is responsible for coordinating and monitoring measures for the implementation of the requirements of the SAA and the Instrument for Pre-Accession Assistance (IPA). All ministries have European integration units and IPA coordinators.

Donor coordination is of great importance in the preparation of programme assistance. The Government is involved in the process of donor coordination through the Integrated Planning System (IPS), a mechanism aiming to reform the way public funds (both domestic and foreign) are managed. The IPS was approved by the Government in 2005 and deploys a strategic framework, ensuring that Albanian core policy and financial processes function in a coherent, efficient and integrated manner.

The Government established DSDC in 2005. It has the twofold objective of ensuring that the Government's strategic planning and budgeting processes are coherent and effectively managed, and that external assistance is targeted towards national priorities. By coordinating foreign aid to Albania, DSDC provides a one-stop-shop for donors with respect to strategic matters related to external assistance. As such, it is responsible for organizing major coordination activities such as the Government–donor roundtables and the IPS Support Group. DSDC participates in negotiations lead by the Ministry of European Integration on IPA programming. In cooperation with donors and line ministries, DSDC has established 10 sector working groups, including the Sector Working Group on Environment. The purpose of their work is to ensure that external assistance is effectively coordinated and supports sector strategy aims. In addition, donor meetings are regularly convened to coordinate future plans. DSDC has established strong communication and cooperation channels with European integration units that operate in all ministries, contributing in this way to the improvement of intra-Government coherence.

In order to improve the system of donor-financed project monitoring, DSDC, in cooperation with the Donor Technical Secretariat, established and maintains a database with general data on each project, including the donors and beneficiaries, amounts committed and disbursed, correlation with Government's strategic areas, thematic and geographic scope, and implementation periods. The focus is on ongoing projects, though information on completed projects is also available, dating back to 1994. No information on project outputs or outcomes, or even project web pages, is available so far. Most of the information from the database is disclosed to the general public through the DSCD's website. While offering the possibility of a global picture of various projects, this database does not yet enable users to understand the actual impact of donor aid on development.

In the environmental sector, several coordination platforms have been active since the first EPR. In the period between 2003 and 2007, the Cross-sector Committee for NEAP (National Environmental Action Plan) Implementation coordinated the activities of different ministries and institutions with

responsibilities in the area of the environment. The Committee ceased to exist with the approval of the ECS in 2007. To integrate environmental issues into ministerial documents in a coherent and permanent manner, and to build upon the ECS, the Inter-ministerial Environment Committee was recently established by MoEFWA with support from the One UN Programme. A number of other platforms have been established to address MEA implementation, e.g. the National Council for Nature and Biodiversity under the CBD and the National Coordination Board for land desertification or degradation under the UN Convention to Combat Desertification (UNCCD). Many of these platforms ceased to function after a few meetings.

One of the possible roots of weak cooperation is limited information and knowledge, at national, regional and local levels, of the scope of and obligations deriving from most MEAs. Occasional communication with regional and local authorities on environmental matters leads to conflicts, e.g. in the National Council for Territorial Adjustment. These reflect disagreements between MoEFWA, which is aiming to extend the natural protected areas, and the local authorities interested in tourism development in the coastal zone. Local administrations participate sporadically in the implementation of specific MEAs through developing local action plans.

## 4.3 Environment-related partnerships

*Cooperation platforms with the EU*

The former Regional Environmental Reconstruction Programme for South-East Europe (REReP) initiative had been providing an important cooperation platform for the countries in South-Eastern Europe (SEE), bringing them together and facilitating interaction with the international financial institutions (IFIs), the EC, the EU Member States and other bilateral donors. Between 2000 and 2008, projects worth nearly €55 million have been implemented in the region under its umbrella. Major REReP accomplishments have included the drafting and implementation of environmental legislation, the strengthening of environmental institutions and efforts to address priority environmental problems. Albania benefited from and participated in a range of activities under REReP including institution-building, cross-border cooperation, civil society-building, and biodiversity and health protection. Work under REReP directly related to MEAs included the so-called AIMS project (Support to the Acceptance and Implementation of Multilateral Environmental Agreements in South-Eastern Europe, 2001-2004). The outputs under this project included country assessments on acceptance and implementation of MEAs, the establishment of regional networks, and capacity-building workshops and meetings. Ultimately, this contributed to the ratification of new MEAs by SEE countries and to their better implementation.

At the end of 2009, the REReP programme was transformed into a new mechanism, the Regional Environmental Network for Accession (RENA). Cooperation between countries through RENA is focused on priority areas for approximation to the EU environmental and climate *acquis*. The project activities are implemented through several working groups. Working Group 3, Cross-border Cooperation and Multilateral Environmental Agreements, aims to increase capacity and strengthen cooperation on issues of transboundary importance, specifically on nature protection, water management and MEAs. A gap assessment of draft legislation related to the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention), the Aarhus Convention and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal is planned within this framework. MoEFWA participated in the meetings of the RENA Working Groups in 2010 and 2011.

*Partnerships to improve the management of shared natural resources and ecosystems*

Albania's transboundary bilateral and trilateral cooperation is primarily focused on the integrated management and conservation of transboundary natural resources and ecosystems. Important progress has been made on the protection of transboundary lakes shared with neighbouring countries, such as lakes Ohrid, Prespa and Shkoder.

The Joint Commission on Boundary Waters with Greece was created in accordance with the 2003 agreement between the Governments of Albania and Greece to create an Albanian–Greek permanent commission on boundary freshwaters. The joint commission discusses common issues arising from boundary waters and issues of energy, irrigation, pollution, environmental elements.

Cooperation between Albania and the former Yugoslav Republic of Macedonia on Lake Ohrid was formalized through the Agreement for the Protection and Sustainable Development of Lake Ohrid and its Watershed in 2004. The Lake Ohrid Watershed Committee was established in 2005. The Agreement for the Protection and Sustainable Development of the Lake Shkoder was signed in 2008 by Albania and Montenegro. It serves, *inter alia*, as the legal

instrument for the implementation of the joint Strategic Action Plan regarding the lake. The Lake Shkoder Commission was established in 2009.

A successful example of cooperation in the region is the Transboundary Prespa Park, launched in 2000. The Prespa Park Coordination Committee includes the Government, local society and NGO participation from the three countries – Albania, the former Yugoslav Republic of Macedonia and Greece, as well as a MedWet/Ramsar[6] observer, and promotes joint water management. Even if, in this case, the effectiveness of cooperation is hampered by the lack of a trilateral agreement with binding provisions and clearly stated obligations for the three states concerned, informal arrangements can also produce results.

Work coordinated by the Committee (acting as a non-legal entity) has led to the joint preparation of a strategic action plan, adopted in 2004. An official agreement on the Protection and Sustainable Development of the Prespa Park was signed by the Environment Ministers of the three countries and the EU Environment Commissioner in 2010.

Many challenges in cross-border cooperation still exist with regard to the management of the Drini River basin that covers a geographical area including Albania, Greece, Montenegro, the former Yugoslav Republic of Macedonia, and Kosovo (UN-administered region, Security Council resolution 1244). The Drini River basin is being managed through different and often inconsistent national management approaches, resulting in degradation of natural values as well as considerable pollution.

Recently, UNECE and the Global Water Partnership Mediterranean have engaged ministries with responsibilities for water management, joint bodies and other stakeholders in a structured and open consultation process to improve cooperation and joint management of the extended Drini River basin, using the platform of the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes and the Petersberg Phase II[7]/Athens Declaration Process[8]. On the Albanian side the key stakeholder is MoEFWA. The Shared Strategic Vision includes specific objectives in the short, medium and long term and institutes the Drin Core Group with representation from all riparian authorities to manage its implementation.

Another example of the Albanian participation in subregional cooperation is the Dinaric Arc Initiative. The Initiative aims to establish a network of protected areas and support the conservation of biological diversity and the sustainable management of resources in SEE. It promotes collaboration among the countries of the region as well as local community development. Subregional meetings have already taken place with support from the Environment and Security Initiative (ENVSEC) and UNEP in order to initiate discussion and facilitate future consultations on the potential for establishing a regional network of protected areas in the Balkans/Dinaric Arc region.

Other transboundary projects include connecting the protected areas of Korabi Protected Landscape in Albania, Mavrovo National Park and the planned Šar Planina National Park in the former Yugoslav Republic of Macedonia, and Mali Sharr National Park in Serbia, as well as strengthening cross-border cooperation and establishing a large international park in the region of Bjeshket e Namuna/Prokletije (Albania, Montenegro and Serbia). The project Cross-border Cooperation through Environmental Planning and Investment assisted stakeholders from the cross-border area Debar and Peshkopia in Albania in addressing common environmental problems. Through training and workshops, local governments and utility experts from across the border region were supported to develop the skills needed to identify and prepare environmental investment projects for financing.

*Other partnerships*

Bilateral and trilateral environmental agreements and memoranda of understanding have been signed with Croatia, the Czech Republic, Denmark, Greece, Italy, Montenegro, Spain, Sweden, the former Yugoslav Republic of Macedonia, and Kosovo (UN-administered region, Security Council resolution 1244). Cross-border cooperation also takes place under programme component II of IPA, which includes environmental aspects.

[6] Ramsar Convention on Wetlands of International Importance, especially Waterfowl Habitat

[7] The Petersberg Process, concerns also cooperation on the management of transboundary waters. The Petersberg Process – Phase II is intended to provide support to translate into action the current developments and opportunities for future cooperation on transboundary river, lake and groundwater management in SEE.

[8] The "Athens Declaration" concerning Shared Water, Shared Future and Shared Knowledge provides a framework for a long-term process to support cooperative activities for the management of shared water resources in the SEE and Mediterranean regions.

Cooperation on civil protection is an important aspect of subregional environmental cooperation. Both Albanian law on civil emergencies and the national civil emergency plan include provisions for international cooperation. The nature of this cooperation includes professional capacity-building, the training of personnel and exchange of experts, the establishment of regional centres for the preparation and development of assistance operations, and data harmonization. The Civil Emergency Service has signed cooperation agreements with the Civil Protection Department of Italy and the Fire-fighting Service of Greece, and similar agreements are underway with other countries such as Austria, Croatia, Montenegro and the former Yugoslav Republic of Macedonia.

Environment and Security Initiative

ENVSEC is working towards improving regional cooperation for the management of risk from pollution hotspots. Since 2006, ENVSEC partners have focused on programmes and projects contributing to reducing environmental and security risks from mining in SEE by providing in-depth risk assessments for decision-makers, identifying potential hotspots and recommending priority measures for mitigation and risk management at national and regional levels. The ongoing project Management and Reduction of Transboundary Risks from Hazardous Activities aims at prevention and mitigation of transboundary environmental risks arising from hazardous pollution hotspots. Remediation work implemented with support from UNEP and UNDP in the project framework resulted in improved safety at two non-active mining sites in Reps and Rrëshen in Albania.

Another project, Ensuring Public Participation in Environmental Impact Assessments in Albania, led by OSCE, supported the Government of Albania in complying more fully with its obligations under the Aarhus and Espoo conventions.

## 4.4 Multilateral environmental agreements

*Biodiversity protection and nature conservation*

Albania is a party to main MEAs related to biodiversity and nature conservation. MoEFWA is the designated competent authority for most of these agreements. Focal points for all biodiversity-related MEAs are within the MoEFWA's Directorate of Biodiversity. This contributes to more coherent management of biodiversity-related MEAs and to building synergies among them. The country participates in the conferences and meetings of the Parties and regularly prepares national implementation reports. The national legal framework incorporates most of the obligations deriving from the ratified MEAs.

MoEFWA has prepared four national reports to the Convention on Biological Diversity (CBD). The NBSAP was approved in 2000. It remains the main policy document on nature and biodiversity protection, covering the period 2000-2015. Many of its recommendations have been implemented, notably the increase in protected areas coverage and modernization of the legal framework. However, implementation needs considerable improvement. Illegal logging and hunting and unauthorized construction in nature reserves remain significant concerns. An effective monitoring and information system has yet to be developed. In line with the CBD's Strategic Plan for Biodiversity for the period 2011-2020, Albania intends to revise and update the NBSAP. Future plans for fulfilling the Convention's obligations, as identified by the country's last national report to CBD, include: (i) increasing protected areas coverage to 17 per cent in 2013, (ii) developing and implementing management plans for protected areas and action plans for globally threatened and endemic species, (iii) implementing new legal provisions concerning biodiversity monitoring, (iv) implementing the Emerald network of the Areas of Special Conservation Interest (ASCIs) in preparation for Natura 2000. These are going to be challenging tasks given the considerable amount of financing required.

In 2004, Albania adhered to the Cartagena Protocol on Biosafety to the CBD and is taking first steps in creating a functional legal and institutional framework for its implementation. Within the UNEP/Global Environmental Facility (GEF) project Development of a National Biosafety Framework for Albania for the period 2005-2008, an interim national report on the implementation of the Cartagena Protocol was prepared in 2005. The project also assisted in developing the draft law on biosafety to regulate the management of genetically modified organisms (GMOs) and to define preventive measures to reduce potentially adverse effects, which can occur during their use, intentional exposure in the environment and introduction into the market. The National Plan for the Implementation of the SAA defines GMO management as a priority area. The Government has assigned competent authorities on GMO management: MoAFCP for crops, foodstuffs and marketing; MoEFWA for introduction into the environment; MoH for micro-organisms in sealed containers and impact on human health; and MoES

for biotechnology development. All ministries shall cooperate with the General Directorate of Customs to ensure implementation of the Protocol's provisions on transboundary movements of GMOs. Despite some progress, Albania has not prepared its first regular national report on the implementation of the Cartagena Protocol on Biosafety (due in 2007) and still needs to further improve and enact the draft law on biosafety.

Albania has been, and continues to be, a participant in regional initiatives related to the CBD, especially in the Pan-European Ecological Network (PEEN) and the Pan-European Biological and Landscape Diversity Strategy (PEBLDS). The country is developing its National Ecological Network as part of PEEN. Albania participated in a project carried out by the European Centre for Nature Conservation that produced an indicative map of PEEN for SEE identifying the core nature areas of European importance and existing and potential corridors between these areas. The implementation of Natura 2000 and the establishment of the National Ecological Network are of particular importance, as these will create conditions for the full achievement of international criteria, as well as the requirements of the relevant EU *acquis* concerning the protection of natural heritage and conservation of biological diversity. However, this process is in the early stages of implementation in Albania.

Albania is a party to the Ramsar Convention. Three sites are included in the Ramsar List: the Karavasta Lagoon, the Butrint wetland complex, and Lake Shkodra and the Buna River wetland complex. The latter two were designated in 2003 and 2006 respectively. The total area designated as wetlands of international importance is about 83,000 ha. In 2006, a strategy and action plan for wetland areas was produced. The responsible authority for coordination of activities regarding these sites is MoEFWA. The Ministry has prepared three national reports and several thematic reports to the Convention. Several international and regional projects concerning wetlands protection in the region have been implemented. The preparation of the national report to the eleventh Conference of Parties (COP 11) in 2012 is already underway.

In accordance with the provisions of the Bern Convention on the Conservation of European Wildlife and Natural Habitats, several projects that aim to establish the National Emerald Network in Albania were implemented between 2002 and 2008. The identification of Areas of Special Conservation Interest (ASCIs) was carried out and 25 potential Emerald sites covering an area of 17 per cent of the country's territory were identified and studied. This was an important enabling activity and mechanism for the establishment of a coherent European Natura 2000 network.

Regarding the Convention on the Conservation of Migratory Species of Wild Animals (CMS), MoEFWA prepared two national reports. Reporting for CMS has been irregular over the last decade; in particular, national reports to COP 7 (2002) and COP 9 (2008) were not submitted. Several international and regional projects concerning conservation of migratory species and their migration pathways have been implemented. Albania is also a Party to the Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), the Agreement on the Conservation of Populations of European Bats (EUROBATS) and the African–Eurasian Water Bird Agreement (AEWA). National implementation reports under EUROBATS were submitted in 2003 and 2006, and under AEWA in 2005.

Albania joined the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 2003 and designated responsible institutions required for the Convention's effective implementation, i.e. the Management Authority (MoEFWA), the Scientific Authority (the Museum of Natural Sciences) and the Enforcement Authority (the General Directorate of Customs). The country has regularly submitted national reports to the CITES Secretariat although there have been difficulties in preparing them due to human resources constraints and, sometimes, difficulties in obtaining data from the customs authorities. The main CITES requirements were transposed into national legislation by the 2008 Law on the Rules and Procedures governing International Trade of Endangered Species of Wild Fauna and Flora, No. 9867. To enable the Law's implementation, secondary legislation still has to be prepared. Capacity-building is also needed in order to be able to properly enforce CITES. This particularly concerns the training of customs officers. Technical assistance was provided to Albania within the framework of the EU Technical Assistance and Information Exchange Instrument (TAIEX) programme to assist with the implementation of CITES requirements, notably a training workshop in Tirana in 2008 in which experts from EU countries presented their experience to the staff of the General Directorate of Customs and the directorates of forestry services that are in charge of implementation of the law.

In 2000, Albania adhered to the Barcelona Convention on the Protection of the Mediterranean Sea against Pollution as well as to its six accompanying protocols, including the protocol concerning specially protected areas and biological diversity in the Mediterranean. In this context, in 2010 Albania designated its first marine protected area, namely the Karaburuni Peninsula–Sazani Island protected area. Protection of the marine environment is defined as an important priority for the future.

As a Party to UNCCD, Albania prepared a national action programme in 2006, although it is not clear whether it was ever adopted. Two national reports have been submitted to UNCCD, the latest one dating back to 2006. MoEFWA has been designated as the competent authority for the implementation of the Convention, in close cooperation with MoAFCP and related institutions. The National Coordination Board set up by the Government in 2002 to coordinate the activity of responsible institutions on combating land degradation has not been active in implementing the strategies based on UNCCD obligations. Most of the constraints related to UNCCD implementation stem from the fact that land desertification and degradation are not considered a priority. The lack of a long-term strategy and policies for soil conservation and land use planning, as well as poor implementation of existing strategies and plans, goes hand in hand with a tortuous legal framework on land administration and protection institutions. Competent authorities require training, equipment and guidance to achieve better cooperation.

*Climate change*

Albania is a (non-Annex I) Party to UNFCCC and the Kyoto Protocol. So far, two national communications on climate change have been prepared (in 2002 and 2009). Preparations are currently underway to develop the third. Albania has prepared greenhouse gas (GHG) inventories for the years 1990-2000. The country plans to include a GHG inventory for 2001-2010 in its third National Communication. Albania has no GHG emission limit or reduction target.

MoEFWA is the key governmental body responsible for coordinating the implementation of provisions deriving from UNFCCC and the Kyoto Protocol, as the National Focal Point for UNFCCC and the Designated National Authority (DNA) for the Clean Development Mechanism (CDM). A climate change office was established in the Ministry of Environment in 1998. A Steering Committee has also been established to oversee all projects and activities within the framework of UNFCCC including high-level participants representing all major governmental stakeholders. However, there was no follow-up on these initiatives. At present, only one staff member is covering climate change issues within the Sector of Air, Noises and Chemicals at MoEFWA. Administrative capacity, as well as technical and financial resources for aligning with and implementing climate change policy and legislation, are poor, as is climate change awareness at all levels.

Albania does not have a national climate change strategy to address mitigation and adaptation challenges. Nevertheless, the climate change issue has been integrated into several strategic documents: the NSDI for the period 2007-2013, the ECS, and the 2009 Policy Paper for Carbon Finance.

Since 2009, Albania has aligned itself with the Copenhagen Accord[9], reporting actions and mitigation measures for climate change in the second National Communication on Climate Change. The country has participated actively in regional cooperation on climate change, including under RENA. As part of regional cooperation, in 2010 Albania signed the Joint Declaration for the Establishment of a Mediterranean Initiative for Climate Change, initiated by the Greek Government.

Albania ratified the Kyoto Protocol to UNFCCC in 2004 and is eligible for the application of one of the Protocol's mechanisms, i.e. the CDM. The country has formulated the main objective of maximizing the development of Albania's potential in the CDM and in carbon finance. The UNDP Climate Change Programme is supporting the DNA and, in this context, procedures for the review and approval of proposed CDM project activities in Albania were recently designed and approved. Memoranda of understanding and agreements for carbon funding have been signed with the Governments of Italy and Denmark. A portfolio of 11 CDM projects was identified under the Memorandum of Understanding with Italy and feasibility studies were launched. Other CDM-related agreements were concluded with the World Bank Bio-Carbon Fund and the Austrian Technical Cooperation Agency.

The Government faces diverse barriers to the effective and substantial participation of local actors in the carbon market. These include: (i) the lack of national financing capacity and low attention paid by foreign investors, (ii) a general lack of capacity to

[9] The Conference of the Parties to the UNFCCC, at its fifteenth session, took note of the Copenhagen Accord of 18 December 2009 by way of decision 2/CP.15.

deal with CDM projects, including technical capacity for project formulation, institutional capacity for international negotiations and managerial skills in carbon finance, (iii) low coordination between ministerial bodies in defining sectors of the economy that will be targeted for emissions reduction projects. One can add to these limited knowledge of the economic advantages of carbon finance and lack of national data for the estimation of baseline emissions.

*Vienna Convention for the Protection of the Ozone Layer*

Albania ratified the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer in 1999. A National Ozone Unit was established in 2003 and, by 2008, with financial support from the Multilateral Fund of the Montreal Protocol, the country had managed to phase out the ozone-depleting substances (ODS) covered by Annexes A, B and E of the Montreal Protocol. Other obligations resulting from the Montreal Protocol, namely implementing a licensing, monitoring and reporting system on activities related to ODS, and prohibiting the production and importation of ODS-using equipment, have partially been fulfilled. In 2006 Albania adhered to the four amendments to the Montreal Protocol: the London Amendment, the Copenhagen Amendment, the Montreal Amendment, and the Beijing Amendment, which repeatedly strengthened the Montreal Protocol by both controlling additional ODS and advancing the date by which already controlled substances must be phased out.

The 2003 Country Programme for Phasing Out ODS has proposed several projects for the accelerated phase-out of ODS. All projects have been technically and financially supported by the Multilateral Fund of the Montreal Protocol through UNIDO as an implementing agency. During recent years, the main focus has been placed on the elimination of hydrofluorocarbon (HCFC) substances classified in Annex C Group I of the Montreal Protocol, in accordance with the Montreal Amendment to the Protocol. A national HCFC phase-out management plan has recently been prepared. The plan foresees the gradual reduction of HCFC import quotas starting from 2013, in accordance with Decision XIX/6 on adjustments to the Montreal Protocol with regard to Annex C, Group I substances for article 5 Parties.

The import of ODS, used equipment and new equipment are only allowed with a permit issued by MoEFWA, which maintains a registry of ODS imports, exports and consumption. Importing ODS included in Annex C, Group I is allowed only on the basis of annual quotas and only through customs facilities which have certified personnel and special equipment for detecting and identifying them. Albania has an appropriate licensing system for HCFCs. Import quotas and permits, price control through environmental taxes for HCFCs and HCFC-containing equipment, a ban on the import of HCFC-containing equipment, and new HCFC installations are stipulated in the 2010 DCM No. 290.

In the framework of the Montreal Protocol and the Country Programme for Phasing Out ODS, the National Action Plan designed to phase out HCFCs has been approved. Since the obligation to phase out CFCs has been realized, for the period 2010-2013 another indicator for monitoring will be introduced, maintaining the quota 120 tons of HCFCs unchanged until 2013 (under the Montreal Protocol). It is intended that the amount of 120 tons will be reduced by 10 per cent, to 108 tons, from 2013 to 2015. The long-term objective is to reduce it to 29 tons by 2040.

*Hazardous chemicals and waste management*

As of 1999, Albania is a Party to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. Albania ratified the Stockholm Convention on Persistent Organic Pollutants in 2004, and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade in 2010. The country recognizes the benefits of coordinating implementation of the three conventions, and has envisaged activities to integrate their implementation, e.g. by establishing a chemicals bureau. Institutional issues will have to be solved, first, to ensure building of synergies among the three conventions. For the moment, the National Focal Point for the Basel Convention is within MoEFWA, while the DNA for the Rotterdam Convention is shared between MoH and MoAFCP. Neither an official contact point nor a national focal point for the exchange of information has been nominated for the Stockholm Convention.

Albania has national legislation regulating the management of chemicals and dangerous substances. All types of waste (hazardous or not) that are the object of import, export and transboundary movements are subject to control and they require special permission from the Council of Ministers (for import) and permission from the Minister of the Environment (for export and transboundary movements). Albania restricts the export and transit of hazardous wastes and other wastes for final disposal and for recovery by the Ministry of

Environment 2003 Regulation on Procedures for Approving of Permit for Export of Waste and Permit for Transboundary Movements of Waste, No. 4. The import of hazardous wastes for final disposal and recovery is prohibited according to the 2003 DCM on Procedures for Import of Waste for Reuse, Recovery and Recycling Purposes, No. 806 (Chapter 7).

On chemicals, a draft decision has been prepared regarding bans and restrictions of production, placing on the market and use of certain dangerous substances, mixtures and articles, which partially transposes REACH. Two years after Albania's adherence to the Stockholm Convention, the Government adopted a national implementation plan for the reduction and elimination of persistent organic pollutants (POPs). During its preparation, an inventory of POPs in Albania was carried out. Supported by international bodies and bilateral donors, Albania has made progress in resolving some issues indicated in the Plan. Several projects have been implemented related to the removal of pesticide POPs (Chapter 8).

The DNAs for the Rotterdam Convention include MoH (for industrial chemicals) and MoAFCP (for pesticides) while the role of the Official Contact Point is played by the Ministry of Foreign Affairs (MoFA). Despite MoEFWA, it has appointed a focal point to deal with implementation issues. Prior to the ratification of the Convention several its requirements were incorporated into the national legislation, including the 2003 Law on Chemical Substances and Agents and the 2005 Law on Plant Protection Service. At present, neither import responses nor notifications are being submitted to the Convention Secretariat.

Within the framework of the Strategic Approach to International Chemical Management (SAICM), Albania is currently implementing the project "Strengthening of Capacities on SAICM Implementation", with support from the UN Institute of Training and Research. The project activities include: (i) preparing a National SAICM Capacity Assessment through updating the National Profile, (ii) legal and institutional strengthening (establishment of an inter-ministerial coordination mechanism on chemicals management), (iii) development of a national mechanism for information exchange and the National Chemicals Management Database.

The SAICM National Focal Point is within IPH. MoEFWA reported lack of capacity for dealing with chemicals issues, notably a lack of legal experts. The National Implementation Plan of SAA for the period 2009-2014 foresees the consolidation of the organizational structure of MoEFWA through inclusion of an expert in the chemicals field.

*Marine environment protection*

Marine resources and ecosystems are under increasing threat of degradation in Albania because of the development of infrastructure, fishing, shipping and tourism. Since the first EPR, Albania has been working to protect and preserve the marine environment and resources at both policy and legal levels, but also through the implementation of infrastructure improvements and clean-up activities in port zones.

The Convention on the Protection of the Mediterranean Sea from Pollution and most of its accompanying protocols, including the Protocol on Specially Protected Areas, were integrated into the national legal framework in 2000. Albania ratified the 2008 Integrated Coastal Zone Management (ICZM) Protocol in 2010. In July 2001, Albania ratified the 1996 Hazardous Wastes Protocol and the 1994 Offshore Protocol. Albania has recently joined the 2002 Emergency Protocol and designated competent national authorities responsible for prevention of, preparedness for and response to marine pollution. The National Contingency Plan for Emergency Cases on the Sea is being prepared to respond, *inter alia*, to accidental marine pollution. According to the 2007 national report to the Convention governing body, implementation strategies, action plans and programmes have been developed. Most of the Convention's requirements were transposed by the 2002 Law on Protection of Marine Environment from Pollution and Damage, No. 8905.

Furthermore, the 2002 Law on Protected Areas included a limited number of marine protected areas and defined the protection of marine environments as an important priority for the future. Karaburun (Vlore) was proclaimed the first marine national park in 2010. In conjunction with this initiative, analyses of marine areas have been conducted covering such aspects as their value in natural, historical, cultural, social and economic terms. The results lay the basis for establishing a network of marine areas.

Albania has ratified the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) and its annexes I/II and III-V. The country is also Party to the 2004 International Maritime Organization's International Convention for the Control and Management of Ships' Ballast Water and Sediments.

**Box 4.1: Coastal zone management plans**

The World Bank has financed coastal zone management plans for the northern and southern coastal regions, which are complementary with the UNEP/Mediterranean Action Plan (MAP) Coastal Area Management Programme (CAMP) for Albania. The World Bank is also implementing the Integrated Coastal Zone Management and Clean-Up Programme, the main goal of which is to protect Albanian coastal ecosystems, resources and cultural assets and to promote their sustainable development and management. The Southern Coastal Development Plan and Regulations prepared under the project were approved in the National Council for Territorial Adjustment in July 2008. Preparation of the plan is coupled with community-based investments, from which the first round of coastal village infrastructure investments is underway, including roads, sewerage facilities and cultural enhancement infrastructure. In addition, the World Bank has been implementing a GEF-financed project for Integrated Water and Ecosystem Management (US$ 5 million) which twinned with the European Investment Bank to support the development of three large sewerage treatment plants in coastal areas. The project closed with an unsatisfactory rating in December 2009, and the plants have yet to be completed owing to delays in Government counterpart financing.

Albania participates in the UNEP/MAP–GEF MedPartnership (Strategic Partnership for the Mediterranean Large Marine Ecosystem). The MedPartnership works through two lines of action: technical and policy support led by UNEP/MAP (Regional Project), and project financing led by the World Bank (Investment Fund/Sustainable Mediterranean Programme). The project is being implemented in close association with other relevant regional initiatives, such as the Horizon 2020 Initiative to depollute the Mediterranean, and the Integrated European Maritime Policy.

In line with these international obligations, the NSDI requires the country to protect the maritime environment through joint activities with the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) in Malta. The Sector Strategy of Transport for the period 2008-2013 stresses the need to protect the marine environment and coastal zones, and places emphasis on enforcement of the MARPOL 73/78 Convention. In addition, a number of pieces of legislation were amended in the period 2007-2009 in order to align national legislation with EU Regulation 1967/2006/EC concerning management measures for the sustainable exploitation of fishery resources in the Mediterranean Sea. There are no specific maritime agreements signed with neighbouring countries regarding fishing.

Several government agencies are involved in the implementation of marine MEAs. MoEFWA ensures the inspection and protection of marine waters. The Albanian Coast Guard is also an important player; pursuant to Article 5 of the 2002 Law on the Coast Guard it has the task "... of protecting the marine environment ... [and] to enforce legislation on pollution in the coastal and marine environment". Another body involved in the management of marine waters and coastal zones is MoPWTT.

## 4.5 UNECE multilateral environmental agreements

*Convention on Long-range Transboundary Air Pollution*

Albania ratified CLRTAP in 2005 and, since 2009, has ratified four of its eight protocols: the first Sulphur Protocol, the NOx Protocol, the second Sulphur Protocol and the Co-operative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) Protocol. The draft law on air protection, which is to replace the 2002 Law on Protection of Air from Pollution, transposes parts of EU measures related to air protection, specifically provisions of the Directive 2008/50/EC on ambient air quality and cleaner air for Europe, including new air quality objectives for fine particles that are in line with the Gothenburg Protocol of CLRTAP.

MoEFWA is responsible for preparing inventories of pollutant emissions into the atmosphere from all activities for the purpose of implementing legal obligations. A partial inventory of gas emissions for 2004 was prepared within the StEMA project, according to the CORINAIR methodology and the Selected Nomenclature on Atmospheric Pollutants. The project did not succeed, however, in building sufficient capacity within MoEFWA and currently there is no qualified domestic expert team to update and follow up on the inventory prepared by StEMA. Thanks to support from the Italian Government, in 2011 an emission inventory was compiled for the year 2008 and available air emission data were submitted to EMEP. Funds for another inventory are also secured. The ongoing IPA Consolidation of the Environmental Monitoring System in Albania (CEMSA) project, which is assisting MoEFWA in building an operational Integrated Environmental Monitoring System (IEMS), would build sufficient capacity. One of the expected project outputs will be the establishment of an environmental database with quality-assured information produced by monitoring and inventories of major environmental compartments which, in turn, would facilitate regular

reporting on emissions according to international requirements.

Besides the CEMSA project, the Netherlands-funded Balkans Project aimed at assisting the Western Balkan countries in ratifying and implementing the CLRTAP protocols on Heavy Metals, on Persistent Organic Pollutants, and to Abate Acidification, Eutrophication and Ground-level Ozone. In April 2011, Albania finalized its National Action Plan for Ratification and Implementation of these protocols. The Plan is a strategic document outlining policy and legislative needs, in addition to technical requirements, providing the country with a step-by-step guide towards implementation and ratification. Albania is close to ratification of the three above protocols; this is expected to happen by end of 2012.

*Convention on the Protection and Use of Transboundary Watercourses and International Lakes*

Most of Albania's watercourses are transboundary. About one third of the catchment area of Albanian rivers is situated outside the national borders, making the country vulnerable to unilateral actions upstream. Albania shares its water resources with all neighbouring countries and is very interested in developing cooperation with its neighbours in order to protect transboundary waters.

The country ratified the Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes in 1994. While its efforts to improve cooperation on transboundary waters with its neighbours are substantial, Albania's participation in the activities under the Convention is rather weak, as illustrated by its poor contribution to the second Assessment of Transboundary Rivers, Lakes and Groundwaters prepared under the Convention from 2009 to 2011.

Albania has also been a Party to the Protocol on Water and Health since 2002 but its compliance with it is very low. In accordance with the Protocol, the country is under the obligation to set targets and target dates to improve the water and health situation but it has not yet complied with its obligation. Furthermore, the country did not report under the first reporting cycle in 2010.

*Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention)*

As a party to the Espoo Convention since 1991, Albania reports as having fully transposed the Convention's requirements into national legislation. Today, the key piece of law transposing the Convention is the 2007 Law on the Protection of the Environment from Transboundary Effects, No. 9700, which sets the responsibilities and procedures for the assessment of environmental impacts within the territory of Albania. The Law was complemented by the 2008 Government Decree on the Endorsement of the Rules and Procedures for the Assessment of the Activities and Projects with Major Adverse Effects in the Environment of the Neighbouring Countries, No. 1429, and by the 2008 Guidance on the Format for Notification of Neighbouring Countries about the Environmental Impact Assessment in a Transboundary Context, No. 5. The Decree foresees the right of the public from neighbouring countries to participate in the EIA of activities with a transborder impact. Detailed EIA procedures are set forth in the 2003 Law on Environmental Impact Assessment, No. 8990. A new Law on Environmental Impact Assessment, No. 10440, was approved in 2011.

Albania has also ratified the Strategic Environmental Assessment Protocol to the Espoo Convention, in 2005. Specific requirements have been included in national legislation to assess the environmental impact of plans and programmes. This was done prior to the Protocol's ratification, the requirement to conduct SEA being set forth in the 2002 Law on Environmental Protection and the 2003 Law on Strategic Environmental Assessment. The adoption of the 2009 Law on Territory Planning constitutes another major step forward by making SEA mandatory for sectoral policies and cross-sectoral planning. MoEFWA is currently transposing the corresponding Directive 42/2001/EC "On the assessment of the effects of certain plans and programmes on the environment" and has drafted a new law on SEA. In practical terms, there have been several instances in the past where consideration of the environment has been included in the development of industrial and energy policies. A strategic environmental assessment has been prepared for the area of Porto Romano and for certain free economic zones located in different regions of Albania.

The latest report on the status of the Espoo Convention implementation in Albania, covering the period 2003-2005, was submitted in February 2009, with revisions submitted in January 2010. Albania had been the only Party not to have returned a completed questionnaire on the Convention's implementation in that period, which resulted in written interventions by the Espoo Convention Implementation Committee seeking clarification of this matter. Albania was again the only Party not to

submit a completed questionnaire on implementation in 2006-2009, resulting in a decision by the Implementation Committee to begin a compliance procedure that will eventually lead to Committee findings and recommendations to the Convention's governing body, the Meeting of the Parties.

During the 2008 session of the Meeting of the Parties held in Bucharest, seven States signed a multilateral agreement among the SEE countries for implementation of the Espoo Convention (Bucharest Agreement). Albania was one of two States in the subregion that did not sign. The Bucharest Agreement has since entered into force for at least three States and is widely used in the subregion as a practical tool to support transboundary EIA procedures.

*Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention)*

The 2000 Law on Adherence to the Aarhus Convention, No. 8672, grants the Aarhus Convention the status of a binding normative act in Albania. Albania became party to the Kiev Protocol on Pollutant Release and Transfer Registers in 2009. Albania provides regular reporting on the Convention's implementation, the latest report being submitted in February 2011. In addition, Albania is actively engaged in regional and subregional activities under the Aarhus Convention and its Protocol.

A Strategy and Action Plan on the Implementation of the Aarhus Convention was approved by the Government in 2005. The National Focal Point is the head of the MoEFWA's Environmental Impact Assessment Department. In 2006, a national AIC was established by MoEFWA to provide information to government bodies, civil society and the general public regarding Aarhus Convention commitments. Two regional AICs in Shkodra and Vlora, established with the assistance of OSCE, are complementing the work of the national centre. The centres' website (www.aic.gov.al) performs the function of a clearinghouse. Due to lack of capacity, a national PRTR has yet to be compiled; the 2011 Law on Environmental Protection delegates the establishment of PRTRs to EFA.

In 2007, the Convention's Compliance Committee identified a number of issues that still needed to be addressed in Albania in order to fully transpose the Convention's requirements and ensure their implementation. These included the need to ensure early public participation in decision-making regarding activities and plans relating to the environment, when all options are open and effective public participation can take place; the need to ensure reasonable time frames for the different phases of environmental decision-making, allowing sufficient time for informing the public and for the public to prepare and participate effectively; and the need to ensure that in making a decision due account is taken of the outcome of public participation. The Committee also held that Albania needed to establish a clear, transparent and consistent framework to implement the provisions of the Convention in Albanian legislation, including a clearer and more effective scheme of responsibility within the governmental administration. In 2011, the Compliance Committee reviewed Albania's progress in implementing the Committee's recommendations during the period 2008-2011. The Committee noted with appreciation that Albania had seriously and actively engaged to follow its recommendations and considered that Albania was no longer in a state of non-compliance with its above obligations under the Convention.

*Convention on the Transboundary Effects of Industrial Accidents*

Albania ratified the Convention on the Transboundary Effects of Industrial Accidents in 1994. MoEFWA has submitted a report to the Convention Secretariat concerning the basic tasks related to the Convention's implementation. Albania's participation in the capacity-building activities conducted by the Convention's secretariat has been very sporadic. Since the first EPR, the national legislation regarding risks and industrial accidents has been complemented with a number of new laws and decisions aiming at prevention, preparedness and response to industrial accidents. A new draft law that fully transposes the requirements of the Convention and relevant EU legislation (Seveso II Directive) has recently been prepared. A working group has been established for this purpose at MoEFWA. At the same time, the General Directorate for Civil Emergencies of the Ministry of Interior (MoI) is working towards improving the existing legal framework, implementation of EU directives, and strengthening of capacities. In this regard, a draft law on civil protection from disasters has been prepared. The draft law will be accompanied by a strategy for civil protection from emergencies and disasters, which will define principles, the new legal basis and sectoral policy objectives, and will strengthen and modernize services for protection and disaster management, and compliance with analogue services of the EU.

National-level authorities dealing with issues related to industrial accidents include MoEFWA, MoI, MoLSAEO and MoETE. Inspections of industrial activities, including chemical facilities, are carried out by various inspectorates: EI, Central Technical Inspectorate, Mine Rescue Unit and State Labor Inspectorate (as the responsible body for labour security and workplace health). MoI's National Operational Centre for Civil Emergencies was established as the Point of Contact under the Convention for notification of neighbouring countries regarding accidents. The Centre is registered within the Industrial Accidents Notification System (IAN). It is not clear, however, whether a well-functioning mechanism to ensure the interaction of all the involved authorities is in place.

Albania did not sign the 2003 Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters. However, the 2011 Law on Environmental Protection contains a special chapter dealing with environmental liabilities, transposing the Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage as amended by Directive 2006/21/EC and Directive 2009/31/EC.

### 4.6 Millennium Development Goals and sustainable development

Following a 2003 Parliament resolution, the MDGs were integrated into the strategy on growth and poverty reduction known as the National Strategy for Socio-Economic Development (NSSED), which was the country's first comprehensive development strategy. In the process of adapting the global goals to Albania, a ninth national MDG emerged: good governance. Goals, targets and related indicators for Albania were identified by 2005. The MDG targets and indicators are also incorporated in the sector and cross-cutting strategies. The MDGs' adaptation to the national context also took account of the development priorities defined as part of European integration.

The process of the MDGs' "regionalization" and "localization" has resulted in the preparation of MDG Regional Reports (MDG-RR) and Regional Development Strategies (RDS). The very first MDG-RRs and RDSs have been prepared for the regions of Elbasan, Fier, Kukes, Shkoder and Berat. By the end of 2004, the remaining seven regions of Albania completed their MDG-RR or MDG-RDS formulation process.

Launched in 2004, the MDG monitoring and reporting process helps to renew the political commitments in this field. Within this process, several documents were prepared, including the 2004 Albania MDG Progress Report, the 2005 MDG Report, the 2005 National Human Development Report on Pro-Poor and Pro-Women Policies and Development in Albania, the 2008 Albania MDG Progress Report, and the 2010 Albania National MDG Report. These reports conclude that the country made good progress towards achieving its targets under MDG 7 on ensuring sustainable environment development.

UNDP assisted the Albanian Government to analyze trends related to each MDG and revise targets, where necessary. The 2007 assessment concluded that Albania was on the right track toward meeting MDGs and some of the targets could be reached before 2015. Other targets, however, were considered too ambitious. Based on these conclusions, in September 2008, DSDC organized an MDG revision process. The outcomes of this process were communicated through the 2008 Albania MDG Progress Report. The newly established targets reflect better Albania's aspiration to become an EU member.

Albania's participation in the Rio+20 process is organized mainly through regional cooperation frameworks, such as MCSD, and UNECE. No national submission with a position on Rio+20 Summit outcomes was provided. Neither had Albania provided any input to the UN Commission on Sustainable Development since the first EPR. The Albania 2002 Country Profile, which provided information on the implementation of Agenda 21 on a chapter-by-chapter basis, has also remained without update.

### 4.7 Conclusions and recommendations

The Government has worked intensively and after the first EPR in 2002 with the aim of integrating a large number of MEAs into the national legal framework. Mechanisms to oversee the implementation of international commitments are limited and often reduced to fiscal monitoring and accountability. An inter-ministerial environment committee was recently established by MoEFWA, at the level of deputy ministers, in an attempt to introduce a coordination platform to address environmental concerns in other sectors. However, several such platforms previously created under the auspices of the environmental authority did not last.

One possible root of weak cooperation is limited information on, and knowledge of, the scope of and obligations deriving from most MEAs, at national, regional and local levels. Domestic transparency of

and accountability for international cooperation in the environmental sector remain insufficient. The culture of information-sharing and communication in relation to the activities of international cooperation on the environment leaves a great deal to be desired. Interested stakeholders are not always engaged in MEA implementation processes.

*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.*

*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.*

There is a tendency to concentrate efforts on adopting new legislation while implementation is still falling behind. No compliance assessment has ever been done for an MEA. Consequently, MoEFWA has only a very general understanding of where it stands with the implementation of international commitments. Not all MEAs have designated focal points in Albania, and there is no mechanism of communication among focal points.

Several MEAs' national focal points were changed and their tasks re-allocated to new persons who did not have the necessary experience to carry out the job. Sometimes this resulted in a decrease in capacity to manage Albania's international obligations on the environment.

On the other hand, there are cases in which several focal point functions are attributed to a single person, which results in an excessive workload which, in turn, affects MEA implementation, and is also reflected in the failure to meet important obligations under multilateral agreements, such as reporting.

*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 question can be raised whether the intensive process of joining new MEAs and transposing them into national legislation corresponds to national capacity to implement them, the RIA of new legal requirements being limited to an assessment of the budgetary burden on the Government. The capacity of MoEFWA to prepare technical, financial and economic analyses in this context is insufficient.

*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.*

Albania has set ambitious objectives to achieve its MDG-related targets, which were recently tightened, and progress with European integration. This will certainly require boosting efforts to raise new and larger-scale financial resources.

*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.*

Albania has made progress in adhering to MEAs. However, there are still a number of MEAs that the country did not join. The internal process of preparation for adhering to CLRTAP protocols on Heavy Metals, on Persistent Organic Pollutants, and to Abate Acidification, Eutrophication and Ground-level Ozone. is close to its end and the ratification is expected soon. The future is not that straightforward for the Emergency Protocol to the Barcelona Convention, which Albania has not joined yet.

*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.*

# *PART II: ECONOMIC INSTRUMENTS AND FINANCIAL RESOURCES*

# Chapter 5

# ECONOMIC INSTRUMENTS AND EXPENDITURES FOR ENVIRONMENTAL PROTECTION

## 5.1 Current situation

Albania's environmental management is based mainly on command and control regulatory instruments (permitting, inspections), although economic instruments have been strengthened in some areas since the first EPR. The latter are used largely as income generators although there are cases where their structure supports environmental objectives. It is important to strengthen existing instruments and to establish new ones or re-establish abolished ones.

Despite a rather difficult macroeconomic environment, environmental expenditures and investments in key areas, as reflected in the budgets of MoEFWA and MoPWTT, have increased. Whatsoever, expenditure on environmental protection remains low in the Government's budget.

## 5.2 Legal and institutional framework

The general provisions of the 2002 Law on Environmental Protection, No. 8934, define the underlying principles of environmental protection, including the "polluter pays" principle and rehabilitation of sites damaged by industrial and other economic activities.

The main laws for environmental taxes are the 2008 Law on National Taxes, No. 9975, and the 2006 Law on Local Tax System, No. 9632. Both laws were significantly amended in 2011, as discussed later in this chapter. Article 3 of the 2008 Law on National Taxes, "Types of National Taxes", defines the types of environmental taxes. Environmental fines are based on two amendments (2008 and 2009) of the 2002 Law on Environmental Protection. Forestry Police fines are in accordance with article 8 of the 2005 Law on Forests and the Forestry Service, No. 9385. Local government tariffs for environmental clean-up follow the 2008 Law on Taxation Procedures, No. 9920, as well as the 2006 Law on Local Tax System, No. 9632.

The General Directorate of Customs, through its district branches for the importation of used vehicles, is the tax agent for imported fuel. The General Directorate of Tax and Tariffs is responsible through its branches for domestically produced fuels. The General Directorate of Customs was the tax agent responsible for imported vehicles through its district branches before the abolition of import taxes on used vehicles.

The General Directorate of Customs is the responsible authority for the plastic packaging of imported liquids. The General Directorate of Tax and Tariffs is responsible for plastic packaging of domestically produced liquids.

MoEFWA and MoPWTT are the key ministries channeling State budget resources in environmental expenditures and investments.

While the Ministry of Finance controls the system of taxes and fees, MoPWTT is reviewing all transport-related legislation to align it with the EU *acquis*, while MoEFWA and its agencies bear responsibility for the NES. MoPWTT, through its General Directorate for Road Transport Service, is also responsible for the registration of imported vehicles. MoETE and its subordinate agencies also take part in administering the national regulations for fuel economy.

## 5.3 Economic instruments

The country has made moderate progress since the first EPR. Only a limited range of pollution charges are utilized, although there are relevant stipulations in the 2002 Law on Environmental Protection. Environmental taxation, one of the most widely used methods of economic incentives to change behaviour, is used in Albania. Certain forms of environmental taxation have been applied in an attempt to alter polluting human behaviour or choices by imposing taxes that can be avoided, or diminished, by more environmentally friendly behaviour or choices.

**Photo 5.1: Botanical Garden in Tirana**

There is, however, a clear preference towards indirect environmental taxes as opposed to direct ones. Typical examples in Albania are the product taxes imposed on used vehicles and fuel, discussed in more detail below. At the same time, the country appears not to participate in the carbon finance market or the European Emissions Trading Scheme.

*Environmental taxes*

Taxes in Albania are applied at the national and local levels. Before 2008, mechanisms and tools of environmental policy were spread across many laws and regulations and the collection of environmental taxes and fees was scattered among several uncoordinated institutions. The situation improved with the 2008 Law on National Taxes which attempted to simplify Albania's taxation system, reducing the number of national indirect taxes from 23 to seven by eliminating and consolidating a number of taxes while transforming others to fees.

Direct environmental taxes (i.e. those where the base of calculation is the volume of emissions that an activity produces) are not used in Albania. Effluent charges, based on either the amount of pollution generated by economic agents or the type of polluting activity, can be very effective instruments in reducing polluting behaviour. Yet, so far, the Albanian authorities have chosen not to use this instrument even for the most common types of pollution such as water pollution discharges or air emissions.

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: a) 1 lek per piece for packages of capacity 1.5 litres or less, b) 2 lek per piece for packages of capacity greater than 1.5 litres.

Transport-related taxes

In general, vehicle emissions and efficiency are conceived as important issues in the country's public opinion and are frequently discussed in the media. Transport-related taxes with environmental impact traditionally generate considerable income while having positive environmental impacts. In recent years, however, some core taxes have been very volatile. A good example is changes to taxes and customs duties on vehicles. At the time of the EPR review, no local taxes and only one national annual tax on used vehicles appeared to be in force. A tax on all vehicles (road circulation tax) has been replaced by an undifferentiated tax on petrol and gasoline fuel. Given that there are no restrictions on the importation of vehicles in Albania, these developments mean that, in contrast with previous years, there are currently fewer and weaker incentives for the importation of environmentally friendly vehicles.

The import tax on used vehicles was abolished in 2010 because of its perceived impact on the level of imports, although it had been a substantial source of revenue (Table 5.1). For most categories of imported vehicles, this tax privileged the importation of cars less than 10 years old at the time of their importation to the country. In that sense, it served environmental objectives in positive ways. The import tax was

replaced by a sales tax on the purchase of used vehicles within the country which maintained the positive bias in favour of vehicles less than 10 years old.

The import tax for used vehicles overlapped with a smaller import tax for all transport vehicles, which also had a bias towards more environmentally friendly vehicles. This tax was abolished in 2011. The import tax for all vehicles was calculated on the basis of the type of fuel used by the car, the size of the car's engine and a coefficient for the years of use. The fuel-type component of the vehicle tax was 20,000 lek (€145) for cars with a gasoline engine and 25,000 lek (€183) for those with other types of engines.

The coefficients for years of use varied from 0.0016 for a car up to 2 years old to 0.0048 for a car older than 10 years. These coefficients mean that, all other things being equal, the tax for a 10-year-old vehicle would be three times as high as that for a two-year-old vehicle. The 2008 Law on National Taxes also defined lower limits: the tax should be at least 60,000 lek (€438) for cars and other vehicles with 10 or more years of use. The same tax should be at least 40,000 lek (€292) for vehicles with less than 10 years of use.

The import tax on transport vehicles was replaced by an annual tax on used vehicles. Following the 2011 amendments to the 2008 Law on National Taxes, the annual vehicles tax was suspended for vehicles up to three years old. All other vehicles are required to pay an annual tax at the time of their inspection. The amount of the tax is calculated multiplying the car's engine size (in $cm^3$) with a fixed fuel-type coefficient with a variable coefficient which increases with the age of the vehicle. The fixed fuel-type coefficient is set at 20 lek for petrol-fuelled vehicles and 25 lek for gasoline-fuelled vehicles. The age coefficient starts at 0.18 at the fourth year of a vehicle's age and increases in annual increments of 0.01 until the tenth year of the vehicle's age and thereafter by annual increments of 0.04. The coefficients for buses start at 0.07 at the fourth year and increase by 0.01 annually until the 14th year and by 0.03 thereafter. The coefficients for all other types of vehicles start at 0.20 at the fourth year of the vehicle and increase by 0.02 annually until the 24th year.

The 2011 amendments to the 2008 Law on National Taxes also abolished the annual road circulation tax on all vehicles. Before its abolition, the annual tax was differentiated according to the type of vehicle and was heavier on petrol-fuelled vehicles than gasoline-fuelled ones. This tax was collected during a vehicle's technical control. This tax revenue was collected by the regional directorates of the General Directorate of Service Road Transportation.

In addition to the import tax, a mostly nominal road circulation tax on foreign vehicles was imposed on foreign-registered vehicles which remained in the country for more than 60 days per year.

**Table 5.1: Revenue from economic instruments, 2007-2009, €**

| Environmental taxes and fees | 2007 | 2008 | 2009 |
|---|---|---|---|
| Used vehicle import tax | 21,167,939 | 20,801,527 | 20,000,000 |
| Fuel tax | 4,175,573 | 4,396,947 | 3,480,916 |
| Forestry fees | 1,876,191 | 1,776,029 | 1,505,805 |
| Plastic packaging tax | 1,282,443 | 1,213,740 | 1,206,107 |
| Water use tariffs | 626,896 | 45,690 | 317,980 |
| Environmental licence fees | 221,439 | 272,513 | 230,574 |
| Environmental expert certificate fee | 26,089 | 30,081 | 0 |
| Environmental fines | 20,304 | 8,143 | 380 |
| Seal fees | 15,159 | 25,726 | 18,450 |
| Fishing fees | 12,414 | 25,446 | 33,038 |
| Forestry Police fines | 5,129 | 9,446 | 1,451 |
| Professional permit | 0 | 0 | 626 |
| **Total** | **29,429,576** | **28,605,288** | **26,795,327** |
| ***Memo item:*** | | | |
| **MoEFWA annual budget** | 15,048,780 | 16,276,235 | 16,625,203 |

*Source:* Ministry of Environment, Forests and Water Administration, 2011.

Vehicles that remained for less than 60 days were subject to payment of a symbolic amount of 1€ upon their exit from the country.

Local taxes also apply in the case of vehicles, in addition to the national taxes discussed above. Until 2011, all vehicle owners were obliged to pay an annual registration tax defined by the vehicle type. In

2011, the annual registration tax for vehicles was abolished, based on Law No. 10457 of 21 July 2011 (amending the 2006 Law on Local Tax System) and published in *Official Gazette* No. 107. As compensation to local authorities, the 2011 amendments stipulated that 18 per cent of revenues generated by the annual tax on used vehicles would be transferred to the local authorities.

Fuel taxes

According to the GIZ 2011 International Fuel Prices, which compares retail prices of diesel and gasoline in approximately 170 countries worldwide, Albania is considered to be a country with very high diesel taxation, ranking 140th. Taxation on gasoline is considered high by the same index – Albania ranks 146th. It is not possible to assess the country's current ranking due to recent changes in fuel taxation. Specifically, according to Law No. 10458 (amending the 2008 Law on National Taxes) published in 2011 in *Official Gazette* No. 107, the annual road circulation tax for vehicles was substituted by a fuel tax ("circulation tax") on petrol and gasoline, set at 5 lek per litre until 21 December 2011 and at 7 lek per litre thereafter.

Furthermore, based on the 2008 Law on National Taxes, a carbon tax is applied on gasoline and petrol. The carbon tax is 0.5 lek per litre of diesel and 1 lek per litre of gasoline. This tax is applied to both imported and domestically produced fuels. Following the 2011 amendments, the carbon tax on kerosene, solar and mazut is set at 3 lek per litre. Petroleum coke is subject to a carbon tax of 3 lek per kilogram.

It is not possible to assess the net impact of these changes, especially in light of the abolition of the road circulation tax. In addition to the carbon tax, fuel is subject to an excise duty, which varies according to the fuel type, and a value added tax which is set at 20 per cent.

*Environmental tariffs and fees*

Information on the level of current environmental tariffs and fees was not possible to identify. The currently applied environmental charges are listed in table 5.2. Additional fees of mostly an administrative nature include environmental expert certificate fees, professional permits fees and service tariffs.

Concerning the environmental licence fess, the engagement of the regional environmental agencies and the Ministry of Environment, Forestry and Water Administration for the examination and approval of requests for environmental licences are considered as services to third parties and are paid as such. The value of the tariff consists of the administrative expenses and the operations carried out by the environmental agencies when examining applications and their accompanying documentation. The expenses for preparing the environmental impact assessment are also paid by the applicant but they are not included in this tariff. The tariff is paid when the application is submitted. It is not refundable. Tariffs are determined based on the time and resources spent during the examination and reviewing.

On the forestry fees, according to the 2009 Decision, the tariffs of timber put on sale are determined based on the market prices but cannot be lower than the production costs to be calculated based on the timber base tariffs. Reparation tariffs in case of damages caused to the Forestry Fund also apply. Furthermore, the Decision determines the tariffs for camping's set-ups, Christmas trees and seedlings sale.

The 2006 Decision 547 lays out the procedures for renting water areas for intensive aquaculture activities. The areas to be rented are either at coastal areas, internal waters or natural lakes. The documents to be submitted include evidence of conformity with the environmental requirements, the technical project and the detailed business plan.

*Environmental fines*

There are two types of fines, those imposed by EI and those by the Forestry Police. The two are following very different trajectories over time (Table 5.3). On the one hand, fines imposed by EI have increased from approximately €205,000 in 2007 to approximately €434,000 in 2008 and €536,000 in 2009. On the other hand, fines imposed by the Forestry Police have declined from almost €2.8 million in 1997 to €647,000 in 2008 and €521,000 in 2009. This decline has coincided with changes in the ownership of forests from the State level to that of the LGUs (Chapter 8).

The level of payment of imposed fines remains negligible (Table 5.3). It is characteristic that in the three years 2007-2009, of €3.9 million worth of fines imposed by the Forest Police Service only €16,000 was paid. In the same period, of €1.2 million worth of fines imposed by EI, only €28,83 was paid. In total, less than 1 per cent of fines were paid.

There are a number of reasons for this excessively low level of payment. Part of the problem lies with the existing legislation which makes possible the forgiveness of fines after one year (Chapter 2) and part with inefficient law enforcement. Given the

inability to collect fines, however, it is surprising that the amount of imposed fines almost tripled between 2007 and 2009.

*Revenue from economic instruments*

During this period, used vehicle taxes accounted for almost three quarters of total revenue (Table 5.4). This percentage increases to 85 per cent when fuel taxes are added. There is no evidence that revenue generated for the central budget is used for environmental purposes. Furthermore, the tax on imported vehicles was abolished in 2011, further weakening the potential impact of economic instruments.

*Water management*

Economic instruments in the water sector include taxes on the abstraction and use of water, user charges for municipal services and fines for non-compliance. Water user charges are administered by 54 water utilities. The current level of tariffs is low and collection rates are estimated at around 18 per cent. There is no water metering and there is a lack of enforcement toward non-paying customers.

As a result, the water sector does not achieve cost recovery, let alone the creation of adequate margins to secure medium- and long-term investments, and is therefore subsidised from the national budget.

*Energy*

Due to the country's endowment with ample water resources and their use for energy generation, Albania scores very well in the energy intensity of its GDP. In 2009, the country's GDP per kg of oil equivalent in 2005 constant US$ was 13.8, which fares very well compared, for example, with the OECD countries' average which was 6.8. In the same year, the energy use measured in kg of oil equivalent per capita was only 537.8 in Albania compared with 4,801 in the OECD countries.

Electricity tariffs are set by the Energy Regulatory Entity (ERE). As in the water sector, tariffs are low and do not achieve cost recovery. Low electricity prices have discouraged investments and are not encouraging energy efficiency. Although ERE is expected to increase electricity tariffs, attaining cost recovery remains a challenge and therefore an obstacle for investments in the field.

Non-payment in the energy sector is widespread and the government needs to address the issue through ensuring effective metering of used electricity and subsequent payment for used electricity. This objective is clearly not only technical in nature and it may require various measures, including information campaigns and meter installation in some cases, but also strengthening law enforcement due to the widespread occurrence of illegal connections to the network.

Only if these problems are addressed can appropriate levels of pricing be introduced in order to encourage efficiency while raising resources for necessary investments in infrastructure maintenance and renewal. In this way, it will eventually be possible for the country to simultaneously promote economic development and address environmental needs, two goals often not easily reconciled

*Communal services*

LGUs generate income from cleaning and sanitation fees. This source of revenue accounts for about 7-10 per cent of the total income for LGU budgets (Table 5.4). For example, 2007 revenue accounted for 9.2 per cent of LGU income and 2008 revenue for 9.4 per cent. LGU officials (i.e. municipality and commune councils) set fees for households, businesses and State institutions.

Urban waste collection and transportation services in most cities are provided by private companies contracted by the municipalities. Waste management services are not yet provided in rural areas. The levied waste management tariffs include waste collection and transportation to landfills (Chapter 7).

## 5.4 Environmental expenditure and investment

The picture remains mixed. On the one hand, MoEFWA has maintained a healthy position in the Government, since it has not seen its budget decline in recent years, despite the economic downturn. It currently employs 1,360 staff members, according to 2011 data from the Ministry of Finance (Table 5.5). However, environmental protection still remains low in the Government's priorities, despite significant environmental challenges for the country. Environmental protection is at the bottom of the Government's 2011 budget broken down by function (Table 5.6).

**Table 5.2: Environmental charges and taxes**

| Economic instruments | Legislation |
|---|---|
| Water abstraction tariffs | 2008 DCM on Approval of Water Use Tariffs, No. 23 |
| Environmental licence fees | 2007 Instruction on Tariffs of Services and Environmental Permits, No. 5 |
| Forestry fees | 2009 DCM on Establishment of Tariffs in the Forestry Sector, No. 391 |
| Pasture licence fees | 2007 DCM on Approval of Tariffs for Pasture Use, No. 887 |
| Aquaculture licence fees | 2006 DCM on Defining Procedures and Rents for Water Surfaces to Exercise Intensive Aquaculture Activities, No. 547 |

*Source*: Ministry of Environment, Forests and Water Administration, 2011.

**Table 5.3: Imposed and paid environmental fines, 2007-2009, thousand €**

| | 2007 | 2008 | 2009 |
|---|---|---|---|
| **Forestry Police** | | | |
| Imposed | 2,763.63 | 647.44 | 520.56 |
| Paid | 5.13 | 9.45 | 1.45 |
| **Total paid as % of total imposed** | 0.19 | 1.46 | 0.28 |
| **Environmenal Inspectorate** | | | |
| Imposed | 204.90 | 433.71 | 535.76 |
| Paid | 20.30 | 8.14 | 0.38 |
| **Total paid as % of total imposed** | 9.91 | 1.88 | 0.07 |
| **Grand total imposed** | **2,973.85** | **1,092.05** | **1,058.04** |
| **Grand total paid** | **25.43** | **17.59** | **1.83** |
| **Total paid as % of total imposed** | 0.86 | 1.61 | 0.17 |

*Source*: Ministry of Environment, Forests and Water Administration, and author's calculations, 2011.

**Table 5.4: Local government units' revenues from cleaning and sanitation fees, 2005-2008, thousand €**

| | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Collected cleaning and sanitation fees | 7,247 | 7,614 | 8,287 | 9,961 |
| LGU income (per cent) | 7.2 | 8.4 | 9.2 | 9.4 |

*Source*: Ministry of Environment, Forests and Water Administration, 2011.

**Table 5.5: Government employees in selected ministries, 2011**

| Rank | Ministry | Number of employees |
|---|---|---|
| 1 | Ministry of Education and Science | 39,028 |
| 2 | Ministry of Internal Affairs | 13,440 |
| 3 | Ministry of Defence | 11,735 |
| 4 | Ministry of Justice | 4,974 |
| 5 | Ministry of Health | 3,444 |
| 6 | Ministry of Finance | 3,130 |
| 7 | Ministry of Agriculture, Food and Consumer Protection | 2,163 |
| 8 | Ministry of Labor, Social Affairs and Equal Opportunities | 1,419 |
| 9 | Ministry of Environment, Forests and Water Administration | 1,360 |
| 10 | Ministry of Public Works, Transportation and Telecommunications | 1,316 |
| | **Total** | **89,360** |

*Source*: Ministry of Finance, 2012.

*Environmental expenditure*

Each year MoEFWA prepares a three-year Mid-Term Expenditure Plan. This provides the basis for the formulation of the annual budget approved by the National Assembly, which in turn determines the availability of funds for the various programmes. The country's strategic goals in the field of environment are defined in the 2007 ECS, an integral part of the NSDI. Financial resources for implementation of the ECS are provided mainly from the budgets of MoEFWA and MoPWTT for environmental infrastructure investments, including solid waste management and sewage collection and treatment.

MoEFWA budget planning ceilings for 2010-2012 are defined in the 2009 DCM on Approval of Macro-economic and Fiscal Indicators for 2010-2012, No. 21 and the 2009 Instructions of the Ministry of Finance on the Preparation of the State Budget and Special Funds, No. 20.

Albania adopted the Classification of the Functions of Government (COFOG) budget classification in 2002. The MoEFWA budget is organized into five programmes: Planning, Management, and Administration; Environmental Protection; Support for Fishery Sector; Wastewater Administration; and Forest Administration Programme. Expenditure is further broken down by expenditure for salaries and social security, operational expenses and investments. For the period 2009-2012, salaries and social security cover approximately 50 per cent of the Ministry's budget, and operational expenses ("Other current expenses") 20-25 per cent, depending on the year of reference. Environmental investments also account for approximately 25 per cent of the budget (Table 5.7).

There was an annual budget increase of 2.7 per cent in 2010, 6.2 per cent in 2011, and 7.8 per cent in 2012 (Table 5.7). These net increases, given the general level of inflation, indicate the Government's commitment to investing in the environment, even if there remains a considerable gap between actual funding and the funding needed to cover the country's environmental protection needs and priorities. Nonetheless, the fact that these increased allocations are planned to take place in an unfavorable macroeconomic environment is noteworthy.

In the 2009 MoEFWA budget (Table 5.8), 64 per cent of allocations was directed to the Forest Administration Programme. The Environmental Protection Programme was the second largest programme, absorbing 17 per cent of the Ministry's budget, followed by the Support for Fishery Sector Programme which was allocated 14 per cent. It could be expected that the recent changes in the ownership of the country's forests, the majority of which have been transferred from the ownership of the State to that of LGUs, could have an impact on the relative share of forest management in the Ministry's budget. Among other things, this structural change has triggered a decline in the size of staff on the payroll of the Ministry (Chapter 8).

*Environmental investments*

Investments in environmental infrastructure are funded by the State budget and donor contributions. Environmental investments are planned in the mid-term budgets of MoEFWA and MoPWTT. Investment plans are executed based on funding approved by the National Assembly.

The increase in the level of investment that can be observed between 2009 and 2011 is primarily because of investments in priority areas such as rehabilitation of hotspots, solid waste facilities (landfills), rehabilitation of wastewater collection and construction of new wastewater treatment facilities (Table 5.9). The majority of funding for investments came from MoPWTT in these priority areas.

Despite improvements, resources for implementation of the ECS are still limited. To increase resources for the environment, article 87 of the 2002 Law on Environmental Protection and the ECS foresee the establishment of an Environmental Fund. The idea has been circulating ever since the first EPR in 2002; some concrete steps have been taken and there are references to the Environmental Fund in the new Law on Environmental Protection. The Fund, if and when established, will finance environmental investment projects using a cross-sectoral approach, i.e. within the competence of several ministries, including activities such as solid waste management, wastewater collection and treatment, and energy efficiency. Additionally, it is envisaged that the Fund will cover the needs of the Environmental Protection Programme.

At the time of this review the Environmental Fund had not been established as a separate budget programme in MoEFWA, and the rules of its operation and sources of funding had not been set out in a relevant DCM. However, according to the Law on Environmental Protection, it is expected that an inter-ministerial committee composed of representatives from line ministries involved in environmental programmes would run the Fund.

## 5.5 International assistance

Over the past decade, Albania has continued to receive international financing for achieving domestic objectives and meeting international obligations, although external assistance to Albania has been lower in per capita terms when compared with neighbouring countries with similar income levels. ODA has steadily decreased as a share of the country's GDP, attaining 3 per cent in 2009 as compared with 8.4 per cent in 2000.

Grants as a type of financing have decreased substantially since 2000. The simultaneous increase in the level of loans and transit from soft loans

(in concession terms) to commercial term loans, is closely related to Albania's moving from a low-income country to a middle- income country.

Donor aid is integrated into the three-year expenditure framework that the Government uses to plan and manage public money. In this context, and in order to make donor aid better coordinated, MoEFWA prepares an environment operational plan. This, together with other policy documents, will serve as a basis for establishing a sector-wide assistance programme.

The environmental sector is very much dependent on international financing and a very high proportion of public environmental expenditure is coming from external sources. Several development partners, bilateral donors in particular, are considering scaling down or phasing out their assistance in coming years.

The economic crisis and debt crisis in the euro zone is likely to further reduce the availability of donor aid, thus affecting the implementation of environmental programmes.

**Table 5.6: 2011 Government budget expenditure by function, thousand lek**

| Function | Total |
|---|---|
| Social protection | 108,250,490 |
| *Other unclassified expenditure* | 88,290,400 |
| Economic issues | 48,425,057 |
| Education | 40,560,832 |
| Health | 37,057,465 |
| General public services | 25,804,255 |
| Housing and community accommodation | 21,414,101 |
| Public order and security | 21,281,100 |
| Defence | 13,829,726 |
| Entertainment, culture and religious issues | 3,663,696 |
| Environmental protection | 457,708 |
| **Total** | **409,034,830** |

*Source:* Ministry of Finance, 2012.

**Table 5.7: Ministry of Environment, Forests and Water Administration budget by type of expenditure, 2009-2012, thousand €**

| | 2009 | 2010* | 2011* | 2012* |
|---|---|---|---|---|
| **Expenditure on salaries and social security** | **6,698** | **7,081** | **7,333** | **8,553** |
| 1 - Planning, management, administration | 398 | 415 | 419 | 480 |
| 2 - Environmental protection | 488 | 561 | 569 | 602 |
| 3 - Support to fishery sector | 260 | 350 | 358 | 366 |
| 4 - Water administration | 154 | 167 | 171 | 203 |
| 5 - Forest administration | 5,398 | 5,589 | 5,817 | 6,902 |
| *Share of MoEFWA budget (%)* | *53.82* | *54.92* | *47.18* | *50.43* |
| **Other current expenses** | **2,715** | **2,561** | **3,983** | **4,178** |
| 1 - Planning, management, administration | 187 | 187 | 220 | 268 |
| 2 - Environmental protection | 358 | 309 | 415 | 435 |
| 3 - Support to fishery sector | 244 | 220 | 285 | 297 |
| 4 - Water administration | 81 | 81 | 98 | 102 |
| 5 - Forest administration | 1,846 | 1,764 | 2,966 | 3,076 |
| *Share of MoEFWA budget (%)* | *21.81* | *19.86* | *25.62* | *24.64* |
| **Internal capital expenses** | **3,033** | **3,252** | **4,228** | **4,228** |
| 1 - Planning, management, administration | 65 | 81 | 89 | 98 |
| 2 - Environmental protection | 244 | 244 | 268 | 268 |
| 3 - Support to fishery sector | 894 | 1,276 | 976 | 976 |
| 5 - Forest administration | 1,829 | 1,650 | 2,894 | 2,886 |
| *Share of MoEFWA budget (%)* | *24.37* | *25.22* | *27.20* | *24.93* |
| **Annual budget** | **12,446** | **12,894** | **15,544** | **16,959** |

*Source*: Ministry of Environment, Forests and Water Administration, 2011.
*Note*: * According to Medium Term Budget 2010-2012.

**Table 5.8: Ministry of Environment, Forests and Water Administration budget by programme, 2009, thousand €**

| Programme | Current expenditure | Capital expenses | | | | Total State budget expenses | % |
|---|---|---|---|---|---|---|---|
| | Total | State budget | Incomes | Foreign investments | Total capital expenses | | |
| Planning, management administration | 585 | 65 | 0 | 0 | 65 | 650 | 4 |
| Environmental protection | 846 | 244 | 0 | 1,659 | 1,902 | 2,748 | 17 |
| Support to fishery sector | 504 | 894 | 0 | 976 | 1,870 | 2,374 | 14 |
| Water administration | 236 | 0 | 0 | 0 | 0 | 236 | 1 |
| Forest administration | 7,243 | 1,423 | 407 | 1,545 | 3,374 | 10,617 | 64 |
| **Total** | **9,414** | **2,626** | **407** | **4,179** | **7,211** | **16,625** | **100** |

*Source*: Ministry of Environment, Forests and Water Administration, 2011.

**Table 5.9: Environmental investments, 2009-2011, thousand €**

| Year | 2009 | 2010 | 2011 |
|---|---|---|---|
| **Ministry of Environment, Forests and Water Administration** | | | |
| Planning, management, administration | 65 | 81 | 89 |
| Environmental protection | 244 | 244 | 268 |
| Support to fishery sector | 894 | 1,276 | 976 |
| Forest administration | 1,829 | 1,650 | 2,894 |
| **Total** | **3,032** | **3,251** | **4,227** |
| **Ministry of Public Works, Transportation and Telecommunications*** | | | |
| Urban waste facilities | 715 | 1,919 | 1,626 |
| Collection and treatment of waste waters and water supply | 51,391 | 69,374 | 65,642 |
| Hotspots | 500 | 4,400 | 1,056 |
| **Total** | **52,606** | **75,693** | **68,324** |
| **Foreign investments** | | | |
| Environmental protection | 1,659 | 2,372 | 813 |
| Support to fishery sector | 976 | 813 | 813 |
| Forest administration | 1,545 | 1,000 | 976 |
| **Total** | **4,180** | **4,185** | **2,602** |
| **Grand total** | **59,818** | **83,129** | **75,153** |

*Source:* Ministry of Environment, Forests and Water Administration, and author's calculations, 2011.
*Note:* * Including donor contributions.

The share of the environmental sector in receipt of external assistance is rather low and counted within 9 per cent of other sectors. Assistance for water supply and sanitation is registered separately. Project-level financing remains the main modality of aid provision in the environmental sector where project-related grants constitute €60.9 million or 88 per cent of the overall commitment. Co-financing from the Government is available for many of these projects. The scope of international aid to the sector is relatively wide, with focus being put on environmental infrastructure development, such as solid waste and wastewater treatment, addressing transboundary water issues, and strengthening the capacity for environmental management at central and local levels.

The largest bilateral donor to the environmental sector, providing mostly technical assistance, is Italy. Other countries providing assistance include the Netherlands, Germany, Sweden, Spain and the Czech Republic. Several ongoing or past projects financed by Italy, Germany and the Netherlands are fairly large, with budgets that can reach some €3 million,

including both grants and loans. Areas covered include waste management, sustainable management of natural resources, biodiversity protection, and hotspots rehabilitation. Sometimes, bilateral donors channel their support through UN agencies, UNDP Albania in particular. A relatively unusual characteristic of some of these projects is their duration; in one particular case the bilateral assistance project spanned a period of 10 years.

Concerning environmental protection ODA, multilateral assistance since 2006 consistently exceeds bilateral assistance from individual donors. Most of the multilateral assistance comes from the EU. Although total assistance disbursements fluctuate on a year-by-year basis, in 2009 they peaked at a level of US$11.68 million. This figure is much higher than that reported by MoEFWA, which leads to the conclusion that these grants are possibly directed through other recipients. According to the OECD database, all ODA in the environmental protection field takes the form of grants.

Grants and concessional loans for water supply and sanitation have been considerably exceeding grants for environmental protection (Table 5.10). In 2009 they totalled US$ 37.63 million, more than three times the level of ODA for environmental protection. The grants component in that year for water supply and sanitation was almost twice the level of ODA for environmental protection.

*EU assistance programmes*

Albania is able to access various country-specific assistance mechanisms available through the EU. Most importantly, this includes the IPA, which was established in 2007. IPA replaced a number of programmes, notably CARDS. As a potential candidate to accession, Albania benefits from support from IPA's Component I (Transition assistance and institution-building) and Component II (Cross-border cooperation), to progressively align itself to the EU *acquis*. Under IPA funding, three environmental projects are under implementation:

- Establishment and Strengthening of Monitoring System and Supervisory Control in Fishing (IPA 2008);
- Consolidation of Environmental Monitoring System (IPA 2008);
- Strengthening Capacity of MoEFWA on Drafting Laws and Implementing National Environmental Legislation (IPA 2010).

Several other IPA projects are in the pipeline aiming at capacity-building for the implementation of the environmental *acquis* at national, regional and local levels, rehabilitation of environmental hotspots and environmental infrastructure development.

In the recent past, two important cross-cutting projects have been financed by European funds: Implementation of National Plan for Approximation of Environmental Legislation (INPAEL) and Strengthening of the Environmental Monitoring System in Albania (StEMA). The INPAEL project resulted in three framework laws on Environmental Protection, Environmental Impact Assessment and Environmental Permitting.

The CARDS programme, active between 2001 and 2007, has provided substantial support to the environmental sector in Albania. It provided €22 million to the environmental sector between 2002 and 2006, making the sector the third largest CARDS recipient in Albania after justice and home affairs (€104.8 million) and infrastructure (€34.9 million).

TAIEX supports the approximation, application and enforcement of EU legislation. In 2006-2009, 154 events (seminars, workshops, expert missions and study visits) were supported in Albania through this instrument, though it is not clear whether environmental authorities could benefit from them.

Another technical assistance instrument – twinning projects – involves the secondment of EU experts to beneficiary countries to provide specific support in implementing areas of the EU *acqui*s. Twenty-two twinning projects were launched in Albania in the period 2000-2009. The environment-related projects include "Twinning support to the Agency for Environment and Forests, to enable accreditation/certification of its laboratories to ISO 17025" by the Netherlands (2007-2009); twinning on areas of water monitoring and environment impact assessment by Sweden (2006-2009) and "Sustainable Transport Development in Tirana" (2005-2009) implemented by the Federal Ministry of the Environment, Nature Conservation and Nuclear Safety.

*Other development assistance*

On 24 October 2011, the Government of Albania and the United Nations signed the new programme of cooperation for the period 2012-2016. The programme supports Albania's national priorities and development challenges in the areas of governance, the rule of law, economy and environment, regional and local development and inclusive social policies. It builds on experience gained from the previous One UN Programme.

**Table 5.10: Official development assistance disbursements for environmental protection, 2002-2009, constant 2009 US$ millions**

| Year | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|
| Environmental protection (all grants) | | | | | | | | |
| DAC countries, total | 1.3 | 2.5 | 2.8 | 2.8 | 3.7 | 2.8 | 2.0 | 4.4 |
| Multilateral, total | 3.1 | 1.7 | 0.6 | 2.5 | 8.4 | 5.6 | 5.4 | 7.3 |
| **Total** | **4.4** | **4.1** | **3.4** | **5.3** | **12.1** | **8.4** | **7.4** | **11.7** |
| Water supply and sanitation | | | | | | | | |
| DAC countries, total | 16.5 | 16.4 | 17.4 | 23.7 | 25.1 | 26.3 | 28.1 | 18.3 |
| *of which grants* | 10.6 | 6.6 | 11.9 | 15.9 | 17.4 | 13.7 | 22.9 | 13.7 |
| Multilateral, total | 5.1 | 9.8 | 4.5 | 6.4 | 6.0 | 8.4 | 8.3 | 7.7 |
| *of which grants* | .. | .. | .. | 1.7 | 0.4 | 2.6 | 4.7 | 6.1 |
| **Total** | **21.6** | **26.2** | **21.9** | **30.1** | **31.1** | **34.7** | **36.4** | **25.9** |
| **Grand total** | **26.0** | **30.4** | **25.3** | **35.4** | **43.2** | **43.1** | **43.8** | **37.6** |

*Source*: OECD Statistics; data extracted on 13 Dec 2011.

**Table 5.11: Examples of technical assistance projects financed by the United Nations family**

| Project title | Donor | Budget, million US$ | Duration |
|---|---|---|---|
| Global Solar Water Heating Market Transformation and Strengthening Initiative: Albania Country Programme | GEF/UNDP | 1.88 | 11/08/2009-11/02/2014 |
| Support to respond to the forthcoming EU accession-related environment requirements | UNDP | 6.12 | 03/01/2011-04/01/2016 |
| Capacity-building for Ministry of Environment on multilateral agreements | UNEP | 0.02 | 01/01/2009-31/12/2010 |
| National Ozone Depleting Substances (ODS) Phase Out Plan (Sixth and Seventh Tranches) | UNIDO | 0.03 | 08/05/2009-31/01/2011 |
| Natural Risk Preparedness and Mitigation | UNESCO | 0.14 | 01/07/2010-31/07/2012 |

With GEF grant funding, which was matched with the World Bank's own funds and other funds, high-profile projects have been implemented in Albania. These include, most importantly, the US$ 20 million Integrated Water and Ecosystems Management Project, completed in 2009, and the ongoing Natural Resources Development Project which, in addition to the initial US$ 19.4 million, received an additional US$ 2.5 million from the Swedish International Development Cooperation Agency in 2010 to extend the scope of its activities. The project was successful in establishing community-based natural resource management schemes in communes in upland and mountainous erosion-prone lands.

The most recent World Bank Group Country Partnership Strategy (CPS) for Albania, covering the period 2011-2014, aims to help Albania, in particular to meet its current challenges of reducing vulnerability to climate change by improving water conservation and management, and increasing disaster preparedness.

## 5.6 Conclusions and recommendations

Albania already has a range of environment laws that contain "user and polluter pays" principles but it is not possible to adequately use these laws for protection of the environment until secondary legislation is adopted, incorporating the necessary tax rates, fees and charges. It is characteristic of the country that there are still no effluent charges in force. However, evidence shows that taxes that are levied closer to the source of pollution provide greater opportunities for innovation than, say, product charges. To achieve the desired goals, secondary legislation needs to have enforceable and meaningful non-compliance penalties and enforcement of the law requires there to be clearly defined competencies within the administration.

At the same time, the "user pays" principle is very weak, considering the problems in the collection of utility charges. This situation applies to water, electricity and waste. As a result, the principle is compromised and it is very difficult to achieve

resource conservation and rational use of natural resources.

Furthermore, influential taxes such as vehicle and fuel taxes have been very volatile in recent years. At the time of the EPR review there were fewer and weaker incentives encouraging the purchase and use of more environmentally friendly vehicles.

*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.*

Tariffs for municipal waste collection and disposal and for utilities (water supply and sewerage, electricity) are still below cost-recovery levels. The causes are many: non-payment, lack of enforcement, lack of sanctions, illegal connections and lack of metering are among the most common. As a result, service providers have sustained persistent financial losses and are in constant need of State support. Another consequence of the inability to achieve cost recovery is the general lack of adequate funds for investments in infrastructure (repair, maintenance and modernization), in particular for water use but also for wastewater treatment. Higher tariffs and their collection have the potential to contribute to a more rational use of water and electricity and to a reduction in waste generation.

*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.*

Significant parts of environmental investment in the country have been supported since the first EPR by strong donor assistance. However, at the time of this review, due to the economic crisis, the expectation is that external development assistance to the country will decline considerably. The Environmental Fund, which at the time of the review was not yet operational, could potentially provide a way to strengthen the ability of the country to increase funding for investments in priority sectors of environmental importance.

*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.*

# *PART III: INTEGRATION OF ENVIRONMENTAL CONCERNS INTO ECONOMIC SECTORS AND PROMOTION OF SUSTAINABLE DEVELOPMENT*

# Chapter 6

# SUSTAINABLE MANAGEMENT OF WATER RESOURCES

## 6.1 Introduction

*Natural conditions and hydrographical network*

Due to the high amount of annual precipitation and the fact that the hydrographical basin of Albania with a total area of 43,305 km² is about 50 per cent larger than the country's territory, Albania has abundant water resources. The total annual flow is 39.22 billion $m^3$/year with 86 per cent of the annual flow in the humid winter season (October-May), and the remaining 14 per cent of the annual flow in the dry summer season (July-September). Overall renewable water resources amount to 13,300 m³ per capita, of which 65 per cent is generated within Albania and the remaining 35 per cent from countries upstream. In combination with the characteristic porous, karstic and fissured aquifers, this results in huge renewable groundwater resources of an overall 1,250 million m³/year in seven main geological strata. The plentiful water resources are used for urban, industrial and agricultural purposes as well as for hydroelectricity.

Seven main rivers in six river catchments drain towards the Adriatic Sea, namely the Drini, Mati, Ishmi, Erzeni, Shkumbini, Semani and Vjosa rivers (Map 6.1). The 250 lakes occupy 4 per cent of the territory; the biggest lakes (Prespa, Ohrid and Shkoder) are transboundary and belong to the Drini River system. In addition, there are numerous small lakes located at high elevations with glacial or karstic origin.

*Main problems in water resources management*

Despite the fact that the country is rich in water resources and self-purification capacities, the water management sector has some serious problems, which can be attributed mainly to the following:

- A non-existing or weak monitoring system for both surface and groundwater in quantity and quality, including calibration of measuring systems and evaluation and management of data;
- Non-existing or weak water infrastructure and poor maintenance, especially in water supply and wastewater management; this has to be seen in the context of the poor implementation of economic instruments, the dramatic increase in construction activity, which has been poorly planned and regulated, fast structural changes and absence of waste collection in rural areas;
- A poor regulatory and financial framework in the water sector together with the lack of a long-term strategy which should act as a schedule for all activities and projects in the water sector.

The above-mentioned barriers result in the heavy pollution of water resources in populated areas, especially when compared with the plentiful freshwater resources. These problems of quality are exacerbated by a growing demand for limited water resources in some parts of the country where inland waters are scarcest with correspondingly high requirements for water. In combination with the lack of a comprehensive and sufficient monitoring system, and a weak regulatory and financial framework, this results in the fragile and fragmented management of water resources.

## 6.2 Water resources

*Monitoring of hydrological parameters, surface waters and groundwater*

Based on the 2002 DCM, No. 103, on Environmental Monitoring, institutions are contracted to MoEFWA to monitor the quality of surface water such as rivers and lakes, bathing seawater, groundwater and wastewater discharges, within the framework of the National Programme on Environmental Monitoring.

Monitoring of water quantity started in 2011 in the Irzen River by the Institute of Water, Energy and Environment with financial support from the EC, and should be expanded to the six main rivers in 2012. In general, the lack of hydrological information is significant. Unless Albania starts to thoroughly rebuild its basic system for providing hydrological information nationwide, it faces the danger that new water management systems will not fulfil their anticipated functions.

**Map 6.1: Hydrographical network with monitoring stations**

*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.
*Explanation of river basins:* B1: The Drini basin; B2: the Mati basin; B3: the Ishmi and Erzeni basin; B4: the Shkumbini basin; B5: the Semani basin; B6: the Vjosa basin
*Kosovo (UN-administered region, Security Council resolution 1244)

**Photo 6.1: Uncontrolled dumping**

Taking the impacts of climate change into account, which is strongly recommended due to the sensitivity of the Mediterranean region towards climate variability, this is even more evident both in terms of adapting existing systems and building new ones.

Monitoring of water quality is based on information provided by sampling at the 30 stations of the national river water quality monitoring network (Map 6.1) and monitoring at 6 lake stations. Wastewater discharges in the eight main cities are monitored to measure their impacts on rivers, lakes and coastal waters. Groundwater monitoring on a low scale is carried out in the Drini, Mati, Ishmi–Erzeni, Shkumbini, Semani, Vjosa and Zona Jonike basins.

However, it is insufficient to present a comprehensive assessment of the current situation. Biological monitoring of the quality of bathing seawater is carried out at 70 stations at coastal resorts. For instance, in the area of Durrës there are 21 stations with a distance of approximately 500 m within the 20 m coastal zone, which measure bacteriological contamination.

National monitoring methodologies do not yet fully reflect international methodologies, frequencies and sampling procedures. No quality control or quality check is yet carried out on monitoring data in the country. Data are not collected systematically, resulting in information gaps. Cooperation with the local authorities is weak and monitoring data are not used by local authorities to develop mitigation measures. Private and public enterprises are obliged by law to self-monitor and report on emissions and discharges, but rarely so do. No environmental electronic database or statistic exists.

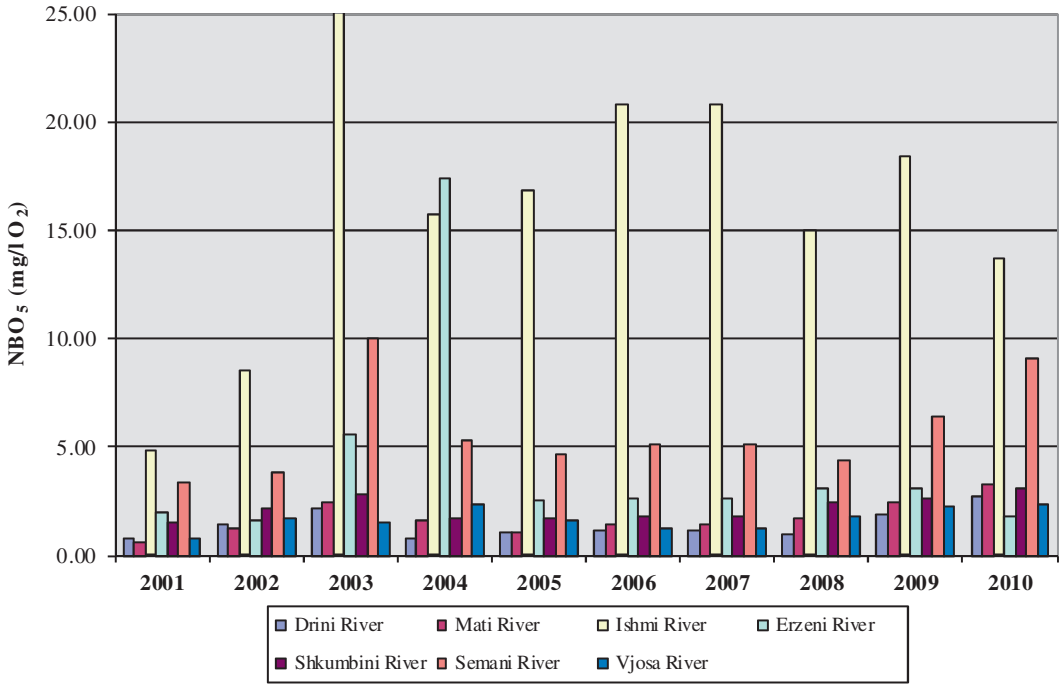
*Quality of surface water and groundwater*

Due to the fact that monitoring of both emissions and water quality has become much less frequent, and the effect of the economic changes in recent years could not be assessed, the situation concerning water quality is not well known.

In general, the quality is often a problem due to pollution through discharge of untreated wastewater from urban settlements, as well as from industries with obsolete technology and by the extensive use of chemical fertilisers and pesticides in agriculture. The uncontrolled dumping of urban waste on the banks of rivers exacerbates the problem of the quality of surface water.

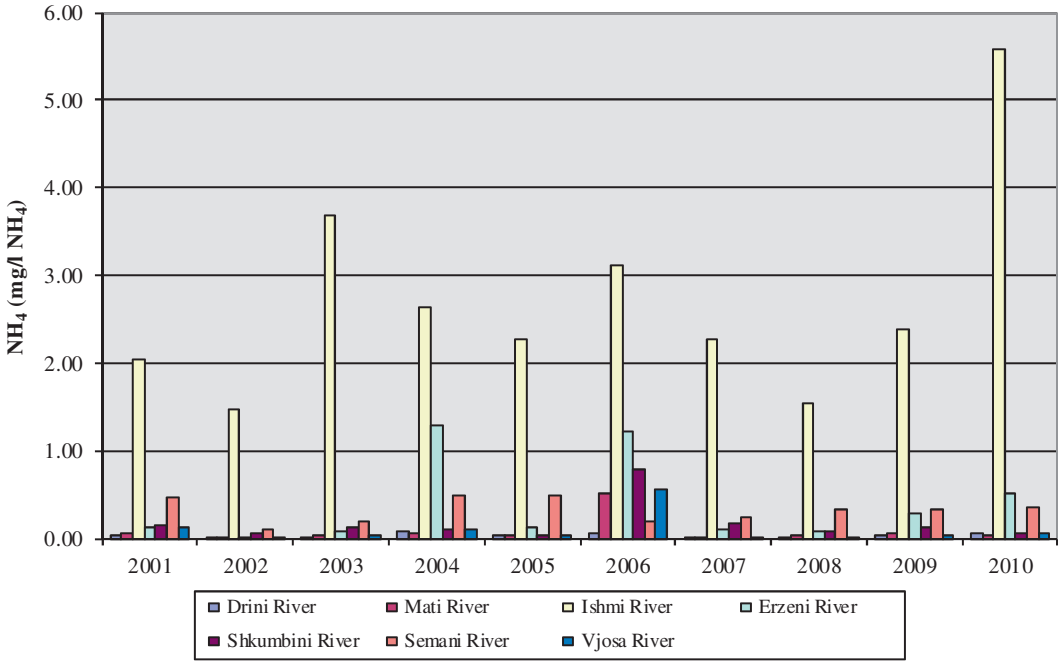
This high pollution load in surface water is leading to a deterioration of groundwater quality and especially concerns low-lying areas, where most of the population lives and most industrial and agricultural activities take place.

**Figure 6.1: Development of the parameter $NBO_5$, 2001-2010**




*Source:* Environment and Forests Agency (EFA), 2011.

**Figure 6.2: Development of the parameter $NH_4$, 2001-2010**




*Source:* Environment and Forests Agency (EFA), 2011.

The bad quality of both surface water and groundwater may put constraints on the use of water, especially:

- From rivers such as Kiri River (industrial wastes), Mati River (copper mining), Gjanica River (oil extraction), and Ishmi, Erzeni, Drini and Semani rivers (industrial and domestic wastes). The generally high values of NBO5, NH4 and P-total in Ishmi River and to some extent in Erzeni River document especially the high organic pollution load resulting mainly from domestic sewage (Figures 6.1, 6.2 and 6.3);

- From groundwater near Lezhe and Laç (saline intrusion) and along Shkumbini and Gjanica rivers (chemical pollution);
- From Lake Ohrid near Pogradec (urban wastes).

The situation concerning the quality of the three big lakes is slightly better, due to a better ratio between discharge of pollutants and fresh water resources. In Lake Ohrid, the low phosphorus content, high content of dissolved oxygen and relatively high values of transparency indicate that the water is oligotrophically stable. The other indicators of pollution such as nitrate content, although at low levels, should not be ignored because the trends are rising compared with previous years.

In Lake Prespa, the oxygen and phosphorus contents show that the lake is already at a mezotrophic level, tending towards a eutrophic level. For the most part, this is caused by anthropogenic factors such as excessive nutrients, and results in high primary productivity with algal blooms and poor water quality. Water in Lake Shkoder is relatively saturated with oxygen; phosphorus content values are low and the electrical conductivity of water is rising due to different discharges into the Lake.

Ishmi River flows through the north-west of the city of Tirana and into the Adriatic Sea. It is more polluted than other rivers as the untreated wastewater from Tirana is discharged into it.

*Quality of marine water*

Concerning the quality of marine waters at coastal resorts, monitoring results for 2009 in the coastal area of Durrës indicate very poor water quality, on the basis of the WHO classification for bathing seawater. The quality of marine waters measured at 21 monitoring stations does not meet the status of excellent or good, 10 per cent meet sufficient quality and 90 per cent meet poor quality – which in fact requires immediate action.

About 10 km to the south, in the area of Kavajes, water quality was significantly better, not only due to the presence of the only 2 operating wastewater treatment plants in Albania: 10 per cent met excellent quality, 50 per cent good quality and 40 per cent poor quality. Good conditions could be attested to in the area of Velipojes, which is about 80 km to the north of Durrës, where 71 per cent met excellent quality and 29 per cent good quality. These results clearly indicate sewage disposal from domestic and industrial wastewater together with waste dumping to rivers and pollution from boats as the chief causes of the pollution of the Adriatic Sea.

*Flood protection infrastructure and flood forecasting*

Although flooding is a recurring problem in Albania, a flood forecasting system does not exist in the country. The heavy winter precipitations often lead to flooding of river valleys with subsequent loss of or damage to property. With particular respect to settlements and agricultural land in the country's northern lowlands, floods occurred more often in recent years (almost annually) and caused serious damage.

Three high dams with large artificial lakes, all in the Drini River system, and about 620 smaller reservoirs totalling 5.60 billion $m^3$ of storage capacity, have been built for flood protection, irrigation and production of hydroelectric power. However, the majority of these dams were badly designed and are now, for safety reasons, operating at half capacity, limiting their usefulness in flood prevention.

Due to unauthorised sand mining and gravel abstraction, riverbeds are being eroded with corresponding impacts on irrigation and flood protection infrastructure, especially in the low-lying reaches of watercourses. Despite the fact that illegal gravel abstraction decreased from 20 per cent in 2000 to less than 5 per cent in 2011, its impact still affect river beds and infrastructure today.

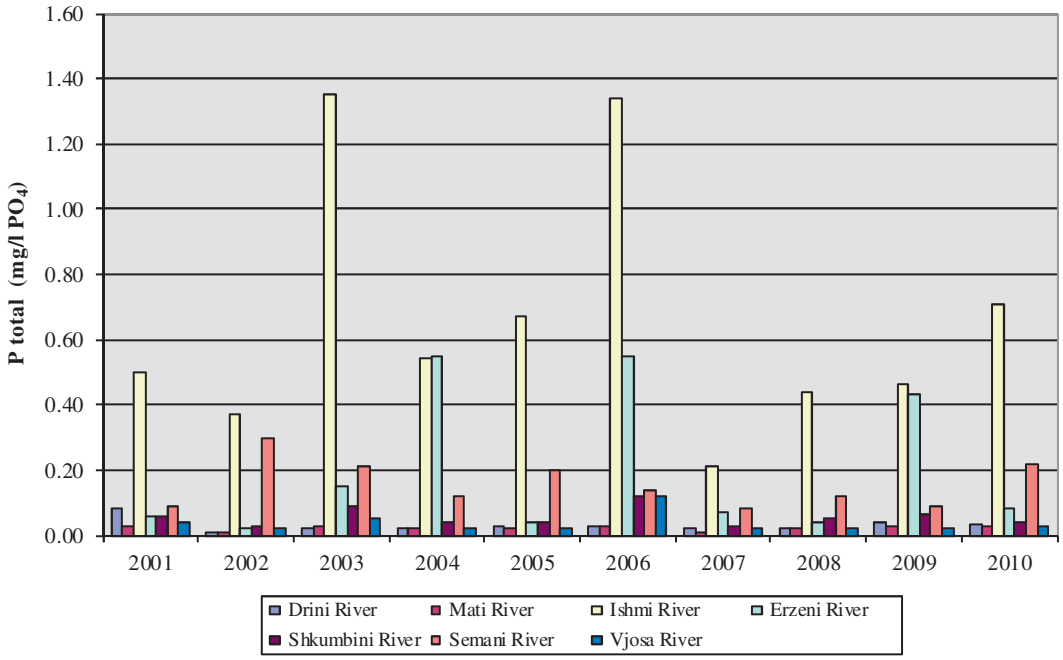
*Impacts of climate change*

Different studies have revealed that the Mediterranean region is most vulnerable to the impacts of climate change. Resulting meteorological impacts such as extreme temperature and precipitation variations will cause significant economic losses and hamper economic development. Climate shocks in this region already account for over 20 per cent of variation in production and over 10 per cent of variation in the value of exports. Similarly to most of the SEE countries, Albania shows a significant lack of anticipation and adaptation measures to confront future climate variations.

As far as water management systems are concerned, climate change impacts can be expected mainly in the following forms:

- Extreme events such as droughts and floods will occur more often and be more intense; this will increase the cost of flood protection works, as well as that of associated infrastructure;
- Due to the increase in temperature and evaporation, aridity will increase in many areas,

**Figure 6.3: Development of the parameter $PO_4$, 2001-2010**




*Source:* Environment and Forests Agency (EFA), 2011.

which will have a direct impact on the irrigation of agricultural areas;

- Decreases in river flow will affect the variable and hard-to-predict water supply, electricity production and tourist activities, as well as resulting in a deterioration of surface water;
- Lack of water will be especially significant in summer, during the tourist season and at a period of increased water consumption, especially in areas with a high population density.

Specific research regarding climate change phenomena and corresponding impacts on water resources systems, such as changes in the intensity and frequency of heavy rainfall, floods and droughts, has not yet been undertaken in Albania, and will be one of the main challenges in the future.

## 6.3 Water use

*Status of water supply services and pressure on resources*

The current situation in terms of water supply and water demand is very difficult to assess because of the lack of adequate monitoring systems, rapid changes in the agricultural, mining and industrial sectors, and the movements in population. Finally, the shift of responsibilities for water supply and sanitation to the LGUs according to the 2000 Law on Organization and Functioning of Local Governments, No. 8652, and resulting structural and organisational problems such as the absence of institutional coordination, make the situation even more complex. Except for Tirana, where about half the water supply is treated surface water, the country relies entirely on groundwater for industrial as well as domestic use (about 80 per cent of the population is supplied from groundwater sources and 20 per cent from surface water sources).

Public water supply

Most of the population (85 per cent) is supplied with water through a public system, at their own houses in urban areas and essentially from standpipes and public taps in rural areas. Access to a centralized system of drinking water supply is established in 62 municipalities which have approximately 60 per cent of the population.

However, the water supply infrastructure in general is inadequate and poorly maintained. Together with a lack of metering and operational control, this is resulting in significant water losses, estimated to be more than 60 per cent in all cities. Insufficient storage capacities and frequent cuts in electricity make water supply in urban areas intermittent, and wastewater from parallel sewer lines increases the risks of contamination in the old supply pipe.

In rural areas, where less than half the population has access to piped water, the situation is no better. As a consequence of non-existent land-use planning, people establish their farms and build their houses in

the middle of the countryside, far from any public infrastructure, and then illegally dig their own wells for drinking water without any monitoring of the water quality or reference to rules of sanitation.

The resulting lack of the required quantity and quality of drinking water is linked with increasing water demand from different sectors and strong seasonal variation: much more water is needed during the summer growing season when rainfall is scarce. This is leading in part to an over-abstraction of groundwater, especially in the low-lying western and south-eastern parts of the country, with resulting problems of saltwater intrusion in the coastal zone.

Industrial and agricultural use

Monitoring of abstracted groundwater in the industrial sector is weak or non-existent and therefore significant results are not available. Taking into account the rapid economic development of recent years and the necessary future economic growth, the scale of demand for freshwater is clear. To cut costs in future, the large industrial plants may switch to the use of surface water, instead of using drinking water from the public network.

Agriculture has always been, and is still, the main resource of Albania. Because of the climatic features along the coast where most of the country's high productive lands are located, agriculture is critically dependent on irrigation. Yet the irrigation networks suffered at the fall of the State farms system, either by direct destruction or by lack of maintenance. Of the total area of 423,000 ha which is designed to be covered by the irrigation system, only 180,000 ha are covered by a working irrigation system.

To cope with the deficiencies in the irrigation networks, the present practice is to use groundwater for irrigation. This practice endangers the aquifers, since the extracted discharges are not subject to any control, and may lead to over-abstraction and resulting saltwater intrusion in coastal areas. Programmes are underway to rehabilitate the networks and bring them back to their original conveyance capacity within a few years.

Hydropower use

Electricity in Albania is generated exclusively by hydropower, which is managed by 83 small and 9 large hydropower plants (HPPs) on the main rivers (Chapter 9). Plans for new projects are underway; they concern the rehabilitation and upgrading of the Drini cascade, and the construction of two more hydropower plants on the lower Drini at Bushati and on the Vjosa at Kalivaç. Taking this into account, the total future capacity of hydropower will increase to 2,627 MW. However, most hydropower plants are in a rather poor state due to lack of maintenance and therefore they do not operate efficiently. Furthermore, the existing power plants do not take into consideration the ecological aspects required in the EU Water Framework Directive (2000/60/EC) and until now no revitalization activities have been implemented.

*Wastewater*

In Albania the development of sewerage systems has lagged behind that of water supply, which results in a very serious state of affairs. Sanitation coverage in urban areas is almost the same as drinking water coverage. Urban areas have mostly combined sewage and storm water collection networks that discharge into nearby surface water bodies. Because of poor maintenance of wastewater sewers and small pipe dimensions, leaks from these sewers often carry the risk of polluting the drinking water network.

About 40 per cent of the urban population has a sewer connection. In rural areas, only a small proportion of the areas with piped water supply is equipped with sewer networks. Most rural areas have individual household wastewater collection systems, principally simple pit latrines with no drainage pipes. Upgrading of sewer networks has not kept pace with the generally rapid development of infrastructure and (illegal) house-building, which is affected by non-existent land-use planning and the use of old fashioned materials and technologies. All industrial activities located near rivers discharge wastewater directly without pre-treatment.

At present there is only operational treatment of wastewater in Kavaja and Pogrdec. Kavaja has mechanical treatment for its 25,000 population equivalents, operational since 2006.

Wastewater treatment plants in Lezha, Vlora and Korca cities are under construction. The discharge of sewage in water bodies, especially in coastal tourist areas and delicate ecosystems, is a major environmental concern for the Government, the business community and the public. Feasibility studies and detailed designs have been completed (for Vlora, Saranda, Durrës, Lezha, Shengjin and Pogradec) and constructions of sewerage water treatment plants are ongoing in Saranda, Durrës and Lezha with the support of different donors.

*Economic instruments*

Like its predecessor, the 2002 Law on Environmental Protection, No. 8934, the new 2011 Law on Environmental Protection is based on the "polluter pays" principle and environmental liability. The draft Law on Integrated Management of Water Resources provides for economic instruments in the water sector, including taxes on the extraction and use of water, user charges for municipal services, and penalties and fines for non-compliance (Chapter 5).

Although the water invoice is determined to be a standardised enforcement, the financial situation for the 54 currently existing water utilities is difficult and most of them are not able to cover operating costs. The reasons are multifaceted: non-economic tariffs for both freshwater and sewerage, high levels of water losses, a lack of enforcement toward non-paying customers, widespread occurrence of illegal connections and overall service inefficiencies. Besides, there is a significant lack of individual water metering which partly explains the low collection rates of only around 18 per cent.

Considering that, it is quite surprising that eight of the 54 water utilities still have a positive financial balance. These utilities managed to improve their revenue collection rates and introduced individual metering. The first examples of involving the private sector in delivering water services happened in the cities of Elbasan and Kavaja. In terms of the total cost structure of the water utilities for 2010, 29.4 per cent is represented by energy costs, 30.6 per cent by personnel costs, 20.6 per cent by depreciation costs and 19.4 per cent by other costs such as maintenance.

## 6.4 Policies, strategies, legislative framework and international cooperation

*Legal framework*

Water policies and legislation in Albania are undergoing fundamental changes. Driven by its wish to join the EU, Albania is revising its legal and institutional frameworks of water management in accordance with the EU directives and regulations, in particular European Union Water Framework Directive.

Primary legislation in the water sector includes:

- 1996 Law on Water Resources, No. 8093;
- 1996 Law on Regulatory Framework of Water Supply Sector and Waste Water Removal, No. 8102;
- 2002 Law on Protection of Marine Environment from Pollution and Damage, No. 8905;
- 2003 Law on Protection of Transboundary Lakes, No. 9103;
- 2003 Law on Environmental Treatment of Polluted Water, No. 9115;
- 2008 Law on Irrigation and Drainage, No. 9860.

The legal framework for water resources management is provided by the Law on Water Resources. This law organizes water resources management by river basin, introduces the issuing of permits, concessions and authorizations for using water and for discharging wastewater, and, furthermore, calls for the development of a water strategy.

Under its provisions, the NWC was established as the main policy institution for water management and development. Notwithstanding its good points, this law is seen as outdated and is currently being revised.

The draft Law on Integrated Management of Water Resources, prepared on the basis of the Water Framework Directive (2000/60/EC) is expected to be approved in 2012. Other legal acts are waiting for approval:

- Decision on Urban Wastewater Treatment;
- Decision on Priority Substances in Water;
- Decision on Water Quality Standards.

*Strategic documents, policies and programmes*

The relevant ministries have prepared a range of strategic documents to set out an appropriate legal framework for the protection and management of water resources. However, the lack of an updated water resources management strategy including mid-term and long-term financial planning is evident.

The 2006 NES2 identifies as the most critical issue the pollution of surface waters, which arises from the discharge of untreated wastewater. It sets out very generally the framework for developing priority projects to reduce diffusion of effort and point to source pollution of water resources.

The 2004 National Water Strategy is under revision due to the changes in the legal and institutional context. As essential preliminary work for this upcoming strategy, a so-called Integrated Water Resources Management (IWRM) Position Paper, was completed in 2011.

**Box 6.1: Water supply and sanitation in the Tirana and Durrës area**

Over the past decade, the migration of the population from rural to urban zones and the spectacular growth of the population in the Tirana–Durrës area have put significant pressure upon water infrastructures. In particular, over the past five years Tirana has experienced one of the highest population development rates among cities worldwide. This is accompanied by a boom in building construction and, because of the absence of urban planning, by many illegal new constructions and illegal connections to water supply pipes. Two water enterprises supply Tirana with drinking water. Overall the supply is not yet satisfactory and the quality of the drinking water at the taps is poor. This is due to a variety of problems, including intermittent supply, high consumption, wastage and misuse, and infiltrations from parallel sewer lines. Enterprises do not achieve the recovery of operation and maintenance costs because of low tariffs and inadequate revenue collection. This results in physical infrastructure with insufficient financial resources for investment. The illegal buildings and illegal connections are responsible for damage to the sewerage system designed for a capacity of 200,000 people in the 1960s. No new wastewater infrastructure has been built to keep pace with the increasing population in Tirana, which now stands at almost one million. In the new suburbs there is no sewerage infrastructure; new buildings are equipped with septic tanks which are emptied by pumping trucks, and sludge is discharged into the sewerage system.

The situation in Durrës is no better. The country's second city in terms of population has the same water problems as those of Tirana. The situation is even worse in summer when its population doubles, since it is the most important domestic sea resort in Albania.

**Photo 6.2: Wastewater Treatment Plant in Kavaja**

Based on an analysis of the general situation of water resources management and experiences from other countries, this paper clearly points out problems and barriers to progress in the water sector, outlines priorities and identifies areas where water resources management in Albania should be supported.

The 2010 Policy and Strategy – Water Supply and Sewerage Sector (PSWSS) for the period 2010-2013 aims to ensure further decentralization and commercialization in the context of reform of the water supply and sewerage sector. It aims to assist companies to be self-sustainable and develop long-term performance improvement plans, and fulfil all their obligations toward consumers, and to ensure a clear pathway for the involvement of the private sector.

The focus of the draft Local Government and Decentralization Strategy (LGDS) is on modernizing local government in compliance with EU standards. Regarding the water sector, it aims to transfer responsibility for companies' property and administration from central to local government and phase out the operation subsidies of utilities.

The Strategic Action Plan for Lake Shkoder Albania and Montenegro was adopted in March 2007. The aim of this 10-year strategic action plan is to assist government institutions and stakeholders in Albania and Montenegro to define actions and projects at different levels, with a focus on improving environmental management and supporting sustainable economic use of the natural resources of Lake Shkoder and its surrounding areas.

In terms of strategic instruments, river basin management plans (RBMPs) play a decisive role as they describe the approach and offer the tools for ensuring sustainable management of water resources.

In this respect, an important first step was taken in preparing the Mati River Basin Pilot Management Plan approved in September 2010.

The plan acts as the first stage of the preparation of an RBMP and describes the major implementation stages necessary in this process in future. The first part characterizes the existing situation within river basins and makes a projection of what will happen in the future with regard to water. The second part describes issues to be solved in the near future and sets up environmental objectives. The third part analyses and defines the approach required to reach these objectives by setting up a programme of measures and allocating the necessary economic resources for financing this programme.

*Institutional framework*

In general, water resources management in Albania involves a number of ministries and institutions. Due to this fragmented institutional framework (Figure 6.4), coordination among the different line ministries as well as between institutions at subordinated levels is not always sufficient, as they often focus on their own sector's water use.

The National Water Council, ministries and national agencies

As the central executive body for water resources management, NWC approves the legal, technical, regulatory and strategic framework in the water sector. It also proposes and adjusts appropriate measures for implementation of MEA on water resources to which Albania is a party.

As one important reform in the water sector, the former NWC Technical Secretariat was abolished in summer 2011. The General Directorate for Water Administration (GDWA) (Chapter 1) of MoEFWA provided the NWC Technical Secretariat. It supports NWC with its three directorates (Water Policy Directorate, Technical Directorate and Fisheries Policy Directorate).

The GDWA is responsible for providing and implementing the legal, policy and strategic framework in the water sector. Further, it is responsible for screening and reviewing the technical content of EIA, which is required for all projects that could have a significant impact on the environment, and for issuing environmental consents and permits for larger activities. Finally, the GDWA is responsible for monitoring the quality and quantity of all water resources, and delegates coordination to EFA. However, implementation of these responsibilities is poor at present due to a lack of finance and resulting lack of technical equipment and software, such as a GIS. The responsibilities of other ministries that are part of the NWC are presented in Table 6.1.

EFA is responsible for monitoring the quality and quantity of water resources. It supervises the work of relevant institutes on monitoring activities and is the main beneficiary of the data provided by these institutes.

Alongside EFA, various institutions are involved in monitoring water resources as follows:

- The Institute of Energy, Water and Environment, formerly the Hydrometeorological Institute, conducts the assessment of surface water quality for rivers and lakes and the monitoring of rainfall, temperature and other hydrometeorological parameters;
- GSA is responsible for monitoring the quality of underground and marine water, risk assessment and monitoring soil pollution;
- IPH is responsible for monitoring drinking water.

River basin authorities and state institutions at the local level

Water resource management in Albania have been organized within six administrative river basins (Drini, Mati, Ishmi–Erzeni, Shkumbini, Semani and Vjosa). Based on this allocation, the following institutions are responsible for implementing issues of water resource management at the local level:

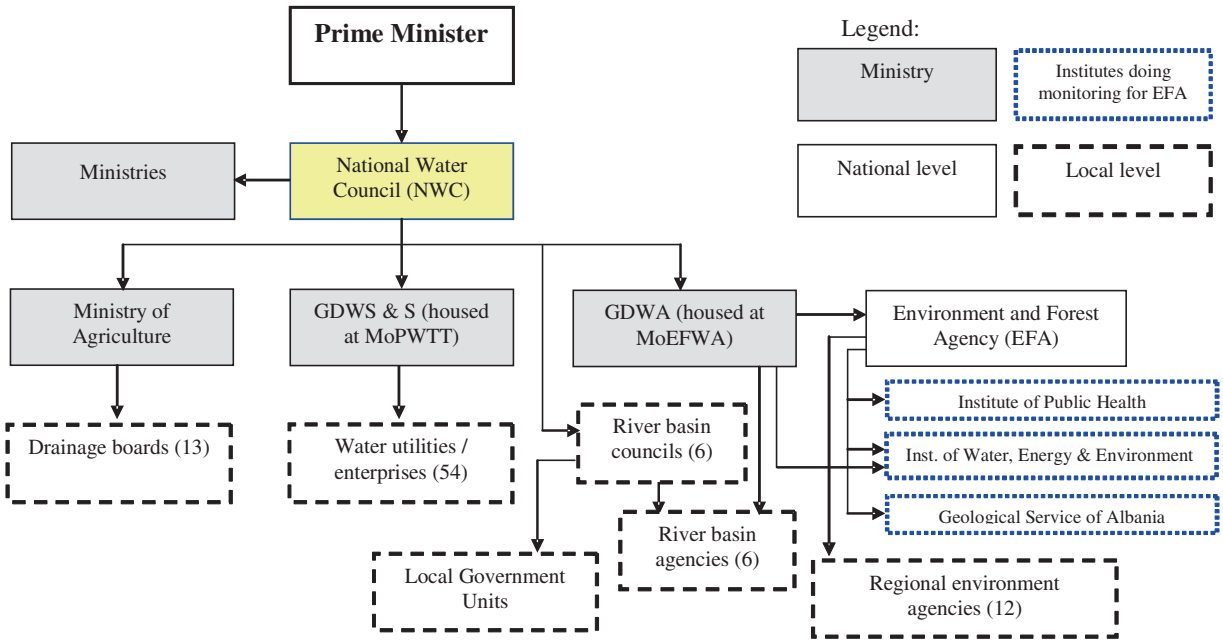
- 6 river basin councils (RBCs), headed by prefects of the regions, act as the administrative body; each is responsible for the protection, development, distribution and operation of water resources within its own basin boundaries;
- 6 river basin agencies (RBAs) act as executive and technical bodies of the RBCs under the supervision of the GDWA; they are responsible for on-site inspection of all activities in terms of water resource usage; however, they have little authority to enforce legal and regulatory procedures;
- 13 drainage boards (DBs), supervised by MoAFCP, are currently the key operators responsible for major irrigation systems, drainage management and flood protection including reservoir dam safety;
- 12 REAs are responsible for the permitting and enforcement of environmental legislation.

**Table 6.1: Sphere of competency in water management of ministries, members of the National Water Council**

| Ministry | Sphere of competency in water management |
|---|---|
| Ministry of Interior | Delegates territorial competences and acts as a bridge between local and central government |
| Ministry of Finance | Distributes financial resources for the water sector as well as giving priority to appropriate water resources management for meeting the needs of society |
| Ministry of Health | Is involved in the implementation of water sector legislation through its State Sanitary Inspectorate. This inspectorate is responsible for setting the drinking water standards, for ensuring compliance with these and for monitoring of drinking water quality |
| Ministry of Economy, Trade and Energy | Hydropower plants |
| Ministry of Public Works, Transportation and Telecommunications with its General Directorate for Water Supply and Sanitation | Water supply, wastewater collection and treatment and flood management |
| Ministry of Agriculture, Food and Consumer Protection | Irrigation and drainage activities in the agricultural sector |

*Source*: Ministry of Environment, Forests and Water Administration, 2011.

**Figure 6.4: Organizational chart of the institutional framework in water resources management**




*Source:* Ministry of Environment, Forests and Water Administration, 2012.

Communes and municipalities

In the framework of the ongoing decentralization process which began in 2000, responsibilities for water provision and sewerage were delegated to LGUs under the 2000 Law on Organization and Functioning of Local Governments, No. 8652.

The transfer of service ownership to water utilities or enterprises began after the inventory and registration of the water supply system and sewerage had been completed. By 2005, 136 of 360 sewerage systems had been transferred to LGUs, which indicates slow progress compared with the 90 per cent rate of transfer of water supply systems. The provision of water supply is in the hands of 58 water utilities or enterprises; 30 of them are also responsible for wastewater services, mostly limited to collection wastewater only. In urban areas this service is performed by LGUs as a public service, while in rural areas it does not exist.

Involvement of users and NGOs in the water management process

Involving the end users in water resource management was the purpose of the 2006 Decision of NCW, No. 2, which provided for the representatives of water users to account for 30 per cent of NCW's composition. In addition, the meetings of RBCs are open to everyone to attend. However, in practice, the public and end user groups, as well as NGOs, participate in the decision-making process to a very limited extent, or do not have the opportunity to influence decisions at all.

*International cooperation*

Due to the transboundary character of surface water and groundwater on the territory of Albania, international cooperation with clearly defined criteria and responsibilities is essential for sustainable and integrated water management. In addition, such cooperation enables financial and technical assistance to be provided for implementation and monitoring according to international standards and procedures. Since the first EPR, some steps have been implemented. Based on the DCM No. 635, on the Establishment of a Government Commission for Water Problems with Neighbouring Countries, the most important agreements and cooperation are as follows:

- The Memorandum of Understanding with Montenegro, signed on 19 June 2010, serves as the main guideline for the management of the transboundary water resources;
- Cooperation with Greece began in 2001. In 2008, both countries agreed to approve the inner regulation related to the Vjosa river basin;
- Cooperation with Kosovo (UN-administered region, Security Council resolution 1244) regarding transboundary water issues began in September 2010.

There are also transboundary projects underway. The Lake Ohrid Project is funded by the World Bank and implemented by Albania and the former Yugoslav Republic of Macedonia. The primary objective of the Project is to develop a basis for the joint management and protection of Lake Ohrid, from which can be developed cost-effective solutions concerning the management and protection of transboundary natural resources. The Adriatic Sea Partnership (2006-2009) under the lead of the REC addresses all States bordering the Adriatic Sea.

The project aims to increase donor interest and generate further funding and to establish the Adriatic Sea Partnership as an operative international body to act as a common platform for regional cooperation to protect the Adriatic Sea. Another transboundary project addresses the protection and sustainable use of the Dinaric karst aquifer system which is shared by four countries (Albania, Bosnia and Herzegovina, Croatia and Montenegro).

## 6.5 Conclusions and recommendations

Albania is rich in surface water and groundwater resources. Much of Albania's economic activity is dependent on the utilization of water resources. Over 90 per cent of energy production comes from HPPs, while agriculture is critically dependent on irrigation. Moreover, the mining, industrial and tourism sectors are strongly dependent on clean and sufficient fresh water, especially in the dry summer. Water resources management in Albania does not meet requirements due to, mainly, inadequate and poorly maintained infrastructure in each of the water-using sectors and the absence of institutional coordination.

The institutional capacity of MoEFWA has been reinforced by introducing the GDWA in summer 2011, and six river basin agencies have also been implemented. However, the institutional structures for river basin management, at both national and local levels, are still weak, understaffed and unstable. The RBAs have little authority to enforce legal and regulatory procedures, which results in poor coordination of local sectors in water resources management. Local sectors dealing with water resources management are not coordinated.

*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 recognised partners in water resources management at the local level.*

Concerning the legal framework, the 1996 Law on Water Resources was a first attempt to integrate the main principles of the EU-WFD. Notwithstanding its good points, this Law is outdated and is currently being revised.

*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.*

There is a lack of an updated and comprehensive water resources management strategy, including mid-term and long-term financial planning and corresponding prioritization for investments in the different sectors in Albania. As a result, investment decisions are made on the basis of a single-sector consideration and priority, leading to suboptimal investments and lost opportunities for capturing multi-purpose benefits. In spite of the recently completed Mati River Basin Pilot Management Plan, there is a lack of action plans, especially RBMPs to act as a framework, guideline and schedule for all action to take place in a river basin. Despite the fact that the Law on Water Resources requests the preparation of RBMPs, the procedures for drafting, reviewing and approving these plans, have not yet been adopted.

*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.*

Most of the existing water utilities in Albania are not able to cover operating costs. This is linked to a series of causes: an inadequate and poorly maintained infrastructure in each of the water-using sectors, with exorbitant water losses in the supply network, water abuses due to illegal connections to the main pipelines, the lack of individual water metering and operational control, low revenue collection rates, inappropriate pricing of water and the absence of institutional coordination.

However, there are water utilities with a positive financial balance. Concerning the adaptation and rebuilding of the infrastructure in water supply and sewerage systems, an essential barrier is the lack of integrated land-use planning which results in poorly planned and regulated construction activity.

*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.*

# *Chapter 7*

# *WASTE MANAGEMENT*

## 7.1 Introduction

Waste management in Albania is at a low level. Systems for the collection of municipal solid waste (MSW) are provided in most cities and towns, but not in rural areas. Very little recycling of waste is undertaken. Wastes are mainly disposed of at municipal dump sites. With few exceptions (Sharra and Bushat landfills), there are no properly managed landfill sites in the country.

The management of industrial and mining waste is focused on clean-up and remediation of waste generated by chemical and mining industries in the past. Although current industrial waste generation is considered low, there are no data to assess the existing situation. Progress has been achieved in assessment and prioritization of sites polluted by past activities and clean-up of the most polluted area – the clean-up of the chemical plant in Durrës was completed in 2011.

The management of radioactive waste is under the control of the Centre of Applied Nuclear Physics (CANP). Medical waste management benefits from the involvement of the private sector. Old pesticides have been exported from Albania for proper disposal.

There is a perceived imbalance between the new legal framework, which is compliant with EU standards, and the limited human resources and waste management practice observed in the country. The capacity of national, regional and local administrations to achieve sustainable development of waste management in Albania is low.

## 7.2 Description of the current situation

*Municipal solid waste collection*

The estimation of MSW generation in Albania is based on the number of trucks delivering waste to disposal sites. INSTAT publishes an overview of MSW and construction and demolition waste (Table 7.1). The increase of MSW amounts reflects the improvement of reporting on collection and disposal activities rather than an actual increase in MSW generation.

The National Waste Management Plan estimates total MSW generation to be 852,360 t/y based on a waste survey to estimate the quantity and composition which was carried out by INPAEL. MSW composition in Albania in 2009 is shown in table 7.2. MSW is collected from the urban population only (Table 7.3). In smaller communities and rural areas no waste collection service is provided and individuals are responsible for removal and disposal of their own waste. This often results in the indiscriminate dumping of waste at roadsides or burning of waste in the open. Urban waste is mostly disposed of at nominated landfill sites, but significant quantities are also dumped at unauthorised locations at the edges of settlements and along roads.

Two thirds of waste collection in urban areas is contracted by municipalities to private companies, which are selected by public tender and operate under contracts typically of three- to five-year duration. About one third of municipalities provide waste collection services through their own companies.

The collection infrastructure is in a poor state. There are often insufficient waste containers and they are frequently in very poor condition. The frequency of waste collection, and hence standing time, is highly variable due to obsolete vehicles.

Collection equipment (trucks, containers) may be owned by the contractor, the municipality, or jointly, as laid down in the contract. Typically, the company collecting waste is also responsible for operating the disposal site.

Some sorting of glass bottles (only bottles, not crushed glass), paper and cardboard, and copper scrap takes place. Glass bottles are collected, sterilized and reused by beverage companies. Paper and cardboard are sorted only in small quantities at a paper-recycling plant in Tirana.

Aluminium cans are usually exported to neighbouring countries for reprocessing, and a very small proportion of them goes to a small private Albanian smelter. Steel scrap is sent to the Elbasan metallurgical plant.

**Table 7.1: Municipal solid waste and construction and demolition waste, tons/year**

| Year | Municipal solid waste | Construction and demolition waste |
|---|---|---|
| 2003 | 358,226 | 636,750 |
| 2004 | 397,382 | 466,320 |
| 2005 | 633,596 | 645,387 |
| 2006 | 722,726 | 506,540 |
| 2007 | 738,738 | 506,540 |
| 2008 | 762,353 | 455,866 |
| 2009 | 857,223 | 455,866 |

*Source:* Institute of Statistics of Albania, 2010.

**Table 7.2: Municipal solid waste composition, 2009**

| Waste stream | % |
|---|---|
| Organic | 47.36 |
| Paper and cardboard | 13.50 |
| Plastic | 13.21 |
| Glass | 5.75 |
| Textile | 5.27 |
| Sanitary waste | 3.25 |
| Wood | 1.43 |
| Metals | 1.13 |
| Animal by-products | 1.08 |
| WEEE and batteries | 0.33 |
| Rubber | 0.20 |
| Hospital waste | 0.17 |
| Inert | 7.20 |

*Source:* National Waste Management Plan, 2010.

**Table 7.3: Coverage of municipal solid waste collection**

| Collection area | Coverage (%) |
|---|---|
| Tirana | 76 |
| Durrës | 63 |
| Lezhe | 82 |
| Shkoder | 81 |
| Kukes | 34 |
| Diber | 25 |
| Elbasan | 45 |
| Korçe | 99 |
| Berat | 53 |
| Gjirokaster | 99 |
| Delvine | 71 |
| Fier | 89 |

*Source:* National Waste Management Plan, 2010.

Very little formal segregation of waste is undertaken by households or commercial entities prior to collection .

In cooperation with two private recycling companies, the Municipality of Tirana has recently taken initiatives to facilitate separate collection services and encourage segregation at source by waste generators. In order to raise awareness among its staff and enable collection of larger amounts of materials for recycling, in one project the Municipality introduced containers for segregation of paper and plastic waste at its premises. This pilot project is to be extended to other institutions in the city as well. Another project concerns paper and cardboard packaging waste from businesses. In other large cities some informal separation and collection of materials for recycling occurs. This is predominantly done by groups scavenging waste in the streets in search of recyclables which are then

sold for recycling. Other informal recycling occurs at disposal sites where unauthorised groups scavenge for metals, plastic, paper and wood.

The recycling industry is developing under the Albanian Recyclers Association (ARA). About 60 private companies are dealing with recycling of a broad range of waste fractions, but predominantly of scrap metal. Not all of them have an environmental permit from MoEFWA.

The European Bank for Reconstruction and Development (EBRD) intends to make an equity investment of €2 million in a private recycling company in Durrës to support its plans to install a recycled paper production line and establish waste paper recycling networks throughout Albania.

*Municipal solid waste disposal*

Dumping in uncontrolled sites is the main method of MSW disposal. It is estimated that about 65 large uncontrolled sites and numerous small sites are currently in operation in Albania. The National Waste Management Plan envisages the replacement of these by 12 regional controlled landfills.

In most instances, sites designated for disposal of MSW are not well managed. They have been established without the necessary infrastructure or engineering provisions to collect and contain landfill leachate and landfill gas. Many of these sites are not secure and there are inadequate facilities for their operational management such as a site office, staff facilities, weighbridge, vehicle wash or lighting. As a result, unauthorised access and dumping is common, as are fires. The inspection of incoming waste is not commonly practised and records of deposits are not kept. Unauthorised disposal is common on land and along watercourses, especially at the edge of the small settlements. Materials are often washed or blown away into the environment, contaminating adjacent land and watercourses. There are no licensed waste incineration facilities for the treatment of MSW. It is common to burn household and other waste in the open. Some wastes, including used tyres and wood waste, are burnt in lime kilns.

Assistance from foreign donors focused recently on the improvement of waste disposal sites. At Sharra, which is the main disposal site in Tirana, the old disposal area has been recultivated. Sharra Phase I is developed as lined landfill and partially filled; Sharra Phase II, which is financed by the Italian Government, is lined and will soon be ready for operation. However, the waste reception area is still under development as part of the Sharra II project. Another modern landfill has been developed in Bushat to serve the Municipality of Shkodra, financed by UNDP's Inter-municipal Cooperation Programme. Under development are landfills in Rrëshen and Bajram Curri. Feasibility studies have been prepared for sites in Korça, Saranda and Vlora. These are co-financed by international donors and the Government of Albania. The development of new landfills is connected with the programme of closure of old disposal sites. Feasibility studies have been prepared for sites in Fier, Elbasan, Berat and Shkodra, all financed from the State budget.

*Industrial and hazardous waste*

The key industrial waste generators are mostly the oil industry, cement production, steel and mining.The oil industry extracts 260,000 tons of crude oil and 7.9 million $m^3$ of natural gas, and produces about 300,000 tons of oil products, annually. Cement production is developing in Albania. Total cement output reached 1.108 million tons in 2009. There are cement plants in Fushe Kruje and Elbasan. Production began at a new 1.5-million-metric-tons-per-year cement plant in the Kruje Region north of Tirana in early 2010.

A full-cycle cement plant was opened in Balldre in 2010. Steel works in Elbasan produced 216,000 tons of steel in 2009. The mining industry is strong in ore extraction (450,000 tons of chromite and copper ores in 2010) and production of construction materials (3.8 million tons of limestone in 2010). Based on a comparison with other countries, and assuming that generation is proportional to GDP, the level of industrial waste generation in Albania is estimated to be 170,000 tons per annum.

The collection and disposal of industrial waste is the responsibility of the producer. Information on the quantity or types of industrial waste is not collected in Albania. Precise information concerning its fate is not available, although it is known that much of it is disposed of at municipal waste sites and some is kept at the site of production, but some is also dumped at unauthorized locations.

As with general industrial waste, there is no information available on current hazardous waste management in Albania. Expert studies estimate that hazardous waste may constitute 3-5 per cent of total industrial waste. Albania created conditions for recording industrial as well as hazardous waste by adoption of a waste classification system and other legislation, but practical implementation – registration of waste amounts – has been delayed.

**Photo 7.1: Waste containers in Tirana**

*Hotspots*

Due to the past industrial practice in Albania, problems with waste deposits from the past are a priority. The need to identify risks connected with improper waste management in the past resulted in the UNDP project Identification and Prioritization of Environmental Hotspots in Albania (January 2008-August 2011), funded by the Government of the Netherlands. The preliminary list of hotspots included 35 sites from which, in May 2010, 9 priority hotspots were selected for assessment and the preparation of remediation action plans. The identified hotspots areas are: Alba Film Studio in the eastern part of Tirana, the ex-Kinostudio; the battery factory in Berat; the Perrenjas mine site; buildings at the Biticka mine near Korca; Dajti enterprise site in Tirana; the tailings dam in Guri i Kuq on the shore of Lake Ohrid; the ferrochrome smelter in Elbasan; the pesticides dump in Rrëshen; and the textile factory in Berat.

Independently from this project, action was taken on several other hotspots (Box 7.1). Table 7.4 provides an overview of the status of individual hotspots.

*Mining waste accumulation*

Past mining activities resulted in the accumulation of large quantities of mining waste, which presents a significant risk to the environment. The National Agency of Natural Resources has reported volumes of mining waste accumulated in heaps and tailing ponds (Table 7.5).

MoETE, which is responsible for these deposits, has prepared a plan of rehabilitation of sites containing higher concentrations of copper by private sector investors. The cost of remediation will be covered by profits from the sale of copper.

*Medical waste*

Medical waste is generated in a wide variety of health-care facilities, including hospitals, polyclinics, health centres and ambulances. There is no record of health-care waste generation, but according to the first EPR of Albania (2002) there were 51 hospitals in Albania producing about 7.3 tons of medical and other hospital waste per day in seven cities. This amounts to 2,600 tons per year.

Privatization in Albania created opportunity for private and state hospitals to provide services for the collection and disinfection of hospital waste. Two companies, Mediatel and Euroteam, offer collection containers and training for hospital personnel on the use of these containers. These companies' services cover practically all of Albania. After collection, medical waste is transported to a treatment facility where it is sterilized in a hydroclave and then transported to a disposal site where it is disposed of together with general municipal waste.

These 2 companies manage approximately 100 tons of infectious waste per year. Considering that infectious waste represents about 15 per cent of total medical waste, they manage about a quarter of all infectious waste generated in Albania. Seven hospitals have in-house sterilization units and dispose of their waste independently.

**Table 7.4: Status of hotspots in Albania**

| Sites | City | Main pollutant | Current status |
|---|---|---|---|
| Chemical plant | Durrës | HCH, lindane | Clean-up completed |
| Nitrate fertilizer plant | Fier | 3 and 5 valent arsenic compounds | Clean-up completed |
| Copper factory | Rubik | Toxic metals | Clean-up completed |
| Storehouse in Bajza | Shkodër | Expired pesticides | Clean-up completed |
| Chloralkali and PVC factory | Vlorë | Mercury | Clean-up in progress |
| Marize oil field | Patos | Oil spills | Clean-up in progress |
| Oil refinery | Ballsh | Oil spills | Clean-up in progress |
| Sanitary centre | Lushnje | 40 tonnes of pesticides | Pesticides removed |
| Waste disposal site - Sharra | Tirana | Urban waste | Old site remediated, new site in development |
| Agricultural storehouse | Rrëshen | Pesticides - 15 barrels and a number of bags | Pesticides removed, selected for further action |
| Metallurgical complex | Elbasan | Heavy metals and other hazardous chemicals | Investigated, selected for further action |
| Alba Film Studio sh.a. | Tirana | Cyanides | Investigated, selected for further action |
| Dajti enterprise | Tirana | Highly toxic chemicals | Investigated, selected for further action |
| Mining site | Perrenjas | Ni-Fe ore dumps near Lake Ohrid | Investigated, selected for further action |
| Buildings - Bitincka Mine | Korçe | Ni-Fe ore dumps | Investigated, selected for further action |
| Tailings dam - Guri i Kuq | Pogradec | Ni-Fe ore dumps | Investigated, selected for further action |
| Battery production factory | Berat | Highly toxic chemicals | Investigated, selected for further action |
| Former textile factory | Berat | About 30 tonnes of ammonium | Investigated, selected for further action |
| Phosphate fertilizer factory | Lac | Toxic metals | Investigated |
| Former tractor factory | Tirana | Highly toxic chemicals | Investigated |
| Agricultural storehouse | Lushnje | Expired pesticides | Investigated |
| Former plastics factory | Lushnje | 1,700 tonnes of toxic chemicals | Investigated |
| Tailings dam | Fushe Arrez | Arsenopyrite deposits near the bank of the Fani River | Investigated |
| Copper factory | Lac | Radioactivity and asbestos | Investigated |
| Copper and gold mining village | Rehove | Copper mining dumps by Osumi River | Preliminary Investigation |
| Former State farm in Shen Vasili-Lukove | Sarande | Expired pesticides | Preliminary Investigation |
| Copper mining and processing along Mati-Fani river | Rrëshen | Tailings dumps containing arsenic located on or in the river(s) | No action |
| Former copper enrichment factory and mine | Kurbnesh | Tailings dams adjacent to or in river beds | No action |
| Copper tailings ponds along Fani river | Rubik area | Copper tailings dumps adjacent to or in the Fani River | No action |
| Copper tailings ponds along Fani river | Reps area | Copper tailings dumps adjacent to or in the Fani River | No action |
| Copper mining and processing area | Kalimash, Kukes, Gjejan | Arsenopyrite ore dumps along Drini River | No action |
| Ferrochrome smelter | Burrel | | No action |
| Chromite mines | Bater, Bulquize, Kalimash | Solid waste from mining activities | No action |
| Nitrate fertilizer plant | Fier | 25 tonnes of liquid NH3 in tanks, copper ammonium | No action |
| Lushnje hospital | Lushnje | 2 tonnes of lindane and 13 barrels with other hazardous chemicals | No action |
| Balez | Elbasan | 30 tonnes of cyanides | No action |
| Institute of Public Health | Tirana | About 800 kg of hazardous chemicals | No action |
| Two dumpsites at Kanine | Vlore | | No action |

*Source:* Ministry of Environment, Forests and Water Administration; UNDP project on Identification and Prioritization of Environmental Hotspots in Albania (2008-2011); Environment and Forestry Agency, 2011.

Analysis of waste composition indicated that 1,460 tons is annually disposed of to dump sites and this is the main practice in medical waste disposal. However, an unknown amount of medical waste may be burned in hospitals. For example, the Tirana University Hospital Centre and Obstetric-Gynaecologic Hospital has its waste incinerated in a new incinerator donated by the Italian government.

Trust Waste Management Limited completed Phase I of a WHO-funded technical assistance programme to MoH in August 2010. The Phase I activities concentrated on the implementation of a waste

management system in five health-care institutions – four in Tirana and one in Korçe.

Phase II of this assistance started in September 2011 and will concentrate on four other regional hospitals, namely Lezhe, Fier, Vlore and Elbasan.

Hospitals and all health-care waste generators are responsible for drafting and updating their own waste management plans in conformity with the National Waste Management Plan.

*Radioactive waste*

At present, due to a lack of in-country radioactive products and the particularly limited use of radioactive sources for medical or industrial purposes, nuclear safety and radiation protection have not been priorities in Albania.

Main users of radiation sources are the Academy of Sciences (Institute of Nuclear Physics) and the University Hospital Centre "Mother Theresa" (Nuclear Medicine Laboratory and Oncology Institute) in Tirana. The majority of these sources are used for scientific research, calibration and medical treatment. Industry is using radiation sources in well logging, thickness metering, level gauges, etc.

Center of Applied Nuclear Physics (CANP) in Tirana is a centralized facility for radioactive waste management and storage. Specialized staff are in charge of managing the radioactive waste and spent sealed sources generated from nuclear facilities in the country. CANP is licensed for import–export, transport, treatment and conditioning and storage of radioactive materials and radioactive wastes. The licence is issued by the Radiation Protection Commission (RPC), the national authority, and is reviewed every two years.

All transport of spent radioactive sources is performed in accordance with the national and internationally agreed transport regulations, which are based on recommendations of the International Atomic Energy Agency (IAEA) for the safe transport of radioactive materials. Solid and liquid radioactive wastes are collected and segregated in accordance with their physical–chemical properties and acceptance criteria are approved by the national authority, based on the recommendations of international institutions.

Spent radiation sources with a short half-life are stored in an interim storage facility at CANP according to their half-life and then discharged as ordinary waste. Reduction of risk is achieved by the conditioning of spent radiation sources with a long half-life into a cement matrix in a 200 litre drum.

By 2009, the storage facility area contained several hundred cubic meters of conditioned radioactive waste and more than 170 pieces of spent sealed sources with a total At≈ 400 TBq. Table 7.6 shows the main radionuclides of spent sealed sources stored and conditioned at CANP.

Albania ratified the Convention on Nuclear Safety and the Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management.

Decisions were approved on the protection of those professionally exposed to ionizing radiation, and on radon concentration and radionuclide levels. The RPC issued two decisions relating to the code of practice for users in nuclear medicine and to dosimetry levels for medical exposure.

As regards enforcement, the RPC approved regulations on inspection reporting and on the procedure for the approval of trading, transfer and transport of radioactive sources. However, further efforts are still required to transpose and implement the Euratom *acquis*.

The capacity of the regulatory authority is still not sufficient to implement and enforce legislation in line with international standards.

Preparations for drafting the national strategy and policies for radioactive waste management are at an early stage. Albania's conditioned waste store has not yet been properly licensed according to international standards, and its placement close to populated areas is a concern.

*Pesticides*

According to the statements of MoEFWA and MoAFCP, there are no obsolete pesticides in Albania. The last body of about 3 tons of DDT and HCH/lindane was removed from Albania in July 2006.

During 2005, an inventory was established of all obsolete pesticides stored in Durrës, whether imported or produced in the country. While the storage facilities were emptied of pesticide stocks, the state of these storehouses remained a problem. The environment within these premises was contaminated and some of them are partially damaged.

**Table 7.5: Mining waste accumulation, $m^3$**

| Waste | Ore heaps | Tailings dams |
|---|---|---|
| Chromium | 11,027,100 | 1,470,000 |
| Iron-nickel | 2,094,800 | 196,100 |
| Copper mining | 5,582,400 | 4,054,800 |

*Source:* National Agency of Natural Resources, 2007.

**Box 7.1: Successful clean-up of hotspots**

The complexity of Albanian hotspot clean-up projects can be demonstrated in the former Durrës chemical plant in Porto Romano, which was declared an environmental disaster area. Until its closure in 1990 the plant produced sodium dichromate for leather tanning, pesticides such as lindane (gamma-HCH) and thiram. Pollution from these processes heavily contaminated an area that includes the former plant, a nearby dumpsite and abandoned chemical storage facilities. Several thousand citizens were estimated to live in and around the plant's contaminated zone.

Significant soil and groundwater contamination was occurring in several locations. The area of most immediate concern was the site of the former plant. The grounds were severely contaminated with lindane and chromium salt residues. A groundwater sample from a water well showed 4.4 mg/l of chlorobenzene, over 4,000 times the acceptable level for drinking water in some EU countries. A sample of milk from a domestic cow showed beta-HCH isomer concentrations 100 times higher than acceptable EU thresholds. Soil samples showed extremely high HCH isomer concentrations, in the range of 1,290 mg/kg to 3,140 mg/kg.

Chromium contamination of groundwater supplies was another major concern. Soil contaminated by chromium and other wastes has been dumped near the former factory, and there were no barriers to prevent leaching of contaminants to the water table below.

A second site of concern was a nearby wetland that has been used as a dumpsite. Separated from the Adriatic Sea by a road, the site contained about 20,000 tons of toxic wastes including lindane and chromium-rich residues.

A third area of concern was a storage site located approximately 1.5 kilometres from the former plant. The storage site consisted of three buildings that contained approximately 370 tons of chemicals. Based on site inspection, these included lindane, methanol, carbon sulfite, sodium dichromate, monomethylamine, and di-methylamine. The chemicals were leaking from corroded steel barrels and bags.

As part of the remediation process, the lindane-contaminated soil was deposited in a confined disposal facility (controlled landfill) constructed on site with bottom and top liners. Specific health and safety measures were taken during the demolition of old buildings and excavation and disposal of contaminated soil to avoid hazardous exposure of the workers.

The clean-up of the former contaminated site of Porto Romano in Albania was completed on 1 July 2011.

There were also few pesticide storehouses still in use and the rest are used for other purposes; however, most of them are empty or useless. Clean-up of these objects and territories was completed in 2011.

## 7.3 Financing of waste management

Fees for collection of MSW and similar waste are set by municipalities and increased on an annual basis. These fees reflect the financial possibilities based on population and range from 4,500 lek (some €32.45) per household per year in Tirana and 1,000 lek (some €7.2) per household per year in other major cities to 300 lek (some €2.20) per household per year in smaller municipalities. Although the fees for industries are relatively high, up to 200,000 lek (some €1,441.2) per year in Tirana and typically around 10,000 lek (some €72) per year (but varying according to the size of the business), the financing of waste management is not sufficient, covering on average 35-60 per cent of needed revenues; municipalities balance payments to collection companies from their own budgets. The sum of waste fees paid by users of MSW collection services reached €7.5 million in 2009.

Industrial companies are using their own waste disposal sites and the cost of industrial waste management is included in overall company expenses.

Due to widespread dumping in dumps without any checking of incoming vehicles, waste management costs cover only the operating costs of collection. Capital investments needed for infrastructure development are provided from the Government budget via MoPWTT and from international donors. Table 7.7 provides an overview of the MoPWTT budget for environmental infrastructure, including funds from foreign donors.

The budget does not seem to be sufficient, as the Sharra landfill in Tirana alone needed a €6 million loan to finance its development. Similarly, hotspot

clean-up costs are high (e.g. the Durrës chemical plant required more than US$ 6 million and other hotspots are budgeted at over €1 million). Funds allocated for waste management represent less than 10 per cent of funds allocated to water and wastewater infrastructure improvements.

### 7.4 Policies and strategies

The 2002 NEAP formulated the need to develop landfills in Tirana, Durrës, Kavaja and Lezha. Requirements for the improvement of waste management and remediation of hotspots were also formulated in the Albanian National Action Plan for the Reduction of the Coastal Zone Pollution from Land Based Sources in 2005. The Plan highlighted the increasing impact of human presence, particularly during summer, which is mainly reflected in higher MSW generation along all the main beaches (Divjaka, Durrës, Saranda, Shengjin, Velipoja and Vlora) due to the high concentration of tourists and local people from inland. It calls for the improvement of MSW collection systems, development of new disposal sites and the clean-up of hotspots in the coastal zone of Albania.

These plans were, in general, not systematically implemented, and only partial results were achieved under individual projects. However, ideas formulated in these documents were used in support of implementation of projects financed by international donors and as a background for the National Waste Management Strategy.

**Table 7.6: Radionuclides stored at the Center of Applied Nuclear Physics**

| Source | Radionuclide |
|---|---|
| Hospitals, industry | $^{137}Cs$ |
| Army, industry | $^{60}Co$ |
| Hospital, geophysic or chemical enterprises | $^{226}Ra$ |
| Research, soil monitoring | $^{241}Am$ |
| Soil, industry, agriculture | Am-Be |
| Industry | $^{192}Ir$ |
| Army, industry | $^{90}Sr$ |
| Research | $^{239}Pu$ |

*Source:* Center of Applied Nuclear Physics, 2011.

**Table 7.7: Waste-related investment from the Ministry of Public Works, Transportation and Telecommunications, in million €**

| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| Municipal waste | 0.197 | 1.386 | 0.715 | 1.919 | 1.626 |
| Hotspots | 2.868 | 0.460 | 0.500 | 4.400 | 1.056 |

*Source:* Ministry of Public Works, Transportation and Telecommunications.

The 2006 NES2 summarizes the situation in waste management and states that efforts in the waste sector have been insufficient and uncoordinated. With the aim of achieving improvements, the Strategy proposes to focus on development of local and regional plans which set principles and address matters of national importance such as hazardous waste, municipal waste and medical waste management, recovery and recycling operations.

NES2 also states that wastewater collection and treatment and solid waste management are two main areas of concern. These areas will require massive investment exceeding €1 billion to achieve EC standards.NES2 outlines the following objectives for the waste management sector:

- Define best practice for waste management in the medium term, as basis for the preparation of waste management plans;
- Have Waste Management Planning System in place at local, regional and national levels;
- Implement Priority Projects for Waste Management – Phase I; these include key MSW landfills and waste separation;
- Implement Priority Projects for Waste Management – Phases II and III;
- Develop hazardous waste management including the preparation of feasibility studies for hazardous waste containment facilities, implementation of new regulations and development of a National Hazardous Waste Management Plan;

- Complete a legal framework for waste management;
- Increase awareness of waste issues so as to encourage responsible behaviour, through public campaigns.

Additionally, the following objectives in the section on environmental damage are related to the waste management sector:

- Establish standards for the reuse of contaminated land in Albania;
- Minimize the risk to human health posed by existing contaminated land securing the perimeters of contaminated areas and relocating people living within these areas;
- Implement priority restoration projects focusing on industrial facilities in Elbasan, Lac and Rubik;
- Develop restoration projects for polluted areas, mines, quarries and disposal sites;
- Establish a contaminated land register and information management.

Objectives defined in NES2 are under implementation, mainly through assistance financed by foreign donors. Good-practice training and waste management plans are being prepared for Tirana, Vlore, Fier, Elbasan, Shkoder, Lezhe and other municipalities.

One of the accomplished objectives of NES2 is the preparation of the National Waste Management Strategy for the period 2010-2025 in 2010. It aims at the implementation of the EU Framework Directive on Waste Management. The Strategy presents an overview of the current waste management situation and formulates vision, strategic priorities and strategic goals on waste for Albania. The Strategy also defines in general terms the key elements of hazardous waste strategy.

The Strategy proposes the division of Albania into 12 waste management areas on the basis of existing district administrative boundaries. A waste management area profile and a relevant waste management solution will be developed according to the specific needs of each area.

This will be coordinated by waste management area groups consisting of representatives from districts and municipalities and a representative from each of the REAs. The district will be responsible, through the municipalities, for the dissemination of information to the communes within the waste management area.

Based on the results of defining waste management area profiles and solutions, regional waste management plans will be developed, outlining the existing capacities and resource needs of each waste management area. Waste management areas can work together to achieve economies of scale. Regional waste management plans will be considered as a source of information for MoPWTT to enable effective spending of available resources, in coordination with international donors.

The Strategy further emphasises the need to strengthen the institutional structure; including the clarification of the roles and responsibilities of authorities and institutions at the central and regional levels, and establishing a regulatory agency for tariff-setting.

According to the Strategy, the conditions for improvement in future waste management are the introduction of at-source waste separation, increased producer responsibility and improvement of the waste data system.

The integration of waste management is expected to be supported by the establishment of an Inter-ministerial Committee on Waste, parallel to the National Waste Advisory Group, members of which will be selected from national and international stakeholders. This group would be a government advisory group on policy and future strategy, for example, to identify priority waste streams and develop project fiches to assist the international donor community to consider funding of priority projects.

Economic and financial implications indicate that the implementation cost of compliance with the EU Framework Directive on Waste Management is estimated at between €150 and €200 million with additional annual operating costs of around €52 million per year after full implementation.

By type of implementation measure, the bulk of one-off costs will be used on equipment and civil engineering (€133 million or 86 per cent of the total), technical assistance (€12.4 million or 8 per cent) and public awareness (€8.3 million or 5.3 per cent). Annual costs will mainly be used for the operation and maintenance of new equipment (€41.7 million or 79 per cent of the total annual cost) and new personnel (€5 million or 9 per cent).

The total additional human resources required to implement the EU Framework Directive on Waste Management are estimated at 350 full-time

specialists, of whom the majority will be employed by the public administration.

Finally, the Strategy defines indicators for improvement of accountability, monitoring and evaluation of waste management.

## 7.5 Legal and institutional framework

*Legal framework*

The 2003 Law on Environmental Administration of Solid Waste, No. 9010, is a framework waste law covering all types of waste except hazardous, radioactive, nuclear and explosive waste. It defines rights and responsibilities of waste generators and waste holders, defines key waste streams, and assigns to ministries responsibilities for the preparation of strategies, policies and legislation for these waste streams.

The Law further defines criteria for the siting of waste treatment and disposal facilities and basic criteria for rehabilitation of existing waste disposal sites. It requires monitoring of waste quantities by waste generators and waste collecting, transporting, processing and disposal companies. It requires companies managing waste to obtain a licence for their activities.

The 2002 Law on Taxation, No. 8977, resulted in the introduction of the packaging tax on beverages. According to this law, the Ministry of Finance should draft the rules on financial guaranties included in the environmental permit for a hazardous waste site, which should be later approved by the Council of Ministers. No such rules have yet been drafted.

The 2006 Law on Hazardous Waste Administration, No. 9537, designates the norms that regulate safe hazardous waste management and their collection, transport, recovery, treatment, disposal and export. The 2006 Law on Concessions, No. 9663, covers public services and waste management and implies construction of waste treatment facilities.

The following decisions and regulations provide details on implementation of the above-mentioned legislation:

- 2003 Decision on Approval of Rules and Procedures for the Import of Waste for Recycling and Treatment, No. 803;
- 2005 Decision on Approval of the Albanian Catalogue for Classification of Waste, No. 99 (which introduces a waste categorization system identical to the European Waste Catalogue);
- 2007 Regulation on Treatment of Construction and Demolition Waste from Creation and Transportation to Disposal, No. 1;
- 2010 Regulation on Hospital Waste Management, No. 798;
- 2007 Guideline on Approval of Rules, Content and Deadlines for Drafting of Plans for Solid Waste Administration, No. 6.

The Law on Integrated Waste Management, No. 10463, does not change the institutional responsibilities for waste management, but stipulates a detailed, coherent framework for proper waste management in line with the latest EU policies in this sector. It is expected that this framework law will be supported by the following legislation which is awaiting approval (with reference to transposed EU legislation):

- Draft Law on Batteries and Accumulators and their Waste (2006/66/EC);
- Draft Law on Waste from Electrical and Electronic Equipment (2002/96/EC);
- Draft Law on the Packaging and Packaging Waste (94/62/EC);
- Draft Law on Landfill of Waste (1999/31/EC);
- Draft Law on Waste Incineration (2000/76/EC);
- Draft Law on Disposal of Waste Oils (75/439/EC);
- Draft Law on End of Life Vehicles (2000/53/EC).

It is a positive sign that the legislation on waste management is developing towards full compliance with EU waste management policy. However, legal changes do not ensure compliance in terms of practice and more demanding legislation results in a more difficult process of implementation. A clear transition strategy from current practice to the standards required by law is lacking.

International agreements

Albania has been a Party to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal since 1999 (Chapter 4). The Ban Amendment to the Convention was accepted by Albania in 2005. However, due to the lack of information on waste controlled by the Convention, annual reports to the secretariat do not contain all relevant information and data on waste are inconsistent.

*Institutional framework*

The institutional framework of waste management in Albania is not strong enough to support efficient implementation due to distributed responsibilities to

several ministries and weak central authority. MoPWTT is responsible for bulky and voluminous waste management, MoETE for industrial and mining waste management, the Ministry of Defence for military waste management, MoAFCP for agricultural and stockbreeding waste management, MoH for medical waste management and the transboundary movement of waste.

Ministry of Environment, Forests and Water Administration

MoEFWA is the main institution on waste policy and management. It is responsible for strategy formulation, legislative drafting, project preparation, central inspection and enforcement. With its regional agencies and EI, it is responsible for setting up a system of environmental management of waste and monitoring its implementation at all stages and levels.

The Ministry also issues waste permits (and changes or suspends them), export and transit permits for shipment of waste, and hazardous waste export permits, and drafts the waste import permit which is to be approved by the Council of Ministers.

The institutional capacity of waste management is not sufficient. The Directorate of Environment Protection has seven experts, only one of whom is directly responsible for waste management.

The EFA has a waste management sector, focusing on data collection and management, and has under its jurisdiction the register of permits. It is also involved in the approval of waste disposal sites and issuing (in cooperation with local government authorities) of environmental permits for local waste facilities.

Other ministries

Other ministries, central institutions and local government bodies, in coordination with MoEFWA, have the following duties: design methodologies for the environmental treatment of waste in accordance with the type and nature of waste; monitor and control waste-generating activities; and control agents engaged in transportation, recycling, processing and disposal of waste in the area under their jurisdiction.

MoPWTT is the contracting authority for concessions for economic activities for which it has responsibility. This also covers public services, including municipal waste management concessions. MoPWTT organizes tenders for concessions, negotiates the conditions of concession and, under certain circumstances, may also terminate a concession agreement. The Concession Unit identifies potential concessions and estimates their cost-effectiveness and financial appropriateness, and recommends them for approval.

The Construction Police, subordinated to MoPWTT, is responsible for controls and inspections of the regulation on construction and demolition of (inert) waste, together with other inspectorates, including EI. The Sanitary Inspectorate of the National Council of Territorial Adjustment approves site permits and construction permits for any objects, including for landfills larger than 0.5 ha.

MoETE has established a unit dealing with concessions, which is in charge of promoting and assisting the contracting authority for concession evaluation and negotiations. This also includes concessions on collection, transport, processing and management of solid waste.

The MoH's State Sanitary Inspectorate cooperates with EI, and occasionally with other inspectorates, to carry out inspections of waste-related activities. It is also involved in the approval of waste collection sites.

The institutions responsible for nuclear safety and protection from radiation are MoH, the Inter-institutional Committee for Protection from Radiation (ICPR), the Academy of Sciences (Institute for Nuclear Physics) and MoEFWA.

Municipalities

Local governments are responsible for organizing municipal waste management and contracting collection, and city cleaning companies. They also draft and approve local regulations on waste management following guidelines prepared by MoEFWA and MoH.

City cleaning companies are required to:

- Separate waste at the source of its generation; properly collect, store and treat waste according to type; establish facilities and plants for waste recycling and processing; and design programmes of technical, technological and organizational steps for waste management; they are obliged to carry out their activities while posing no risk to human health, water, air, soil, plants and animals, and with no additional noise or smell and no irreversible damage to nature;

- Separate hazardous waste from other waste, and package, label and transport waste in accordance with national and international rules;
- Monitor their own waste generation, keep records (on types, quantities of waste they generate, reuse, recycle, recover, hold, transport, dispose, or incinerate) and publish the related information;
- Periodically inform the REAs on hazardous waste they may have consigned to other persons and give them access to their hazardous waste registers;
- Report to and inform MoEFWA every three months;
- Guarantee, at their own expense, the safe disposal of exported waste when the transit countries refuse to allow it go through;
- Pay the transport, recovery and disposal costs for their own waste;
- Design and implement their own programmes for reduction of hazardous waste volume, quantity and toxicity.

Municipalities and communes set waste collection fees in the territory of their jurisdiction and authorize persons for fee collection. Local governments are responsible for defining waste collection and treatment sites, in accordance with environmental criteria and development plans, and for organizing disposal sites for both municipal and hazardous waste.

The territorial adjustment councils of a region or municipality select a disposal site smaller than 0.5 ha for all kinds of waste (technological/urban/inert) in the territory of their jurisdiction.

Each LGU is the contracting authority for the concessions for economic activities under its jurisdiction, and also for waste concessions.

The municipal inspectorates cooperate with EI and other inspectorates to carry out inspections of waste-related activities in the territories of their jurisdiction. The municipal council is involved in the process of permitting of a hazardous waste site.

## 7.6 Conclusions and recommendations

Hot spots, mining sites clean-ups and municipal waste management, in particular, attracted the attention of international donors and significant improvements have been achieved. Strategic documents on waste management have also been prepared by foreign consultants. However, the local expertise and capacity of government institutions does not seem adequate to further develop information and implement proposals prepared by international donors. The currently adopted waste legislation is setting high management standards and it is not clear how Albanian authorities plan to achieve them.

*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 development of waste management infrastructure focuses on landfills, but these will require additional funding in the future for expansion of their capacities.

According to experience from other countries, it is not expected that this funding will be provided by foreign donors. Moreover, the current financial arrangements in waste management cover only collection, but do not allow new investments in equipment and infrastructure. Thus, the situation in waste management in the long term is not considered financially sustainable.

*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.*

Although the waste legislation created conditions for collection of data on waste generation and disposal, no reliable data on waste management are available in the country. The MSW data are based on estimation by municipalities and industrial waste data are limited to hot spots and mining waste sites waste only. The lack of data on waste management limits the possibility of complying with the requirements of the Basel Convention.

*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 management of medical waste has developed an infrastructure for collection and sterilization of this waste, but further improvement and expansion is limited due to insufficient funding of hospitals and lack of a central medical waste incinerator.

*Recommendation 7.4:*

*The Ministry of Health, with the support of the Ministry of Environment, Forests and Water Administration, should analyze:*

*(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.*

# Chapter 8

# FORESTRY, BIODIVERSITY AND PROTECTED AREAS

## 8.1 Main developments since the first Environmental Performance Review

Since the first EPR, national legislation related to forestry, biological diversity and protected areas has been improved. Currently, the most important national policy development related to forestry and forest management is the transfer of ownership, rights to use and responsibilities for the management of what is ultimately planned to be 60 per cent of Albania's forests and pastures to local communes.

## 8.2 Forests and forestry

*Forest cover*

According to the 2005 Law on Forests and the Forestry Service, No. 9385, forest is defined as an area covered at least 30 per cent by dense trees on more than one tenth of a hectare, while open forest or forest land is defined as an area covered 5-30 per cent by forest vegetation, unregistered in another land-use cadastre. In 2009 the forestry lands (high forests, low forests/coppices, shrubs and other areas with forest vegetation) encompassed 1,071,880.2 ha, which accounts for 37.28 per cent of the territory of Albania. The structure of the Albanian forest resources (forest fund), namely its division into different forest types, surface covered and stand volume for the dominant forest species is presented in table 8.1.

The deciduous high forest tree species (in particular beech and oak) were prevailing in Albania's forest resources in 2009, both in terms of surface covered (56.8 per cent) and stand volume (69.6 per cent), while coniferous forest stands (mostly black pine, fir and maritime pine) accounted for only 16.4 per cent of the total forest land area and for 21.1 per cent of the total forest stand volume. Areas overgrown by bushes accounted for some 24 per cent of the total forest area and 9.3 per cent of the total timber volume.

Almost three quarters of the territory extends between 200 and 2,000 m above sea level, with a mean value of 708 m, which is twice the average for Europe. Forests are distributed over most of the country but, due to the agricultural use of lowlands, are predominantly on hilly and mountainous areas with steep and partly unstable slopes. According to the data collected for the 2005 national forest inventory, 42.36 per cent of the sample forest plots were located not higher than 800 m above sea level, 4.47 per cent of plots were located at an altitude between 0 and 200 m, and 13.79 per cent between 0 and 400 m. Some 44.4 per cent of sample plots represented mountain forests, with the altitudinal range between 400 and 1,000 m. As much as 41.8 per cent of forest plots were located at elevated areas with altitudes between 1,000 and 2,000 m.

Importantly, the 2005 national forest inventory shows that on the slope gradient in afforested areas, the majority (62.15 per cent) of forest sample plots were located on terrain with a slope gradient exceeding 40 per cent where forest management, and in particular forest harvesting, should not take place. Only 2.61 per cent of sample plots were in the 0-10 per cent gradient category most suitable for forest management practices and a further 35.24 per cent in the 11-40 per cent category where the management of forests, including harvesting, can still be economically sustainable. As much as 49.75 per cent of plots were in the 41-70 per cent slope gradient category, which is not suitable for sustainable forestry management and which, due to the high exposure of such slopes to the erosion of the very thin layer of fertile organic strata of mountain top soils could be further intensified as a result of any forestry operations. Finally, 12.4 per cent of forest plots were in extremely steep mountain areas where the slope gradient exceeds 70 per cent, indeed scarcely accessible areas, no longer suitable for any kind of management.

In addition, the accessibility of forest stands which are suitable for management is further limited by the generally underdeveloped network of forestry roads. Consequently, forest management practices, in particular logging (both authorized and illegal), concentrate on the most accessible areas, directly adjacent to existing regular transport roads.

In spite of the above limiting factors, the conditions for growing forests in Albania are favourable, due to

the prevailing Mediterranean climate conditions with a relatively short and very humid winter, and a long, hot and very dry summer, providing for a long vegetation season when the tree stands benefit from their exposure to sunlight. In 2009, as much as 80.6 per cent (840,908.8 ha) of forest surface area harbouring some 77.2 per cent (estimated at 584,771 ha) of the total timber stock was classified as productive forests, while the remaining 19.4 per cent (201,881.2 ha) with 22.8 per cent (estimated at 172,490 ha) of the timber volume was classified as non-productive forests. However, forest productivity is estimated to be much lower than in some other European countries, partly due to different forest degradation factors and human pressures on forest ecosystems.

*Forestry*

Over the last 70 years, Albanian forestry has suffered significant changes, as a result of which the forest area has been reduced by more than 300,000 ha mostly due to clearance for agriculture (Table 8.2). Moreover, the more accessible forest stands have been significantly degraded through overharvesting and overgrazing, which has changed the forest age structure and species composition, and reduced the forest underwood. For several years tree felling has exceeded the net annual increment, which has resulted in a decrease in the growing stock. Usually, such practice creates forests that are younger, more even in age structure, biologically less diverse and economically less productive. Other adverse effects are a decrease in natural water retention capacity, increased threat of forest fires, and the disappearance of wildlife and bird species which require larger undisturbed forest complexes.

Between 1990 and 2009 the total surface of forest land increased by some 27,200 ha (Table 8.2). Simultaneously, the surface area classified as high forest decreased by some 32,300 ha (6.6. per cent of the high forest surface in 1990) and in 2009 accounted for 42.37 per cent of the total surface. However, depending on the statistical method used for forest area and forest type classification, available data on forest structure may differ. For instance, data from the 2004 national forest inventory project, Special Study on Forest and Pasture General Plan, following the categorization method later confirmed by the 2005 Law on Forests and the Forestry Service, estimates the high forest surface at 294,957 ha (19.68 per cent of the total forest area) with a breakdown into areas covered by coniferous high forest (84,461 ha) and broad-leafed high forest (210,496 ha), while the acreage of coppice forest is estimated at 405,016 ha (27.02 per cent), of shrubs at 241,724 ha (16.13 per cent), and of open forest at 557,260 ha (37.17 per cent). The 2005 Law on Forests and the Forestry Service determines the total forest fund areas to be 1,498,957 ha.

The current age structure of forests clearly reflects the results of overharvesting in the past, as the greater part of high forest stands has not yet reached cutting maturity, irrespective of dominant tree species composition and habitat, which determine the optimal felling age for particular species. In the high forest stands the first four age classes (trees aged between 0 and 80 years) are predominant, accounting for as much as 65 per cent of the high forest surface, with 48 per cent of tree stands aged below 60 years. The vast majority (73 per cent) of the low forest stands is below 20 years in age. On the other hand, the old-growth forest stands (aged above 140 years), either already protected or in need of protection, still account for 4 per cent of the high forests.

Forestry and agriculture are two important components of land use in rural areas of Albania, closely interrelated throughout history. As the forests surrounding villages are used for grazing, no clear distinction can be made between these two different land-use forms. Official statistics often aggregate data on forest surface with the surface of pastures. Moreover, this is also reflected in the institutional structure of MoEFWA, in which both land uses are among the competencies of one department, the Directorate of Forests and Pastures (DFP).

Wood is commonly used for heating and cooking purposes, not only in rural areas and remotely located mountain settlements but also peri-urban zones, whenever households have no access to other fuel sources, e.g. through communal gas pipeline installations. Therefore, timber consumption by households has always been higher than by industry in Albania. In 2003, some 415 wood processing plants processed about 360,000 m³ of timber, while simultaneously the documented level of fuel-wood consumption was 1.6 million m³ per year. The latter number may correspond to the current unofficial estimates for illegal cuts per year (between 0.5 and 2.0 million m³ of timber volume).

Illegal cuts often have no commercial purpose (thus not all cases should be classified as “unauthorized commercial logging”). They result from the subsistence needs of the rural population and commonly understood traditional right to use the natural resources of the area, to a large extent tolerated by the authorities despite the legally imposed sanctions and fines for such law infringements. The intensity of such illegal practices

will probably decrease in the future, due to ongoing depopulation of rural areas and decreasing demand for firewood. In fact, official statistics based on reports by the Forestry Police on law infringements already demonstrate positive tendencies over recent years (28,373 m³ of illegally cut timber in 2002 versus only 8,129 m³ in 2010). However, the low number of reported cases and illegally harvested timber volume may not only result from progress in preventing such illegal practices, but also reflect the limited operational capacities of the generally understaffed and underequipped forestry field services, which are unable to control the situation in mountain forests.

Forest fires

Forest fires, often human induced, still pose a significant threat to the forest ecosystems. According to the database on forest and pasture fires , high number of fires was reported in 2007 (1,182). As much as 30,827 ha were affected, 5,888.31 ha totally burnt, including as much as 3,659.81 ha of high-stem forests.

Despite the 2004 National Strategy for Fighting Fires in Forest and Pasture Areas, and the cooperation of different ministries and mobilization of different agencies, services and forces in case of forest and pasture fires, this continuous threat cannot easily be controlled or mitigated. This is mostly due to the inaccessibility of larger forest complexes on account of the underdeveloped forestry road network, as well as the general absence of modern optoelectronic equipment for early detection, reporting and warning of forest fires, and limited technical capacities resulting from the lack of modern fire-suppressing equipment, vehicles and special aircraft.

Non-timber forest products

Albania is also well known for the abundance and quality of its non-timber forest products (NTFPs), in particular medicinal plants, ether oil plants, and tannin plants. Estimates from 2004 show that, on average, over 7,400 tons valued at US$ 10 million are exported each year. Control over unauthorized collection of such plants has improved in recent years, and the pressure has slightly decreased, which is also due to the educational campaigns, training and technical assistance provided under the Private Forestry Development Programme. The Programme sensitized entrepreneurs who understood the economic benefits deriving from cultivation and marketing of such plants on a larger scale. However, detailed data on the state of populations of the above plants is currently not available.

NTFPs also include game animals, and in 2010 the country had some 400 hunting grounds. The list of game species includes 17 species (2 mammal species – fox and hare – and 15 bird species, mostly migratory). The number of hunters registered in hunter associations amounted to some 17,000 in 2009. Furthermore, a considerable number of hunters from foreign countries come to Albania each year.

Hunting activities are not allowed in national parks and Ramsar sites but seriously affect the wildlife populations outside protected areas. This is because, in general, control over illegal hunting or using illegal hunting methods, as well as poaching, is scarcely possible, due to the low level of law enforcement. Uncontrolled hunting still remains a serious threat to the viability of populations of large carnivores and birds of prey, even if they are not directly affected by hunting and poaching, as they are confronted with a continuous decline in food sources as a result of hunting and poaching targeted at their animal prey species. According to the MoEFWA database on wildlife game species hunted, the numbers of individual mammals hunted in 2009 included 2,734 brown European hares and 1,409 red foxes. Individual game birds hunted in 2009 included 13,575 coot (*Fulica atra*), 2,582 rock partridges (*Alectoris graeca*), 7,605 turtle doves (*Streptopelia turtur*) and 7 common quail (*Coturnix coturnix*).

*Legal and policy framework*

Forest ownership reform, currently ongoing, is aimed at transferring the ownership of a major part of previously State-owned forests to the communes. In September 2007 the Government decided to speed up the transfer process of public properties to LGUs, especially for the State-owned forests.

The most recent legal bases for this process are the 2006 Regulation on the Use and Transfer of Forests from LGUs and the 2008 DCM on the Determination of Procedures and Criteria of Administration of Communal Forests, No. 22, which has much accelerated forestry ownership reform in recent years. The Regulation defines rules and procedures for the transfer of forest ownership from the State to communes, and the use of forests by the LGUs. It also assigns to MoEFWA the supervision of the implementation of the Regulation, and the provision for, extension services, which may be required by the users of communal forests, through the regional forestry administrations.

**Table 8.1: Structure of forest fund**

| Type | Surface | | Volume | |
|---|---|---|---|---|
| | ha | % | thousand $m^3$ | % |
| **A. Coniferous, Total** | **175,558.90** | **16.4** | **15,945.80** | **21.1** |
| Black pine | 109,199.40 | 10.2 | 8,939.10 | 11.8 |
| Fir | 15,181.00 | 1.4 | 3,171.00 | 4.2 |
| Other | 51,178.50 | 4.8 | 3,835.70 | 5.1 |
| **B. Deciduous, Total** | **609,304.10** | **56.8** | **52,760.50** | **69.6** |
| Beech | 197,093.50 | 18.4 | 33,717.80 | 44.5 |
| Oak | 343,916.10 | 32.1 | 15,031.20 | 19.8 |
| Poplar | 1,795.40 | 0.1 | 97.00 | 0.1 |
| Other | 66,499.10 | 6.2 | 3,914.50 | 5.2 |
| **C. Bushes, Total** | **257,927.20** | **24.1** | **7,019.80** | **9.3** |
| Strawberry tree | 58,998.40 | 5.5 | 2,855.80 | 3.8 |
| Hornbeam | 96,901.00 | 9.0 | 2,700.50 | 3.6 |
| Other | 102,027.80 | 9.5 | 1,463.50 | 1.9 |
| **D. Other areas with forest vegetation** | **29,090.00** | **2.7** | **N/A** | **N/A** |
| **Grand Total** | **1,071,880.20** | **100** | **75,726.10** | **100.0** |

*Sources*: State of Environment Report, 2010; author's own calculations.

**Table 8.2: Changes in forestry land structure between 1990 and 2009, in thousand ha**

| Type of area | Surface | | | | |
|---|---|---|---|---|---|
| | 1990 | 1995 | 2000 | 2005 | 2009 |
| **Forest** | **788.8** | **775.2** | **769.3** | **782.4** | **784.9** |
| High forest | 486.5 | 471.2 | 459.6 | 458.3 | 454.2 |
| Low forest | 302.3 | 304.0 | 309.7 | 324.1 | 330.7 |
| **Shrubs** | **255.9** | **254.8** | **254.5** | **257.8** | **257.9** |
| **Other areas with forest vegetation** | .. | **14.7** | **23.9** | **23.8** | **29.1** |
| **Total** | **>1,044.7** | **1,044.7** | **1,047.7** | **1,064.0** | **1,071.9** |

*Sources*: State of Environment Report, 2010; FAO Global Forest Resources Assessment, 2010.

To achieve this goal, the Sector of Extension and Communal Forestry was established under the DFP within the MoEFWA General Directorate of Environmental Policies (GDEP).

This process has changed the land ownership structure in Albania, as well as the division of forestry land management rights between the State authorities and the LGUs. Before World War II, only 1 per cent of forests was in communal ownership, 5 per cent was privately owned, and 94 per cent belonged to the State. By 2009, the communal ownership of forestry areas (530,000 ha, 50.72 per cent of the total) was already prevailing over State (495,700 ha, 47.43 per cent) and private (19,000 ha, 1.82 per cent) ownership.

Due to such important changes in the forest land ownership structure, the effects on the state of forests – both forests remaining in State ownership and those for which forest management has been taken over by communal owners – should regularly be monitored in the coming years.

The 2005 Law on Forests and the Forestry Service replaced the 1992 Law on Forestry and the Forestry Police Service, No. 7623. The 2004 DCM on Approval of the National Strategy for Fire Management in Forests and Pastures provides the legal basis for the implementation of the National Strategy for Fighting Fires in Forest and Pasture Areas. The 2008 MoEFWA Order on Approval of Forms for Identification of Forest and Pasture Fires sets up a centralized system for data collection on forest and pasture fires. The Regulation for the Prevention and Suppression of Wild Fires in Forests and Pastures, and for the Organization of the Voluntary Units for Fire Suppression, was adopted in 2010. The 2008 Guidelines on the Cadastre of Forest and Pasture Fund are fundamental for the development of monitoring of the state of forests and pastures in Albania. Most recently, MoEFWA has drafted several pieces of legislation related to forestry, e.g. the draft Law on the Identification of the Criteria and Procedures for the Creation of Strategic Wood Material in Stands and the Treatment of Virgin Forests.

**Photo 8.1: Theth National Park**

However, much more important changes could result from adoption of the draft law on forests and pastures, which specifies new institutional organization of the forestry sector reflecting changes since the adoption of the 2005 Law on Forests and the Forestry Service, in particular the transfer of ownership rights to the significant part of the forests to the communes.

The proposed institutional structure aims to strengthen forest administration in the 12 regions by a merger of 36 district forest service directorates into some 10 to 12 much stronger regional forest service directorates. This merger would also result in the reduction of forestry staff by some 38 per cent. This draft law on forests and pastures is expected to be submitted for approval in 2012

The main strategic document is currently the 2004 National Strategy for the Development of Forests and Pastures. The Strategy sets out a long-term national strategy for forest and pasture management, including erosion control, community management, reforestation, biodiversity conservation and protected area management.

*Institutional framework*

The main governmental institution responsible for the development of forestry policies and legislation, and monitoring and management of forests, is MoEFWA. MoEFWA responsibilities include protection, management, governance and control of forest and pasture areas, protected areas, wild flora and fauna, medicinal plants and other NTFPs. The regional and district structures of MoEFWA exercise forest management and control functions in public and private forests.

The Directorate of Forestry and Pasture (DFP) operating under General Directorate of Environmental Policies (GDEP) within the MoEFWA is in charge of forestry. DFP currently has two organizational units: the Sector of Extension and Communal Forestry and the Sector of Management, Silviculture Measures and Training. DFP employs a staff of eight specialists. DFP activities are supported by other organizational units of MoEFWA, in particular: the Sector of Data Processing, Publications and Technology of Information (employing three specialists, one of them responsible for the maintenance of the forestry cadastre and databases) which operates under the General Directorate of Support Services; and two units of the Directorate of Environmental Control, namely, the Sector of Forestry Police and EI (employing four specialists each).

Furthermore, the Directorate of Integration and Projects supports the preparation and implementation of plans, programmes and awareness-raising activities of the DFP and of the whole Ministry, as well as the elaboration and implementation of projects, in particular those implemented with the support of external funding sources.

EFA, based in Tirana, and its 12 REAs which operate at the regional level in cooperation with the 36

district forestry services directorates (DFSDs), are in charge of forests and pastures as well as wild fauna and flora, in terms of law enforcement, control and forestry programme implementation.

The DFSDs are the executing agencies of MoEFWA, operating in each of the 36 districts of the 12 regions. DFSD technical functions and responsibilities include control over the implementation of legal provisions and by-laws in force for forests, pastures, protected areas, wild flora and fauna, hunting and other activities that take place in forests.

In close collaboration with the LGUs, the DFSDs play an important role in the forest transfer process and are also expected to serve as a forest extension body for communal and private forests, by organizing training and extension services for private owners and specialized structures in LGUs responsible for communal forests.

The recent decline in the surface area of the State-owned forests, resulting from the forest ownership transfer to communes, has simultaneously caused reductions in staff employed by the DFSDs, including those in field services. In the past the DFSD sector employed some 1,400 staff; currently the number is close to 1,000 and is expected to decrease further (to some 616 employees) as a result of the currently planned institutional reform in the forestry sector.

However, there are plans to raise the currently limited capacities of the 36 DFSDs which have reduced staff, by their merger into either 12 (reflecting the administrative division of the country into 12 regions) or 10 (given that two of the 12 regions have small forest resources) much stronger, regional forest service directorates.

With the ongoing ownership transfer of the considerable part (50.7 per cent in 2009) of forest land from State to communal ownership, the role and responsibilities of the regions, regional environmental agencies, and regional and/or district forest service directorates are constantly expanding. In addition, as a consequence of this transfer process, the LGUs and associations of forest and pasture users (institutionalized at local, regional and national levels) are gaining more responsibilities in forestry management within communal forests.

The regions are entrusted with the function of supervising the development of communal forestry. According to the 2007 MoEFWA Instruction on the Procedure of the Approval of Management Plans of the Communal Forests and Pastures, the communal forest management plan, approved by the relevant council of the LGU, must be confirmed by the prefect.

LGUs are responsible for the management and development of communal forests according to the forest management plan. Their responsibilities and rights include forest restoration, timber and firewood harvesting and issuing concessions for such, collection of NTFPs and the grazing of animals for rural family needs.

Councils are, in fact, the end beneficiaries of the forest ownership transfer process. They establish villages' forest and pasture commissions which decide on delimiting the boundaries, appointing the users and defining uses, and implementing the protection and improvement plans of communal forests.

All users of the communal forests and pastures in the communities are organized as members of the forests and pastures users' associations, bearing NGO status (currently NGOs in Albania are defined as "non-profit organizations"). These are grouped under a regional federation and represented at the national level by the National Association of Communal Forest and Pastures (NACFP); all these bottom-up initiatives institutionalize communal forestry, represent the interests of local stakeholders and have a countervailing role in dealings with the governmental structures.

## 8.3 Biological diversity

*Current state*

Several biodiversity monitoring and research programmes are being implemented by research institutions contracted for this purpose by MoEFWA, e.g. monitoring of habitats with rare, endemic and threatened plant species and their ex-situ conservation by the botanical gardens, and Monitoring of the Trophic Status of Lagoons by the Faculty of Natural Sciences (Chapter 3).

The other important institutions involved in biodiversity monitoring are: the Centre of Flora and Fauna Research consisting on the Museum of Natural Sciences and the Botanical Garden and the Biotechnology Department – all above mentioned institutions subordinated to the Faculty of Natural Sciences of Tirana University under MoES; and the Forestry Department within the EFA.

**Photo 8.2: Fish farm**

Most recently, some progress has been achieved with the inventory and mapping of natural and semi-natural habitats, the conservation of which, pursuant to the EC Habitats Directive, requires the designation of special areas of conservation (SACs).

This progress was made possible in the course of projects targeted at the implementation of the Emerald network of Areas of Special Conservation Interest (ASCIs). During 2011, an update of the national database took place, by converting the Palearctic habitat classification into the European University Information Systems Organization (EUNIS) habitat classification, as well as mapping some important habitats listed in annexes to the Habitat Directive. For instance, habitat maps of the Ramsar site encompassing the Lake Shkoder wetland system and of Prespa National Park have been elaborated with due consideration of the above annexes.

The first Red List of Albanian Fauna and Flora, published in 2007 and elaborated according to the criteria set up by the International Union for Conservation of Nature (IUCN), provides information on threatened species present in Albania.

According to the more up-to-date information gathered from monitoring reports between 2007 and 2009, as many as 46 mammal species (of the newly indicated total of 91 mammal species, thus 50.1 per cent), 115 bird species (of the new total of 330, thus 34.8 per cent), 37 reptile species (100 per cent), 15 amphibian species (100 per cent), 54 fish species (of 311, thus 17.4 per cent), 108 insect species (of 680, thus 15.9 per cent) and 130 mollusc species (of 183, thus 71 per cent) were considered to be threatened on a national scale in Albania.

According to MoEFWA data on the main wild fauna species (Table 8.3), the populations of protected animal species listed under annex II to the EU Habitats Directive either remain stable or have increased notably in number between 2002 and 2010. Among protected species, the most spectacular increase has been noted for the Balkan chamois, the population of which increased by over 12 per cent, and the brown bear (10 per cent), most probably as a result of successful educational campaigns, designation of new protected areas and protective measures applied by field services. As for other mammal species, a notable increase in population can be remarked for the golden jackal (62.9 per cent), wild boar (57.9 per cent), beech marten (51.8 per cent) and Eurasian badger (41.5 per cent).

On the other hand, a significant decline of game species populations has been noted between 2002 and 2010, in particular for the brown European hare and rock partridge. The latter is a species listed under Annex I to the Birds Directive. Its population has been reduced by over one third over the last eight years, due to either overhunting or poaching.

Such a significant decrease in population of these important “prey species”, coupled with the very small population of roe deer (relative to the surface of forests), may soon result in a rapid decline in several large carnivore populations (in particular wolf and lynx, both listed under Annex II to the Habitats Directive and birds of prey populations, thus seriously threatening their stability or even viability

in the near future. Taking into account the adverse changes in forest habitats resulting from intensive and illegal forest exploitation in the past as well as changes in forest structures over recent years, the disappearance of animal and bird species which require larger undisturbed forest complexes is very likely to occur in the near future. For instance, there is much concern about the potential for maintaining the viable lynx population, the size of which still remains small (only 26 individuals in 2009).

So far, little progress has been achieved with the inventory and mapping of the mainstays, priority connecting corridors and migratory routes of protected fauna species. Some initial studies have been conducted on migrations of several bird species and sea turtles. Such a methodological gap could be an obstacle for the proper design of the desired ultimate spatial shape of the national ecological network constituted by interrelated, mutually complementary protected areas of different legal protective status, functions and management categories.

Moreover, this could prevent or at least seriously impair transboundary cooperation with neighbouring countries on the protection of threatened animal species of common European importance (e.g. the brown bear, lynx and wolf) which inhabit frontier areas and migrate across State borders. The lack of knowledge on such transfrontier migrations could place in question the reliability of statistical data on the population numbers of important animal species permanently inhabiting the territory of Albania, in particular bird and large carnivore species.

Due to the scarcity of budget available for biodiversity monitoring, in some cases long-term monitoring programmes implemented in Albania (e.g. the monitoring of rare, endemic and threatened species) are not comprehensively implemented on a national scale. The common practice is to carry out research each year only in a few selected, small areas (e.g. protected areas), and similar research is conducted in remaining areas in other years.

This multitude of research and monitoring programmes is still inadequately coordinated, and the communication among various agencies, scientific institutions and environmental NGOs cannot currently be considered effective.

The vast majority of data from biodiversity monitoring is still collected, stored and retrieved solely by use of paper archives and reports, which are currently being replaced, but to a limited extent, by electronic archiving systems and databases.

*Legal and policy framework*

The Law on the Determination of Rules and Procedures Governing International Trade of Endangered Species of Wild Fauna and Flora, No. 9867, was adopted in 2008. The 2002 Law on Protected Areas was amended in 2008 by inclusion of the main provisions of the Habitats Directive. The 2008 Law on the Protection of Wild Fauna endorsed provisions of the Birds Directive related to protection measures. Later, the 2009 DCM on the Determination of the Criteria for Establishment of Biodiversity Inventory and Monitoring Network, No. 84, prepared the ground for the biodiversity monitoring network to be set up in Albania. Most recently, the 2010 Law on Hunting endorsed all provisions of the EU Birds Directive related to hunting means, methods and precautionary measures to be undertaken in order to ensure the long-term survival of bird species and of their habitats.

The 2000 National Biodiversity Strategy and Action Plan (NBSAP) for the period 2000-2015 is the main strategic document focused on biological diversity. The Strategy defines main directions for preserving biodiversity and habitats, through their identification and proclamation as protected areas, and through protection of species within and outside the protected areas. Several recommendations of the NBSAP have already been implemented, including the adoption of the Law on Biodiversity Protection in 2006, amendments to the Law on Protected Areas in 2008, and the significant extension of the national environmental network of Albania by the designation of new protected areas.

Five action plans for threatened species and habitat conservation have been prepared, namely for the brown bear (*Ursus arctos*), lynx (*Lynx lynx*) and pygmy cormorant *(Phalacrocorax pygaeus)*, as well as for cetaceans and the *Posidonia* oceanic meadows. However, the successful implementation of these action plans for conservation would also to a large extent depend on the availability of external funding support.

*Institutional framework*

The DB within MoEWFA is in charge of protection of wild fauna and flora species, natural habitats and ecosystems, as well as protected areas and nature monuments. The DB comprises two thematic sectors, the Sector of Flora, Fauna and Soil, and the Sector for Protected Areas and National Parks. The total number of staff of the DB is seven, comprising the Director and three specialists in each sector.

**Table 8.3: Populations of the main wild fauna species, 2002 and 2010**

| Scientific name | Species name in English | Species population | | | |
|---|---|---|---|---|---|
| | | 2002 | 2010 | Change (No.) | Change (%) |
| *Canis aureus* | golden jackal | 356 | 580 | 224 | 62.9 |
| *Canis lupus* | wolf | 1,492 | 1,498 | 2 | 0.1 |
| *Capreolus capreolus* | roe deer | 471 | 506 | 35 | 7.4 |
| *Felis silvestris* | European wild cat | 451 | 458 | 7 | 1.6 |
| *Lepus europaeus* | brown European hare | 40,081 | 25,937 | -14,144 | -35.3 |
| *Lutra lutra* | river otter | 622 | 584 | -38 | -6.1 |
| *Lynx lynx / Lynx lynx martinoi* | lynx / Balkan lynx | 24 | 26 | 2 | 8.3 |
| *Martes foina* | beech marten | 4,678 | 7,102 | 2,424 | 51.8 |
| *Meles meles* | Eurasian badger | 2,426 | 3,433 | 1,007 | 41.5 |
| *Rupicapra rupicapra balcanica* | Balkan chamois | 799 | 897 | 98 | 12.3 |
| *Sus scrofa* | wild boar | 837 | 1,322 | 485 | 57.9 |
| *Ursus arctos* | brown bear | 569 | 626 | 57 | 10.0 |
| *Vulpes vulpes* | red fox | 28,056 | 27,214 | -842 | -3.0 |
| *Alectoris graeca* | rock partridge | 39,584 | 26,405 | -13,179 | -33.3 |
| *Pelecanus crispus* | Dalmatian pelican | 70 | 120 | 50 | 71.4 |
| *Perdix perdix* | grey partridge | 5,397 | 4,389 | -1,008 | -18.7 |
| *Phasianus colchicus* | common pheasant | 10 | 128 | 118 | 1,180.0 |

*Sources*: Ministry of Environment, Forests and Water Administration, 2011; author's own calculations.

Because they do not have their own executing agencies at either the regional or district levels, both sectors of the DB work in close cooperation with the DFP and the DFSDs. The DB cooperates with EFA, which is responsible for a number of biodiversity monitoring programmes, and coordinates data collection from other institutions and agencies. The EFA is the institution responsible for gathering and processing data from biodiversity monitoring, assessment and reporting at national and international levels.

The DB faces a lack of space for keeping paper archives and documentation, simultaneously having neither access to electronic data storage systems and GIS databases on biodiversity, nor software, capacities and skills to develop databases.

Communication among different ministries, State agencies and institutions on biodiversity matters is still reported to be weak.

## 8.4 Protected areas

*Current state of the protected area network*

Throughout recent years Albania has achieved progress and made a major investment in the future protection of unique natural and landscape assets. Pursuant to the main areas of work identified by the 2000 NBSAP, and also as a result of the National Programme of Work on Protected Areas (PoWPA) for the period 2006-2009, the protected area network has been extended (map 8.1). Since 1996 the surface area legally declared as protected areas in Albania has more than tripled from 108,475 ha to 378,748 ha, bringing the total proportion of protected areas in different management categories to 13.17 per cent in 2011, compared with only 5.7 per cent in 2002 (Table 8.4). The positive trend is particularly visible for the legal designation of protected areas corresponding to IUCN category II (national parks), category IV (habitat/species management areas) and category V (protected landscapes/seascapes).

In 2011, national parks (i.e IUCN category II) cover an area more than seven times greater than in 2002, due to the territorial extension of existing, or designation of new, national parks, and merging and upgrading the legal protective status of protected areas in other management categories. Such new developments included the national parks Butrinti (2005, 8,591.2 ha), Mali i Dajtit (2006, 29,216.9 ha), Divjakë–Karavasta (2007, 22,230.2 ha), Shebenik–Jabllanice (2008; 33,928.0 ha), Bredhi i Hotovës–Dangelli (2008, 34,361.1 ha) and Karaburun–Sazan (2010, 12,428.0 ha). As a result, the proportion of national parks in the surface area of the ecological network of Albania has more than triped (from 15.68 per cent in 2002 to 49.88 per cent in 2011). Recently proclaimed or extended managed nature reserves (i.e. IUCN category IV) include Liqeni i Shkodrës (2005, 26,535.0 ha), part of the Ramsar site listed in 2005, Kune–Vain–Tale (2010, 4,393.2 ha) and Patok–Fushëkuqe–Ishem (2010, 5,000.7 ha).

Since 2002, the surface area of protected landscape areas almost doubled, from 59,200 ha to 95,864 ha in

2011, which accounts for over 25 per cent of the current surface area of the country's ecological network. Protected landscapes (i.e. IUCN category V) designated or extended after 2002 include Vjosë–Nartë (2004, 19,738.0 ha), Lumi Buna–Velipojë (2005, 23,027.0 ha) – another part of the Ramsar site listed in 2005, and Mali me Gropa–Bizë–Martanesh (2007, 25,266.4 ha).

Throughout recent years, Albania has continued efforts towards the setting up of the Emerald network in light of preparations for implementing the Natura 2000 network concept. The work on potential areas of special conservation interest was carried out between 2002 and 2008. As a result, 25 potential Emerald sites covering an area of around 17 per cent of the country's territory were identified and studied. Furthermore, the project on wetlands in Albania carried out by ECAT (Environmental Center for Administration and Technology) Tirana in cooperation with the Greek Biotope/Wetland Centre (EKBY) allowed for the identification of 12 proposed Important Bird Areas (IBAs), which could possibly be designated as special protection areas following the provisions of the Birds Directive, on the basis of the 2008 Law on the Protection of Wild Fauna. In addition, 16 Important Plant Areas (IPAs) have been identified in Albania.

The decrease in numbers and surface area of strictly protected areas (i.e. IUCN category I) is explained by incorporation of two of them into newly designated national parks. The areas under strict protection are underrepresented in the system and account for only 1.2 per cent of the surface area of the whole ecological network, not matching the surface area of the country's territory encompassing pristine natural habitats, areas of occurrence of rare and threatened plant communities and species, and mainstays of wildlife species of common European importance such as the brown bear, wolf and Balkan lynx.

The protected landscape areas are much less effective for habitat and species conservation than the strictly protected areas, the current size and proportion of which in Albania's ecological network (1.2 per cent), or of Albanian territory (less than 0.17 per cent) is almost negligible.

Even the designation of new national parks, which currently constitute almost half of Albania's national ecological network, will not bring positive effects for biodiversity and nature conservation unless these parks are properly managed and sustainably financed, which is not yet the case, taking into account, for example, that management plans for the majority of national parks, including those established almost half of a century ago, are still lacking.

In the EC Member States, the presence of habitats and species listed under relevant annexes to the Habitats Directive requires the designation of SACs constituting the Natura 2000 network. Similarly, the effective protection of natural habitats and species of priority importance for the conservation of biological diversity in Albania would require the designation of either numerous smaller strictly protected nature reserves, or strict (passive) protection zones of adequate size within the boundaries of, for example, national parks or protected landscapes and seascapes.

The identification and delineation of such areas, based on sound scientific field research and nature inventories, is most probably one of the most urgent priorities for work during the preparation of protected area management plans in Albania, in particular for its national parks, which currently constitute half of the country's ecological network.

In the past, marine ecosystems were underrepresented in Albania's ecological network, usually being included as parts of the coastal terrestrial protected areas. The designation of the Karaburun Peninsula, Sazani Island and Vlora Bay as Karaburun–Sazan National Park in early 2010 is the first step towards eliminating this gap in protected area coverage of marine habitats.

However, preliminary assessments carried out under the PoWPA indicate many more areas of high marine biodiversity values in need of protection, e.g. Cape of Lagji/Turra Castle (600 ha); Cape of Rodoni–Lalzi Bay–Ishmi Forest (2,500 ha); Canyon of Gjipe (1,200 ha); Porto Palermo (600 ha); Kakome Bay and Cap Qefali (2,200 ha); Çuka Channel–Ksamili Bay (1,000 ha); and Pagane–Cape Stillo (500 ha).

Three wetland areas in Albania are currently listed as Ramsar sites (Karavasta Lagoon, Butrinti wetland complex, and Lake Shkoder and Buna River wetland complex), the total area of which accounts for over 83,000 ha or some 2.9 per cent of the country's territory. Albania cooperates with Montenegro on the integrated management of Lake Shkoder Managed Nature Reserve and Ramsar site. A similar success story is the cooperation with Greece and the former Yugoslav Republic of Macedonia on the joint management of the Lake Prespa basin, which has been identified as the potential fourth Ramsar site.

**Table 8.4: Development of protected area (PA) network, 2002 and 2011**

| National PA category | IUCN category | PA number | | PA surface (ha) | | | PA category share in the total surface of PAs (%) | |
|---|---|---|---|---|---|---|---|---|
| | | 2002 | 2011 | 2002 | 2011 | change | 2002 | 2011 |
| Strict nature reserve / scientific reserve | I | 4 | 2 | 14,500.0 | 4,800.0 | -9,700.0 | 8.78 | 1.27 |
| National park | II | 12 | 15 | 25,890.0 | 188,945.4 | 163,055.4 | 15.68 | 49.89 |
| Nature monument | III | 300 | 750 | 4,360.0 | 3,470.0 | -890.0 | 2.64 | 0.92 |
| Managed nature reserve/natural park | IV | 26 | 21 | 42,960.0 | 67,423.9 | 24,463.9 | 26.01 | 17.80 |
| Protected landscape | V | 3 | 5 | 59,200.0 | 95,864.4 | 36,664.4 | 35.85 | 25.31 |
| Protected area of managed resources /protected area with multiple use | VI | 4 | 4 | 18,245.0 | 18,245.0 | .. | 11.05 | 4.82 |
| **Total** | | **349** | **797** | **165,155.0** | **378,748.7** | **213,593.7** | **100** | **100** |
| Share of PA in the territory of Albania (%) | | | | 5.7 | 13.2 | 7.4 | | |

*Sources*: State of Environment Report, 1999; Ministry of Environment, Forests and Water Administration, 2011; author's own calculations.

*Legal and policy framework*

The most important strategies towards the development and strengthening of the national ecological network is the completed PoWPA for the period 2006-2009, which has immediately been followed by the currently ongoing PoWPA for the period 2009-2013. The latter Programme plans a further increase of protected area network coverage up to 17 per cent of Albanian territory by the end of 2013.

Other priorities for the near future are monitoring and inventories in protected areas, as well as implementation of existing valid protected area management plans and revision or development of such documents for the other remaining areas.

Management plans have so far been elaborated for 4 national parks of the 15 designated so far, namely for Dajti National Park (29,384.18 ha), Butrinti National Park (8,591.2 ha) and the Llogara–Karaburun Peninsula (31,380 ha), which encompasses Llogara (1,010 ha) and Karaburun–Sazan (12,428 ha) National Parks. Management plans are also available for Vjosë–Nartë Protected Landscape Area (19,738 ha) and Kune–Vain–Tale Managed Nature Reserve (4,393.2 ha).

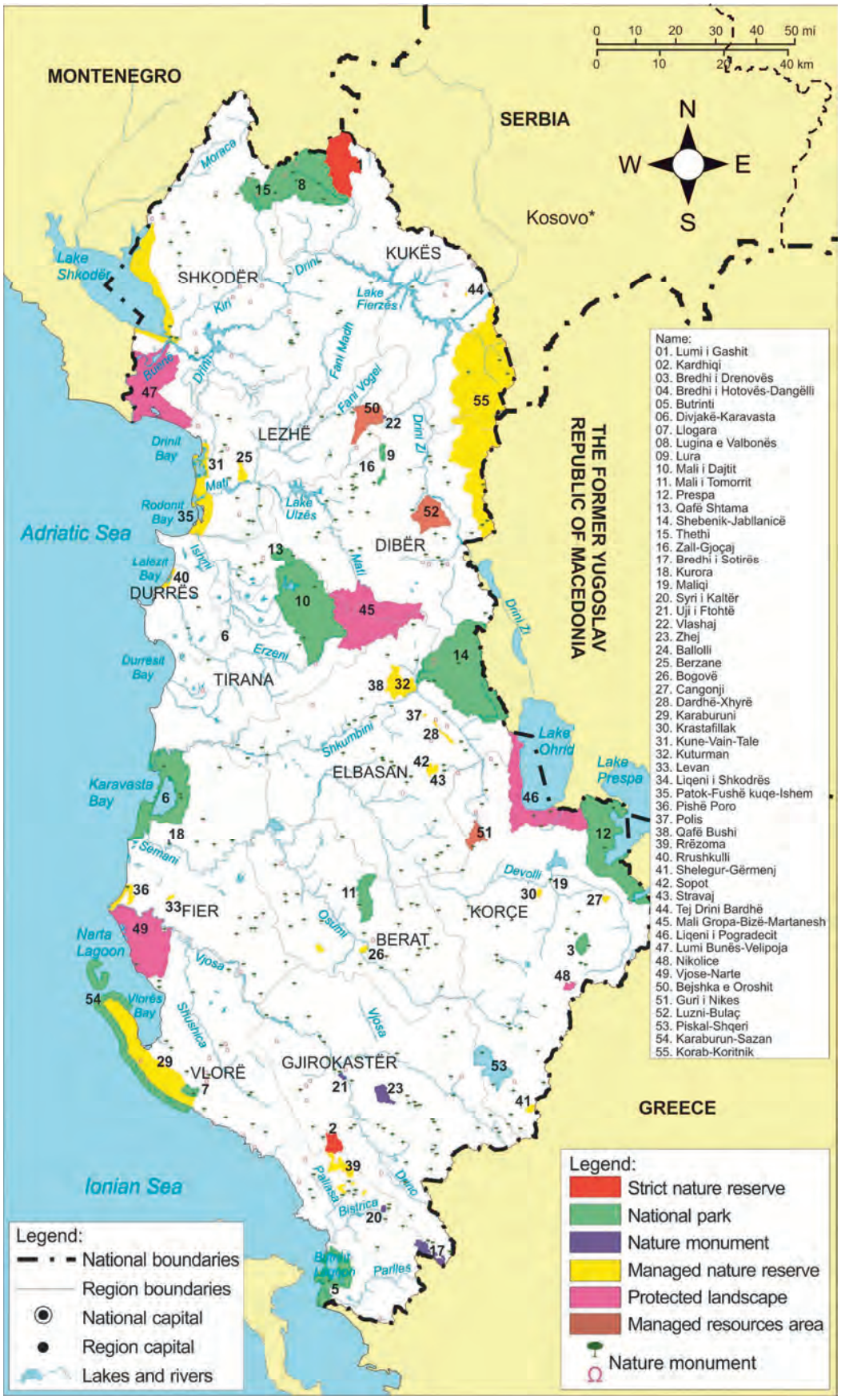
Two more management plans are currently in preparation, for Lake Shkoder Managed Nature Reserve (26,535 ha) and Lumi Buna–Velipojë Protected Landscape Area (23,027.0 ha), and for Prespa National Park (27,750 ha). Implementation of management plans has been undertaken by the administrations of Dajti National Park, Llogara National Park, Karaburun–Sazan National Park and Vjosë–Nartë Protected Landscape Area.

Due to the budgetary constraints, progress in elaborating protected area management plans is slow and mostly dependent on the availability of external financial support while their effective implementation remains the future task for the majority of protected area administrations.

The 2000 NBSAP redefined the Albanian protected area network according to CBD requirements, and was followed by adoption of the 2002 Law on Protected Areas. Some new acts relevant to protected areas have been adopted, e.g. the 2002 DCM on Listing the Butrinti Wetland Complex as a Ramsar Site, No. 531, the 2002 DCM on Declaration of Nature Monuments, No. 676, the 2003 Law on the Protection of Transboundary Lakes, No. 9103, the 2003 DCM on the Administration of Protected Zones, No. 266, and the 2003 DCM on Procedures Regulating Proposals and Declaration of Protected Areas and Buffer Zones, No. 267.

The 2002 Law on Protected Areas was significantly amended in 2008 by inclusion of the main provisions of the Habitats Directive, e.g. providing the legal basis for both the selection of protected areas to be recognized as special areas of conservation (SACs), and the assessment of habitats.

**Map 8.1: Protected area network**




*Source:* United Nations Cartographic Section, 2011.
*Note:* The boundaries and names shown on this map do not imply official endorsement or acceptance by the United Nations.
*Kosovo (UN-administered region, Security Council resolution 1244)

In 2011, MoEFWA drafted the DCM on the Rules and Procedures for the Designation of Specially Protected Areas, aimed at full transposition of annexes III and IV to the Habitats Directive, and the DCM on the Designation of the Natural Ecosystem Korab–Koritnik as a Managed Nature Reserve, (together with the required proclamation study and digital map). Their approval was expected in 2012. The management plan for Butrinti National Park and for Kune–Vain Managed Nature Reserve was approved in 2011.

Future plans resulting from the national strategies related to protected areas include the implementation of the Emerald network of ASCIs as a contribution to PEEN and PEBLDS, and review of the national PoWPA in light of new developments from the CBD's COP 10 held in Nagoya, Japan, in October 2010.

*Institutional framework*

The institutional framework for protected area designation and management has gone through several changes in recent years. Initially, the responsibilities for protected areas were assigned to the Ministry of Environment, but the Ministry of Agriculture and Food (through its General Directorate for Forests and Pastures) retained responsibility for protected areas administration. Such unclear division of responsibilities between the two ministries to a large extent prevented the effective implementation of the national nature conservation policy defined in the Biodiversity Strategy and Action Plan for the period 2000-2015.

In 2005, the competencies for protected areas were transferred to MoEFWA, as more relevant for nature protection issues. Protected areas are currently among the responsibilities of MoEFWA's GDEP, namely its two technical directorates, the DB and the DFP.

The DB is responsible for the protection of natural habitats and ecosystems, protected areas and nature monuments, and for conservation of wild fauna and flora species. Its Sector for Protected Areas and National Parks employs three specialists. The role of the DB is limited to drafting legislation related to the protected areas and policies towards the development and strengthening of the national ecological network, developing the Emerald network and Ramsar site networks, and identifying IBAs and IPAs as well as potential SPAs and SACs.

The DFP is responsible for the administration and management of protected areas. The DFP executing agencies operate in all 12 regions, and the DFSDs manage national parks and other protected areas involving forestry land. The law enforcement and control functions in protected areas are performed by the Forestry Police.

Pursuant to the 2005 Government Decision on the Protected Areas Committee, all protected areas in categories II and IV should have their local management committees, as participatory structures involving local stakeholders (e.g. local government representatives, communities, landowners, NGOs and entrepreneurs) in site planning and management.

Such management committees have so far been established for some national parks. Protected areas are designated by a DCM, while the roles of MoEFWA include preparation of the required documentation for any new proposal, including the GIS map and the detailed functional zoning pattern proposed for the area

The fees collected by the respective communes, and revenues gained from tourist and recreational uses of the protected area, usually neither contribute to the budget for nature protective measures to be applied in the area, nor compensate for the damage to nature resulting from intensive recreational uses, which are not always compatible with the main objectives of the protected area designation.

In very few cases where some basic facilities (e.g. buildings planned for visitor centres) are owned by the protected area administration, they remain either not fully equipped to perform such functions, or completely unused, due to budgetary constraints. This results in a lack of sustainable and stable funding (or project external funding) for their completion, maintenance and operations.

## 8.5 Conclusions and recommendations

The ongoing transfer of the ownership, rights to use, and responsibilities for the management of the planned 60 per cent of Albania's forests and pastures to local communes would require continuous support and capacity-building for the communal forest owners.

This change has already had an impact on the institutional structures and staff of the forestry services directorates, while other potential effects of the above change, if improperly managed, on the state of forests (both State and communally owned) can hardly be predicted.

*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.*

In addition to the continuous lack of basic infrastructure, forestry field staff are currently not properly equipped to perform their extensive functions in a much more effective manner, having limited access to a broad range of contemporary technical support means and techniques. This seriously impairs the operational capacity of the MoEFWA field services, which are currently expected to provide extension support to the new communal users of forests. Much broader use is required of geo-information techniques and spatial information by public and communal sector authorities, organizations and institutions at almost all organizational levels. The availability of spatial information for planning and decision-making is currently becoming an indispensable prerequisite for modern, effective local and regional development that is in line with the idea of sustainable development.

*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.*

Assessment of the current state of biological diversity is complicated by the lack of a reliable single database on species and their status. The current status of biodiversity monitoring can be best characterized as rather incomplete and fragmented, as data are still dispersed among many agencies and institutions subordinated to different ministries, as well as a broad variety of research institutes and non-governmental organizations.

The vast majority of data from biodiversity monitoring is still collected, stored and retrieved solely by use of paper archives and reports, which are slowly being replaced, but still to a limited extent, by electronic archiving systems and databases.

*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 effective protection of natural habitats and species of priority importance for the conservation of biological diversity in Albania would require the designation of numerous smaller, strictly protected nature reserves, as well as of strict (passive) protection zones of adequate size within the boundaries of, e.g. national parks or protected landscapes and seascapes. The identification and delineation of such areas, based on sound scientific field research and nature inventories, is most probably one of the most urgent priorities for work during the preparation of protected area management plans in Albania, in particular for its national parks.

*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.*

# Chapter 9

# ENERGY AND ENVIRONMENT

## 9.1 Introduction

At present, the Albanian electric power system is experiencing severe problems. Hydropower represents more than 95 per cent of Albania's domestic generation and there is additional potential as well as plans to extend the capacities of HPPs. This development reliant on this energy source may in the future cause a significant decrease in power generation in the event of reduced water inflow. Such unreliability in energy supply is the main problem in the energy sector.

Albania possesses coal (lignite) and oil resources. The latter can become an essential component of the energy sector if or when one of the largest onshore oil fields in Europe, the Patos–Marinza, renews its operations. However, the recent limited production of domestic fossil fuels, together with an ageing existing energy infrastructure and incomplete market structures, are barriers to the successful functioning of the energy sector. Different ways to resolve these problems are being considered, including demand-side management and ways to increase fossil fuels production and power generation capacity. The Government recognizes that the country cannot rely any longer on increasing energy consumption, dependence on energy imports or high energy intensity. Instead, the Government intends to promote greater energy efficiency and use of renewable energy while at the same time constructing new thermal power plants (TPPs).

## 9.2 Institutional, policy and legal framework

*Institutional framework*

There are several ministries and agencies responsible for the development of the national energy sector. MoETE is responsible for the operation of the energy sector and has specialized divisions for electricity and hydrocarbons. It plays the main role in the development of strategic policies for the sector. It supervises the operation of public energy companies, which have not yet been privatized. The Ministry is also responsible for the drafting of norms and standards for the design, installation and operation of electrical equipment, as well as fuel quality standards.

The National Agency of Natural Resources (AKBN) is part of MoETE and serves as an advisory body for the Government on energy issues, including mining, hydrocarbons and power. The Agency also develops the country's national energy strategies and policies in the field of renewable energy, energy efficiency, and conservation. AKBN promotes the extraction of mineral and hydrocarbon resources and negotiates hydrocarbon and mining contracts.

MoEFWA's responsibility includes the monitoring and inspection of energy sector activities, and it oversees controls over the sources of pollution. MoEFWA plays specific roles in relation to hydropower and fuel wood, as well as a broader role in ensuring environmental impact assessments of relevant energy projects. In addition, the Ministry collects charges for air emissions and the discharge of wastewater, and it controls industrial waste disposal, notably pollutants related to the energy sector.

The Energy Regulatory Entity (ERE) is responsible for issuing licences, developing methodologies for tariff calculations for transmission and distribution networks, and establishing electricity tariffs. ERE is an independent regulator in the power sector. It promotes strategic foreign investment in the construction of new power generation plants or in existing privatizing power capacity. ERE gradually raises electricity tariffs to reflect full cost recovery and a fair return on investment.

The Albanian Power Corporation (KESH) is an operational company which is accountable for the efficient and reliable generation of electricity. Until recently KESH was a vertically integrated monopoly responsible also for transmission and distribution, but after institutional reforms transmission and distribution functions have been taken away from KESH.

The establishment of the Transmission System Operator has been the result of the separation of the functions of generation, transmission and distribution. It is a State operator of the transmission system and is expected to be a market operator.

*Legal framework*

Parliament has created the legal basis for the successful implementation of energy sector development. There are several main national laws that contribute to the development of the energy sector of Albania and related environmental problems.

The 2003 Law on the Power Sector, No. 9072, establishes power sector market structures and provisions for the issuing of licences for electricity transmission, distribution, generation, export, import and supply/trade. The Law has established ERE as an independent electricity regulator to set rules and tariffs. It allows for the establishment of the Albanian Power Model and Energy Regulatory Entity and preparation of secondary legislation according to the Albanian Electricity Model.

The 2005 Law on Energy Efficiency creates the legal framework required for the promotion and improvement of the efficient use of energy. The law covers energy efficiency issues such as labelling of electric appliances, energy audits, energy efficiency fund establishment and financing of the fund, and programmes financed by the energy efficiency fund. In accordance with this Law, consumers with an annual energy use of more than 1 GWh of electricity, or 150 tons of oil or 200 tons of coal are obliged to submit data reports on their energy consumption for the last year to the local Energy Office.

The 2003 Law on Energy Saving in Buildings and Building Code defines heat loss norms for new buildings and aims at reduction of electricity consumption for heating purposes. In accordance with this Law, all new buildings (after the Law was decreed) should have defined heat loss norms (levels) approved by the Council of Ministers in 2003. To implement this Law the National Energy Agency provides software for checking the energy consumption of planned new buildings.

The 2011 Law on Environmental Protection provides the legal basis and framework for implementation of a large number of EU environmental directives that are relevant to the protection of the environment from human activities, including energy production.

The 2011 Law on Environmental Permitting establishes rules for permitting the operation of certain groups of polluting activities, measures designed to prevent or, where that is not practicable, to reduce emissions from such activities, including measures concerning energy sources.

The 2006 Law on Concessions, No. 9663, aims at creating a favorable framework for promoting and facilitating the implementation of concessionaire projects in the development of industrial sectors such as generation and distribution of energy.

There are several other national laws and acts that are relevant to the development of the energy sector, including the 2010 Law on Mining, No. 10304.

*Policy framework*

National Energy Strategy, 2003

The most important national energy policy document is the National Energy Strategy, which aims to restructure the Albanian energy sector according to market principles, and to develop an energy policy for the establishment of an effective institutional and regulatory framework to support privatization of State energy companies. The Strategy targets the efficient use of energy resources to achieve maximum economic effect and minimum impact on the environment. The document also considers the diversification of the energy system through the construction of new generation capacities, including renewables (solar, small HPPs, wind and biomass). The Strategy assumes active participation in the regional electricity market based on the requirements of the EU for reforming the electrical power sector (Directive 2003/54/EC).

Athens Memorandum and Energy Community Treaty of the countries of South-East Europe

The Athens Memorandum of 2002 aims for the establishment of an integrated regional electricity market in the South-Eastern European countries. The legal base for this market is legislation governing the EU's internal energy market, including the Electricity Directive (2009/72/EC).

As a follow-up to this Memorandum, SEE countries signed the Energy Community Treaty in October 2005. Albania has ratified the Treaty, which entered into force in July 2006. Albania, along with other Parties, is committed to creating compatible models for its national electricity market, especially concerning the eligibility of customers to choose a supplier, non-discriminatory access to transmission and distribution networks, and cross-border trade.

Albanian electricity market model

The Albanian market model was approved in October 2007. The model envisages cost coverage, the

elimination of cross-subsidies, and the introduction of uniform tariffs throughout the country. The establishment of a Transmission System Operator has been achieved. It has separated the functions of generation and distribution (retail supply). A bilateral contract market is being considered for the future.

Consistency with EU requirements is a key consideration in the development of the Albanian energy sector. This is due to the formal requirements under the Energy Community Treaty covering the SEE electricity system, as well as the longer-term goal of Albania acceding to the EU. However, to reach this goal, Albania will need to take into consideration not only technical and financial constraints but also the environmental risks that accompany its energy sector.

In the electricity sector, significant improvements could be developed. The Government signed a loan agreement for a new power plant at Vlora with the World Bank, the European Bank for Reconstruction and Development and the European Investment Bank. These loans have been used to build a new 97 MW combined-cycle, diesel-fuelled power and steam plant at Vlora, together with the necessary facilities to import the fuel. It will have the possibility of expanding capacity up to 435 MW in the future. There are also plans to increase electricity generation capacity through the construction of new HPPs, but these are not yet underway and electricity imports are likely to increase in the short term.

## 9.3 Review of the energy sector

The total primary energy supply in Albania decreased from a peak of 2.75 million tons of oil equivalent (Mtoe) in 1990 to 1.7 Mtoe in 1995, and then increased to 1.94 Mtoe and 2.088 Mtoe in 2003 and 2008 respectively. Coal and natural gas were the "big losers" since economic changes have forced many industrial consumers to close down.

Supply and consumption of coal has declined from approximately 644.5 thousand tons of oil equivalent (ktoe) of primary energy supply in 1990 to 23 ktoe in 2008. Natural gas has followed the same trend with a production decrease from 206 ktoe in 1990 to 7 ktoe in 2008. Table 9.1 represents the national energy balance in 2009, the most up-to-date information. It shows that the diversity of energy supply, which was already low, was concentrated in oil (and oil by-products), hydropower and biomass (fuel wood).

*Fossil fuels sector*

Albania possesses many mineral resources, including fossil fuels. While it has limited domestic hydrocarbon reserves, they could be sufficient to meet national demands. The United States Energy Information Administration estimates the country's coal reserves at about 790 million tons, crude oil proved reserves at 27 million tons and natural gas at 840 million $m^3$.

**Photo 9.1: Use of fuel wood**

## Table 9.1: National energy balance, 2009

Thousand tons of oil equivalent (ktoe) on a net calorific value basis

| Supply and consumption | Coal and peat | Crude oil | Oil products | Gas | Nuclear | Hydro | Geothermal, solar, etc. | Combustible renewables and waste | Electricity | Heat | Total * |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Production | 5 | 576 | 0 | 7 | 0 | 450 | 3 | 213 | 0 | 0 | 1,254 |
| Imports | 69 | 60 | 602 | 0 | 0 | 0 | 0 | 1 | 169 | 0 | 901 |
| Exports | -2 | -343 | -25 | 0 | 0 | 0 | 0 | -1 | -46 | 0 | -417 |
| International aviation bunkers ** | 0 | 0 | -18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -18 |
| Stock changes | 0 | 26 | -28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 |
| **TPES** | **71** | **320** | **531** | **7** | **0** | **450** | **3** | **213** | **123** | **0** | **1,717** |
| Statistical differences | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Electricity plants | 0 | 0 | -2 | 0 | 0 | -450 | 0 | 0 | 450 | 0 | -2 |
| CHP plants | 0 | 0 | -17 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | -14 |
| Oil refineries | 0 | -316 | 290 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -26 |
| Energy industry own use | 0 | 0 | -38 | -5 | 0 | 0 | 0 | -1 | -19 | 0 | -63 |
| Losses | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -96 | 0 | -98 |
| **TFC** | **71** | **0** | **766** | **1** | **0** | **0** | **3** | **212** | **461** | **0** | **1,514** |
| **Industry** | **62** | **0** | **99** | **0** | **0** | **0** | **0** | **12** | **108** | **0** | **281** |
| **Transport** | **0** | **0** | **442** | **1** | **0** | **0** | **0** | **0** | **1** | **0** | **444** |
| **Other** | **0** | **0** | **150** | **0** | **0** | **0** | **3** | **200** | **351** | **0** | **704** |
| Residential | 0 | 0 | 45 | 0 | 0 | 0 | 2 | 186 | 241 | 0 | 474 |
| Commercial and public services | 0 | 0 | 35 | 0 | 0 | 0 | 1 | 13 | 51 | 0 | 100 |
| Agriculture/forestry | 0 | 0 | 70 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 76 |
| Non-specified | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 | 0 | 54 |
| **Non-energy use** | **10** | **0** | **75** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **84** |
| *- of which* | | | | | | | | | | | |
| *Petrochemical feedstocks* | *0* | *0* | *24* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *24* |

*Source:* International Energy Agency, see: http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=AL. Accessed on 14.3.2012.
*Notes:* * Totals may not add up due to rounding. ** International aviation bunkers are included in transport for world totals.

One of the Europe's biggest onshore oil fields – Patos–Marinza with 600 million tons of oil – is located 10 km east of the city of Fier in south-central Albania. The country's coal reserves are located mainly in areas around Tirana (86 per cent of reserves) and Korça–Podradec (10 per cent of reserves).

The Government has expressed interest in cooperating with international companies for the exploration and development of hydrocarbons. A number of foreign companies are working already or have applied for onshore and offshore oil and gas prospecting licences, including such corporations as Agip, Chevron, Shell, and Manas Petroleum. The latter – a Switzerland-based company – has announced the discovery of 400 million barrels of oil and 85 billion cubic feet of natural gas.

It is worth mentioning that Albania has a rather well-developed petroleum infrastructure – three commercial refineries and modern port facilities on the Adriatic Sea. Since 2000 there has been an increase in oil production (Table 9.2).

Annual natural gas production decreased from 140 million $m^3$ in 1991 to 30 million $m^3$ in 2009. Albania neither exports nor imports natural gas; total production is consumed by local customers. Domestic gas fields are depleted and natural gas, which was previously used in the industrial sector, is currently used for technological purposes in refineries and oil production. However, in the National Energy Strategy, natural gas supply is foreseen as an alternative energy source for power generation.

The Government is pursuing the goal of linking the country with regional natural gas networks along with further national gas sector development. There is a possibility that Russian and/or Central-Asian gas from the Caspian region will contribute to a diversification of energy supply in Albania.

As mentioned above, coal lost its place in the energy sector following the economic decline which forced many industrial consumers to shut down operations. Nevetherless, coal consumption is increasing in the country (Table 9.3).

*Power sector*

At the beginning of Albania's economic transition in the 1990s, the country was 100 per cent electrified and it was a net electricity exporter with about 1,890 MW of installed capacity.

The Koman HPP is the largest power station in Albania. Completed in 1986, it has four turbines of 150 MW each, with 600 MW total installed capacity.

The Fierza HPP has four 125 MW turbines with total installed capacity of 500 MW. Construction began in 1971 and was completed eight years later, in 1979.

The Vau i Dejës HPP was commissioned in 1973. It has five 52 MW turbines with a total installed capacity of 260 MW.

All three main HPPs are situated on the Drini River. The other HPPs are located on

- Vjosa River: Kalivaci HPP with a capacity of 100 MW;
- Mati River: 2 HPPs (Ulez, Shkopet) with a capacity of 49 MW;
- Devolli River: a 40-MW HPP (Banja), not completely operational at present;
- Bistrica River: 2 HPPs (Bistrica 1 and 2) with a capacity of 27 MW.

While this cascade – Vau i Dejës, Fierza and Koman – along with smaller plants on other rivers which together produce over 90 per cent of total electricity supply, are in reasonably good condition, the Fier TPP of 159 MW was badly maintained and later shut down. In 2009, total installed capacity was 1,610 MW and 100 per cent of electricity generated came from HPPs.

Power generation is not stable. For example, electricity production reached around 5,500 and 6,600 GWh/year in 2004 and 2005 respectively because of high water levels in HPP reservoirs due to heavy rains, but just three years later, in 2007, it fell to 2,800 GWh due to dry years. This fall in output forced the Government to increase power imports. Electricity supply and consumption data demonstrate the unstable operation of the power system and high demand for imported electricity (Table 9.4).

Over the past 15 years, Albania has changed from an electricity exporter to an electricity importer. There are high distribution losses (Table 9.4). While only distribution loss data are available, it is worth mentioning that electricity losses through transmission and distribution, both technical and non-technical (illegal connections) are very high, amounting to almost 40 per cent of consumption. The increase in total losses might be caused by an increase in commercial losses as well as technical losses due to obsolete transmission lines and electricity distribution networks.

**Table 9.2: Oil supply and consumption, thousand tons/year**

| Year | 2002 | 2004 | 2006 | 2008 | 2010 |
|---|---|---|---|---|---|
| Crude oil production | 314.8 | 333.6 | 389.1 | 302.9 | 544.1 |
| Petroleum consumption | 1,209.0 | 1,435.7 | 1,588.1 | 1,543.8 | 1,643.4 |
| Imports of refined petroleum products | 1,041.1 | 1,156.8 | 1,088.6 | N/A | N/A |
| Exports of refined petroleum products | 143.2 | 61.7 | 0.0 | 50.0 | N/A |
| Crude oil distillation capacity | 1,300.0 | 1,300.0 | 1,300.0 | N/A | N/A |

*Source*: United States Energy Information Administration, Country Analysis Briefs, see: http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm#

**Table 9.3: Coal supply and consumption, thousand tons**

| | 2002 | 2004 | 2006 | 2008 | 2009 |
|---|---|---|---|---|---|
| Coal production | 77 | 79 | 63 | 83 | 115 |
| Coal consumption | 90 | 90 | 75 | 95 | 127 |
| Coal imports | 13 | 11 | 12 | 12 | 12 |

*Source*: United States Energy Information Administration, Country Analysis Briefs, see: http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm#

**Table 9.4: Electricity supply and consumption, billion kWh**

| | 2002 | 2004 | 2006 | 2008 |
|---|---|---|---|---|
| Total electricity net generation | 3.641 | 5.498 | 5.038 | 3.759 |
| Total electricity net consumption | 4.546 | 3.733 | 2.991 | 4.054 |
| Total electricity imports | 2.200 | 1.242 | 0.611 | 2.434 |
| Total electricity exports | 0.058 | 0.274 | 0.000 | 0.000 |
| Electricity distribution losses | 1.237 | 1.968 | 2.658 | 2.139 |
| Total electricity generation by HPP | 3.477 | 5.411 | 4.951 | 3.759 |

*Source*: United States Energy Information Administration, Country Analysis Briefs, see: http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm#

The current total power supply (more than 6,000 GWh in 2008) is not sufficient to cover domestic demand. To meet this challenge, the National Energy Strategy aims at a combination of new HPP capacity and TPP capacity in the coming years, including building in the near future Drini1 HPP (84 MW) on the Drini River, Vjosa1 HPP (80MW) on the Vjose River, Devolli1 HPP (75 MW) on the Devolli River and the Vlora TPP (435 MW).

This means that by 2020 new power system capacity will be around 900 MW. There is also the potential for medium and small HPPs in Albania, estimated to be about 165 MW at 224 identified sites. These comprise 83 existing small HPPs with a total capacity of 25 MW and 41 new medium-sized HPPs with a potential total capacity of 140 MW.

In 2011, the first unit of Vlora TPP, a new distillate oil-fired generation facility with capacity of 97 MW, was commissioned. The project will increase electricity production and improve the balance between hydropower and thermal power generating capacity reducing the overdependence upon potentially uncertain hydropower resources and power imports. It will create a more favourable investment climate for potential foreign investment in Albania and improve Albania's economic growth prospects. However, TPPs are always a source of pollution and will impact negatively on the environment.

*Energy efficiency and renewables policy*

The Government intends to increase installed capacity of electricity as well as electricity production in order to reduce dependence on imports and adverse hydrological conditions. However, an additional way to meet national electricity demand is the implementation of energy efficiency measures. Currently, there is a potential for these measures, including reductions in energy consumption and losses in power production and distribution, and energy conservation in housing and communal services, industry, agriculture and transport.

Energy efficiency is a cross-sectoral subject involving all economic activities, especially the energy sector itself. Improving energy efficiency is a policy priority for the Government. The Government

included energy efficiency issues in the National Energy Strategy. It proposes to implement initial steps and initiate the development of an institutional framework for energy efficiency, along with economic incentives and a campaign to build public awareness.

The Strategy estimates the energy savings potential at 22 per cent of total primary energy supply by 2015. The Strategy states that the power sectors clearly offer the best prospects for operating with less energy loss. Housing and communal services also offer significant opportunities for energy conservation. The main components of energy consumption in these sectors are heating, hot water supply, lighting and electrical appliances.

An environmentally friendly energy sector requires not only energy efficiency and savings measures but also the development of renewable energy resources. Albania possesses significant potential for small hydropower and some potential for solar, wind and biomass energy.

*Solar energy*

With about 225 sunny days per year and an annual yield of standard solar water heating systems of ~ 500-650 kWh/m$^2$ per year, Albania has sufficient exposure to the sun for solar energy to be considered a viable resource.

While around 82 per cent of household water heating is secured by electricity and demand for hot water in the residential sector is projected to grow from 600 GWh in 2000 to 875 GWh in 2015, and because of the high cost of photovoltaic systems, the most feasible option for Albania is to promote solar water heating systems for domestic hot water preparation, thereby reducing electricity consumption for water heating. In accordance with the 2010 AKBN report, "Renewable Energy in Albania", the capacity of solar water heating panels has reached 9 MW thermic. Around 80 per cent of panels are installed along the Adriatic and Jonian coasts.

Although electricity production through photovoltaic elements can be secured by feed-in tariffs, such a measure would negatively affect the national economy and cannot be considered as an option in current circumstances.

*Wind energy*

Albania has several sites with strong and stable wind, in particular along the Adriatic Sea coast and on hills and ridges running in a north-to-south direction along the coast. ERE has licensed several companies to develop this potential. There is also the potential for small wind power facilities in remote areas in small villages. It is economically inefficient to connect remote areas with the electricity grid or deliver the fuel for electricity and heat generation. Thus, wind energy could become a source of power generation, which would be used to meet household and agricultural needs in remote villages.

*Biomass*

There are several biomass resources available in Albania. Biomass accounted for approximately 215 ktoe of the total primary energy supply in 2008. Total proven reserves of fuel wood are considered to be approximately 6 Mtoe. There are uncertainties related to the real rate of wood cutting for fuel but apparently it is around 250,000-350,000 toe/year.

While the potential for energy use is high, wood is also used for industry and export, which ensure economic benefits for the country. Firewood accounts for about 10-15 per cent of energy supply, but growth of firewood consumption will be constrained due to forestry and environmental management issues.

Biomass energy will possibly play a noticeable role in Albania's sustainable energy development. It could involve the four main resources: urban wastes, agricultural residues, forest residues and animal wastes. A comprehensive study should be undertaken and proper policies to promote biomass use should be developed.

*Small hydropower*

There are 83 small HPPs in Albania ranging from 0.05 to 10 MW. In 2007, small HPPs generated 107 GWh of electricity, but generation has recently been reduced due to obsolete equipment and poor maintenance. There is the potential to develop new small plants with a potential total capacity of 140 MW. Since the liberalization of the market in 2007, foreign and domestic investors have signed concession contracts to construct 24 new small and medium-sized hydropower plants in Albania.

## 9.4 Impact of the energy sector on the environment

*Hydropower impact*

HPPs have traditionally been considered environmentally friendly because they represent a renewable energy source. They are also considered to

be a clean source of energy because they do not generate emissions or waste materials. However, hydropower does have environmental impacts since the construction of dams and creation of artificial water reservoirs behind them affect a river's ecosystem and habitats.

Consideration of environmental impacts caused by HPPs should begin with a review of possible changes to a river's ecosystem. Because there are many hydroelectric projects in Albania, understanding such ecosystems and habitat issues is vitally important.

Specific ecosystem impacts caused by a particular HPP largely depend on the following variables: 1) water volume and water flow rate of the river where the HPP is located, 2) the climatic and habitat conditions that exist, 3) the type, size, design and operation of the HPP, and 4) whether cumulative impacts occur because the HPP is located upstream or downstream of other projects. While the first two variables relate to nature and depend on geological, geographical and weather conditions, the last two depend on human activities. The fourth variable is especially critical for Albania because of the cascade of three HPPs on the Drini River.

The formation of big water reservoirs can slow the water flow rate and increase water surface temperature because slower water absorbs more heat from the sun. It causes a more pronounced stratification effect – coldest water at the bottom and warmest on the surface. If the water released for power generation purposes is coming from the bottom, where it is colder and consequently has less oxygen, it affects the river's ecosystem and habitats downstream.

Another problem is related to nitrogen dissolved in water. A stream falling over a dam and hitting the pool below creates turbulence, which eases dissolution of nitrogen from the air. The nitrogen concentration in water increases significantly and can reside in water for a long time. If fish swim from high nitrogen content water to normal waters, they may die.

Water released for power generation is not stable; it depends on seasonal and daily peak demands. Usually, such peaks are in winter and in the evening. Different rates of water flow from reservoirs can damage soil and vegetation in riparian areas.

A dam, as an artificial wall, causes sedimentation – deposit of fine organic and inorganic materials that are typically suspended in the water. After sufficient time, sediments reach the level where they support an expansion of living organisms fed by nutrients from these sediments. Since these organisms use oxygen, their growth depletes the supply of oxygen in the reservoir. At the same time, fewer sediments and hence fewer organic and inorganic nutrients are provided to downstream habitats.

While all these factors could impact on the environment, they can vary greatly from project to project. For each HPP the impact should be carefully examined. Such examination should identify which plants, fish and wildlife are affected. Some species may end up doing quite well, while others may sharply or completely decline and some will be minimally affected.

While the impact of any dam depends on various technical and natural factors, it can be significantly reduced by technological and operational enhancements of the HPP. Such enhancements may include installing a fish passage, minimum flow turbines, re-regulating weirs and pulsed operation at peak efficiency. There is also a variety of techniques available for moving non-contaminated sediment downstream.

While MoEFWA is generally responsible for the monitoring and inspection of energy sector activities, it does not have any responsibility for the water quality of HPP reservoirs, and does not have any control over operational issues, including water release.

*Thermal power plant impact*

The Vlora TPP was commissioned in 2011. A comprehensive environmental and social impact assessment was carried out for the project and an environmental management plan prepared through a broad range of consultations with representatives from national and local government agencies, universities, business, NGOs, media and the general public.

It is well known that TPPs will generate pollution. However, according to the World Bank, the EIA of the Vlora project demonstrated that there would be limited environmental impact and, furthermore, that appropriate mitigation and monitoring measures have been included in the environmental management plan. The Vlora TPP will use distillate fuel oil in a combustion turbine. The combustion will generate sulfur dioxide ($SO_2$), nitrogen oxides (NOx), carbon monoxide (CO), particulate matter (PM) smaller than 10 microns, carbon dioxide ($CO_2$) and volatile organic compounds (VOCs). While the EIA presents mitigation measures to help minimize the

environmental and social impacts of the project, the environmental management plan provides mitigation, monitoring and institutional measures to be taken during the construction and operation of the generation facility to eliminate, offset or reduce adverse environmental as well as social impacts, and set out the actions needed to implement these measures.

*Main issues concerning the impact of the fossil fuels industries.*

Although Albania produces a limited amount of fossil fuels, the production of coal, gas and oil can cause severe damage to the environment. Worldwide practice demonstrates that all oil and gas industry activities have environmental effects: geological and geophysical surveys, drilling and production activities, accidental oil spills, decommissioning of installations, gas and oil transportation, and gas and oil processing. These activities have an environmental impact on the air, surface and groundwater, soil, wildlife and populations, and should be carefully examined.

Detailed data on sources, types and volumes of pollution and waste discharges during oil and gas activities, which would allow the Government to develop the necessary preventive measures, are lacking in Albania. Since oil and natural gas activities are performed mainly by international companies, the data must be submitted by the developers, while MoEFWA should conduct monitoring and inspection.

Nevertheless, it is not clear whether adequate measures are being taken to ensure environmental protection. While the institutional and legislative framework has been created and Albania has signed several MEAs, the Ministry's lack of capacity to gather relevant information suggests that a number of existing and emerging environmental problems are still unsolved and that appropriate action is needed at both local and national levels.

The UNEP report, "South-Eastern European mining-related risks: Identification and verification of environmental hot spots", identified Ballsh, Kucova and Patos–Marinza oil fields as onshore oil and gas extraction sites with severe oil pollution. At the Patos–Marinza oil field, surface and groundwater is being severely contaminated by oil from wells, pumps, pipelines and pre-treatment facilities, and sulfurous gas and hydrocarbon emissions are emitted to the atmosphere. Wastewater containing oil impurities is being discharged into a channel, contaminating the Gjanica River, and probably affecting the local water supply. The refinery also emits toxic pollutants into the atmosphere.

It is clear that special attention should be paid to environmental issues concerning the Adriatic Sea. With potential oil and gas production expected to increase in coming years, the risk of oil spills and other leakages will increase.

In addition to the risks associated with oil and gas exploration, extraction, production and processing, transportation routes create major environmental risks. Transportation via pipelines or tankers across the sea creates significant environmental problems. If increased, oil and natural gas production in the Adriatic Sea will inevitably result in the construction of infrastructure to export these resources to consumers, raising the possibility of loss of habitat for marine life as well as the spectre of accidental spills. The greatest possible threats to oil discharge in offshore operations are posed by loss of well control, pipeline leak, tanker leak, tanker accidents and release of bunker oil.

The Government plans to obtain access to oil and natural gas through sharing arrangements for fossil fuels transiting Albania from the Russian Federation and the Caspian Sea to Western Europe, when and if these pipelines are constructed. The construction of pipelines will raise the issue of the protection of the land and sea environment in the areas through which the pipelines will pass. Pipelines should, preferably, avoid residential areas and pass as close as possible to Albania's refineries. A comprehensive assessment of environmental impact should be prepared.

The NES notes that fossil fuels production has been the major contributor of environmental pollution in Albania. The NES stresses that the main concern remains spills of crude oil and refinery residues into rivers and lakes and onto oilfield land. For hundreds of square kilometers surrounding Ballsh and Fier refineries, a specific smell can be detected, while water in rivers and streams has a high concentration of hydrocarbon residues.

Coal mining also has environmental impact. Although the demand for coal in Albania has fallen since the 1990s, the country continues some lignite mining. In 2006 its production was 9 ktoe or less than 0.5 per cent of total primary energy supply. Nonetheless, existing mining can still cause environmental problems associated with this industry, in particular large-scale land use, an overburden of removal and disposal, disturbance of hydrology, acid mine drainage, fugitive dust and reclamation.

## 9.5 Conclusions and recommendations

The significant available potential of hydropower offers good prospects but requires careful planning, particularly regarding the environmental impacts of new as well as existing HPPs. There are several technical and natural factors which have caused impact on the environment. They can vary greatly from project to project. The impact of each particular HPP should be carefully examined and should identify which plants, fish and wildlife are affected. Some species may end up doing quite well, others may sharply decline or completely disappear and some will be minimally affected. Currently, there is not cooperation between hydropower and environmental authorities on environmental matters

*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 (HPP);*
*(b) Conduct water quality monitoring in HPP reservoirs;*
*(c) Improve inter-administration cooperation between hydropower and environmental authorities, particularly on water release issues.*

There is growth in energy companies' activities, especially in the oil sector. Analysis of the structure and scale of the environmental impact of the fossil fuels sector's activities is critical. Volumes of pollutant inputs into the environment should be examined by the energy operators and environmental authorities. A detailed analysis of the sources and composition of pollution components, and the degree of hazard they represent, is a necessary part of environmental control. A database of pollution levels in different regions, as well as ranges of typical pollutant levels in surface waters and air, should be prepared and provided for public consideration.

*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.*

While the power sector has the greatest prospect of operating with less energy loss, there are several critical sectors for the implementation of energy efficiency measures. For example, buildings and water heating together represent the second largest energy use in Albania, after road transport. More than half of the energy consumption in building heating is of electricity, as is 86 per cent of water heating. A major challenge facing Albania's electricity system is the need to encourage consumers to switch to alternative sources for heating as well as for cooking. Enhanced energy efficiency will reduce electricity consumption and hence will mitigate environmental impacts.

*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.*

Total proven reserves of fuel wood in Albania are considered to be approximately 6 Mtoe. There are uncertainties related to the real rate of cutting fuel woods but apparently it is around 250,000-350,000 toe/year. Growth of firewood consumption will be constrained due to forestry environmental management issues. Uncontrolled harvesting of fuel wood for domestic use and export is leading to deforestation in parts of the country. The use of inefficient stoves creates indoor and outdoor pollution and leads to health problems. Biomass energy will possibly play a noticeable role in Albania's sustainable energy development. It could involve the four main resources: urban wastes, agricultural residues, forest residues and animal wastes. There is also potential for other renewable energies such as solar water heating, wind energy and small-scale hydropower.

*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.*

Electricity losses through transmission and distribution, both technical and non-technical (illegal connections), is a serious problem. For example, in 2008 the total losses were 35 per cent of the electricity supply (generation and importation). KESH estimates technical losses caused by obsolete transmission lines and electricity distribution networks to be 20-25 per cent and commercial losses 10-15 per cent. Reduction of electricity technical and commercial losses could reduce import and/or generation volumes and would also improve KESH's financial indicators.

*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 electicity meters.*

# Chapter 10

# HUMAN HEALTH AND ENVIRONMENT

## 10.1 Developments since the first Environmental Performance Review

Since the first EPR in 2002, Albania has been intensively developing new legislation and policy with the ambitious goal of full approximation to EU policy and legal standards. The impacts of degraded environment on health have been increasingly recognized and their reduction stated as a major goal of the environmental protection policy, programmes and regulations. Monitoring of the quality of the main environmental media and infectious disease surveillance has been advanced.

The institutional landscape has been significantly changed and some of the environmental public health tasks and responsibilities shifted outside the health sector, thus calling for strong intersectoral collaboration. Professional capacity for public and environmental health has been strengthened with advanced methods for health surveillance and risk assessment. Overall, there is progress in country capacity to address human health and the environment.

Against this background, progress in implementing and enforcement of the legislation and policy programmes which benefit health and the environment has been limited. Reporting obligations under the existing environmental regulations have been limited to compliance with eemission standards without including any information about policies' effects and effectiveness, especially concerning population health.

An integrated monitoring system enabling assessment of the environmental health situation and progress, as a basis for development of future (mostly environmental) policy and regulatory actions and ensuring continuity, has not been put in place.

Policy development has been predominantly driven by the priority of aligning with EU legislation, sometimes without sufficient consideration of feasibility aspects, country-situation specifics, and available capacity and administrative staffing.

## 10.2 Population health status and environmental conditions

*Population health status*

Population development

The population of Albania was estimated at 3.19 million in 2009, up from 3.11 million in 2000. The country has a relatively high proportion of young people 0 to 14 years of age, and a low proportion of people over 65. The median age of the population, 30 years, is eight years younger than the UNECE region average. Both the birth rate and fertility rate are falling, most likely as a result of the recurring effect of the emigration of a considerable number of people in the active reproductive life span during the 1990s. In 2009, the birth rate was lower than that of the EU, the Central and Eastern European Countries (CEEC) and the European region averages (Table 10.1). The death rate is low and natural population growth is much higher in Albania than in the other country groups.

The free and uncontrolled movement of people since 1990 has also changed the urban:rural population ratio. In 2000, 42 per cent of Albanians lived in urban areas; in 2009, this figure was 51 per cent. Nevertheless, Albania's population is still less urban than in many countries of the region.

According to WHO estimates, a person born in Albania in 2009 can expect to live for 73 years, on average: 75 years if female and 72 years if male. Though the life expectancy of Albanian people increased by three years between 2000 and 2009, this estimate is lower than the average for the EU, the CEEC countries and the European region (Table 10.2). In 2000, the figure obtained based on the national mortality statistics was five years higher than that estimated, the difference being explained by underreporting of deaths and difficulties gathering population statistics.

In 2009, the probability that a 15-year-old person in Albania will die before reaching his or her 60th birthday was estimated at 107 per 1,000 population.

**Table 10.1: Key demographic indicators: Albania, and the averages for the Central and Eastern European Countries, the European Union and the European region, 2009**

| | Albania | CEEC | EU | European region |
|---|---|---|---|---|
| Mid-year population (millions) | 3.2 | 140.3 | 497.9 | 891.4 |
| Population aged: | | | | |
| 0-14 years (%) | 23.4 | 15.2 | 15.6 | 16.9 |
| 65+ years (%) | 9.4 | 14.4 | 17.3 | 15.2 |
| Live births per 1,000 population | 9.1 | 10.7 | 10.8 | 12.2 |
| Deaths per 1,000 population | 4.9 | 10.8 | 9.6 | 10.5 |
| Natural growth rate per 1,000 population | 4.2 | -0.2 | 1.1 | 1.7 |
| Total fertility rate | 1.6 | 1.4 | 1.6 | 1.7 |
| Urban population (%) | 50.9 | 62.0 | 73.9 | 70.4 |

*Source:* WHO Regional Office for Europe. Health for All Database, September 2011; Institute of Statistics of Albania. *Albania in Figures 2010*.

**Table 10.2: Selected population health indicators: Albania, and the averages for the Central and Eastern European Countries, the European Union and the European region**

| | Albania | CEEC | EU | European region |
|---|---|---|---|---|
| Life expectancy at birth (years)* | 73.0 | 74.6 | 79.5 | 76.6 |
| Adult mortality rate (per 1,000 adults 15-59 years)* | 107.0 | 138.2 | 88.1 | 141.0 |
| Infant mortality (per 1,000 live births)** | 16.0 | 6.9 | 4.1 | 9.2 |
| Under-5 mortality rate (per 1,000 live births)** | 18.0 | 8.3 | 5.0 | 11.2 |
| Maternal mortality rate (per 100,000 live births)*** | 31.0 | 14.5 | 15.2 | 18.8 |

*Source:* WHO World Health Statistics Report, 2011.
*Notes*: * – data refers to 2009; ** – data refers to 2010; *** – data refers to 2008.

This probability has significantly decreased since 2000, when it was 130. Adult mortality is lower than the European region and the CEEC averages but remains higher than EU levels.

Child and maternal mortality and the Millennium Development Goals

Both infant and under-5 mortality have decreased in Albania. The infant mortality rate which Albania has regularly reported to WHO declined by one third from 1999 to 2004, the last year of national reporting of mortality-based indicators. A similar trend is evident in under-5 mortality; the corresponding figures are 17 and 12 per 1,000 live births. However, infant mortality data is prone to discrepancies due to the poor civil registration system. The estimates of the UN Inter-agency Group for Child Mortality Estimation show a 50 per cent decline in infant mortality from 2000 to 2010, but the country's rates still remain rather high – among the top 10 in the European region.

Under-5 mortality estimated by the UN Interagency Group declined from 51 per 1,000 live births in 1990 to 18 in 2010, indicating that Albania is on track to reach MDG 4, which aims to reduce the rate by two thirds between 1990 and 2015. Nevertheless, both the under-5 and infant mortality rates are two to three times higher than the levels of the CEEC and the EU countries, and significantly higher than the European region average (Table 10.2).

The under-5 mortality rate in Albania shows a huge urban–rural divide, with the probability of dying before the age of 5 years in rural areas double that in urban areas. Congenital anomalies and pneumonia, which could be partly attributed to environmental chemical hotspots and indoor air pollution from hazardous heating and cooking sources, particularly in poor areas, are among the main causes of mortality, accounting for 22 and 18 per cent respectively of all deaths.

Maternal mortality in Albania – both that regularly reported to WHO and the estimates of the Maternal Mortality Estimation Inter-agency Group – show a consistent decrease in the period 1990 to 2008, but at a slow pace. According to the estimates, in 2008, Albania was among the 10 countries with the highest maternal mortality in the European region, with poor sanitary conditions, among other contributing factors. Similarly to the child mortality indicators, the maternal mortality rates are two to three times higher than the levels of the CEEC and the EU countries, and significantly higher than the European region

average (Table 10.2). Thus, considerable effort is needed if MDG 5, which aims to reduce the maternal mortality rate by three quarters between 1990 and 2015, is to be attained.

Mortality by main causes of death

Both the regular reporting of mortality by cause and the latest WHO estimates show that non-communicable diseases continue to represent the major proportion of deaths and of years of life lost of Albanians. Similarly to the situation in the rest of Europe, cardiovascular diseases constitute the leading cause of death, followed by cancer. Ill-defined causes – when the main cause of death is classified under symptoms, signs, abnormal findings, etc. – persisted as a cause of 13-14 per cent of deaths in Albania, indicating the need to strengthen health information capacities for diagnosis and death registration.

Overall mortality in Albania has decreased over time, in particular in the second half of the 1990s. Since then, progress in all-causes mortality and that of the leading underlying causes has been inconsistent and rather slow as compared with the steady decrease in EU averages. In 2005, diseases of the circulatory system caused more than half of all deaths in Albania and air pollution both, ambient and indoor, contribute to it. Cancer caused only every seventh death in Albania, which may be at least partly explained by differences in the classification and registration of causes of death. External causes and respiratory diseases each accounted for about 5 per cent, and communicable diseases only 0.5 per cent, of all deaths (Table 10.3). Other country groups showed similar distribution of cause-specific mortality in 2005, with the exception of the EU countries, in which diseases of the circulatory system accounted for about 40 per cent of total deaths, most likely due to more effective health care and prevention of health risks, including environmental risks.

Selected trends in morbidity

According to the regularly reported hospital-based morbidity data, respiratory and gastrointestinal diseases continue to be the main causes and the rates are high – in 2007, they were 1,527 and 1,358 per 100,000 respectively. This important toll of morbidity is largely preventable through an integrated approach addressing risk factors that span many different policy sectors beyond health. For example, reducing the main risk factors of respiratory disease morbidity such as indoor air pollution related to tobacco smoke and solid fuel used for cooking and heating, outdoor air pollution, and occupational dusts and chemicals, implies the involvement of transportation, industry, housing, and occupational health and safety institutions.

Morbidity due to infectious and parasitic diseases is also high. The rates of hospital discharges are greater than those of the EU: in 2007, they were 649 and 408 per 100,000 respectively. Infectious diseases related to water and food contamination, and poor hygiene and sanitation, though decreasing, are a significant public health issue. The same is true of epizoonotic diseases such as brucellosis transmitted through unpasteurised milk or meat. Figure 10.1 displays the significantly higher incidence rates of brucellosis, shigellosis and typhoid fever in Albania as compared with the CEEC and the EU averages. It indicates that infectious diseases are not a major cause of mortality, but remain a significant morbidity burden.

Viral hepatitis, especially the most common Hepatitis A which is particularly frequent under poor sanitary and hygiene conditions, is still an important public health problem in Albania. A new hepatitis case-based surveillance system is underway. As regards tuberculosis, incidence rates have decreased since 2000 and are similar to those of the EU, which can be related to the improvement of living standards and health care.

*Health risks related to environmental factors*

Air quality

Due to the lack of coordination of actions in the past, consistent data from air quality monitoring on particulate matter ($PM_{10}$, $PM_{2.5}$) relevant for population exposure is currently limited to one monitoring station in the centre of Tirana, which has been operational since the summer of 2010. IPH operates air quality monitoring under contract to MoEFWA, which has responsibility for air quality. Extension of the comprehensive monitoring network is underway but overall progress with those positive developments has been slow.

Ambient air pollution is now recognised as a serious health problem in the main cities of Albania, in part as a result of information from WHO stating that pollution levels in Tirana are reducing life expectancy by 1.5 years. The rapid urbanisation and associated major increase in residential and commercial building construction contribute significantly to air pollution, together with the current bad condition of streets and roads within the urban areas. With the dramatic increase in the number of cars, and the number of old vehicles in use, traffic in urban areas is now a major cause of air pollution.

**Table 10.3: Standardized death rates for the most important causes of death and their proportion per 100,000 population, 2005**

| Cause of death | Albania* | | CEEC average | | EU average | | Regional average | |
|---|---|---|---|---|---|---|---|---|
| | SDR | % | SDR | % | SDR | % | SDR | % |
| All causes | 810.2 | 100.0 | 966.4 | 100.0 | 669.7 | 100.0 | 924.5 | 100.0 |
| Diseases of circulatory system | 417.7 | 51.6 | 515.9 | 53.4 | 265.4 | 39.6 | 453.9 | 49.1 |
| Malignant neoplasms | 114.9 | 14.2 | 197.7 | 20.5 | 177.6 | 29.5 | 170.7 | 18.5 |
| External cause injury and poison | 41.9 | 5.2 | 61.6 | 6.4 | 41.4 | 6.2 | 81.6 | 8.8 |
| Diseases of the respiratory system | 42.3 | 5.2 | 47.7 | 4.9 | 48.5 | 7.2 | 53.3 | 5.8 |
| Infectious and parasitic diseases | 4.3 | 0.5 | 7.4 | 0.8 | 8.8 | 1.3 | 15.7 | 1.6 |

*Source:* WHO Regional Office for Europe. Health for All Database, September 2011.
*Note:* Data denoted by * are for 2004, i.e. the last available year for mortality-based indicators of Albania.

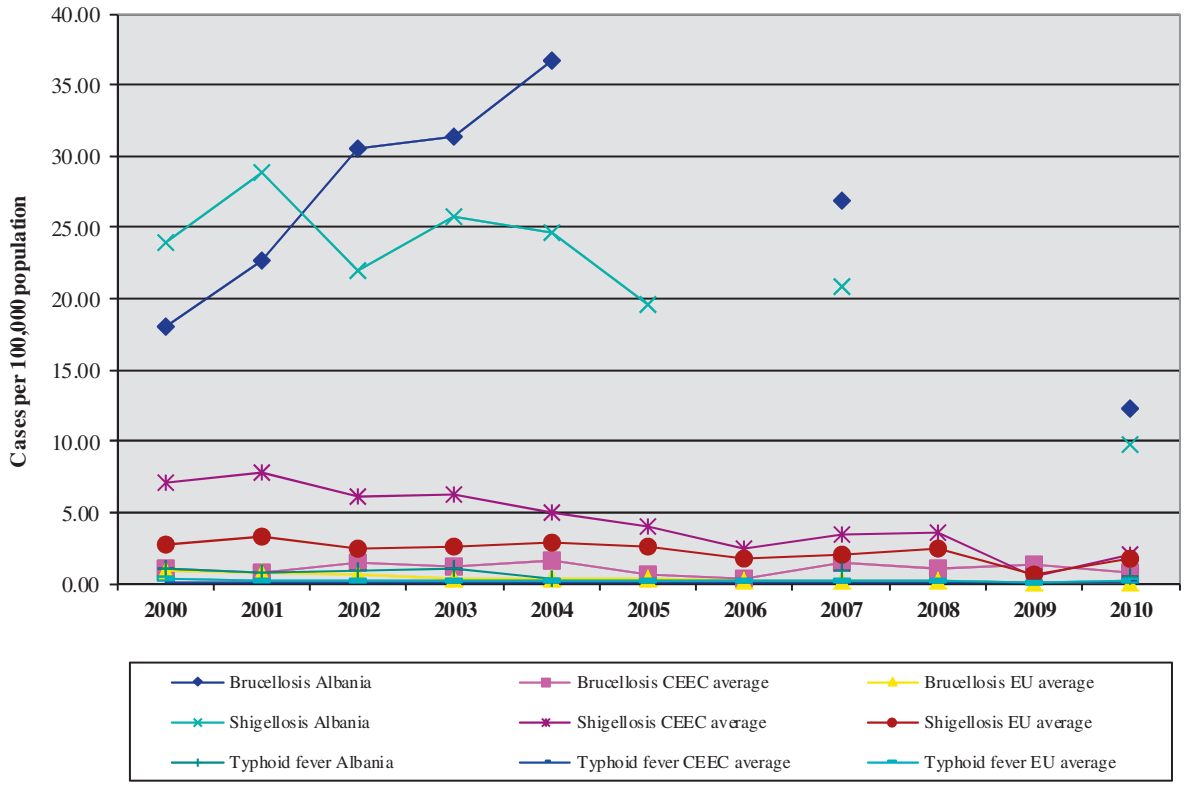
**Photo 10.1: Health path**

Air quality levels for Tirana from the last 12 months are more than twice in excess of the WHO Air Quality Guidelines; it is estimated that each year 500 deaths in the city can be attributed to air pollution. Reducing it will significantly reduce those adverse health impacts, and also traffic noise complaints, and will bring additional health benefits related to increased healthy and safe mobility. An action plan to reduce air pollution in Tirana was first prepared by MoH with the support of WHO in the fall of 2007, but it has not yet been implemented. The strategic plan for the development of transport in Tirana adopted by Tirana provides a good opportunity to implement action on reducing air pollution.

Indoor air quality has not yet attracted the due attention of the public health sector. There are some regulations for indoor air quality in kindergartens and day-care centres and in the near future there will be such regulations for workplaces. Albania is being involved in multinational projects on indoor air quality monitoring in schools, and is a pilot country in the new WHO-coordinated survey as part of the follow-up of the commitments taken at the Fifth (Parma) Ministerial Conference on Environment and Health.

There is no systematic data on air quality at the workplace. Concerning second-hand or passive smoking – the most important source of indoor air pollution relevant to health – the 2006 Law for Health Protection from Tobacco Products, No. 9636, prohibits smoking in public places, including bars and restaurants. However, it is still not fully implemented and enforcement presents challenges. A 2009 national survey of youth (13-15-year-olds) exposure to environmental tobacco smoke in and outside the home, showed a decrease in second-hand smoking as compared with 2004. Nevertheless, exposure is still high: every second young person in Albania has been exposed to environmental tobacco smoke at home, and outside the home the proportion is even greater – about 65 per cent of the youth population.

**Figure 10.1: Selected food- and waterborne and zoonotic infectious diseases: Incidence rates (cases per 100,000 population) of brucellosis, shigellosis and typhoid fever, 2000-2010**




*Source:* WHO Regional Office for Europe. Centralised Information System for Infectious Diseases (CISID), 2011.
*Note:* Dashed lines denote missing data points.

Climate change

The rise of the average temperature in Albania in the past 30 years is an alert about the threat of climate change. Projected climate changes in Albania include higher air temperature, increased frequency of extreme weather events, and a 20 per cent decrease in water runoff with a reduction of up to 60 per cent of power generation.

Albania is prone to a range of extreme weather events such as floods and associated landslides, storms, heat waves and cold snaps. The typical risk across Albania is that of small-scale disasters relating to floods of pluvial origin, landslides and the effects of high snows, and recent years have shown an increase in the number of flood-related emergencies. The western plain has the highest flood risk of under 100 years' return. The vulnerability of the Albanian population to both large- and small-scale disasters is compounded by poverty, poor infrastructure and communications, a building boom, and a range of environmental factors from rapid deforestation and poor watershed management to environmental pollution. During recent heat waves, an increase in heat-related health conditions was noted.

Climate change will further aggravate air-quality-related health problems in the major cities of Albania, but in particular in Tirana, contributing to the worsening of respiratory consequences among groups of residents clearly exposed to such risks. Climate change and variation affects vector biology, altering vector seasonality, abundance and distributions. It has favoured the growth of tropical plants, even in Albania, and made it possible for mosquitoes to appear at altitudes above 400-500 m above sea level. Albania has thus become subject to potential outbreaks of diseases such as chikungunya, dengue, malaria and other diseases of tropical origin. There is no system in place to monitor and assess the health effects of climate change.

Since 2004, Albania has had a National Civil Emergency Plan, aimed at both prevention and recovery. A national inter-ministerial committee under the Council of Ministers is the relevant policy body, and MoI's General Directorate of Civil Emergency is the operational arm, providing technical expertise. The health system tasks are to work with and alongside the national disaster team, and to provide the health and medical services needed during and following a disaster such as a

flood, heat wave or extreme cold period. Tirana Hospital coordinates the provision of services for the whole of Albania.

In the framework of the WHO-coordinated seven countries initiative on protecting health from climate change, which focuses on SEE, Central Asia and the Russian north, Albania has prepared tools to advance relevant policy-making. The Albanian Strategy for Health Adaptation into the Climate Change Context has just been released as an overarching platform for the health system's preparedness and response within wider sector efforts. It specifies activities in several domains related to: raising public awareness and building capacities among professionals in the health effects of climate change; upgrading the information system with a set of policy-relevant indicators for identifying and assessing climate-related health risks and the effectiveness of actions; enhancing surveillance and control of selected infectious diseases and vectors, as well as air quality monitoring, etc. Further, it outlines the tasks and capacities of the health sector in coordinated intersectoral activities on emergencies related to extreme weather events, their planning and response.

The Strategy is accompanied by a comprehensive training programme in emergency management and risk reduction, with a focus on health risk management in emergencies and disasters, targeted at high-level health authorities. The programme also contains a number of tools to facilitate the training courses for capacity-building in the area of public health emergency management at all levels. Implementing the Strategy requires regulatory and organizational arrangements for integration in the mid-term budget priorities of the health sector, and strengthened intersectoral collaboration.

Water and sanitation

According to the monitoring and benchmarking programme of MoPWTT in 2010, public water supply service coverage was 85 per cent in urban areas and only 57 per cent in rural areas – although on the rise. In many cities, water availability at the source is abundant, but leaks and misuse mean that only a small fraction of the water produced is available to consumers. The distribution problem also has a seasonal aspect: much more water is needed during the summer growing season when rainfall is scarce. Continuity of the drinking water supply is an issue: the country average for water continuity is about 12 hours. Currently, only two of the water utilities in Albania (Korçe and Librazhd) can provide a 24-hour water supply service across their entire systems throughout the year. The main factors that cause low continuity of water supply are the loss of water from unmetered overconsumption as a consequence of flat-rate billing, illegal connections and technical losses in the networks.

Monitoring drinking water quality at the tap is conducted in 530 points throughout the country and demonstrates a high level of compliance over the last five years: 97-98 per cent for microbiological parameters and 95-97 per cent for residual chlorination. The high compliance rate refers to big water supply systems, whereas the small water supply systems and those in rural areas are not subject to monitoring and control. Furthermore, the country's monitoring network suffers deficiencies related to equipment and methods, the lack of databases and paper-based reporting.

Sanitation is a greater problem than drinking water. In 2010, the reported sanitation coverage of about 40 per cent in urban areas was somewhat low as compared with that for drinking water, while only a very small proportion of rural areas (11 per cent) is equipped with sewerage networks. The poorer neighbourhoods have no access at all; at best, buildings and houses are equipped with septic tanks and this situation presents a public health risk in densely populated areas. There are currently only two operational wastewater treatment plants in the country (Kavaja and Pogradec). Four new plants (Durrës, Sarande, Lezhe and Vlorë) have been completed. The NSWSS, with high aspiration targets towards EU standards and MDG 7, has just been adopted; its implementation, implying a huge investment, is yet to be seen. Poor sewage collection and treatment affect the quality of waters used for recreational purposes.

Monitoring of microbiological water quality is conducted by IPH for the coastal waters along the Adriatic and Ionian seas, in nine towns from Velipojë in the north to Sarandë in the south. In 2009, the classification of coastal bathing waters across all the monitoring sites according to the four WHO/UNEP categories was as follows: 39 per cent were of excellent quality, 14 per cent were good, 4 per cent were sufficient and 43 per cent were of poor quality, requiring immediate action. In the small towns, 100 per cent compliance has been reported, and has remained unchanged over the last five years. Compliance in Durrës, Kavaja and Vlorë was somewhat lower (85, 78, and 81 per cent respectively) and has deteriorated over time by 15-20 per cent in Durrës and Kavaja, suggesting that pollution problems continue to persist in this very popular recreational area which is also an important port.

There is a significant burden of ill health associated with the water pollution risks. As already noted, levels of shigellosis and typhoid fever are still high in Albania (Figure 10.1). In addition, the monthly dynamics of selected food- and waterborne diseases in 2009 show that shigellosis infections persist in the country throughout the entire year, and demonstrate the relative importance of the disease (Figure 10.2).

The total number of notified cases of food- and waterborne diseases in 2008 was 2,764, with the highest number of cases of infection in the town of Berat (591 cases) and, in the north-east of the country, in the towns of Kukës (1,070) and Tropojë (566). Common reasons for the outbreaks were microbiological water contaminated from untreated sewage, poor hygiene and contaminated animal by-products. In 2009, one local outbreak of Hepatitis A in the Tirana region was laboratory confirmed. As it is not possible to determine the proportion of background cases of acute gastrointestinal infections and outbreaks associated with poor water and sanitation, it is likely that the vast majority of waterborne infections remain undiagnosed and many outbreaks undetected. Furthermore, the specific causal pathogen in the water supplies or food products cannot be identified and neither, therefore, can the source of the outbreak.

Food safety and nutrition

Foodborne infections continue to take their toll on public health in Albania: recorded foodborne poisonings were on the rise in the second half of the last decade, partly due to improved surveillance and reporting but also to the occurrence of large-scale outbreaks (Figure 10.3). The underlying infection is, in most cases, of microbiological origin.

Microbiological food safety has shown high rates of compliance, in particular for selected bacteriological analyses (Table 10.4). The number of samples analysed, however, is relatively low, mostly due to a lack of re-agents, laboratory equipment problems, etc. Furthermore, the share of food samples taken within the framework of projects and studies is growing, which may not show the real situation as the objectives of projects and studies have their own specifics. Capacity for pesticide residue controls in food and feed of plant and animal origin is not yet in place.

Salmonellosis is a common underlying infection across Europe. Two foodborne outbreaks have been reported with salmonellosis as the underlying disease: in 2007, a smaller outbreak among school children in Tirana, and in 2008, a larger outbreak in the general population of Librazhd. The most common causes include contaminated poultry products, and poor hygiene during food handling and manufacturing. Launching of the national salmonella control programme is underway and will enable Albania to build capacity for managing public health risks at the human–animal interface.

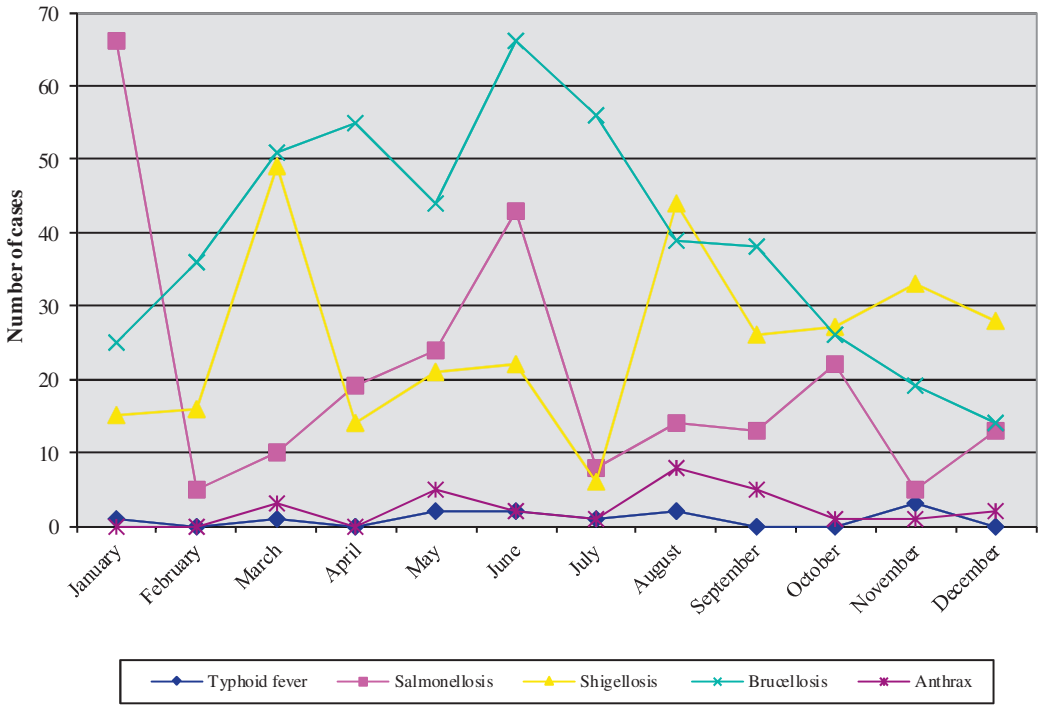
In contrast to the European situation, the highly contagious, epizoonotic disease brucellosis still remains a problem in Albania. As already noted, though incidence rates are decreasing, they remain high by order of magnitude as compared with the EU and CEEC averages. Brucellosis also persists throughout the year at relatively high levels. In 2009, for example, it climbed rapidly during the first half of the year to peak at a very high level before declining steadily (Figure 10.2). Measures for control and eradication have been undertaken but progress is insufficient owing to the existence of many small farms which sell their food products illegally on the streets, and overall weak control.

Food safety and consumer protection is considered a priority in the Government's reform agenda and the food safety policy has been subject to important developments in recent years with assistance from the EU. The National Food Authority (NFA) was created in 2010 to consolidate all responsibilities for inspection, risk assessment and communication. A food hygiene package has been adopted and feed hygiene legislation has been prepared for the placing of food and feed and animal by-products on the market.

Enforcement of the legislation is weak and more effort is needed to strengthen the organization of official controls on animal products intended for human consumption, improve laboratory capacity, enhance coordination between central and local levels, and enhance intersectoral communication and cooperation. Currently, only a few establishments in the meat, fish and dairy sectors apply the modern hazard analysis and critical control point (HACCP) system and self-controls for food safety assurance.

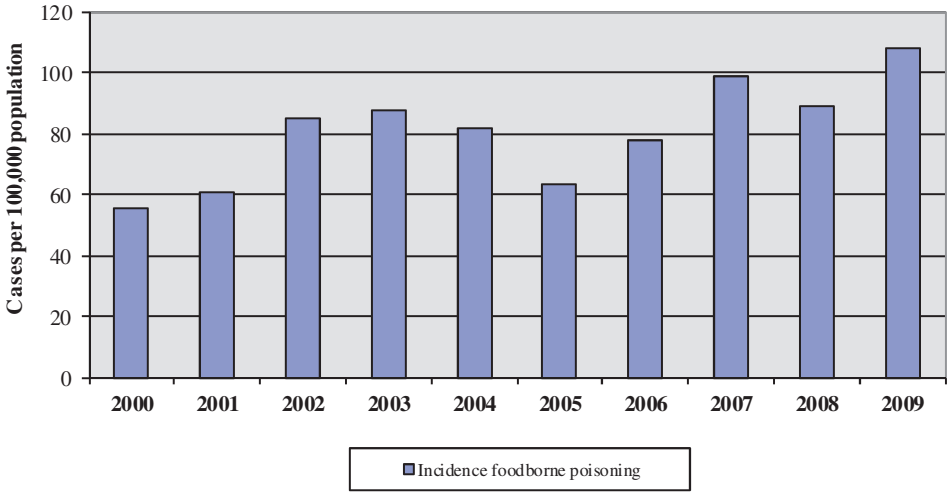
Albanians have a healthier diet than do people in other European countries: the proportion of energy from fat is lower than that of the EU and CEEC countries and that available from protein is higher. Albanians consume more fruits and vegetables than other Europeans and fruit and vegetable consumption has more than doubled since the 1990s. As regards progress in combating iodine deficiency in the population, about 60 per cent of households in Albania were reported to have adequate consumption of iodized salt during the period 2003-2008.

**Figure 10.2 Dynamics of selected food- and waterborne and zoonotic infectious diseases, 2009**




*Source:* Institute of Public Health, 2011.

**Figure 10.3: Incidence of foodborne poisoning (cases per 100,000 population), 2000-2009**




*Source:* Institute of Public Health, 2011.

Chemical safety

Chemicals in the environment present significant health risks, yet there are no human biomonitoring activities to estimate the population's exposure to these hazards and enable monitoring of the potential effects of rehabilitation measures. Neither has the country been involved in international surveys, in particular for those chemicals which persist for a long time in ecosystems, such as POPs and heavy metals.

Pollution hotspots around closed industrial sites are of serious environment and health concern (Chapter 7). The copper, chromium, iron-nickel and oil industries have produced several million tons of industrial waste which have been dumped without any environmental or health considerations. In addition, urgent measures are required for the safe disposal of a number of chemicals stored inside the production lines of closed chemical factories. Albania has adopted an extensive body of legislation on environmental protection and management, and on air and water quality, but does not have specific legislation addressing hotspots, in particular on soil protection, industrial pollution and ownership of polluted sites.

**Table 10.4: Food safety: Microbiological analyses, 2005-2010**

| **Mycological compliance** | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** |
|---|---|---|---|---|---|---|
| Total number of samples analysed: | 104.0 | 98.0 | 45.0 | 37.0 | 172.0 | 260.0 |
| Private sector share (%) | 73.0 | 86.7 | 48.9 | 94.5 | 10.5 | 16.5 |
| Public sector share (%) | 27.0 | 13.3 | 51.1 | 15.5 | 18.6 | 3.0 |
| Projects and studies share (%) | .. | .. | .. | .. | 70.9 | 80.5 |
| Food samples analysed from food poisoning cases (%) | 13.5 | 17.3 | .. | 18.9 | 18.6 | 3.0 |
| Samples analysed on request in pre-production stage | 4.8 | .. | .. | .. | .. | .. |
| Compliance with mycological standards (%) | 97.1 | 96.0 | 91.1 | 73.0 | 85.5 | 57.7 |
| **Bacteriological compliance** | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** |
| Total number of samples analysed: | 130.0 | 110.0 | 64.0 | 113.0 | 334.0 | 331.0 |
| Private sector share (%) | 48.4 | 81.8 | 46.8 | 52.0 | 19.6 | 20.2 |
| Public sector share (%) | 51.6 | 18.2 | 53.2 | 31.2 | 11.8 | 10.4 |
| Projects and studies share (%) | .. | .. | .. | 16.8 | 68.6 | 69.4 |
| Food samples analysed from food poisoning cases (%) | 24.6 | 8.2 | 25.0 | 12.3 | 12.6 | 3.3 |
| Samples on request in pre-production stage (%) | 16.6 | .. | .. | .. | .. | .. |
| Compliance with bacteriological standards (%) | 86.7 | 97.1 | 89.1 | 81.5 | 76.4 | 81.9 |

*Source:* Institute of Public Health, 2011.

A series of projects has been implemented, with the support of UNDP and funded by foreign donors, on rehabilitation of hotspots, reduction of environmental pollution to basic safety standards and eliminating toxic materials. Recent activities have resulted in repackaging, labelling, control and removal of chemicals from hazardous chemicals depots in the central part of Albania and in Bajza, next to the border with Montenegro. Furthermore, EFA, in cooperation with UNDP, has identified nine priority environmental hotspots with related EIAs, remediation action plans and cost estimates, which are published on the web to support resource mobilization for effective measures. However, the public health "argument" is only a subject of general consideration; there is no specific assessment or use of information on environmental health impacts.

Responsibility in the field of chemicals is spread across a number of ministries with unclear and overlapping responsibilities. The national register of chemical substances is maintained by MoEFWA. MoETE is responsible for chemicals as material used in industry, including import and export; MoAFCP is responsible for registration and control of plant protection products; MoH is in charge of biocides, pharmaceuticals and chemicals in hospital waste; and MLSAEO is in charge of control and prevention of exposure to chemicals at the workplace. The 2003 Law on Chemical Substances and Agents, No. 9108, has several provisions on the health sector, enabling an integrated approach to chemical safety from a public health perspective, but enforcement is weak because there has not been an adequate administrative infrastructure in place and the relevant expertise is insufficient.

Albania has joined SAICM (Strategic Approach to International Chemicals Management), a global policy framework for coordinating, catalysing and facilitating country efforts to achieve sound management of chemicals throughout their life cycle by 2020. IPH has been appointed a National Focal Point for SAICM from 2008, and a multisectoral group has been established involving stakeholders from the environment, economy, agriculture, health, labour and social sectors, academia and NGOs, led by the health sector. National implementation has been supported by the SAICM Quick Start Programme and the planned activities comprise the preparation of a national capacity assessment, establishment of an intersectoral SAICM coordination committee through a formal mechanism, development of a national chemicals management database, strengthening the legal framework and updating the country profile. The first update has now been completed with the involvement of all relevant stakeholders. The terms of reference of the National Intersectoral Committee of Chemicals Management (NICCM) in Albania have been prepared.

Responsibility for chemical emergencies, similarly to climate-related emergencies, lies with MoI's General Directorate of Civil Emergency. The updated chemical safety profile has revealed the lack of a fully fledged poisons information centre in Albania. The Centre for Toxicology of the Military Hospital in Tirana is providing treatment in cases of poisoning but does not have the infrastructure and tools (e.g. chemicals database) to provide an information service and advice around the clock in case of chemical emergency. Not only the local hospitals but even the country's unique specialized centre, the

Clinical Toxicology Service at the University Hospital Centre "Mother Teresa" in Tirana, suffers heavily from a lack of appropriate infrastructure for patients' decontamination, stock of antidotes, medicines, ventilating machines and other essential supplies.

The legal framework for control of accidents related to dangerous substances is being drafted but further effort is needed to strengthen the preparedness and response aspects. The regulations on industrial accidents notification are at an early stage.

Occupational health

There is no information on occupational exposure to the main factors in the working environment, or on work-related injuries and traumatism. The responsibilities and tasks for monitoring and control of risk factors in the working environment, and of occupational health and safety, are shared between the labour and health sectors and are specified in by-laws. Cooperation between the two sectors has been intensified, including through a series of joint inspections.

## 10.3 Environmental health management

*Policy framework*

The NSDI for the period 2007-2013 sets the Government's agenda for economic and social development and integration into the EU. This overarching policy platform is based on 38 sector and cross-cutting strategies and brings together the main directions of action in a single, unified, strategic framework.

The National Environment and Health Action Plan (NEHAP) approved by the Government in 1999 was prepared when the Ministry of Environment did not yet exist, and hence neither it nor its successor, MoEFWA, have been closely associated with it. NEHAP has not been updated to specify tasks and responsibilities for the environment sector under the new institutional setting, and the programme has not been put in place. At the same time, the NES, though taking social and economic imperatives into consideration to some extent, is primarily aimed at improving the environment.

The 2007 ECS presents the "core" components of a national integrated programme, with the overarching objectives to improve the quality of life and to integrate the environment into other sectors' strategies. Specific objectives of high relevance for the population's health focus on air quality, water supply and treatment, waste management (Chapter 6) and remediation of industrial pollution hotspots.

Concerning air quality, ambitious goals have been set for its improvement and eradication of extreme pollution by acting at the source, putting in place a national air quality monitoring system complying with EU requirements, and institutionalizing a system of national and local air quality management planning. The accountability mechanisms, however, are limited only to compliance with emission standards. The measures to attain the goals are clearly interlinked with MoPWTT's 2008 Sector Strategy of Transport for the period 2008-2013. The fundamental priority is the approximation of road transport legislation, with the main focus on road safety and environmental pollution from vehicles, establishment of standards for gas emissions from heavy vehicles and levels of noise, as well as the setting up of an information system to support road safety policy. Multisectoral measures on transport, health and environment, integrating health concerns in urban planning, and environmental quality management with considerably greater societal benefits, are not envisioned in the cross-cutting or the transport sectoral strategies.

The goals on water supply and sanitation of the 2007 ECS coincide with those of the NSWSS. MoPWTT has the central role in administering funding of the sanitation infrastructure (Chapter 5). Integrated approaches to water resources management from source to consumer with a clear health focus, such as the WHO water safety plans, should be put in motion through both regulations and intersectoral institutional mechanisms to assure a high level of health protection.

*Legal framework*

To bring to life the strategic integrated approach and coordinated action on cross-cutting issues, several key pieces of environmental legislation have recently been developed with a shift towards putting public health high on the environmental legal agenda. As compared with its predecessor, the new Law on Environmental Protection which enters into force in 2012 features the main aspects of an integrated approach to health and the environment. While the 2002 Law on Environmental Protection focuses on the environmental sector, specifying its mandate, tasks and responsibilities, the new Law clearly articulates reducing and eliminating adverse effects on human health, quality of life and environment as the main aim of environmental protection measures in the fields of air quality, water, and nature and forest protection, as well as in development plans.

Furthermore, the scope of pollution control measures has been broadened to include several environment-mediated factors of public health relevance such as waste, chemicals, POPs, radiation, noise and vibration in specific settings, and odours. Third, environmental monitoring is envisioned to cover not only the state of the environment but also to encompass monitoring the impacts of environmental pollution on human health. Fourth, the environmental information system should integrate data on effects of environmental pollution on human health.

The PRTR, which is to be established in adherence to the UNECE Protocol on PRTRs of the Aarhus Convention, is an effective policy instrument for pollution control at the source and, at the same time, an information service on the emission of pollutants into the environment. This service is of particular health relevance as it provides important signals for preventive actions on hazardous releases before the effects on health have taken place, as, for example, in the case of POPs.

The new Law on Environmental Impact Assessment determines the general requirements of an EIA, specifies the preliminary and profound assessment procedures and criteria for selecting projects and programmes subject to those assessments, the public opinion and consultation process, the certification of experts and sanctions. An assessment is defined as the establishment of the possible direct and indirect effects of a given activity on the soil, water, sea, air, forest, climate, human beings, flora and fauna, landscape, material assets and cultural heritage, taking into account their mutual interrelations. However, the definition does not imply any assessment of environmental health impacts.

The 2009 Law on Public Health, No. 10138, introduced the public health sector reform and modernization, in particular a shift from lengthy and costly treatment to disease prevention, health promotion and action on health risks such as drinking water and air quality control. Essential public health activities within the system include: (a) monitoring people's health status and trends in order to identify health problems and risk factors, (b) strengthening laws and regulations for health protection ensuring the relevant capacities, (c) preparing, planning and taking relief measures in the face of public health emergencies. Furthermore, environmental health monitoring and health and safety at work, public health information and epidemiological surveillance are at the core of the public health services package.

The Law on Public Health sets provisions for environmental public health policy measures along the four main axes: monitoring and assessment of environmental impacts on health, preparation and control of hygiene–health norms, implementation of interventions to eliminate or minimize the direct or indirect environmental impacts on health, and citizens' education on environment and health protection.

The 2003 Law on Chemical Substances and Agents, No. 9108, regulates the management of chemical substances and preparations for the protection of life and health of people and animals, as well as for the protection of the environment from risks caused by hazardous substances. It is based on the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). A new law is planned to be prepared in 2012 following the EU REACH Directive. A further legal advancement in the field is the recent transposition of the EU Integrated Pollution Prevention and Control Directive (96/61/EC).

The 2010 Law on Safety and Health at Work, No. 10237, transposed the relevant EU Framework Directive (89/391/EEC). It introduced new concepts, such as employers' obligations regarding risk assessment, along with prevention and protection measures, the services provided by external bodies for health protection and prevention of workplace safety-related risks, and workers' participation. It also introduced a classification of accidents at work, depending on their consequences and the number of persons involved. This, along with the recent adoption of the European classification of economic activities, should enable Albania to generate and report key statistics on work-related injuries applying harmonized approaches in the future.

*Institutional framework*

MoH, through its Department of Public Health, is the central institution responsible for determining, coordinating and directing public health policy. It is supported by the National Council of Public Health, an advisory body with the aim of securing a wider background for public health policies and the functioning of the public health system. The technical support and information necessary for the development of national public health policies and strategies is provided by IPH, which is subordinated to MoH through the State Health Inspectorate.

At present, the country's infrastructure integrates 36 public health directorates, 12 in each of the administrative regions and 24 in LGUs, i.e. municipalities and communes. They provide public health services in the main strands of hygiene and

sanitary inspection, and epidemiology. The public health laboratories, both microbiological and chemical, complement and support health-related activities.

IPH is the NRC and has the following core functions: to build expertise through conducting epidemiological surveillance of communicable/infectious and non-communicable diseases, to manage the national disease registers and to undertake scientific research in public health. The Institute is responsible for introducing systems and practices following international health advances, and is the National Focal Point for the International Health Regulations. It is also a training and university education institution in public health. The public health laboratories at the Institute are the reference laboratories for the country. They are being accredited by the National Centre of Quality, Security, and Accreditation of Health Institutions.

The State Health Inspectorate within MoH is the backbone of the public health infrastructure. It is headed by the Chief Health Inspector and incorporates health inspectors of the public health services throughout the country, and IPH. The Inspectorate supervises and controls for compliance with the regulations aimed at preserving and improving public health. Traditionally, vis-à-vis hygiene–health norms, it has covered a broad range of health risk factors related to the living and working environment in the private and public sectors at various establishments managed by physical or legal persons, whether domestic or foreign, including those which provide health-care services.

With the ongoing health sector reform, there is a redefining of the scope of inspections and their implementation mode. For example, the State Health Inspectorate works jointly with the State Labour Inspectorate on issues of health and safety at work. The State Labour Inspectorate under MLSAEO is responsible for monitoring, control of and enforcing legislation on health and safety at work by all natural and legal persons, public or private. It has 12 regional directorates and should expand further to 24 local offices to yield a total of 36 offices throughout the country.

Certain sectors, e.g agriculture, are excluded from the scope of authority of the Inspectorate, which substantially affects the uniform implementation of health and safety at work. The State Health Inspectorate controls and monitors workplace factors such as toxic substances, radiation, noise, vibrations, and inadequate microclimate with the aim of protecting employees from any adverse impact. It is also in charge of the incidence of occupational diseases and work-related accidents. An industrial toxicology laboratory should exist in each of the Inspectorate's structures throughout the country for the assessment of environmental conditions in industrial establishments.

The State Labour Inspectorate's capacity to enforce legislation throughout the country is hampered by a lack of equipment and by the fact that only one of the 24 local offices planned has been established. Within the health sector there is also a lack of specialized capacity in industrial hygiene in the country. Only a few regional services have fully fledged industrial hygiene sectors and dedicated toxicological laboratories.

Regional public health directorates and IPH are specialized institutions for the monitoring of urban air quality and microbiological quality of drinking and coastal bathing waters, and collaborate with the LGUs and the relevant regional agencies from the environment sector to prevent adverse health effects from the environment (Chapter 2).

The public health directorates' epidemiology service on control and prevention of infectious diseases is carried out together with the private and public health services and supported by the LGUs. The directorates supervise the primary health care services in the implementation of the national vaccination programme and other anti-epidemic measures. With respect to dangerous infections which constitute a public health emergency of international concern, an anti-epidemic sanitary service is organised at border-crossing units in pursuance of the International Health Regulations. The anti-epidemic sanitary service at the port of Durrës is certified by WHO for full compliance with the Regulations' provisions.

The primary health care package includes disease surveillance – an important public health service. The primary care centres supply data on infectious diseases, as do hospitals, and it is understood that the contracts of general practitioners include a requirement that they also report infectious diseases. This model of integrated service delivery and legally specified data flows has the clear advantage of a high reporting rate (95 per cent). The Albanian Early Reporting Tool (ALERT) system further adds infectious diseases data based on syndrome, which are reported on a daily basis by a number of health centres such as primary care, social centres (nursing homes and orphanages), emergency rooms, hospital intensive care units and ambulances.

The Law on Public Health requires all data collected by the public health structures, along with data on infectious diseases, to be channelled to IPH, which prepares analytical reports on the health status of the population, exposures to environmental risks and related health effects, for MoH. The Ministry is to submit biannual reports to the Council of Ministers which will then present them to the National Assembly. The public health structures have to periodically report to the local governments in the areas they cover.

The quality of services, equipment and personnel varies among the 36 public health structures; in addition, data collection and reporting is, in many cases, outdated, and covering the entire breadth of environmental public health services throughout the country in depth poses a significant challenge with limited resources. MoH is currently undertaking a consolidation of the health inspection regime as part of the initiative to pool together sectoral inspection bodies with the aim of separating control and enforcement from the policy process. Optimization of the organizational structure and geographical organization of the public health system are also underway. As regards education, the Department of Public Health in the Medical Faculty of the University of Tirana has since 2007 provided capacity for public health professionals. Environmental health is a compulsory and fundamental course in the public health and medical curriculum, and is part of postgraduate education and medical specialization and of the postgraduate qualification.

The NFA – the newly created body following EU regulations, which is directly subordinated to MoAFCP through its General Directorate of Food Safety Policies and Consumer Protection – has taken over food safety and related consumer protection issues. The Authority has now increased operational capacity and is expanding across the 12 regions, while its risk assessment and communication capacity is still to be developed. The backbone of the Authority is the inspectorates of food and food business establishments, and of animal health, which operate at central and regional levels. Responsibilities for plant health, and coordination and support for laboratories, are also carried out at central and regional levels, and the Food Safety and Veterinary Institute (ISUV) provides the reference laboratories for food safety analysis and official controls. In addition, at regional level there is a unit on self-controls and control-points-based information.

INSTAT is coordinator of the national statistical system and, in the fall of 2011, conducted the population and housing census. It collects mortality data from the health sector and civil registrars but data from those two sources do not match and are available in highly aggregated form only. The Institute will host registers on injuries and traumatism in occupational and transport settings.

*Intersectoral collaboration*

Several working groups involving both experts and policy-makers from different sectors are being involved in the development of policy programmes and legislation, which demonstrates intersectoral collaboration in the policy preparation phase. The establishment of long-term partnerships among the different sectors for the implementation of policy and legislation in the field of environment and health is very limited. The ECS envisions some policy measures for intersectoral collaboration, but there is no report on what has been implemented and what worked. The national transport, environment and health intersectoral committee set up in the context of the UNECE/WHO Transport, Health and Environment Pan-European Programme (THE PEP) is still not functioning. The intersectoral working group following up on the Fifth Ministerial Conference on Environment and Health in Parma is, equally, not operational. In some rather particular cases – such as monitoring of urban air quality and of bathing waters when there is capacity and resources, mechanisms of inter-institutional communication, and clear definition of the tasks, including information activities, data and reporting channels – intersectoral collaboration has been successful.

The lack of policy-oriented monitoring and information support tools hinders intersectoral collaboration during the entire policy process. Current monitoring and information systems focus either on the state of the environment or on health from a health-care perspective. Integrated assessments on the population's health, involving the environmental and other economic sectors and using a common language in the form of policy-relevant indicators such as those of the WHO/ENHIS system, are lacking. Furthermore, there are no periodic assessments of the health impacts of environmental risks which could provide strong argument for investment in "win-win" solutions benefiting both public health and the environment.

## 10.4 Conclusions and recommendations

IPH gathers data on key environmental health exposures, such as air pollution and contaminated drinking water, and on the health effects of degraded

environment such as food- and waterborne infectious diseases, but lacks a system which can provide reliable, targeted and timely information. The Law on Public Health, which sets provisions for monitoring public health and its determinants and establishment of an information system, and the DCM on Data Reporting Obligations to the IPH make it possible to provide comparable indicators on environmental health risks in support of policy-making. Information-sharing with the environmental and other economic sectors (e.g. transport) enables the addressing of upstream determinants which drive hazardous environmental exposure, and counteracting of adverse health effects at the source of the problem.

*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.*

The quality and reliability of existing health statistics present several challenges. Morbidity and mortality statistics are not available on single disease conditions and hence not useful for epidemiological analyses. Albania discontinued reporting key mortality-based data to WHO in 2004, most likely because of their low quality. There is no reliable data on injuries and traumatism in transport and occupational settings – a highly significant environmental public health problem. The ALERT system is limited in its ability to support preventive measures on the sources and outbreaks of food- and waterborne diseases, and to address emerging environmental health issues related to climate change.

*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.*

EIA is a major accountability mechanism of the national environmental protection policy, but health aspects of poor environmental conditions are only vaguely mentioned. They are well defined in law, but the strategic environmental assessment law is still pending. The Law on Public Health introduces the process of health impact assessment and assigns the responsibilities to the State Health Inspectorate. Further specification through by-laws and other regulatory mechanisms is needed to advance its practical implementation, and ensure coherence and integration into EIA. Beyond the authorisation of new projects, the assessment of environmental impacts on health should be progressively implemented as a policy accountability, enabling evaluation of policy effectiveness regarding population exposures to environmental health risks.

*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.*

Population coverage of safe drinking water services must continue to increase, particularly in rural and informal settlement areas. The new draft Law on Integrated Management of Water Resources, which aims to achieve convergence with the EU Water Directives on river basin planning and management,

marks the starting point for the introduction of modern approaches to water quality management. While such a legal and policy approach should ensure compliance with standards for end-of-pipe water quality, there should be an emphasis on management of health risks in drinking water. Water quality management should be complemented with a system of water safety plans – integrated risk assessment and incremental risk management from catchment to consumer – and independent monitoring and surveillance. WHO recommends such plans as the most effective and sustainable means to ensure safety of the drinking-water supply.

Sanitation is a long-standing problem in Albania. Many cities and most villages do not have sewage collection systems. The poor state of existing sewage collection and treatment systems is a risk for secondary contamination of drinking water and soil. The huge investment necessary for the development and extension of sewerage systems requires prioritization, and public buildings such as schools and hospitals should be given top priority.

Climate change can impede progress in ensuring access to safe drinking water and sanitation if policy actions on adaptation to climate change do not include measures ensuring the resilience of the water sector. Such measures should be based on the differential resilience of various water and sanitation technologies.

*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.*

The action plan of reducing air pollution in Tirana, to be launched upon Government's approval of the strategic plan for the development of transport in Tirana, is a good-practice example of introducing health-based environmental quality management with intersectoral involvement. Its implementation will not only bring significant benefits in clean air and reducing adverse impact, but can mark a turning point towards integrated environmental public health management.

*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.*

# *ANNEXES*

## *Annex I: Implementation of the recommendations in the First Review*

## *Annex II: Participation of Albania in multilateral environmental agreements*

## *Annex III: Selected economic and environmental indicators*

## *Annex IV: List of major environment-related legislation*

# *Annex I*

# *IMPLEMENTATION OF THE RECOMMENDATIONS IN THE FIRST REVIEW**

PART I: THE FRAMEWORK FOR ENVIRONMENTAL POLICY AND MANAGEMENT

## Chapter 1: POLICY FRAMEWORK, LEGAL INSTRUMENTS AND INSTITUTIONAL ARRANGEMENTS

*Recommendation 1.1:*
*The relevant authorities, with the cooperation of the Ministry of Environment, should review and update all environmental policy documents. In undertaking these reviews, they should organize preparatory meetings with interested institutions to facilitate the adoption of these policies. An information campaign about their purpose and benefits should be considered.*

In 2006, the Albanian Government started a new planning process taking into account the progress made and experience collected following the former policies. This process included preparation of new sector strategies, cross-sector strategies and the NSDI for the period 2007-2013 which provided a framework for these strategies. Based on the new priorities and in order to achieve the new goals, new action plans were elaborated with the contributions of line ministries and other stakeholders.

*Recommendation 1.2:*
*Efforts should be made to consolidate discrete legislation into coherent and comprehensive laws. For example, there should be a single water act instead of four separate laws (Law on Water Resources, Law on Water Supply and Sanitation Sector Regulation, draft law on water protection and draft law on rules on water intended for human consumption) and a single waste management act, including the management of all kind of waste (except radioactive waste). (see also recommendation 7.1)*

The recommendation was partly adopted. There is the intention in Albania to elaborate a comprehensive Water Law to take the place of existing separate ones. Referring to waste management, the new Law on Integrated Waste Management was adopted by the Albanian Parliament in 2011. This new Law provides full transposition of the Waste Framework Directive 2008/98/EC.

*Recommendation 1.3:*
*(a) The draft environmental impact assessment law should distinguish clearly between EIA for projects and environmental assessment for plans and programmes (strategic environmental assessment);*
*(b) A legally binding environmental audit should be the precondition for issuing environmental permits (licence) for operating facilities;*
*(c) Public participation in both EIA and environmental auditing should be developed, reflected in law and implemented; (see also recommendation 4.3)*
*(d) The respective competencies of the Ministry and the Regional Environmental Agencies should be clearly defined by the law.*

The recommendation is partly implemented. The new approved laws distinguish the EIA and permitting procedures. The 2011 Law on Environmental Impact Assessment, No. 10440, which fully transposes the Council Directive of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 97/11/EC, Directive 2003/35/EC and Directive 2009/31/EC, will further improve the quality of EIA in Albania. This Law will enter into force at the beginning of 2013.

* The first review of Albania was carried out in 2002. During the second review, progress in the implementation of the recommendations in the first review was assessed by the EPR Team based on information provided by the country.

The 2011 Law on Environmental Permitting, No. 10448, establishes a new and special procedure for environmental permitting in Albania. This Law transposes Directive 2008/1/EC concerning integrated pollution prevention and control, as amended by Directive 2009/31/EC, and Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants, as amended by Directive 2009/31/EC and many other permitting principles for a vast number of EC Directives. The implementation of this Law begins in January 2013.

In practice, the procedures are not clear and transparent in spite of the legal requirements. There are no permit conditions with threshold limit values for pollutants. The permits are not regulating emissions to air, water and soil.

*Recommendation 1.4:*

*(a) The structure of the Ministry of Environment, which is function- and management-oriented, needs to be expanded. Specifically, the following new sectors under the directorates should be created:*

- *A section for hazardous waste management and a section for emergency situations within the Directorate for Pollution Control and Prevention;*
- *A section for environmental impact assessment and a separate section for environmental permitting within the Directorate for EIA and Information;*
- *A national centre for environmental monitoring as a matter of high priority; (see recommendation 4.1)*

A section of the Forests Extension Service has been created to assist with and strengthen the communal forestry.

*(b) The Ministry of Environment should consider establishing a new department for coastal areas; (see recommendation 11.3)*

*(c) In addition, the following should be strengthened:*

- *Directorate for Environmental Policy and Project Implementation;*
- *Directorate for Natural Resources Management and Biodiversity Management;*
- *The Information and Public Relations Unit.*

*(d) The staff of both the Ministry and the Regional Environmental Agencies should have access to ongoing training in all of the areas that fall within their competence.*

The number of personnel and internal structure of the ministry responsible for environmental issues (currently MoEFWA) has changed considerably in comparison with those of the former Ministry of Environment (MoE) in 2002. The basic intention was to gradually reach the most appropriate conditions for completing the Ministry's existing and new tasks. A new sector was established dealing with waste and industrial accidents. Separate units were established within MoEFWA for performing the EIA-related tasks and permission tasks. The total number of staff of MoEFWA is about three times greater than that of MoE. Training courses are organized occasionally for the employees of MoEFWA and EFA.

## Chapter 2: ECONOMIC AND REGULATORY INSTRUMENTS FOR ENVIRONMENTAL PROTECTION

*Recommendation 2.1:*

*(a) The Ministry of Environment should improve the current permit system by preparing clear procedures and guidelines, and when necessary adjusting the existing legislation. A first step should be to introduce appropriate permit conditions with threshold limit values for pollutants, in line with European Union legislation. A further step would be to introduce an integrated environmental permit regulating emissions to air, water and soil; (see also recommendation 9.1)*

*(b) The Ministry of Environment should update its environmental quality standards in line with European Union standards. As a first step, the system of environmental standards should concentrate on the major pollutants.*

The new 2011 Law on Environmental Permitting, No. 10440, establishes a new and special procedure for environmental permitting in Albania. It establishes measures for permitting the operation of certain groups of polluting activities, measures designed to prevent or, where that is not practicable, to reduce emissions to the air, water and land from such activities, including measures concerning waste. In practice, the environmental quality standards are not clearly determined and the major pollutants are not detected. The air and water quality standards are under preparation. Standards for vehicle emissions and the quality of fuels have been prepared but a lot of effort is needed for their implementation.

The 2004 Guidelines of MoPWTT and MoEFWA, on Permitted Values of Atmospheric Polluting Elements in the Environment Resulting from Gas Emissions and Noises Caused by Vehicles and the Ways for Controlling Them, No. 6527, in effect since 08.06.2005 (*Official Journal*, 2005/Mars, No. 9, p. 388), were amended by 2010 Guidelines on Amendments and Addenda to 2004 Guidelines on Permitted Values of Atmospheric Polluting Elements in the Environment Resulting from Gas Emissions and Noises Caused by Vehicles and the Ways for Controlling Them, No. 6527, No. 12, accompanied by the Manual of Vehicles Control. Monitoring of atmospheric pollution from the release of gases resulting from motor vehicles, is undertaken by entities which control the roads (General Road Directorate, municipalities, regions, etc.).

The 2007 DCM on the Quality of Petrol and Diesel Fuels, No. 147, determines standards and technical specifications relating to health and environmental conditions for fuels to be used by vehicles. It partially transposes Directive 98/70/EC on the quality of petrol and diesel fuels, and 2007 Common Order on Gathering and Maintaining Data Related to Fuels' Quality, in compliance with the requirements of Directive 98/70/EC, No. 6.

According to DCM No. 147, the content of sulphur in fuels is expected to be decreased by grades, mainly for economic, financial and social reasons, as follows:

- As of 1 January 2009, the content of sulphur in gasoil has been decreased fivefold (from 50 mg/kg to 10mg/kg);
- From 1 January 2009 until 31 December 2010, the content of sulphur in diesel fuels will have decreased almost sixfold (from 2000 mg/kg to 350 mg/kg);
- From 1 January 2011, the content of sulphur in diesel fuels will decrease 35-fold (from 350 mg/kg to 10 mg/kg).

The quality of fuel is controlled by the Central Technical Inspectorate (CTI), in accordance with the 1999 Law On Processing, Shipping and Commercialising Oil, Natural Gas, and their By-products, No. 8450, amended with 2004 Law No. 9218, (*Official Journal*, No. 30, 19.05.2004, p. 2509), and the2004 Order of the Minister of Economy, Trade and Energy, On Quality Control, Sampling, Quantity of Sample, Respective Payments and Documentation, as well as Controls in Respect of Technical Norms and Conditions at Oil, Gas, and Their By-products' Installations, No. 166. The CTI extracts samples from each shipment of fuel products entering Albania by sea or land, to conduct quality analysis.

Test results are documented. The same procedure is followed for domestically produced gasoil. The ICT conducts periodic controls and year-round surveys at all retail dispensers of gasoil, diesel and liquid propane gas, and at all wholesale storage sites for oil and gas products. A Draft DCM On the Quality of Certain Liquid Fuels for Thermal Use as well as the Use on Water Transport Means (Sea, River, Lake) transposes Council Directive 1999/32/EC of 26 April 1999 relating to a reduction in the sulphur content of certain liquid fuels, and amending Directive 93/12/EEC as amended by Regulations (EC) 1882/2003 and (EC) 219/2009 and Directives 2005/33/EC and 2009/30/EC. The responsible institution for the drafting of this Decision is MoETE, in cooperation with MoEFWA, based on the 2011 Common Order on Establishing the Working Group for Preparation of the Relevant Juridical Acts, No. 592,. It is foreseen that it will be approved in 2012.

*Recommendation 2.2:*
*Enforcement of environmental legislation needs to be improved by strengthening the Regional Environmental Agencies and establishing an independent inspectorate at national level to coordinate the regional inspectors and improve collaboration with other inspectorates. The Regional Environmental Agencies should be strengthened with training, equipment and operational means.*

The recommendation is partially implemented. EI has been established covering the national and regional levels. Some work has been done around strengthening the capacity of its structures. MoEFWA provides training to its staff mainly through foreign institutions and organizations operating in Albania and abroad. Budget funds allocated for training purposes are quite limited.

*Recommendation 2.3:*
*The Ministry of Environment, together with the Ministry of Finance, should begin to develop a comprehensive system of economic instruments for environmental protection, in cooperation and negotiation with other ministries and stakeholders. A first attempt could be made by adopting the draft law on carbon tax (earmarked for environmental purposes), and by adopting the proposals to introduce a packaging tax and to increase the cleaning tax.*

The recommendation is partially implemented. A carbon tax has been adopted at 0.5 lek per litre of diesel and 1 lek per litre of gasoline. A tax has been applied on plastic packaging.

*Recommendation 2.4:*
*The Government should take the necessary steps to establish and manage an environmental fund to channel financing for environmental purposes. This environmental fund could be established within the State budget under the supervision of the Ministry of Finance. To make the environmental investments more effective, priority projects need to be identified by the Ministry of Environment fully in line with the National Environmental Action Plan.*

The recommendation has not been implemented. A DCM on the environmental fund is under development with the assistance of UNDP.

**Chapter 3: INTERNATIONAL COOPERATION**

*Recommendation 3.1:*
*The Government of Albania should put more emphasis on fulfilling its international obligations in practical terms. The role of the Ministry of Environment in these tasks should be strengthened. To begin with, the Ministry of Environment should prepare national implementation plans for each convention ratified, in cooperation with the other ministries and institutions involved.*

The recommendation was only partly implemented. The Government was quite proficient with the adoption of policies and legislation, but much less convincing on fulfilling its international obligations in practical terms. Although MoEFWA has increased its resource base, its capacity for implementing international commitments remains insufficient. Inter-institutional cooperation and coordination still needs improvement.

Regarding action plans for the implementation of international conventions, there are some MEAs for which action plans have been elaborated and implemented, for instance, in relation to the CBD. An action plan is in place as an integral part of the NBSAP and has been implemented since 2000, while the PoWPA for the CBD is going to be revised in 2012.

Regarding the UNCCD, MoEFWA has been setting up the objectives for implementation of the requirements on combating land degradation. The main documents which take this issue into consideration are the National Strategy on Environmental Protection, NSDI, the 2007 Sector Strategy of Agriculture and Food, and the 2007 Intersectoral Rural Development Strategy.

The National Action Plan on the Ratification and Implementation of Heavy Metal Protocol, Protocol on Persistent Organic Pollutants and the Gothenburg Protocol of the CLRTAP Convention has been compiled.

Albania ratified the Stockholm Convention in 2004. MoEFWA prepared the National Implementation Plan for Reduction and Disposal of POPs. In the framework of the Montreal Protocol, the National Action Plan designed to phase out HCFCs has been approved.

*Recommendation 3.2:*
*Albania needs to sign up to other international environmental instruments, in particular the Convention on Long-range Transboundary Air Pollution and its protocols and the Convention on International Trade in Endangered Species of Wild Fauna and Flora. (see also recommendation 5.3)*

The recommendation was to a large extent implemented. Albania joined CITES in 2003. In addition, the country ratified CLRTAP in 2005 and has ratified four of its eight protocols since 2009, namely the first sulphur protocol, the NOx protocol, the second sulphur protocol and the EMEP protocol. The ratification of three other protocols (the protocol concerning heavy metals, the protocol concerning POPs, and the Gothenburg Protocol to abate acidification, eutrophication and ground-level ozone) is under way The country has yet to accede to the 1991 protocol to CLRTAP concerning the Control of Emissions of Volatile Organic Compounds or their Transboundary Fluxes.

*Recommendation 3.3:*
*The Ministry of Environment should develop a strategic paper, including a list of environmental priorities and projects, for international cooperation. This paper should be disseminated to the Ministry of Foreign Affairs and to the Ministry of Economy.*

The 2007 ECS outlined, *inter alia*, the environmental priorities for international cooperation. The country's international obligations are occasionally mentioned in different parts of the document, relating to matters considered to be of both national and global importance. In addition, a Strategic Action Plan on Cross-cutting Capacity Issues for Global Environmental Management (2006) was produced as a result of a national capacity self-assessment exercise, supported by UNDP/GEF. The Action Plan was accompanied by a pertinent analysis of capacity constraints, needs and priorities for the implementation of the three Rio conventions on biodiversity, climate change and desertification. Thus, despite the absence of a formal strategy on international environmental cooperation, this theme is integrated in existing policy papers. This is judged sufficient for conveying the priorities of international environmental cooperation to governmental partners and other relevant parties. Since January 2012 Albania has started the work for updating the ESC for the other seven years (2013-2020), expected to be finalized by March 2013.

*Recommendation 3.4:*
*The Government needs to adopt regulations and establish mechanisms for the administration of funds that it receives from international donors, so as to ensure a transparent and well-controlled system for managing international financial assistance. Such regulations may be in the form of instructions for the ministries responsible for the projects on how to manage the projects, distribute the funds and report back.*

Over the review period, international partners' and donors' support for the environmental sector became the predominant source of environmental expenditure channelled through MoEFWA. The Government established sectoral mechanisms for managing external assistance, including in the environmental sector. To this end, DSDC, under the Council of Ministers of Albania, in cooperation with donors and MoEFWA, created the Sector Working Group on Environment. Its aim is to ensure that external assistance is effectively coordinated and supports sector strategy aims.

A donor database comprising data about all active donors since 1994 was established by DSDC, in cooperation with the Donor Technical Secretariat. Government–donor roundtables were regularly organized during recent years. As a result of improved coordination between the Government and the donor community, and national ownership of the development agenda, donor aid reflects well national development priorities.

*Recommendation 3.5:*
*The Ministry of Environment should intensify its efforts to strengthen its cooperation with the European Environmental Agency and fulfil all obligations accordingly.*

Albania has maintained a mixed record of cooperation with EEA. The country cooperates with EEA in the framework of EIONET. From a very low base, the environmental data flows from Albania have gradually improved over recent years; however, the timeliness and quality of supplied data still leave much to be desired. The country provided a contribution to several flagship reports of the EEA, including Europe's Environment: The Fourth Assessment (2007) and The European Environment: State and Outlook (2010).

## Chapter 4: ENVIRONMENTAL MONITORING AND INFORMATION

*Recommendation 4.1:*

*(a) A national centre for environmental monitoring, subordinate to the Ministry of Environment, should be set up as a management unit to fulfil the goals and objectives of monitoring activities and information flow for environmental management purposes. The centre should:*

- *Draw up a monitoring programme that prioritizes the measurements needed (goal-oriented approach) for environmental management nationally and internationally, following requirements of the European Environmental Agency; monitoring institutes should be involved in this process;*
- *Make the environmental monitoring network more reliable;*
- *Assess and interpret monitoring and other data;*
- *Draft reports on the state of the environment;*
- *Establish a pollutant release and transfer register with reference to the current negotiations on Pollutant Release and Transfer Registers under the Aarhus Convention.*

EFA was established in 2006 as a legal entity under MoEFWA. The main purpose of this was to streamline the institutional set-up supporting monitoring activities, as well as the use of monitoring information in the policy-making process.[10] According to the provisions of the new 2011 Law on Environmental Protection (yet to come into force), EFA will become the competent authority for the management of the National Monitoring Network for the Environment which includes all institutions performing environment-related monitoring tasks. Progress made in specific areas is as follows:

- The overall structure and main components of a monitoring system were outlined through the EU-funded StEMA project[11]. Environmental Monitoring System (IEMS) covering all environmental topics was designed. Concerning implementation, priority was given to air and water, for which partial developments have been achieved. The IEMS structure was based on EU requirements and EEA recommendations for monitoring and reporting to ensure harmonization and comparability of data as the basis for future integration of the system at various levels. The implementation of IEMS as designed by the StEMA project has proved to be slow and weak after the project completion due to the complexity of the monitoring system in relation to the existing environmental status, institutional set-up for monitoring and economic constraints. To accelerate the implementation of the proposed IEMS in 2010, a new EU/IPA-funded project (CEMSA) was put in place building on StEMA project recommendations.
- Annual contracts based on tendering are still used for providing monitoring services to MoEFWA.
- The presentation of the data collected remains factual, without any real ex-post or ex-ante analysis.
- Annual SERs are being prepared by EFA but they are limited to a description of the situation, lacking integration and cross-cutting sectoral analysis.
- No progress was recorded in the practical implementation of the PRTR Protocol.

*(b) To set clear-cut objectives and ensure coherency in the information programme, the national centre for environmental monitoring should prepare a conceptual framework on the flow of environmental statistical data from collection to the target audiences, in cooperation with the national statistical institutes.*

The StEMA and the current CEMSA project, both funded by the EU, have assisted in the development and gradual implementation of an IEMS in Albania. Environmental statistics are still in their infancy.

*(c) The environmental monitoring centre should benefit from the equipment obtained under the Lake Ohrid Programme. To fulfil monitoring tasks, the budget of the Ministry of Environment for monitoring should be increased.*

EFA has been gradually equipped with monitoring equipment under various projects. The costs of operation and maintenance are not yet secured from the MoEFWA budget. There is a severe shortage of monitoring equipment at the regional level and in the newly created river basin authorities. Substantial financial and human shortages are faced by the environmental sector at both national and regional levels.

[10] The 2006 DCM on the establishment of the Environment and Forest Agency, No. 579

[11] StEMA ran from 2006 to 2008; see: http://www.seda.org.al/Documents/StEMA%20English.pdf

*Recommendation 4.2:*
*The Ministry of Environment should strengthen the information and public relations unit within the Ministry, inter alia, to assume the functions currently undertaken by ECAT-Tirana. The tasks of the information unit should include: dissemination of information to decision makers and the public, and promotion of awareness about the environment.*

The recommendation was implemented successfully with a need for continuation and ensuring sustainability in the provision of environmental information.

As the main information provider, MoEFWA has established a Division for Public Information and Information Technology which has the following tasks:

- Passive dissemination of environmental information – by providing environmental information, answering questions from interested members of the public and receiving visitors requesting environmental information
- Active dissemination of information – mainly via the Ministry website but also through a monthly electronic newsletter. The website is quite comprehensive and systematically updated.

*Recommendation 4.3:*
*The Ministry should ensure that the relevant provisions of the Aarhus Convention are fully implemented, taking into account the Convention's implementation guidelines. The new Law on Environmental Impact Assessment should incorporate public participation mechanisms at both the national and local levels. Even though the country has knowledgeable experts, general training for governmental and municipal officials (inspectors, clerks) on public participation and awareness raising should be developed in the near future.*

The provisions of the Aarhus Convention are gradually being implemented, with the most successful outcome related to the first pillar on access to information. Public participation in the decision-making process has also shown some progress, especially in terms of public consultation in the drafting of new legislation. There is still a low level of public access to justice on environmental matters; in practice, very few cases have been taken – NGOs have initiated administrative proceedings, or have addressed the People's Advocate[12] or a court of law on an environment-related issue.

*Recommendation 4.4:*

(a) *A strategy on awareness raising on environmental issues should be developed by the Ministry of Environment and thoroughly implemented by the Environmental Information Centre aiming at all user categories and using all kinds of media. A training programme for journalists, particularly on environmental issues, should be instituted;*

In 2005, Albania, alongside the other UNECE countries, adopted the ESD Strategy as a practical instrument to incorporate key themes of sustainable development into the region's education systems. As first steps towards transposing the Strategy into the national context, Albania designated a National Focal Point for implementation and adopted a National Strategy and Action Plan for ESD.

(b) *The public's right to access information should be ensured by the Ministry of Environment by establishing binding procedures. In the meantime, governmental and local authorities responding to requests from the public should take immediate action;*

The 2005 Prime Minister's Order on Improving Transparency through an Increased Use of the Internet and Improvement of Existing Websites, No. 202,[13] was issued to improve the transparency of the work carried out by public institutions through increased use of the internet and improvement of existing websites. Furthermore, according to the 2008 revision of the Law on Environmental Protection, the 12 REAs must compile and submit to their regional LGUs bi-annual reports on the state of the environment in the region and also make the report available to the public.

[12] The People's Advocate Institution safeguards the rights, freedoms and lawful interests of individuals from unlawful or improper actions or failures to act of public administration bodies and the third parties acting on their behalf. His or her duty is to prevent conflicts between the public administration and the individual. See: http://avokatipopullit.gov.al/English/index.htm

[13] Letter "i"; see: www.pad.gov.al

*(c) To increase awareness, media briefings, public events, information materials, linkages with other government entities, schools and universities, and other environmental initiatives should be organized by the Ministry of Environment and its subordinated entities. Where possible, communication should be established through broadcasts on TV and radio and debates in newspapers.*

The websites of MoEFWA and EFA remain the main sources of environmental information at the national level. An electronic newsletter with a limited distribution is produced by MoEFWA on a monthly basis in order to facilitate the dissemination of environmental information. Articles on environmental topics in the local media are sporadic and there is not yet a professional environmental journalism in the country. In 2005, the basis was created for the introduction of environmental education into the national curriculum. This process was facilitated through the signing of a Memorandum of Cooperation between UNICEF, the Netherlands, MoES and MoEFWA.

*Recommendation 4.5:*
*Through the "access to environmental information and public participation" mechanism, the Ministry of Environment could encourage a more independent and active NGO network, which could help to consolidate democracy. The NGOs should actively lobby for environmental issues. The environment-related NGO community should also strengthen environmental education by organizing campaigns, exhibitions and other educational activities.*

Cooperation between major environmental NGOs and MoEFWA has been gradually developing on the basis of memoranda of cooperation. A new Memorandum of Understanding was prepared by MoEFWA to be concluded with the NGO Ecolëvizja and is currently in the process of signature. Ekolëvizja is a network of 37 environmental NGOs with different profiles, covering the whole territory of Albania. The Ministry is currently drafting memoranda of cooperation to be concluded with other relevant environmental organizations.

The new Division for Public Information and Information Technology created in MoEFWA has good contacts with main environmental NGOs, without having a regular calendar of meetings. A more formal dialogue with NGOs takes place within the context of the monthly steering meetings of the three Aarhus Information Centres.

The NGOs are playing an increasing role in facilitating public access to environmental information. An example of this is provided by Ecolëvizja, which publishes a weekly newspaper accessible online.

On several occasions, policy papers were prepared by NGOs, discussed and agreed by a number of interested organizations and submitted to MoEFWA for consideration. There is also progress in including NGOs in the decision-making process. One good example is the NGO's involvement in the development of new environmental legislation such as the 2011 Law on Environmental Protection.

There is, however, weak involvement of NGOs during the practical implementation of legislation.

PART II: MANAGEMENT OF POLLUTION AND OF NATURAL RESOURCES

## Chapter 5: AIR MANAGEMENT

*Recommendation 5.1:*
*Albania should accede to the Convention on Long-range Transboundary Air Pollution and its protocols. (see also Recommendation 3.2)*

The recommendation was partly implemented. See also recommendation 3.2.

*Recommendation 5.2:*
*The Ministry of Environment should start submitting air emission inventories as soon as possible, following the methodology of CORINAIR and the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP).*

The recommendation was only partly implemented. To date, MoEFWA has not succeeded in establishing a regular framework for compiling and reporting on emissions inventories. A partial inventory of gas emissions

for 2004 was prepared within the StEMA project, according to the CORINAIR methodology. Thanks to foreign support, in 2011 an emissions inventory was compiled for the year 2008 and available air emissions data were submitted to EMEP, as well as to EEA. Funds for another inventory are also secured. However, no sufficient in-country capacity was built to follow up on the inventories prepared so far and on regular reporting on emissions according to the international requirements.

*Recommendation 5.3:*
*The Ministry of Environment and the Ministry of Health should cooperate in planning and establishing a unified network to monitor ambient air quality and deposited matter that will comply with ambient air quality European Union standards and the standards set by the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) under the Convention on Long-range Transboundary Air Pollution.*

Monitoring of air quality in Albania is performed according to the 2009 DCM on the Rules and Procedures for Compilation and Implementation of National Environmental Monitoring, No. 1189, by scientific institutions contracted to and funded by MoEFWA. These institutions are EFA, IPH and CANP. The monitoring of air quality complies with international practices to a certain extent.

*Recommendation 5.4:*
*The Ministry of Health should study further the occurrence of high radon concentrations in indoor air. Mapping areas with a high concentration of radon in soil, water and air would greatly help land use and construction planning.*

The recommendation has not been implemented in the way it has been proposed, i.e. no new surveys of indoor air radon have been carried out by the Institute of Geosciences. Instead, the following activities have been implemented:

- Regulations for radiation protection, safety and security of ionizing radiation sources were prepared by the RPC[14] and approved by the Council of Ministers;
- The RPC issued two decisions relating to the Code of Practice for Users in Nuclear Medicine and to dosimetry levels for medical exposure, which were approved by the Council of Ministers;
- Regulation on the limit of radon concentration in buildings, radionuclides and construction was prepared in 2011 and is awaiting approval.

The regulation sets the radon level limit of 400 Bq/m3 as the level for considering remedial action in old dwellings and 200 Bq/m3 as the reference level for new dwellings. The values follow the EC recommendation 90/143/Euratom on the protection of the public against indoor exposure to radon. There is no legislation on mitigation activities or the way they will be implemented, or specification of the levels above which financial support for mitigation can be provided. The recently released WHO guidelines on selected indoor air pollutants include radon outline countermeasures and their effectiveness in health terms.

Overall, legal measures have been updated and the standards harmonized with the European ones, but no mitigation actions have been attached to them.

*Recommendation 5.5:*
*(a) The Ministry of Environment, together with the Ministry of Health, should adopt and implement new air quality standards and emission standards for stationary sources. Air quality standards should be in line with World Health Organization's guidelines on ambient air;*

*(b) The Ministry of Transport and Telecommunications, in cooperation with the Ministry of Environment, should develop, adopt and implement new emission standards for new mobile sources according to relevant European Union standards. Adequate vehicle emission control schemes should be set up as soon as possible. Relevant European Union control schemes could serve as examples;*

[14] The Radiation Protection Commission was established by MoH as the national regulatory authority (under the Radiation Protection Law, No. 8025, of 1995, amended in 2008), to oversee and ensure the implementation of the provisions of the Law and other regulations in the field of radiation protection. Its Committee is chaired by the Minister of Health. The Radiation Protection Office is the executive arm performing inspection of physical and legal entities working with ionizing radiation.

*(c) The Ministry of Industry and Energy, in cooperation with the Ministry of Environment, should adopt and implement new fuel quality standards. Adequate fuel quality control schemes should be set up as soon as possible. It is vital to establish appropriate schemes to control the content of sulphur in diesel fuel and the content of lead in petrol.*

Parts (a) and (b) of the recommendation are partly implemented. In practice, the environmental quality standards are not clearly determined and the major pollutants are not detected. Maximum acceptable values of air quality for the most important atmospheric pollutants are determined in the Law On Protection of Air from Pollution, No. 8897, of 16.05.2002 (*Official Journal*, No. 26, June 2002, p. 825), and in the DCM On the Approval of Air Quality Norms, No. 803, of 04.12.2003 (*Official Journal*, No. 101, December 2003, p. 4337). The air quality standards are under preparation.

In Albania, the norms of discharge into the air from vehicles are provided in the 2004 Guideline on Permitted Values of Atmospheric Polluting Elements in the Environment Resulting from Gas Emissions and Noises Caused by Vehicles and the Ways for Controlling Them, No. 6527, as amended by the 2010 Guideline No. 12, on Some Amendments in 2004 Guideline No. 6527, on Permitted Values of Atmospheric Polluting Elements in the Environment Resulting from Gas Emissions and Noises Caused by Vehicles and the Ways for Controlling Them, as well as in the Vehicle Control Manual. The main purpose of this Guideline is to define the permissible limits of air pollutants in the ambient air discharged from gases by the use of vehicles and other road traffic.

Evaluation of the technical condition of vehicles, with regard to atmospheric pollution due to gaseous emissions and noises, is a component of the vehicle technical control system, defined by the Instruction of MoPWTT on the Technical Control of Road Vehicles, No. 3413. However, the effectiveness of controls is unsatisfactory and the Government has transferred vehicle inspections to the private sector. Compulsory technical control of vehicles, including controls on gas emission, are undertaken on the basis of the 2009 Concession Agreement between MoPWTT and the Swiss Societe Generale de Surveillance S.A., with exclusive rights to conducting such controls for 10 years.

<u>*Recommendation 5.6:*</u>
*Immediate action should be taken and policy instruments should be examined to curb the import of the most polluting vehicles. One possibility could be to further differentiate the import tax on cars, e.g. according to the European Union standards they were required to meet when they were first registered. In order to reduce the sulphur content in diesel fuel, as well as in fuel oils, the introduction of a sulphur tax levied on the content of sulphur in fuel could be considered. Regarding petrol, the tax policy should be modified in order to stimulate the changeover to unleaded-petrol-fuelled cars.*

Implementation is partially achieved. Until 2011 an import tax on used cars was levied, differentiated according to the age of the vehicle with older ones paying higher taxes. However, the tax has been abolished in 2011 and it is not clear whether a new environmental tax will be applied. A tax on fuel is applied. The tax is higher for gasoline than diesel.

<u>*Recommendation 5.7:*</u>
*(a) To avoid uncontrolled growth in emissions and other environmental problems from the transport sector, the Government should give more priority to the development of urban public transport and better traffic management;*

*(b) The Government should consider allocating more resources to the development of rail transport through the most important international and national transport corridors, for passenger as well as for freight transport.*

There is no information on the implementation of this recommendation.

## Chapter 6: WATER MANAGEMENT

*Recommendation 6.1:*

*(a) The Government of Albania, through the National Water Council and with the support of all its members, should urgently enforce the 1996 Law on Water Resources and the related regulations. The Technical Secretariat of the National Water Council should set in motion the following expeditiously:*

- *Management by river basin should be put into practice as provided by the Law; river basin authorities should be set up and should manage their water resources;*
- *Water abstraction permits for groundwater and surface water should be properly registered; this should apply to all entities defined by the Law, i.e. hydropower plants, irrigation enterprises and drinking-water enterprises (be they private or State-owned);*
- *Proper implementation of sanitary protection perimeters is required around the water uptakes intended for drinking water;*
- *Enforcement of the water abstraction charges; the enterprises abstracting water should report on the quantity they abstract; the related data should be registered, compiled and used as a management tool, in particular at the basin level;*
- *The money collected from the water abstraction charges should help pay for the functioning of the river basin authorities and their projects.*

The 1996 Law on Water Resources is seen as outdated and is currently being revised. The new Law on Integrated Management of Water Resources is expected to be approved in 2012. Progress made in specific areas is as follows:

- Water resources management in Albania is organized within six administrative river basins (Drin–Bune, Mati, Ishem–Erzen, Shkumbin, Seman and Vjose). Based on this allocation, six river basin councils (RBCs), each headed by the prefect of the region, act as the administrative body. Each is responsible for the protection, development, fair distribution and operation of water resources within its own basin boundaries. Beside them, six river basin agencies (RBAs), which act as executive and technical bodies of the RBCs, are responsible for on-site inspection regarding all activities in terms of water resource usage. However, they have little authority to enforce legal and regulatory procedures and are still weak, understaffed and unstable, suffering especially from fragile financing.
- In practice, registration of water abstraction permits for groundwater and surface water in general is very weak and covers only a small part of the actual water abstraction. Even if there are water abstraction permits, the extracted discharges are not subject to any control. Given the lack of adequate monitoring systems for abstracted waters, the rapid changes in the agricultural, mining and industrial sectors and the continuous movements in population, the current situation in terms of water supply and water demand in general is very difficult to assess. Especially in the agricultural sector, the non-existence of a working permission system, together with the lack of monitoring systems, endangers the aquifers and may lead to over-abstraction and resulting saltwater intrusion in coastal areas.
- It was not possible to obtain any information concerning the implementation of sanitary protection perimeters for water uptakes for centralised water supply systems. Some questions concerning related aspects were not answered. In general, however, the quality of groundwater suffers from pollution through discharge of untreated wastewater from urban settlements, as well as from industries with obsolete technology and by the extensive use of chemical fertilisers and pesticides in agriculture.
  Concerning the water uptakes of decentralized (and therefore non-controlled) systems – which affect 85 per cent of the population – sanitary protection does not, in principle, exist.
- Monitoring and reporting of the quantity of abstracted water more or less exists, with some exceptions. However, the management of these data is insufficient. The data are neither organized in a working database nor used as a management tool.
- It was not possible able to obtain any information on water abstraction charges. Some questions concerning related aspects were not answered.

*(b) The coordination role of Technical Secretariat of National Water Council should be strengthened and it should implement its tasks and obligations deriving from the 1996 Law on Water Resources.*

This recommendation was implemented. As one important reform in the water sector, the former Technical Secretariat was reorganised into the GDWA in the summer of 2011 and provided with more staff and

responsibilities. The GDWA is subordinated to MoEFWA and supports the NWC through its three directorates (Directorate of Fishery, Directorate of Water Policies and Technical Directorate).

*Recommendation 6.2:*
*The National Water Council, with the help of its river basin agencies, of the regional environmental agencies and of the construction police and State police, as appropriate, should combat the illegal uptaking of gravel and sand. Places where this practice can take place under control without endangering the environment should be defined under EIA procedures.*

Illegal gravel abstraction decreased from an estimated 20 per cent in 2000 to an estimate of less than 5 per cent in 2011 and controlled places now exist. However, the impacts of illegal uptaking of gravel and sand in the past still affect river beds at present, with corresponding impacts on irrigation and flood protection infrastructure, especially in the low-lying reaches of watercourses.

*Recommendation 6.3:*
*The Ministry of Local Government and Decentralization should encourage all relevant administrative authorities, and chiefly the municipal authorities of the biggest cities, to develop urban plans and especially master plans for water supply and sewerage networks. Municipalities should strengthen their competences regarding water infrastructure planning and management, taking advantage of the numerous possibilities for assistance offered by the international community.*

The absence of urban planning based on integrated planning (which takes into account supply and disposal, among other aspects), and illegal new constructions, are still fundamental problems, and steps forward have been small over the last 10 years. Together with the continuing boom in building construction and continuous movements in population, this is an obstacle to sustainable and adequate urban planning.

*Recommendation 6.4:*
*The Ministry of Environment should identify and draw up a list of industrial hotspots that have a significant adverse impact on the environment, and rank them. Environmental objectives, and in particular water emissions objectives, for these plants or for particular industrial sectors (firstly the oil industry, private and State-owned), should be set or negotiated and introduced into the environmental permits. Environmental permits for these facilities should be compulsory and handled at the Ministry, and environmental, economic and other incentives worked out in parallel. (see also recommendations 2.1, 7.3(b), and 9.1)*

There is a list of industrial hotspots with the focus on big industrial plants. Concerning environmental permits, water emissions objectives are not comprehensive and do not sufficiently comply with EU standards. There are significant problems in terms of implementation and enforcement.

*Recommendation 6.5:*
*The Ministry of Environment, in cooperation with the National Water Council and other entities (ministries and institutions) involved in water management, should draw up water quality standards and set water emission limits, taking as reference the corresponding standards of the European Union.*

Wastewater effluent norms were approved by the 2005 DCM on Allowed Norms for Wastewater Effluent before Discharge into Environment, No 177 and the 2005 DCM on Allowed Norms of Liquid Releases and the Zoning Criteria of Receiving Water Environments. The elaboration of water standards are currently ongoing, as well as draft decisions on urban wastewater treatment, priority substances in water and on standards of water quality.

*Recommendation 6.6:*
*Under the joint auspices of the National Water Council, the Ministry of Environment and the Ministry of Territory Adjustment and Tourism, should revise, adopt and implement the draft national water strategy of 1997 without further delay. It should define a clear policy towards a sustainable use, management and protection of Albania's water bodies. The strategy's revision should involve all the ministries that are members of the National Water Council and institutes that carry out water management tasks. (see also recommendation 1.1)*

There is no updated water resources management strategy including mid-term and long-term financial planning and corresponding prioritization for investment in the different sectors. However, relevant ministries have prepared various strategic documents in the corresponding sectors which should act as a legal framework for water resources management. An Integrated Water Resources Management (IWRM) Position Paper was completed in February 2011. Based on an analysis of the general situation of water resources management and experiences from other countries, this paper clearly points out problems and barriers to progress in the water sector, outlines priorities and identifies areas where water resources management in Albania should be supported.

**Chapter 7: WASTE MANAGEMENT**

*Recommendation 7.1:*
*The Ministry of Environment in cooperation with the Ministry of Industry and Energy should speed up the development and implementation of a law and regulations on hazardous waste and chemicals management. This law should be consistent with European Union legislation.*

The recommendation was partially implemented. The Law on Hazardous Waste Administration, No. 9537, was adopted on 18.05.2006. The new 2011 Law on Integrated Waste Management, No. 10463, regulates hazardous waste management in line with EU requirements. The implementation of this legislation is not completed yet.

*Recommendation 7.2:*
*The Government, in close cooperation with the Ministry of Environment, the Ministry of Local Government and Decentralization and the municipalities, should take the necessary steps to find financial and human resources to:*

- *Assess the environmental impact of existing municipal landfills and take measures to reduce that impact;*
- *Monitor groundwater and surface water in the vicinity of landfills;*
- *Introduce municipal waste management systems in rural areas; and*
- *Launch public information campaigns on municipal waste management, focusing on waste prevention, through the educational system and the mass media. In this context the Ministry of Environment should prepare special guidelines on the prevention, reduction and handling of municipal waste for municipalities and the public.*

- The first point was not completed. Only the disposal site in Sharra, Tirana was investigated in detail as one of the key hotspots. Only general information was collected on other disposal sites in the country.
- The second point was not completed. No data on local water pollution from disposal activities is available.
- The third point of the recommendation is not feasible. Albania has to upgrade collection services in the urban areas first and then expand services to rural areas.
- The fourth point was partially completed. International projects usually include a component on public education and awareness. MoEFWA has introduced new standards for MSW management but these are not sufficiently enforced.

*Recommendation 7.3:*
*(a) The Council of Ministers, the Ministry of Environment, the Ministry of Industry and Energy and the municipalities should focus on providing financial and human resources to mitigate the risks caused by abandoned dangerous industrial sites, in particular, they should:*

- *Relocate people and farm animals away from contaminated sites, because homes are also contaminated by those hazardous substances which are at the sites;*
- *Decontaminate sites and prevent any further contamination;*
- *Introduce a groundwater and surface water monitoring system around the sites, especially for drinking water, and ensure that contaminated groundwater is not used for drinking or irrigation;*
- *Assess the environmental impact, and especially the human health impact, of all contaminated sites;*
- *Local authorities should, as the first urgent step, put up fences and special warning signs around contaminated sites in their jurisdiction, indicating that they are contaminated, and forbid access to them.*

The implementation of this recommendation is in progress. A list of hotspots was established. The Mining Division of MoETE is monitoring these sites and has developed a plan for their remediation. Progress in specific areas is as follows:

- The perception of threats from contaminated sites is still low in Albania. People were relocated from the Porto Romano area.
- Five hotspots were cleaned completely and clean-up of several others continues. The majority of hotspots were investigated and new sites were added to the list.
- There is no new information available on water contamination from polluted sites.
- Investigation of hotspots included identification of populations in danger and characterization of risks.
- Remediated sites include fencing of areas of highest risk.

*(b) The Ministry of Environment and the Ministry of Industry and Energy should apply appropriate legislation to improve waste-water treatment for all industrial facilities in operation in order to prevent further contamination of the environment and, in particular, oil losses during oil exploration, transport and refinery. (see also recommendation 6.4)*

See implementation of Recommendation 6.4.

*Recommendation 7.4:*
*The Ministry of Environment and the Ministry of Agriculture and Food should collect and find ways to contain, store, and destroy obsolete pesticides and other toxic chemicals in order to reduce risk. Cooperation with neighbouring countries and the international community could help solve this problem.*

The recommendation has been implemented. All obsolete pesticides were exported for proper destruction.

*Recommendation 7.5:*
*The Ministry of Environment, in close cooperation with the private sector and line ministries, should promote the establishment of a cleaner production centre, which would: conduct environmental audits, provide training and disseminate information on cleaner production; and promote the introduction of ISO 14000 standards.*

Implementation of the recommendation is not completed. However, privatization of industries leads to the introduction of cleaner technologies.

The National Cleaner Production Programme for Albania (NCPP-Albania) is part of the One UN Programme implemented in Albania and is aimed at building the capacities of Albanian industries to be more resource efficient and to reduce their environmental impacts by promoting Resource Efficient and Cleaner Production (RECP). The project is being jointly implemented by MoEFWA and MoETE with technical support from UNEP and UNIDO.

NCPP-Albania consists of two components which are being implemented in parallel: a) an industrial support component, which is aimed at building capacities for RECP demonstration and application in Albanian industries (supported by UNIDO), and b) a policy component, which is aimed at developing the necessary institutional framework for the effective promotion of RECP (supported by UNEP).

NCPP-Albania was officially launched on 30 March 2010 and will be implemented over a period of three years in three phases. The primary aim is to foster the widespread application of RECP methods, practices, technologies and policies among businesses and other organizations to contribute to sustainable industrial development and sustainable consumption and production in Albania. The Programme includes capacity development, promotion and professional training, industry demonstrations and support for the creation of supportive policy mechanisms. It targets the hotel/tourism accommodation, agro- and food-processing, and mining and metallurgical sectors.

ISO certification is being conducted by several companies, mostly with assistance from foreign companies. Information concerning the current number of certified companies in accordance with international standard ISO 14001 is not available. There are some private companies in Albania that have been certified by

international consulting and authorised companies (mostly Italian). However, at least four Albanian consulting companies (Qplan-ine Sh.p.k., QM Consulting Sh.p.k., ZIG Consulting Sh.p.k. and TBI Consulting Sh.p.k.) claim to be providing consultation on management system implementation in accordance with ISO standards. Qplan-ine Sh.p.k. has provided consulting for more than 20 Albanian enterprises on the implementation of quality and environmental management systems in accordance with ISO standards.

*Recommendation 7.6:*
*The municipalities should undertake the necessary measures to collect and store separately the construction debris at the existing dump sites, so that it can be treated and possibly reused.*

The recommendation has been implemented. Separate monitoring of construction and demolition waste was introduced. Construction waste is disposed of separately from MSW.

*Recommendation 7.7*
*The Ministry of Health, in conformity with the Ministry of Environment, should improve the management of health care waste by standardizing record-keeping, monitoring and good waste-management practices. The Ministry of Health should also identify and encourage local independent suppliers of waste containers and equipment to provide appropriate equipment for health care waste. (see also recommendation 12.6)*

The recommendation has been partially implemented. Management of medical waste has improved through several international projects and the activities of two private companies providing collection and sterilization of medical waste. Several hospitals use hydroclaves for sterilization of medical waste. Disposal of sterilized medical waste in municipal disposal sites continues.

**Chapter 8: BIODIVERSITY CONSERVATION AND FOREST PROTECTION**

*Recommendation 8.1:*
*The Ministry of Environment should support the responsible authorities to establish management plans for protected areas under the new Law on Protected Areas, for example by financing studies and developing methodologies and procedures.*

The recommendation has partly been met. Management plans have been elaborated for four of the 15 national parks designated in the country (plans are available for Dajti and Butrinti National Parks, and the Llogora–Karaburuni Peninsula area encompassing Llogara and Karaburun–Sazani National Parks), one protected landscape area (Vjosë–Nartë) and one managed nature reserve (Kune–Vain–Tale). Currently two more management plans are in preparation – for the Ramsar site encompassing two protected areas (Liqeni i Shkodrës Managed Nature Reserve and Lumi Buna–Velipojë Protected Landscape Area) supported by the World Bank, and for Prespa National Park supported by the KfW project. Due to budgetary constraints, progress in elaboration of management plans for all other protected areas in Albania is slow and, to a large extent, dependent on the availability of external financial support while their effective implementation remains the future task of the majority of protected area administrations.

*Recommendation 8.2:*
*To achieve the goals of the Biodiversity Strategy and Action Plan and fulfil the obligations under the Convention on Biological Diversity, the Ministry of Environment should develop a legal act on biodiversity conservation.*

The recommendation has been fully met. The 2006 Law on Biodiversity Protection, No. 9587, was successfully adopted and published (*Official Journal* No. 84, 09.08.2006, p. 2847).

*Recommendation 8.3:*
*The Ministry of Environment and the Ministry of Agriculture and Food should develop, as soon as possible, a proper institutional and legal framework for the medicinal and aromatic plant market to promote the cultivation of such plants. Their collection should be based on biodiversity conservation criteria and methods, and on a licensing system.*

The recommendation has partly been met. Little information is available on the progress achieved so far. Control over unauthorized collection of such plants has improved in recent years, and the pressure on them has slightly decreased, which is also due to the educational campaigns, training and technical assistance provided under the Albania Private Forestry Development Program (APDFP).

*Recommendation 8.4:*
*The Ministry of Agriculture and Food should establish a permanent national reforestation scheme and undertake actions to protect forests from legal cutting and fires, based on secured financial contributions.*

The recommendation has partly been met, although not by the originally addressed authority, as since 2005 forestry management (including reforestation, forestry law enforcement by preventing illegal cuts, and forest fire prevention) has remained solely within the scope of competencies of MoEFWA. The national reforestation scheme has been launched, but progress is still slow and based on external donors' support rather than secured financial contributions. A dedicated fund for reforestation is planned within the framework of the Regional Development Fund. The effectiveness of forestry law enforcement regarding the prevention and prosecution of illegal forest harvesting and of forest fire prevention is still limited. This is due to both the topography and relief of the country and the underdevelopment of the technical forestry road network which results in the inaccessibility of larger forest complexes, and the limited staff and operational capacities of the forestry field services, which lack basic facilities and equipment.

*Recommendation 8.5:*
*The Ministry of Environment should take steps to include those sites that fulfil criteria of wetlands of international importance, to be included as RAMSAR sites and in the national network of protected areas.*

The recommendation has been fully met. Three wetland areas in Albania (Karavasta lagoon, Butrinti wetland complex, and Shkodra Lake and Buna river wetland complex) are currently listed as Ramsar sites of international importance, especially as waterfowl habitats. Their total area accounts for over 83,000 hectares, or some 2.9 per cent of the country's territory. All three wetland areas have been included in the national network of protected areas by their proclamation on the basis of relevant DCMs, although under different IUCN categories (Divjakë–Karavasta and Butrinti National Parks, Liqeni i Shkodrës Managed Nature Reserve and Lumi Buna–Velipojë Protected Landscape Area). Albania cooperates with Montenegro on the integrated management of Shkodra Lake Managed Nature Reserve and Ramsar site under the project supported by the World Bank and GEF. A similar success story is Albanian cooperation with Greece and the former Yugoslav Republic of Macedonia on the joint management of the Prespa lake basin, which has been identified as the potential fourth Ramsar site of Albania, while the area already has the legal protective status of a national park (Prespa National Park).

PART III: SECTORAL INTEGRATION

## Chapter 9: ENVIRONMENTAL INTEGRATION

*Recommendation 9.1:*
*As a basis for environmental integration, the environmental permit system should be improved by developing clear procedures for conducting environmental impact assessment and linking the environmental impact assessment to environmental permits. In addition, existing environmental regulations should be better enforced (see recommendation 2.1).*

The recommendation has not been implemented.

*Recommendations 9.2:*
*The line ministries, with the support of the Ministry of Environment, are encouraged to establish environmental targets in the preparation of their sector strategies and plans. An implementation plan – clearly defining actions, responsibilities, time frame and financing – should support the achievement of the environmental targets.*

The recommendation was only partly implemented. In 2007, sector strategies and some action plans were prepared; however, the integration of environmental aspects into sector strategies is generally weak. Sometimes

it is limited only to the level of priorities and can not be recognized as having been given due emphasis in actions and budget allocations.

*Recommendation 9.3:*
*The Government, in conformity with the report on 'Immediate Measures for Implementation of the NEAP', should establish environmental units within ministries. These units should be allocated sufficient resources.*

In line ministries, the units responsible for environment issues do not function adequately and this situation sometimes makes inter-ministerial consultation at the expert level difficult.

*Recommendation 9.4:*
*To improve environmental integration and the decision-making process, the Council of Ministers should establish cross-sector or inter-ministerial working groups at the expert level for the development of laws and policies.*

Inter-ministerial consultation at the expert level can be initiated by MoEFWA in the course of preparation of a new legal document, programme or action plan. It is the responsibility of MoEFWA to decide whether line ministries should be invited for personal consultation with an expert working group or can provide written comments on prepared drafts. A letter of invitation is usually signed by the General Secretary of MoEFWA and, in special cases, by the Minister. The process is the same where a sector ministry plays the role of initiator and MoEFWA is one of the invited parties. Horizontal cooperation among ministries cannot always work perfectly without mandatory regulations and assigned units on all sides.

Since 2004, donor coordination at the sector level is supported by the sector working groups (SWGs) working under DSDC. SWGs are composed of Government and donor representatives. They concentrate on information exchange regarding ongoing projects but they are gradually focusing also on forward-looking policy coordination issues, prioritization of assistance and monitoring of implementation. One of them is dedicated to environmental issues. These working groups, whose aim is to ensure that external assistance is effectively coordinated and supports sector strategy targets, have meetings once or twice annually.

*Recommendation 9.5:*
*The Ministry of Environment should ensure that environmental impact assessments and environmental audits are part of the privatization process and that environmental investments and environmental clauses are included in the sales agreement.*

The recommendation has not been implemented.

**Chapter 10: ENVIRONMENTAL CONCERNS IN AGRICULTURE AND SOIL PROTECTION**

*Recommendation 10.1:*
*As a basis for environmental integration, the environmental permit system should be improved by developing clear procedures for conducting environmental impact assessment and linking the environmental impact assessment to environmental permits. In addition, existing environmental regulations should be better enforced (see Recommendation 2.1).*

Environmental impact assessments are carried out for all irrigation schemes. This provision is included in the Law On Environmental Impact Assessment, No. 8990, of 23.01.2003 (Annex II) as well as in the new Law On Environmental Impact Assessment, No. 10440 of 07.07.2011, approved in June 2011, that will enter info force in January 2013. The new Law is fully transposing the EU Directive on EIA.

EIA for irrigation schemes is conducted also for pollution of drainage water by agrochemicals.

*Recommendation 10. 2:*
*(a) The National Council for Territorial Planning should draw up a master plan for land use for all Albania. A national land administration responsible for managing publicly owned land (State land) should be created with the authority to carry out transactions and oversee private transactions (control of property rights and leasing prices) for agricultural land;*

*(b) All municipalities, under the supervision of the National Council for Territorial Development, should urgently draw up spatial plans for land use, beginning with the rural municipalities located around large cities (Durrës, Tirana) which are subject to intense pressure from urbanization, in order to save the good agricultural land in these regions. After public hearings, those plans must be implemented very quickly.*

There is no information on the implementation of this recommendation. Territorial adjustment is the responsibility of the National Council of Territorial Adjustment which analyses and approves plans for territorial development. There are such development plans for Tirana and Durrës.

(a) The National Territorial Council (NTC), established by the provisions of the 2009 Law On Territory Planning, No. 10119, is the decision-making body responsible for the approval of national instruments of territorial planning, according to the this Law.

According to the provisions of the Law On Territory Planning, the Council of Ministers should start the preparation a National Master Plan, no later than six months after the entry into force of the Law and should approve it no later than two years after the commencement of the full effects of the Law.

Other structures established by other laws also contribute in this field. One is the State Committee on Soil Protection, established with the implementation of the 2004 Law On the Protection of Agriculture Land, No. 9244. Under the chairmanship of the Minister of Agriculture, Food and Consumer Protection (MAFCP), this inter-ministerial body has the following duties and responsibilities: to coordinate the work of the MAFCP, the MoEFWA and other institutions, as well as of LGUs in charge of the implementation of this Law regarding soil protection, for all activities that are carried out on agriculture land, are related to it and impact on agriculture land protection.

(b) Under the provisions of the Law On Territory Planning, NTC promotes the elaboration of national and local territorial plans by relevant planning authorities and ensures that they fullfil technical and procedural standards established in the Law. In terms of implementation of the law, local authorities should start the preparation of local master plans and also start the elaboration of land use plans that will enter into force after their approval by NTC.

*Recommendation 10.3:*
*The Ministry of Agriculture and Food should promote sustainable management measures for wildlife protection and for pastures, including a moratorium on the use of systematic fertilization and weed-control chemicals.*

There is no information on the implementation of this recommendation. This is the responsibility of MoEFWA. In recent years restrictions on some services, including the use of fertilizers and of weed chemicals, have indirectly contributed to pasturs preservation.

MoEFWA aims to allow pastures to be rented on a multi-annual basis in order to create pasture growth for livestock farming. The Law On Pasture Management determines measures and rules for the well-being of pastures in such cases.

*Recommendation 10. 4:*
*(a) The Ministry of Agriculture and Food, through the Soil Science Institute, should collect and aggregate in a manner useful for decision makers all existing information about soil erosion and past soil pollution by mining and other industries so as to determine sound land use on the national level. Particular attention should be given to areas at high risk;*

*(b) The Ministry of Environment and the Ministry of Agriculture and Food should jointly finalize the draft law on soil protection and submit it to Parliament for adoption;*

*(c) The Ministry of Environment, in cooperation with line ministries and National Council for Territorial Planning, should develop a strategy and action plan to combat soil erosion.*

There is no information on the implementation of this recommendation. Prevention of soil erosion is an objective of the Intersectoral Rural Development Strategy (ISRDS) 2007-2013. Soil erosion measurements are

taken. In addition, NES2, under MoEFWA's competency, encompasses prevention of soil erosion and the appropriate measures that need to be taken, including reforestation.

(a) The Centre of Agriculture Technology Transfer of Fushe-Kruje (that plays the role of Soil Science Institute) has the institutional framework, administrative capacities and the database to carry out the job.

(b) This recommendation is fully met. The Law On the Protection of Agriculture Land, No. 9244, of 17.06.2004, has been prepared and approved jointly by MAFCP and MoEFWA.

(c) The need for a strategy and action plan to combat soil erosion is included in the national legal framework as well as in several programmes. A Strategy and Action Plan to Combat Soil Erosion has been an integral part of National Reports of Albania to the UNCCD. However, the enforcement of such programmes and plans is still weak.

*Recommendation 10.5:*
*The Ministry of Agriculture and Food needs to strengthen its extension services, particularly for small farmers. The extension information centres should promote organic farming and low-input farming and provide information on a range of critical issues, including, for example, agricultural waste management, sanitary measures and protection of waters.*

There is no information on the implementation of this recommendation. Agricultural extension services are established within MoAFCP. However, there is only one such extension service that is a public body. MAFCP has a unit named Counselling Service. Part of its job is to provide support for organic farming as well as assistance on a number of issues.

*Recommendation 10.6:*
*The Government should take the necessary steps to establish certification procedures for organic farming meeting international eco-standards.*

There is no information on the implementation of this recommendation. The 2011 Law on Environmental Protection, that will enter into force in January 2013, includes some measures for the implementation of eco-labelling. The Counselling Service assists farmers in the process of conversion from traditional to organic farming. Over 100 farms and vineyards are certified organic (for produce including olives, vegetables, wine, etc.). These certified farms are included in the subsidy schemes that are part of the policies promoted by MAFCP.

**Chapter 11: COASTAL ZONE MANAGEMENT (INCLUDING TOURISM)**

*Recommendation 11.1:*
*(a) The Government, together with the Ministry of Territorial Adjustment and Tourism, should stimulate implementation of the integrated coastal zone management plan for the entire coastal region. All necessary regulatory instruments to implement the plan should be adopted as soon as possible;*
*(b) To facilitate implementation, the Government should establish a special inter-ministerial coastal zone management committee, which consists of relevant ministries and local authorities.*

The Government, specifically MoPWTT as the lead agency, is implementing the Integrated Coastal Zone Management and Clean-up Project (ICZMCP) in the southern coastal zone of Albania, with the objective of contributing to sustainable tourism development in this area. Under the ICZMCP and institutional capacity-building, the Southern Coastal Development Plan (SCDP) has been prepared, which aims at promoting sustainable natural resource management and cultural heritage preservation while minimizing the negative environmental impacts of local development and infrastructure. The SCDP was approved by the National Council of Territorial Adjustment on 17 July 2008. The SCDP is an instrument to promote sustainable tourism as a principal catalyst for economic growth in the regional economy. Subordinate to the regional SCDP, local development plans (including land use plans) for the six municipalities and communes in the southern coastal area would allow municipalities and communes to improve their land use planning regulations and issue building permits based on transparent building regulations and clear land use zoning.

The Inter-ministerial Working Group on Planning (IWGP) has been composed of high-level decision-makers (at the level of Deputy Ministers) from MoPWTT (chair), MoETE, MoEFWA and the Ministry of Tourism, Cultural Affairs, Youth and Sports (MoTCYS). The IWGP continued operating during project implementation. Later, the Project Steering Committee (PSC) was appointed, which is responsible for providing overall project oversight, reviewing project progress and assisting in resolving obstacles to project implementation. The PSC is also composed of high-level decision-makers (at the level of Deputy Ministers) from MoPWTT, Ministry of Finance (MoF), MoTCYS, MoI, MoAFCP and MoEFWA (represented by the Advisor to the Minister), along with the Mayor of Himara Municipality and the Deputy Mayors of Durrës Municipality and Saranda Municipality. The Deputy Minister of MoPWTT is the Head of the PSC.

*Recommendation 11.2*
*The Government should address the problem of illegal building along the coast, giving special attention to measures to eradicate existing illegal buildings along the coast.*

The problem of illegal building along the coast has been addressed by the Albanian Government over the years. Especially in the frame of the South Coast Development Project of the World Bank, a number of campaigns were undertaken for the demolition of illegal buildings, in cooperation with the National Urbanistic Construction Inspectorate.

*Recommendation 11.3:*
*The Ministry of Environment should develop and implement appropriate instruments to achieve the sustainable management of coastal resources. Special importance should be given to the improvement of the monitoring systems, particularly regular monitoring of beach water quality.*

Some projects were carried out in the major resorts. Responsibilities have changed since the first EPR. The ICZMCP will serve as a pilot project and will be extended to other parts of the coastal zone.

Regular monitoring of beach water quality is achieved through the annual monitoring programme supervised by the Agency of Environment and Forests (AEF). IPH carries out beach water monitoring, according to the provisions of the DCM On the Monitoring in the Republic of Albania, No. 1189, of November 2009.

*Recommendation 11.4:*
*The National Water Council, the Ministry of Territorial Adjustment and Tourism and the Ministry of Environment should work to improve waste-water treatment and solid waste management in large coastal cities, and prevent hazardous materials pollution, in order to reduce pollution from land-based sources.*

Under the ICZMCP, a wastewater treatment plant will be constructed in Himara Municipality. A feasibility study is currently being carried out. The ICZMCP will support the development of modern waste management facilities and services in the southern coastal zone of Albania. Specifically, it will support the construction of a regional sanitary landfill (i.e. a disposal facility for non-hazardous solid waste) in Bajkaj (near Saranda) in accordance with EU standards and directives, to fully comply with approved national strategies and plans for the construction of regional landfills in Albania. The proposed landfill construction aims at improving environmental conditions and will allow to close the existing operational dumpsite in Saranda. In addition, the project will include the construction of a transfer station close to Himara Municipality.

*Recommendation 11.5:*
*The Ministry of Territorial Adjustment and Tourism, assisted by the Ministry of Environment, should implement the sustainable tourism development plan, including the preparation of carrying-capacity assessments for the most attractive tourist locations.*

Some assessments were carried out, the results of which were taken into consideration in the ICZMCP.

## Chapter 12: HUMAN HEALTH AND THE ENVIRONMENT

*Recommendation 12.1:*

*(a) The Ministry of Environment and the Ministry of Health should tighten their intersectoral cooperation in the implementation of environmental health policy and work jointly at a more concrete definition of the tasks to be undertaken and the measures needed to accomplish those tasks;*

*(b) The Ministry of Environment and the Ministry of Health, within the context of health care reform, should review the roles and organization of their inspectorates and ensure the coordination and efficient use of scarce resources. Working conditions should be improved and more attention given to institutional memory and appropriate training for all inspectors.*

(a) Cooperation between MoEFWA and MoH exists, but not to a satisfactory level. National committees and working groups for the development of policies and regulations usually consist of representatives of both ministries. However, there is no mechanism in place for intersectoral collaboration between the two ministries in the implementation of joint activities.

There is no integrated environmental and health policy programme to enable the establishment of a sustainable mechanism of intersectoral collaboration with governmental support. The European Environment and Health policy process has not been sufficiently used, and a national intersectoral group to organize follow-up on the Parma Declaration commitments has not been set up.

Overall, progress has been very limited.

(b) Organization of the environmental and health inspectorates has been reviewed in the context of the Law on Public Health and the Law on Environmental Protection, and their tasks and responsibilities clarified based on complementary sectoral activities as in the case of monitoring ambient air and bathing water quality. In the tourist high season, local collaboration on environmental and health activities on a daily basis is strengthened through task force mechanisms, but clear agreement on coordination of routine work is lacking.

The qualifications of inspectors vary across the country as do laboratories and the technological basis of inspections. The use of standardized protocols (e.g. checklists), quality control and quality assurance of laboratory analyses, and the creation of databases and computerised information reporting have yet to be implemented throughout the country.

The 36 public health inspectorates may not represent an optimal number vis-à-vis available resources. MoH is currently undertaking a consolidation of the health inspectorates as a part of the Government initiative to pool together sectoral inspection bodies into one inspectorate, thus disentangling control and enforcement from the policy process. This reform was launched in mid-2011 and it is yet to be fully implemented.

Overall, there is progress on this recommendation but coordinated implementation of joint activities on a daily basis is still lacking. Considerable effort is also needed to ensure uniform control of environmental health status, comparability of results and the ability to trace issues back to their source and implement interventions to counteract identified problems.

*Recommendation 12.2:*

*The Ministry of Health should clarify and assess the respective roles of the institutions within the Ministry and subordinated institutions involved in environmental and health activities, and they should be given adequate consideration within the health care reform framework.*

The central and subordinated institutions in charge of environmental health activities within MoH have been assessed and adequately positioned in the public health infrastructure of the health system. Since the first EPR, the public health infrastructure has been progressively built to become the most consolidated health service in the country. The integration of nationwide programmes on disease prevention, including vaccination, reproductive and child health, epidemiological surveillance, etc., with vertical interventions in terms of local hygiene–sanitary and epidemiological networks, has started producing positive results in population health.

Furthermore, the Law on Public Health adopted in 2009 lays down the institutional setting, tasks and responsibilities for environmental health.

The integration of primary health care into the public health infrastructure offers further advantages to environmental health concerning infectious disease surveillance and control. The surveillance system has been upgraded with an early detection module, and laboratory-confirmed surveillance has focused on the food- and waterborne infectious diseases, shigellosis, brucellosis and salmonellosis.

Overall, substantial progress has been made and a modern public health service integrating environmental health created. Care should be taken to ensure that these positive developments are being sustained and further enhanced.

*Recommendation 12.3:*
*The Ministry of Health should develop a methodology for health aspects within Environmental Impact Assessment.*

This recommendation has not yet been implemented. The 2009 Law on Public Health introduces the process of health impact assessment and assigns the responsibilities to the State Health Inspectorate. Further specification through by-laws and other regulatory mechanisms is needed to advance practical implementation of the Law, ensuring coherence and integration into EIA.

Though the importance of health impact assessment of the environment as a policy tool is recognized, a plan of activities, timeframes, responsibilities and associated costs has not yet been outlined within MoH.

*Recommendation 12.4:*
*The Ministry of Health, in cooperation with the Ministry of Environment, should develop an environmental health information system and good spatial and temporal coverage.*

The recommendation has not yet been implemented. Since the first EPR, several developments which favour the establishment of an integrated environmental and health information system have taken place, such as:

- Legal provisions: the 2009 Law on Public Health for monitoring public health and its determinants, and for establishment of an information system; the DCM on Data Reporting Obligations to the Institute of Public Health
- International policy requirements: follow-up on the commitments made at the Fifth (Parma) Ministerial Conference on Environment and Health and related enhancement of the Environment and Health Information System (ENHIS)
- Advances in monitoring ambient air pollution and surveillance of food- and waterborne diseases
- Involvement of public health professionals in international activities on development of policy-relevant indicators such as those related to the WHO/ENHIS system; implementation of national projects on the establishment of health-relevant indicators for some environmental issues such as climate change
- The existence of a dedicated department of health monitoring and evaluation within MoH as one of the policy-making users of the information system
- Discussion of the tasks and activities required for indicator-based monitoring and information support for policy-making in Albania (at the training seminar on environmental health for public health professionals, involving stakeholders from the environmental and health sectors and WHO, held in Tirana, early 2011).

The establishment of intersectoral mechanisms to drive the process on the environment and health information system (e.g. in the form of a steering group or task force, and an institutional network of key data holders) remains a priority.

The two ministries need to work together to agree on a tangible product of the system and to prepare a road map of the process. So far, no actions have been undertaken in this direction.

*Recommendation 12.5:*

*(a) The Ministry of Health should promote studies to clarify the health impacts of pollution, with a special focus on urban centres and hotspot areas;*

*(b) The Ministries of Transport, Health and Environment should undertake actions to implement the World Health Organization's Charter on Transport, Environment and Health. The Ministries should also give consideration to the WHO-UNECE Transport, Health and Environment Pan-European Programme (THE PEP).*

(a) Studies of health impacts of pollution have been conducted, such as of: air pollution on the respiratory health of school children; traffic-related outdoor air pollution on the health of traffic police in Tirana; oil fields on the health of local residents, etc. The study on air pollution and the respiratory health of schoolchildren further benefits from the participation of country experts engaged in multinational projects such as assessment of indoor air quality and health in schools, and the recently launched European large-scale comprehensive study of health risks of indoor air pollution in schools.

(b) A number of actions along the main axes of THE PEP have been implemented at the national, regional and local levels. They were very often isolated activities with limited collaboration. The existing policy programmes, such as the 2008 Sector Strategy of Transport for the period 2008-2013 and the National Transport Plan (2006), do not enable the systematic integration of health and environment aspects into transport policy, monitoring of its implementation or assessment of its impacts to serve policy updating or formulation. The inter-ministerial committee on road safety is still not functioning; there is no funding attached to it.

In November 2011, the international Decade of Action for Road Safety 2011-2020 was launched with Albania's National Road Safety Strategy for 2011-2015, which has been approved by Parliament and endorsed by the Prime Minister. The activities envisaged in the Strategy match the main pillars of the Decade's Global Plan of actions. A multisectoral working group would take forward the debate on the implementation of the National Strategy and its actions would be presented to the Parliament for further endorsement.

*Recommendation 12.6:*

*(a) The Ministry of Health should improve the management of health care waste by:*

- *Drawing up a national policy on health care waste management;*
- *Deciding on a set of minimum standards for health care waste management to be applied in each hospital;*
- *Giving the medical staff clear responsibilities for health care waste management in their department;*

*(b) The Ministry of Health and the Ministry of Environment should improve and stimulate the separate collection of medical waste at all hospitals and treat it or incinerate it. To this end hospitals must receive additional funds from the regular budget. (see recommendation 7.7)*

The recommendation is partly implemented. A strategic plan for health-care waste management for Tirana and the surrounding region was prepared in 2001. Staff from key hospitals in Tirana and other larger towns were trained in medical waste management. Responsibilities are defined in a new regulation, but implementation has still not been undertaken nationwide

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# *Annex II*

# *PARTICIPATION OF ALBANIA IN MULTILATERAL ENVIRONMENTAL AGREEMENTS*

| Worldwide agreements | | Albania | |
|---|---|---|---|
| **Year** | | **Date** | **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 |
| 1961 | (PARIS) International Convention for the Protection of New Varieties of Plants | | |
| 1969 | (BRUSSELS) Convention relating to Intervention on the High Seas in Cases of Oil Pollution | | |
| 1971 | (RAMSAR) Convention on Wetlands of International Importance especially as Waterfowl | 1996 | Ra |
| | 1982 (PARIS) Amendment | 1996 | Ra |
| | 1987 (REGINA) Amendments | 1996 | Ra |
| 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 | 2006 | Ra |
| | 1992 Fund Protocol | 2006 | Ra |
| 1972 | (PARIS) Convention Concerning the Protection of the World Cultural and Natural Heritage | 1979 | Ra |
| 1972 | (LONDON) Convention on the Prevention of Marine Pollution by Dumping of Wastes and | | |
| | 1978 (TORREMOLINOS) Amendments (incineration) | | |
| | 1980 Amendments (list of substances) | | |
| 1972 | (LONDON, MOSCOW, WASHINGTON) Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons, and their | 1975 | Ra |
| 1972 | (LONDON) International Convention on the International Regulations for Preventing | | |
| 1972 | (GENEVA) International Convention for Safe Containers | | |
| 1973 | (WASHINGTON) Convention on International Trade in Endangered Species of Wild Fauna | 2003 | Ra |
| | 1979 (BONN) Amendment | | |
| | 1983 (GABORONE) Amendment | | |
| 1973 | (LONDON) International Convention for the Prevention of Pollution from Ships (MARPOL, 73/78) | 2007 | Ac |
| | 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 | Ac |
| | 1978 (LONDON) Annex IV on Prevention of Pollution by Sewage from Ships | 2007 | Ac |
| | 1978 (LONDON) Annex V on Prevention of Pollution by Garbage from Ships | 2007 | Ac |
| | 1997 (LONDON) Annex VI on Prevention of Air Pollution from Ships | | |
| 1977 | (GENEVA) Convention on Protection of Workers against Occupational Hazards from Air Pollution, Noise and Vibration (ILO 148) | | |

Ac = Accession; Ra = Ratification.

| Worldwide agreements | | Albania | |
|---|---|---|---|
| **Year** | | **Date** | **Status** |
| 1979 | (BONN) Convention on the Conservation of Migratory Species of Wild Animals | 2001 | Ra |
| | 1991 (LONDON) Agreement Conservation of Bats in Europe | 2001 | Ra |
| | 1992 (NEW YORK) Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS) | | |
| | 1995 (THE HAGUE) African/Eurasian Migratory Waterbird Agreement (AEWA) | 2001 | Ra |
| | 1996 (MONACO) Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) | 2001 | Ra |
| 1981 | (GENEVA) Convention Concerning Occupational Safety and Health and the Working | | |
| 1982 | (MONTEGO BAY) Convention on the Law of the Sea | | |
| | 1994 (NEW YORK) Agreement Related to the Implementation of Part XI of the Convention | | |
| | 1994 (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 | | |
| 1985 | (VIENNA) Convention for the Protection of the Ozone Layer | 1999 | Ra |
| | 1987 (MONTREAL) Protocol on Substances that Deplete the Ozone Layer | 1999 | Ra |
| | 1990 (LONDON) Amendment to Protocol | 2006 | Ra |
| | 1992 (COPENHAGEN) Amendment to Protocol | 2006 | Ra |
| | 1997 (MONTREAL) Amendment to Protocol | 2006 | Ra |
| | 1999 (BEIJING) Amendment to Protocol | 2006 | Ra |
| 1986 | (GENEVA) Convention Concerning Safety in the Use of Asbestos | | |
| 1989 | (BASEL) Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal | 1999 | Ra |
| | 1995 Ban Amendment | 2005 | At |
| | 1999 (BASEL) Protocol on Liability and Compensation | | |
| 1990 | (LONDON) Convention on Oil Pollution Preparedness, Response and Cooperation | 2008 | Ra |
| 1992 | (RIO) Convention on Biological Diversity | 1994 | Ra |
| | 2000 (CARTAGENA) Protocol on Biosafety | 2005 | Ra |
| 1992 | (NEW YORK) United Nations Framework Convention on Climate Change | 1994 | Ra |
| | 1997 (KYOTO) Protocol | 2005 | Ra |
| 1993 | (ROME) Agreement to Promote Compliance with International Conservation and Managament Measures by Fishing Vessels on the High Seas | 2005 | Ra |
| 1993 | (PARIS) Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction | | |
| 1994 | (PARIS) United Nations Convention to Combat Desertification | | Ra |
| 1998 | (ROTTERDAM) Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade | 2010 | Ra |
| 2001 | (STOCKHOLM) Convention on Persistent Organic Pollutants | 2004 | Ra |
| 2001 | (LONDON) Convention on Civil Liability for Bunker Oil Pollution Damage | 2009 | Ra |
| 2004 | (LONDON) Convention for the Control and Management of Ships' Ballast Water and Sediments | 2009 | Ra |

At = Acceptance; Ra = Ratification.

| Regional and subregional agreements | | Albania | |
|---|---|---|---|
| **Year** | | **Date** | **Status** |
| 1957 | (GENEVA) European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)<br>Annex A: Provisions Concerning Dangerous Substances and Articles<br>Annex B: Provisions Concerning Transport Equipment and Transport Operations | 2005 | Ra |
| 1968 | (PARIS) European Convention - Protection of Animals during International Transport | | |
| | 1979 (STRASBOURG) Additional Protocol | | |
| 1969 | (LONDON) European Convention - Protection of the Archeological Heritage (revised in 1992) | | Si |
| 1976 | (BARCELONA) Convention for the Protection of the Mediterranean Sea against Pollution | 2000 | Ra |
| | 1976 (BARCELONA) Dumping Protocol (as amended in 1995) | 2000 | Ra |
| | 2002 (MALTA) Prevention and Emergency Protocol (replacing the 1976 Emergency Protocol that was ratified in 2000) | | |
| | 1996 (SYRACUSE) Land-based Sources Protocol (replacing the 1980 Land-based Sources Protocol) | 2000 | Ra |
| | 1994 (MADRID) Offshore Protocol | 2000 | Ra |
| | 1995 (BARCELONA) Specially Protected Areas and Biodiversity Protocol (replacing the 1982 Specially Protected Areas Protocol) | 2000 | Ra |
| | 1996 (IZMIR) Hazardous Wastes Protocol | 2000 | Ra |
| | 2008 (MADRID) Integrated Coastal Zone Management Protocol | 2010 | Ra |
| 1976 | (STRASBOURG) European Convention for the Protection of Animals Kept for Farming Purposes | | |
| 1979 | (BERN) Convention on the Conservation of European Wildlife and Natural Habitats | 1998 | Ra |
| 1979 | (GENEVA) Convention on Long-range Transboundary Air Pollution | 2005 | Ra |
| | 1984 (GENEVA) Protocol - Financing of Co-operative Programme (EMEP) | 2011 | Ra |
| | 1985 (HELSINKI) Protocol - Reduction of Sulphur Emissions by 30% | 2009 | Ra |
| | 1988 (SOFIA) Protocol - Control of Emissions of Nitrogen Oxides | 2009 | Ra |
| | 1991 (GENEVA) Protocol - Volatile Organic Compounds | | |
| | 1994 (OSLO) Protocol - Further Reduction of Sulphur Emissions | 2011 | Ra |
| | 1998 (AARHUS) Protocol on Heavy Metals | | |
| | 1998 (AARHUS) Protocol on Persistent Organic Pollutants | | |
| | 1999 (GOTHENBURG) Protocol to Abate Acidification, Eutrophication and Ground-level Ozone | | |
| 1991 | (ESPOO) Convention on Environmental Impact Assessment in a Transboundary Context | 1991 | Ra |
| | 2003 (KIEV) Protocol on Strategic Environmental Assessment | 2005 | |
| 1992 | (HELSINKI) Convention on the Protection and Use of Transboundary Waters and International Lakes | 1994 | Ra |
| | 1999 (LONDON) Protocol on Water and Health | 2002 | Ra |
| 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 | | Si |
| | 1994 (LISBON) Protocol on Energy Efficiency and Related Aspects | | Si |
| | 1998 Amendment to the Trade-Related Provisions of the Energy Charter Treaty | | Si |
| 1997 | (NEW YORK) Convention on Non-navigatory Uses of International Watercourses | | |
| 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 | Ra |
| 1998 | (STRASBOURG) Convention on the Protection of Environment through Criminal Law | | |
| 2000 | (FLORENCE) European Landscape Convention | | |

Si = Signed; Ra = Ratification.

# *Annex III*

# *SELECTED ECONOMIC AND ENVIRONMENTAL INDICATORS*

| Air pollution | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| Emissions of $SO_2$ | | | | | | | | | |
| - Total (1,000 t) | 40.9 | 45.5 | 46.4 | 39.1 | 40.7 | 41.9 | 36.6 | .. | .. |
| - by sector (1,000 t) | | | | | | | | | |
| Energy | 17.5 | 16.5 | 17.2 | 17.2 | 18.7 | 16.8 | 9.9 | .. | .. |
| Industry | 0.2 | 0.2 | 0.2 | 1.8 | 2.6 | 3.1 | 3.4 | .. | .. |
| Transport | 6.9 | 7.7 | 8.8 | 9.1 | 9.3 | 9.7 | 10.6 | .. | .. |
| Other | 16.3 | 21.1 | 20.2 | 11.1 | 10.1 | 12.2 | 12.7 | .. | .. |
| - per capita (kg/capita) | 13.2 | 14.6 | 14.8 | 12.5 | 12.9 | 13.2 | 11.5 | .. | .. |
| - per unit of GDP (kg/1,000 US$ (2005) PPP) | 2.6 | 2.7 | 2.6 | 2.1 | 2.1 | 2.0 | 1.6 | .. | .. |
| Emissions of $NO_X$ (converted to $NO_2$) | | | | | | | | | |
| - Total (1,000 t) | 23.1 | 24.0 | 28.7 | 28.9 | 28.6 | 27.6 | 29.2 | .. | .. |
| - by sector (1,000 t) | | | | | | | | | |
| Energy | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 | 0.7 | 0.4 | .. | .. |
| Industry | 0.8 | 0.8 | 0.7 | 1.1 | 1.2 | 1.8 | 2.1 | .. | .. |
| Transport | 20.2 | 20.9 | 25.7 | 25.8 | 25.3 | 23.5 | 25.4 | .. | .. |
| Other | 1.3 | 1.5 | 1.5 | 1.2 | 1.3 | 1.5 | 1.2 | .. | .. |
| - per capita (kg/capita) | 7.5 | 7.7 | 9.2 | 9.2 | 9.1 | 8.7 | 9.2 | .. | .. |
| - per unit of GDP (kg/1,000 US$ (2005) PPP) | 1.5 | 1.4 | 1.6 | 1.5 | 1.5 | 1.3 | 1.3 | .. | .. |
| Emissions of ammonia $NH_3$ | | | | | | | | | |
| - Total (1,000 t) | 28.5 | 28.3 | 27.3 | 27.3 | 25.5 | 24.4 | 23.7 | .. | .. |
| - by sector (1,000 t) | | | | | | | | | |
| Energy | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Industry | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Transport | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | .. | .. |
| Other | 28.3 | 28.2 | 27.2 | 27.1 | 25.4 | 24.3 | 23.6 | .. | .. |
| - per capita (kg/capita) | 9.2 | 9.1 | 8.7 | 8.7 | 8.1 | 7.7 | 7.5 | .. | .. |
| - per unit of GDP (kg/1,000 US$ (2005) PPP) | 1.8 | 1.7 | 1.5 | 1.5 | 1.3 | 1.2 | 1.1 | .. | .. |
| Emissions of total suspended particles (TSP) | | | | | | | | | |
| - Total (1,000 t) | 23.7 | 33.1 | 33.5 | 30.7 | 31.6 | 99.5 | 37.5 | .. | .. |
| - by sector (1,000 t) | | | | | | | | | |
| Energy | 1.3 | 1.3 | 1.3 | 1.3 | 1.4 | 1.3 | 0.8 | .. | .. |
| Industry | 4.0 | 5.3 | 6.0 | 4.4 | 6.7 | 6.8 | 4.5 | .. | .. |
| Transport | 4.2 | 4.7 | 6.2 | 5.8 | 4.8 | 5.5 | 6.0 | .. | .. |
| Other | 14.1 | 21.8 | 19.9 | 18.8 | 18.6 | 85.9 | 23.8 | .. | .. |
| - per capita (kg/capita) | 7.7 | 10.6 | 10.7 | 9.8 | 10.0 | 31.4 | 11.8 | .. | .. |
| - per unit of GDP (kg/1,000 US$ (2005) PPP) | 1.5 | 2.0 | 1.9 | 1.6 | 1.6 | 4.8 | 1.7 | .. | .. |
| Emissions of volatile organic compounds (VOC) | | | | | | | | | |
| - Total (1,000 t) | 107.7 | 136.9 | 115.3 | 120.0 | 119.6 | 128.8 | 131.7 | .. | .. |
| - by sector (1,000 t) | | | | | | | | | |
| Energy | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | .. | .. |
| Industry | 10.6 | 11.1 | 11.9 | 12.2 | 12.4 | 13.7 | 13.9 | .. | .. |
| Transport | 7.3 | 6.5 | 8.6 | 9.1 | 9.0 | 7.8 | 8.0 | .. | .. |
| Other | 89.8 | 119.3 | 94.7 | 98.6 | 98.1 | 107.2 | 109.9 | .. | .. |
| - per capita (kg/capita) | 34.9 | 44.1 | 36.9 | 38.2 | 37.9 | 40.6 | 41.4 | .. | .. |
| - per unit of GDP (kg/1,000 US$ (2005) PPP) | 6.8 | 8.2 | 6.5 | 6.4 | 6.1 | 6.2 | 5.9 | .. | .. |

| Air pollution (Cont'd) | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| Emissions of persistent organic pollutants (PCBs, dioxin/furan and PAH) | | | | | | | | | |
| - Total (kg) | 1.9 | 2.3 | 2.2 | 2.2 | 2.1 | 3.7 | 3.0 | .. | .. |
| - by sector (kg) | | | | | | | | | |
| Energy | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | .. | .. |
| Industry | 0.8 | 0.9 | 0.9 | 1.1 | 1.0 | 1.4 | 1.9 | .. | .. |
| Transport | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | .. | .. |
| Other | 1.0 | 1.3 | 1.2 | 1.0 | 1.0 | 2.2 | 1.1 | .. | .. |
| Emissions of heavy metals | | | | | | | | | |
| - Total cadmium (t) | 42.0 | 46.7 | 50.8 | 56.8 | 55.6 | 63.4 | 77.2 | .. | .. |
| - Total lead (t) | 1,726.9 | 2,452.0 | 2,880.4 | 2,424.2 | 2,922.4 | 3,013.3 | 3,216.3 | .. | .. |
| - Total mercury (t) | 25.6 | 30.1 | 25.2 | 53.9 | 55.5 | 101.6 | 122.9 | .. | .. |

| Climate Change | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| Emissions of $CO_2$ | | | | | | | | | |
| - Total (1,000 t) | 4,496.0 | 5,253.3 | 5,560.0 | 5,326.2 | 5,031.3 | .. | 6,262.8 | .. | .. |
| - by sector (1,000 t) | | | | | | | | | |
| Energy | 374.6 | 352.4 | 367.9 | 366.9 | 409.7 | 361.4 | 211.4 | .. | .. |
| Industry | 444.9 | 386.2 | 281.6 | 525.3 | 600.4 | 887.2 | 1,086.5 | .. | .. |
| Transport | 2,264.5 | 2,361.9 | 3,063.0 | 2,880.5 | 2,455.6 | 2,603.7 | 2,697.8 | .. | .. |
| Agriculture | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Waste | 50.6 | 442.8 | 94.9 | 0.0 | 0.0 | 851.7 | 793.1 | .. | .. |
| - per capita (kg/capita) | 1,455.0 | 1,690.8 | 1,779.2 | 1,695.2 | 1,593.7 | .. | 1,968.8 | .. | .. |
| - per unit of GDP (kg/1,000 US$ (2005) PPP) | 284.8 | 314.7 | 315.0 | 285.3 | 255.6 | .. | 279.4 | .. | .. |

| Ozone layer | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| Consumption of ozone-depleting | 50.5 | 38.0 | 36.6 | 14.3 | 15.2 | 6.6 | 4.1 | 5.4 | 6.5 |

| Water | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| Renewable internal freshwater | | | | | | | | | |
| Total (billion $m^3$) | 26.9 | .. | .. | .. | .. | 26.9 | .. | 26.9 | .. |
| - Surface water (million $m^3$) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| - Groundwater (million $m^3$) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Water abstraction | | | | | | | | | |
| Total abstraction (million $m^3$/year) | 1,838.0 | .. | .. | .. | .. | .. | .. | 1,838.0 | .. |
| Intensity of water usage (water | 4.4 | .. | .. | .. | .. | .. | .. | 4.4 | .. |
| Total water consumption by sectors (%) | | | | | | | | | |
| - Households | 30.0 | .. | .. | .. | .. | .. | .. | 30.0 | .. |
| - Industry | 12.4 | .. | .. | .. | .. | .. | .. | 12.4 | .. |
| - Agriculture | 57.7 | .. | .. | .. | .. | .. | .. | 57.7 | .. |

| Biodiversity and living resources | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| Protected areas | | | | | | | | | |
| - Total area ($km^2$) | .. | .. | .. | 2,383.2 | 2,611.1 | 2,995.0 | 3,615.7 | 3,614.0 | 3,740.0 |
| - Total area (% of national | .. | .. | .. | 8.3 | 9.1 | 10.4 | 12.6 | 12.6 | 13.0 |
| - Protected area IUCN categories (% of national territory) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ia Strict Nature Reserve | .. | .. | .. | 145.0 | 145.0 | 95.0 | 48.0 | 48.0 | 48.0 |
| Ib Wilderness Area | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| II National Park | .. | .. | .. | 625.3 | 886.1 | 1,096.0 | 339.3 | 1,765.2 | 1,890.9 |
| III Natural Monument | .. | .. | .. | 34.9 | 34.9 | 34.9 | 34.9 | 34.9 | 34.7 |
| IV Habitat / Species Management | .. | .. | .. | 669.6 | 636.6 | 628.5 | 625.3 | 625.3 | 625.3 |
| V Protected Landscape / Seascape | .. | .. | .. | 726.4 | 726.4 | 958.6 | 958.6 | 958.6 | 958.6 |
| VI Managed Resource Protected Area | .. | .. | .. | 182.0 | 1,892.0 | 182.0 | 182.0 | 182.0 | 182.5 |
| Forests | | | | | | | | | |
| - Total area ($km^2$) | .. | .. | .. | 7,820.0 | .. | .. | .. | .. | 7,760.0 |
| - Total area (% of national territory) | .. | .. | .. | 28.5 | .. | .. | .. | .. | 28.3 |
| Industrial fish catch (t) | 4,112.0 | 4,730.0 | 5,502.0 | 6,418.0 | 7,376.0 | 7,359.0 | 7,132.0 | 7,607.0 | .. |

| Land resources and soil | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| Arable land (thousand ha) | 578.0 | 578.0 | 578.0 | 538.0 | 584.0 | 578.0 | 610.0 | 612.0 | .. |
| Pesticide imports (ton) | .. | .. | .. | 1,634.2 | 449.1 | 1,873.9 | 1,521.4 | 1,083.9 | .. |

| Energy | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| Total primary energy supply (TPES) (Mtoe) | 2.40 | 2.89 | 2.94 | 3.05 | 2.99 | 2.60 | 2.76 | 3.14 | .. |
| Total final energy consumption | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| - by fuel | | | | | | | | | |
| Coal | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 |
| Petroleum products | 1.27 | 1.44 | 1.50 | 1.63 | 1.65 | 1.64 | 1.57 | 1.71 | 1.72 |
| Natural gas - consumption (million | .. | 30.0 | 30.0 | .. | 30.0 | .. | 30.0 | .. | .. |
| Electricity (in million kWh) | 4554.0 | 4123.0 | 3,794.0 | 3,797.0 | 3,047.0 | 3,716.0 | 4,314.0 | 5,578.0 | .. |
| Heat | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| - by sector | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Industry | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Road transport energy consumption (thousand toe) | .. | 582.0 | 553.0 | 729.0 | 580.0 | 631.0 | 669.0 | 392.2 | .. |
| Agriculture | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Other | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Energy intensity TPES/GDP (PPP) (toe/thousand US$ (2005) PPP) | 0.12 | 0.12 | 0.11 | 0.12 | 0.11 | 0.10 | 0.09 | 0.07 | .. |
| TPES/Population (toe per capita) | 0.64 | 0.66 | 0.64 | 0.72 | 0.68 | 0.67 | 0.65 | 0.54 | .. |

| Transportation | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| Number of transport accidents (land, air and maritime) | 343 | 345 | 827 | 871 | 1,096 | 1,313 | 1,274 | 1,525 | 1,607 |
| In which | | | | | | | | | |
| - Died | 257 | 270 | 332 | 317 | 313 | 404 | 307 | 396 | 366 |
| - Injured | 497 | 524 | 1,130 | 1,221 | 1,387 | 1,779 | 1,637 | 1,895 | 2,109 |
| Size and composition of motor vehicle fleet (1,000) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Freight vehicle fleet | | | | | | | | | |
| - Trucks | 54,360 | 56,857 | 48,775 | 54,803 | 41,318 | 61,621 | 90,245 | 81,874 | .. |
| Passenger vehicle fleet | | | | | | | | | |
| - Buses (including passenger vans) | 21,026 | 21,693 | 25,066 | 29,453 | .. | .. | .. | .. | .. |
| - Cars | 149,000 | 174,782 | 190,004 | 195,125 | 225,114 | 237,932 | 264,828 | 281,236 | 325,783 |
| Passenger transportation (million passenger kilometres) road | 189 | 176 | 141 | 135 | 145 | 134 | 144 | 139 | 136 |
| Passenger transportation (million passenger kilometres) rail | 123 | 105 | 89 | 73 | 80 | 51 | 41 | 32 | 19 |
| Freight transportation (million ton kilometres) road | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Freight transportation (million ton kilometres) rail | 21 | 31 | 32 | 26 | 36 | 53 | 52 | 46 | 66 |

| Waste | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| Generation of waste | | | | | | | | | |
| Total waste generation (t) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| - Hazardous waste (if available, by class of hazard) (t) | .. | .. | .. | 120.0 | .. | .. | .. | .. | .. |
| - Industrial waste (t) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| - Municipal waste (t) | .. | 358,226 | .. | 633,596 | 722,726 | 738,738 | 762,353 | 857,223 | .. |
| - Radioactive (nuclear) waste (t) | .. | .. | .. | 1,634 | 449 | 1,873 | 1,521 | 1,083 | .. |
| Transboundary movements of hazardous waste (t) (import of waste) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Waste intensity (total waste generated per unit of GDP) (t/1,000 National currency units) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Waste recycling and reuse (t) | .. | .. | .. | .. | .. | .. | .. | .. | .. |

| Demography and Health | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| Total population (million | 3.09 | 3.11 | 3.13 | 3.14 | 3.16 | 3.17 | 3.18 | 3.19 | 3.20 |
| - % change (annual) | 0.4 | 0.5 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 |
| - Population density | 112.8 | 113.4 | 114.0 | 114.7 | 115.2 | 115.7 | 116.1 | 116.5 | 117.0 |
| Birth rate (per 1,000) [1)] | .. | 14.7 | 14.1 | 13.6 | 13.3 | 13.0 | 12.9 | 12.8 | 12.8 |
| Total fertility rate [1)] | .. | 1.9 | 1.8 | 1.8 | 1.7 | 1.6 | 1.6 | 1.6 | 1.5 |
| Mortality rate (per 1,000) [1)] | .. | 5.8 | 5.8 | 5.8 | 5.9 | 5.9 | 6.0 | 6.1 | 6.1 |
| Infant mortality rate (deaths/1000 live births) [1)] | .. | 22.4 | 21.4 | 20.3 | 19.6 | 18.7 | 17.8 | 17.2 | 16.4 |
| Female life expectancy at birth | .. | 78.8 | 79.1 | 79.4 | 79.6 | 79.7 | 79.8 | 80.0 | 80.1 |
| Male life expectancy at birth (years) | .. | 72.5 | 72.8 | 73.0 | 73.2 | 73.4 | 73.6 | 73.7 | 73.9 |
| Life expectancy at birth (years) [1)] | .. | 75.5 | 75.9 | 76.1 | 76.3 | 76.5 | 76.6 | 76.8 | 76.9 |
| Population ages 0-14 years (% of | .. | 27.8 | 27.0 | 26.3 | 25.5 | 24.8 | 24.1 | 23.4 | 22.7 |
| Population ages 15-64 years (% of | | 64.2 | 64.8 | 65.3 | 65.8 | 66.3 | 66.8 | 67.2 | 67.7 |
| Population 65 or above (% of total) | .. | 8.0 | 8.2 | 8.4 | 8.7 | 8.9 | 9.2 | 9.4 | 9.7 |
| Population with access to safe drinking water, total (%) | 97.0 | 97.0 | 96.0 | 96.0 | 96.0 | 95.0 | 96.0 | 95.0 | 95.0 |
| - Urban (%) | 99.0 | 99.0 | 98.0 | 98.0 | 98.0 | 97.0 | 97.0 | 96.0 | 96.0 |
| - Rural (%) | 95.0 | 95.0 | 95.0 | 95.0 | 94.0 | 94.0 | 94.0 | 94.0 | 94.0 |
| Population with access to improved sanitation, total (%) | 86.0 | 87.0 | 88.0 | 90.0 | 91.0 | 91.0 | 93.0 | 94.0 | 94.0 |
| - Urban (%) | 95.0 | 95.0 | 95.0 | 95.0 | 95.0 | 95.0 | 95.0 | 95.0 | 95.0 |
| - Rural (%) | 80.0 | 81.0 | 83.0 | 85.0 | 87.0 | 88.0 | 90.0 | 92.0 | 93.0 |
| Active tuberculosis incidence rate (per 100,000 population) | 22.0 | 20.0 | 20.0 | 19.0 | 17.0 | 16.0 | 16.0 | 15.0 | 14.0 |
| Viral hepatitis incidence rate, including vaccination cases (per | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Health expenditure (% of GDP) [1)] | 6.3 | 6.2 | 6.9 | 6.8 | 6.7 | 6.9 | 6.7 | 6.9 | 6.5 |

| Macroeconomic context | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| GDP | | | | | | | | | |
| - change over previous year (% change over previous year; in 2005 prices and PPPs) | 4.2 | 5.8 | 5.7 | 5.8 | 5.4 | 5.9 | 7.5 | 3.3 | 3.9 |
| - in current prices and PPPs, | 13,067 | 14,119 | 15,349 | 18,671 | 21,151 | 22,725 | 26,124 | 27,614 | 29,164 |
| - in prices and PPPs of 2005 | 15,784 | 16,695 | 17,649 | 18,671 | 19,685 | 20,847 | 22,419 | 23,162 | 24,074 |
| Registered unemployment (% of labour force, end of period) | 15.8 | 15.0 | 14.4 | 14.1 | 13.8 | 13.2 | 12.5 | 13.6 | 13.5 |
| Net foreign direct investment (FDI) (million US$) | 135.0 | 178.0 | 341.0 | 262.0 | 325.0 | 662.0 | 959.0 | 964.0 | 1,110.0 |
| Net foreign direct investment (FDI) (as % of GDP) | 3.0 | 3.1 | 4.5 | 3.2 | 3.5 | 6.1 | 6.8 | 7.7 | 9.1 |
| Cumulative FDI (million US$) | 910.0 | 1,088.0 | 1,429.0 | 1,691.0 | 2,016.0 | 2,678.0 | 3,637.0 | 4,601.0 | 5,711.0 |

| Income distribution and poverty | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| GDP per capita at current prices and PPPs (US$) | 4,229.0 | 4,545.0 | 4,912.0 | 5,943.0 | 6,700.0 | 7,170.0 | 8,212.0 | 8,649.0 | 9,102.0 |
| Consumer price index (CPI) (% change over the preceding year, annual average) | 5.5 | 2.6 | 2.3 | 2.4 | 2.4 | 2.9 | 3.4 | 2.3 | 3.6 |
| Population below national poverty | | | | | | | | | |
| - Total (%) | 25.4 | .. | .. | 18.5 | .. | .. | 12.4 | .. | .. |
| - Urban (%) | 19.5 | .. | .. | 11.2 | .. | .. | 10.1 | .. | .. |
| - Rural (%) | 29.6 | .. | .. | 24.2 | .. | .. | 14.6 | .. | .. |
| Poverty | | | | | | | | | |
| Income inequality (Gini coefficient) | 28.15 | .. | 31.09 | 33.03 | .. | .. | 34.51 | .. | .. |
| Minimum to median wages (minimum wage as a percentage of median wage) | .. | .. | .. | .. | .. | .. | .. | .. | .. |

| Telecommunications | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| Telephone lines per 100 population | 7.12 | 8.21 | 8.79 | 8.88 | 8.11 | 9.46 | 10.80 | 11.37 | 10.35 |
| Cellular subscribers per 100 | 27.54 | 35.41 | 40.31 | 48.71 | 60.50 | 73.27 | 98.74 | 130.35 | 141.93 |
| Personal computer in use per 100 | 1.17 | 1.36 | 1.55 | 1.74 | 3.84 | 4.15 | 4.61 | .. | .. |
| Internet users per 100 population | 0.39 | 0.97 | 2.42 | 6.04 | 9.61 | 15.04 | 23.86 | 41.20 | 45.00 |

| Education | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| Literacy rate (%) | .. | .. | .. | .. | .. | .. | 99.1 | .. | .. |
| Literacy rate of 15-24 years old, men and women (%) | .. | .. | .. | .. | .. | .. | 98.8 | .. | .. |

| Gender Inequality | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| Country Policy and Institutional Assessment gender equality rating (1=low to 6=high) | .. | .. | .. | 4.5 | 4.5 | .. | .. | .. | .. |
| Share of women employment in the non-agricutlural sector (%) | 31.6 | 33 | .. | .. | .. | .. | .. | .. | .. |
| Gender Parity Index in | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| - Primary education enrolment | 0.96 | 0.98 | 0.99 | .. | .. | .. | 1.00 | 0.99 | 0.99 |
| - Secondary education enrolment | .. | 0.96 | 0.96 | .. | .. | .. | 0.98 | 1.00 | 0.98 |
| - Tertiary education enrolment | 1.51 | 1.56 | 1.57 | .. | .. | .. | .. | .. | .. |

*Sources:*
Direct communication with INSTAT - Albanian Institute of Statistics
INSTAT website: http://www.instat.gov.al/
UNECE statistical database: http://w3.unece.org/pxweb/
UNFCCC website: http://unfccc.int
UNSD database: http://unstats.un.org/unsd/default.htm
World Bank. World DataBank. http://databank.worldbank.org/data/home.aspx
MDG database
Index Mundi at http://www.indexmundi.com

*Note:*
1) World Bank database

# *Annex IV*

# *LIST OF MAJOR ENVIRONMENT-RELATED LEGISLATION*

**Laws**

**1996**
Law on Water Resources, No. 8093
Law on Public Removal of Waste, No. 8094
Law on Regulatory Framework of Water Supply Sector and Waste Water Removal, No. 8102

**1998**
Law on the Privatization Strategy of Sectors of Primary Importance, No. 8306 (amended)

**1999**
Law on the Privatization of Local Hydropower Plants, No. 8527 (amended)

**2000**
Law on Organization and Functioning of Local Governments, No. 8652
Law on Adherence to the Aarhus Convention, No. 8672

**2001**
Law on the Public Property and its Transfer, No. 8744
Law on Non-profit Organizations, No. 8788
Law on the Registration of Non-profit Organizations, No. 8789

**2002**
Law on the Coast Guard, No. 8875
Law on Protection of Air from Pollution, No. 8897
Law on Protection of Marine Environment from Pollution and Damage, No. 8905
Law on Protected Areas, No. 8906
Law on Environmental Protection, No. 8934
Law on Taxation, No. 8977
Law on Energy Saving in Buildings and Building Code, No. 8937

**2003**
Law on Environmental Impact Assessment, No. 8990
Law on Environmental Administration of Solid Waste, No. 9010
Law on the Power Sector, No. 9072
Law on Protection of Transboundary Lakes, No. 9103
Law on Chemical Substances and Agents, No. 9108
Law on Environmental Treatment of Polluted Water, No. 9115

**2004**
Law on Official Statistics, No. 9180

**2005**
Law on Plant Protection Service, No. 9362
Law on Energy Efficiency, No. 9379
Law on Forests and the Forestry Service, No. 9385

**2006**
Law on Hazardous Waste Administration, No. 9537
Law on Biodiversity Protection, No. 9587

Law on Local Tax System, No. 9632
Law on Protection of Human Health From Tobacco Products, No. 9636
Law on Concessions, No. 9663

**2007**
Law on the Protection of the Environment from Transboundary Effects, No. 9700

**2008**
Law on Irrigation and Drainage, No. 9860
Law on the Rules and Procedures Governing International Trade of Endangered Species of Wild Fauna and Flora, No. 9867
Law on Environmental Protection, No. 9890
Law on National Taxes, No. 9975
Law on the Protection of Wild Fauna, No. 10006

**2009**
Law on Licences, Authorizations and Permits, No. 10081
Law on Territory Planning, No. 10119
Law on Public Health, No. 10138

**2010**
Law on Mining, No. 10304
Law on Health and Safety at Work, No. 10237
Law on Hunting, No. 10253
Law on Administrative Violations, No. 10279

**2011**
Law on Environmental Protection, No. 10431
Law on Environmental Impact Assessment, No. 10440
Law on Environmental Permitting, No. 10448
Law on Integrated Waste Management, No. 10463

**By-laws**

**1996**
Regulation on the Transfer of the Communal Forests and Pastures under Use and Administration

**2002**
DCM on the Approval of Norms of Emissions into the Air, No. 435

**2003**
Decision on Approval of Rules and Procedures for the Import of Waste for Recycling and Treatment, No. 803
DCM on the Approval of the List of Activities with an Environmental Impact for which an Environmental Permit is Needed, No. 805

**2004**
DCM on the Functioning of Environmental Inspectorate, No. 24

**2005**
DCM on Allowed Norms of Liquid Releases and the Zoning Criteria of Receiving Water Environments, No. 177
Decision on Approval of the Albanian Catalogue for Classification of Waste, No. 99

**2007**
Guideline on Approval of Rules, Content and Deadlines for Drafting of Plans for Solid Waste Administration, No. 6
Regulation on Treatment of Construction and Demolition Waste from Creation and Transportation to Disposal, No. 1

**2008**
DCM on Public Participation in the Environmental Decision-making, No. 994

**2009**
DCM on Rules and Procedures for Drafting and Implementing the National Monitoring Programme, No. 1189

**2010**
Regulation on Hospital Waste Management, No. 798
Guideline on Organization and Functioning of the Regional Environmental Agencies, No. 2
Guideline on Standards and Procedures to Endue with Simple Environmental Permit to Activities that Release Noises on the Environment, No. 5

**2011**
Order on the Allocation of Inspection Functions and Technical Functions of Environmental Impact Assessment, Permits and Environmental Monitoring in the Regional Environmental Agencies, No. 139
Order on Sending of the Self-monitoring Data Results of Industrial Operators from the Regional Environmental Agencies to the Ministry, No. 247
National Action Plan for the Management of Environmental Noise, DCM, No. 123

**Strategies**

**2000**
National Biodiversity Strategy and Action Plan, No. 532

**2003**
National Energy Strategy

**2004**
National Strategy for the Development of Forests and Pastures, No. 247
National Strategy for Fighting Fires in Forest and Pasture Areas, No. 392

**2006**
Strategy and Action Plan for Wetlands

**2007**
Environmental Cross-cutting Strategy, No. 847
Sector Strategy of Agriculture and Food for the period 2007-2013
Strategy for the Development of Business and Investments
Intersectoral Rural Development Strategy for the period 2007-2013

**2008**
Sector Strategy of Transport for the period 2008-2013, No. 1214
National Strategy for Development and Integration for the period 2007-2013, No. 342

**2011**
National Waste Management Strategy for the period 2010-2025, No. 175
National Strategy of Water Supply and Sewerage Services Sector for the period 2011-2017, No. 643

# *Sources*


**Individual authors**

1. Bego, F., et al. (2005). *Albania National Capacity Self-Assessment / Stock-taking report on the implementation of the Convention on Biological Diversity (CBD). Government of Albania, United Nations Development Programme, Global Environmental Facility.* September 2005.
2. Metaj, M. (2009). *Alba Forest, Albania. Biodiversity and the Protected Areas System in Albania*. International Journal for Quality research UDK- 378.014.3(497.11) Short Scientific Paper (1.03) Vol.3, No. 2, 2009.
3. Porej, D. and Diku, A. (2009). *Final Report - Implementation of the Rapid Assessment and Prioritization of Protected Areas, Management methodology for assessing protected area system in Albania.* Commissioned by the Ministry of Environment, Forests and Water Administration and WWF Mediterranean Programme.
4. Qirjo, M. (2008). *Assessment of Capacity Building Needs of National and Local Stakeholders. UNDP Project Strengthening capacities in the Western Balkans countries to address environmental hot spots through an integrated approach. Albanian Component*. Tirana, September 2008.
5. Tafaj, L. (2009). *Strategic Approach to International Chemicals Management and its implementation in Albania, T*echnical support for implementation of Multilateral Environmental Agreements in national laws and regulations in Albania. Available from http://archive.rec.org/albania/UNEP_Workshop.html

**Material from Albania**

6. Albania (2004). *Forests and Pastures Sector Development Strategy of Albania.* 23 April 2004.
7. Albania (2004). *National Strategy for Fighting Fires in Forest and Pasture Areas.* 30 April 2004.
8. Albania (2006). *National Plan for the Implementation of the Stabilization Agreement 2009-2014.* 5 July 2006.
9. Albania (2007). *National Environmental Strategy 2007-2013.* 29 November 2007.
10. Albania, Council of Ministers (2006). *National Strategy for Development and Integration 2007-2013, 2005 Annual Progress Report.* Available from www.keshilliministrave.al
11. Albania, Council of Ministers (2008). *National Strategy for Development and Integration 2007-2013*. Available from www.keshilliministrave.al
12. Albania, Council of Ministers (2008). *National Strategy for Development and Integration 2007-2013, 2006-2007 Progress Report.* Available from www.keshilliministrave.al
13. Albania, Council of Ministers (2009). *National Strategy for Development and Integration 2007-2013, 2008 Progress Report.* Available from www.keshilliministrave.al
14. Albania, Council of Ministers (2010). *Albania's answers to EC questionnaire, April 2010.* Available at http://www.mie.gov.al
15. Albania, Council of Ministers, Department of Strategy and Donor Coordination: *Our Mission.* Available from www.dsdc.gov.al
16. Albania, Council of Ministers, Department of Strategy and Donor Coordination: *Sector Working Groups*. Available from www.dsdc.gov.al

17. Albania, Department of Strategy and Donor Coordination (2008). *External Assistance Orientation Document*. Tirana.

18. Albania, Department of Strategy and Donor Coordination (2009). *External Assistance in Albania: Progress Report 2008*. Tirana.

19. Albania, Ministry of Agriculture, Food and Consumer Protection (2007). *Inter-Sectoral Rural Development Strategy 2007-2013. Draft*. Tirana.

20. Albania, Ministry of Agriculture, Food and Consumer Protection (2007). *Sector Strategy of Agriculture and Food 2007 – 2013. Draft. Tirana*

21. Albania, Ministry of Economy, Trade and Energy (2007). *Business and Investments Development Strategy (2007-2013)*. Revised draft.

22. Albania, Ministry of Environment (2002). *National Assessment Report for the World Summit on Sustainable Development (Johannesburg, 26 August – 4 September 2002).* Available from www.un.org/esa/dsd

23. Albania, Ministry of Environment, Forest and Water Administration. *National State of Environment reports.* Available from http://www.moe.gov.al/index.php?option=com_content&view=article&id=158:raportet-e-gjendjes-se-mjedisit&catid=94:raporte-e-gjendjes-se-mjedisit&Itemid=40

24. Albania, Ministry of Environment, Forestry and Water Administration (2006). *National Environmental Strategy*. Available from www.moe.gov.al

25. Albania, Ministry of Environment, Forests and Water Administration (2004). *Albania National Forest Inventory (ANFI) Project - Special Study on Forest and Pasture General Plan.* Tirana 2004.

26. Albania, Ministry of Environment, Forests and Water Administration (2005). *Albania National Forest Inventory (ANFI) Project – Final Report.* Tirana 2005.

27. Albania, Ministry of Environment, Forests and Water Administration (2010*). IPA National Programme 2010 for Albania, Project Fiche 10: Capacity strengthening of the Ministry of Environment, Forests and Water Administration for law drafting and enforcement of national environmental legislation. CRIS Number: 2010/022-530.*

28. Albania, Ministry of Environment, Forests and Water Administration (2011). *Fourth National Report to the United Nations Convention on Biological Diversity (period covered by the report: August 2007 - December 2010).* Tirana, 31 March 2011.

29. Albania, Ministry of Environment, Forests and Water Administration (2011). *Report on Monitoring of the Environmental Cross-cutting Strategy 2007-2010.* Tirana 2011.

30. Albania, Ministry of Environment, Forests and Water Administration (2011). *Aarhus Convention Implementation Report*. Tirana.

31. Albania, Ministry of Environment, Forests and Water Administration (2009). *Albanian Policy Paper for Carbon Finance*. Tirana.

32. Albania, Ministry of Environment, Forests and Water Administration (2005). *Albania's Technology Needs Assessment. Climate Change Enabling Activities, Phase II*. Tirana.

33. Albania, Ministry of Environment, Forests and Water Administration (2007). *Environment Sector and Cross-Cutting Strategy*. Tirana.

34. Albania, Ministry of Environment, Forests and Water Administration (2011). *Environment Sector and Cross-Cutting Strategy Progress Report 2007-2010*. Tirana.

35. Albania, Ministry of Environment, Forests and Water Administration (2009). *Environmental Strategy Implementation Report 2007-2010*. Tirana.

36. Albania, Ministry of Environment, Forests and Water Administration (2010). *Fourth National Report to the United Nations Convention on Biological Diversity*. Tirana. Available from http://www.moe.gov.al/en/ftp%20upload/publications/reports/al-nr-04-en.pdf

37. Albania, Ministry of Environment, Forests and Water Administration (2010). *Hydrochlorofluorocarbon Phase-out Management Plan*. Tirana.

38. Albania, Ministry of Environment, Forests and Water Administration (2006). *National Capacity Self-Assessment Related to Environmental Management of Global Conventions: Report on Cross-Cutting Capacity Constraints, Needs & Priorities for the Implementation of Rio Conventions on Desertification and Biodiversity*. Tirana.

39. Albania, Ministry of Environment, Forests and Water Administration (2006). *National Capacity Self-Assessment Related to Environmental Management of Global Conventions: Strategic Action Plan on Cross-Cutting Capacity Issues for Global Management, Draft*. Tirana.

40. Albania, Ministry of Environment, Forests and Water Administration (2005). *National Capacity Self-Assessment Related to Environmental Management of Global Conventions: Thematic Assessment Report on Capacity Development Needs for the Convention on Biological Diversity*. Tirana. Available from http://www.undp.org.al/index.php?page=projects/project&id=61 http://www.undp.org/mainstreaming/docs/ncsa/ncsa-reports/ccr_pdf/ccr-albania.pdf

41. Albania, Ministry of Environment, Forests and Water Administration (2011). *National Action Plan for Ratification and Implementation of the Protocol on Heavy Metals, Protocol on Persistent Organic Pollutants and Gothenburg Protocol to the Convention on Long-Range Transboundary Air Pollution. Final draft document*. Tirana.

42. Albania, Ministry of Environment, Forests and Water Administration (2006). *National Implementation Plan for Reduction and Disposal of Persistent Organic Pollutants*. Tirana. Available from http://chm.pops.int/Countries/National%20Implementation/tabid/253/language/en-B/Default.aspx

43. Albania, Ministry of Environment, Forests and Water Administration (2006). *National Report to the United Nations Convention to Combat Desertification*. Tirana.

44. Albania, Ministry of Environment, Forests and Water Administration (2006). *National Environment Strategy*. Tirana. Available from http://www.moe.gov.al/en/ftp%20upload/legislation/strategic%20docs/Nes%20English.pdf

45. Albania, Ministry of Environment, Forests and Water Administration (2011). *IWRM Position Paper*. Tirana.

46. Albania, Ministry of Environment, Forests and Water Administration (2011). *Report on Monitoring of the Environmental Cross-cutting Strategy (2007-2010).*

47. Albania, Ministry of Environment, Forests and Water Administration (2011). *Fourth National Report to the United Nations Convention on Biological Diversity (August 2007-December 2010).* Available from www.cbd.int

48. Albania, Ministry of Environment, Forests and Water Administration (2010). *National Waste Strategy. Final ver 6_final.*

49. Albania, Ministry of Environment, Forests and Water Administration (2010). *The National Waste Plan Appendix - final Draft 3_ENG*

50. Albania, Ministry of Environment, Forests and Water Administration (2011). *List of hot spots*.

51. Albania, Ministry of Environment, Forests and Water Administration. *Answers of Albania to Chapter 27- Environment.*

52. Albania, Ministry of Environment, Forests and Water Administration (2011). *Report on hot spots status.*

53. Albania, Ministry of Environment, Forests and Water Administration and Ministry of Tourism and Environment of Montenegro (2007). *Strategic Action Plan for Skadar/Shkodra Lake – Albania & Montenegro.*

54. Albania, Ministry of Finance (2006). *Public Finance Sector Strategy for the period 2007-2013.*

55. Albania, Ministry of Health (2011). *Albanian strategy on health system adaptation to climate change 2011-2021.* Available from http://klima.developingcorner.com/images/stories/publikime/strategy.pdf

56. Albania, Ministry of Health (2011). *Protecting health from climate change in Albania, International Climate Initiative Vulnerability Assessment Report, 2011.* http://klima.developingcorner.com/images/stories/publikime/protecting_from_change.pdf

57. Albania, Ministry of Industry and Energy, National Agency of Energy (2005). *Updated version of the National Strategy of Energy and Plan of Action 2003.*

58. Albania, Ministry of Public Works and Transport (2011). *National Water Supply and Sewerage Services Sector Strategy 2011-2017*. Tirana.

59. Albania, Ministry of Public Works, Transport and Telecommunication. *Sector Strategy of Transport (2008-2013).* Available from www.mpptt.gov.al

60. Albania, Ministry of Tourism, Culture, Youth and Sports (2008). *Tourism Strategy (2007-2013).* Available from www.mtkrs.gov.al

61. Albania, Ministry of Transport, Public Works and Telecommunication (2008). *Sectoral Strategy of Transport 2008-2013.* Available from http://www.mppt.gov.al/

62. Albania, Ministry of Transport, Public Works and Telecommunication (2011). *National Water Supply and Sewerage Services Sector Strategy 2011-2017.* Available from http://www.erru.al/doc/Strategjia_Kombetare_sektoriale_e_sherbimeve_te_furnizimit_me__uje_dhe_kanalizime_2011_-_2017.pdf (in Albanian)

63. Albanian Institute of Statistics, Institute of Public Health, and ICF Macro Calverton, Maryland, USA (2010). *Albania Demographic and Health Survey 2008-2009.* Available from http://rochr.qrc.com/bitstream/123456789/1603/1/Albania%20Demographic%20and%20Health%20Survey%202008-2009%20FR230.pdf

64. Center of Applied Nuclear Physics. *National Policy for Safety Spent Sealed Sources, Radioactive Waste Management and their Decommissioning in Albania.* Paper presented at the International Conference on Effective Nuclear Regulatory Systems: Further Enhancing the Global Nuclear Safety and Security Regime. 14 to 18 December 2009. Cape Town, South Africa. Available from http://www-pub.iaea.org/mtcd/meetings/cn177p.asp

65. Government of Albania (2005). On improving transparency through an increased use of the internet and improvement of existing websites, Available from http://www.pad.gov.al

66. Government of Albania and United Nations (2011). *Programme of Cooperation, 2012-2016*. Tirana. Available from http://www.un.org.al/editor-files/file/news/GoA-UN-Cooperation-ProgrammeSIGNED.pdf

67. Institute of Statistics (2010). *Statistical Yearbook Albania in Figures 2010*. Tirana. Available from http://www.instat.gov.al/graphics/doc/downloads/publikime/2010/Shqiperia_ne_shifra%202010.pdf

68. National Agency of Natural Resources (2007). *Presentation on mining waste.*

69. People's Advocate (2008) *Annual Report.* Albania. Available from www.avokatipopullit.gov.al

70. Regional Environmental Center Albania (2006). *Environment Today*, *November 2006, No. 115.* www.albania.rec.org

71. Regional Environmental Center Albania (2006). *Green Pack Albania -The Teacher's Handbook*. Tirana. Albanian language. Available from http://documents.rec.org/publications/Green_Pack_AL.pdf

72. Republika Shqipërisë (2007). *Urdhër Nr.146 Për Miratimin e Listës së Kuqe të Florës dhe Faunës* (Red List of Albanian Fauna and Flora). Tiranë, 8 May 2007.

73. Republika Shqipërisë. Agjencia Kombëtare e Mjedisit (1999). *Raport Për gjendjen e Mjedisit 1997-1998*. Tiranë, Tetor 1999.

74. Republika Shqipërisë. Ministria e Mjedisit (2001). *Raport Për gjendjen e Mjedisit 1999-2000.* Tiranë, Tetor 2001.

75. Republika Shqipërisë. Ministria e Mjedisit, Pyjeve dhe Administrimit te Ujerave, Agjencia e Mjedisit dhe Pyjeve (2010). *Raport per Gjendjen e Mjedisit 2009* (State of Environment report 2009). Tiranë, 2010.

**Regional and international organizations:**

76. Basel Convention (2008). *Country Fact Sheet Albania.* Available from www.basel.int

77. Commission of European Communities (2008). *Implementation of the National Plan for Approximation of Environmental Legislation in Albania (Background Assessment Report).* Ref.: EuropeAid/124909/C/SER/AL 29.8.2008.

78. Commission of European Communities (2010). *Mati River Basin Management Plan.* Ref.: EuropeAid/124909/C/SER/AL.

79. Commission of European Communities, for and on behalf of the Government of Albania (2008). *Implementation of the National Plan for Approximation of Environmental Legislation in Albania. Background Assessment Report.* Ref.: EuropeAid/124909/C/SER/AL. Brussels, 29 August 2008.

80. Council of Europe, Second Emerald Network Pilot Project in Albania (2006). *First report by the Group of Experts for the setting up of the Emerald Network of Areas of Special Conservation Interest, February 2006. Council of Europe, Strasbourg, 20 March 2006 (T-PVS/Emerald (2006)3).*

81. Economist Intelligence Unit (2011). *Country Report. November 2011.*

82. Energy Information Administration (EIA). *Country Analysis Briefs.* Available from http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm#

83. European Commission (2008). *Albania 2008 Progress Report accompanying the Communication from the Commission to the European Parliament and the Council: Enlargement Strategy and Main Challenges 2008-2009*. COM(2008) 674. Brussels, 05.11.2008.

84. European Commission (2010). *Communication from the Commission to the European Parliament and the Council: Commission opinion on Albania 's application for membership of the European Union.* COM(2010) 680. Brussels, 09.11 2010.

85. European Commission (2010). *Staff Working Document Analytical Report.* SEC (2010) 1335.

Brussels, 09 November 2010. Available from http://ec.europa.eu/enlargement/press_corner/key-documents/reports_nov_2010_en.htm and from http://www.mie.gov.al

86. European Commission (2011). *Albania 2011 Progress Report accompanying the Communication from the Commission to the European Parliament and the Council: Enlargement Strategy and Main Challenges 2011-2012*. COM(2011) 666 final. Brussels, 12.10.2011.

87. European Commission (2011). *Albanian 2011 Progress Report, Chapter 27 "Environment"*, SEC (2011) 1205 final, Brussels, 12.10.2011,

88. European Commission (2011). *Commission Staff Working Paper Albania 2011 Progress Report.* SEC(2011) 1205. Available from www.eeas.europa.eu/delegations/albania

89. European Commission (2011). *Staff Working Paper Albania 2011 Progress Report.* SEC (2011) 1205. available from http://ec.europa.eu/enlargement/press_corner/key-documents/reports_oct_2011_en.htm and from http://www.mie.gov.al

90. European Environment Agency (2005). *The European environment - State and Outlook Report*. Copenhagen. http://www.eea.europa.eu/highlights/20051122115248

91. European Environment Agency (2010). *Albania State of the Environment Report.* http://www.eea.europa.eu/soer/countries/al

92. European Environment Agency (2010). *Environmental trends and perspectives in the Western Balkans: future production and consumption patterns Report*. Copenhagen. Available from http://www.eea.europa.eu/publications/western-balkans

93. European Environment Agency (2010). *The European Environment – State and Outlook 2010: Synthesis Report*. Copenhagen. Available from http://www.eea.europa.eu/soer/synthesis/synthesis

94. European Environment Agency (2010). *The European Environment – State and Outlook 2010: Country Assessments Albania. Copenhagen.* Available from http://www.eea.europa.eu/soer/countries#c11=CommonalityReport&c11=DiversityReport&c11= FlexibilityReport&c12=all&c5=&b_start=0&c13=albania

95. European Parliament and Council Directive (2007). *Establishing an infrastructure for spatial information in the European Community (INSPIRE Directive).* 2007/2/EC of 14 March 2007.

96. Germany, Federal Ministry for the Environment (2008). *Nature Conservation and Nuclear Safety*.

97. GIZ International Fuel Prices, January 2011. Available from http://www.gtz.de/de/dokumente/giz2011-international-fuel-prices-2010-2011-data-preview.pdf

98. International Energy Agency (2011). *Albania: Statistics.* Available from http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=AL, 2011

99. International Energy Agency (IEA) in cooperation with UNDP (2008). *Energy in the Western Balkans.* Available from http://www.iea.org/textbase/nppdf/free/2008/Balkans2008.pdf

100. International Labour Organization (ILO) Database of national labour, social security and related human rights legislation NATLEX Country profiles Albania. Available from http://www.ilo.org/dyn/natlex/country_profiles.basic?p_lang=en&p_country=ALB

101. International POPs Elimination Network (2006). *Country Situation Report on POPs in Albania.* Available from www.ipen.org

102. Project Management Ltd, SYKE and Prospect (2009). *Strengthening of the Environmental Monitoring System in Albania (StEMA).* Contract No.: 2005/111-229 Final Report 5 December 2005 to 4 December 2008 (Issue C, Approved Version). 31 August 2009.

103. Regional Environmental Center for Central and Eastern Europe (2002). *Developing Skills of NGOs.* Szentendre. Available from http://albania.rec.org/publications/publications_by_title/1

104. Situation analysis and recommendations for occupational health systems in the South East Europe, report of the 5th Meeting of the SEE Network on Workers health Podgorica Republic of Montenegro. 1 December 2009. Available from http://www.euro.who.int/__data/assets/pdf_file/0019/117073/E94073.pdf

105. TACSO (2011). *Manual on CSO (Civil Society Organization) Management, Practical Tools for Organizational Development Analysis.* Available from http://www.tacso.org/doc/doc_manual_1.pdf

106. U.S. Geological Survey (2011). *2010 Minerals Yearbook Albania.* Available from http://minerals.usgs.gov/minerals/

107. UNDP Albania (2010). *Identification and prioritization of environmental hotspots in Albania - Progress Report (January 2009-June2010).* Available from http://www.undp.org.al/elib.php?elib,1082

108. UNDP Albania (2010). *Priority hot-spots in Albania*. Available from http://www.undp.org.al/elib.php?elib,1082

109. UNDP and Albanian Agency of Environment and Forestry (2011). *GIS of hotspots in Albania*. Available from http://hotspots.aefalbania.org/#Map.Hotspots

110. UNDP and Albanian Agency of Environment and Forestry (2011). *Identification and prioritization of environmental hotspots in Albania.* Available from http://hotspotsproject.org

111. UNDP and Global Environmental Facility (2005). *Albania National Capacity Self-Assessment - Stock-taking report on the implementation of the Convention on Biological Diversity (CBD).* September 2005.

112. UNECE (2002). *Environmental Performance Reviews Albania.* Sales No. E.03.II.E.23.

113. UNECE (2007). *Regional Environmental Center Project: Building Capacity for Environmental Monitoring and Reporting by Enterprises and Public Authorities in Eastern Europe, Caucasus and Central Asia (EECCA) and Western Balkan countries.* Geneva, July 2007.

114. UNECE (2011). *Second Assessment of Transboundary Rivers, Lakes and Groundwaters*. Sales No. E.11.II.E.15.

115. UNECE Aarhus Convention (2008). *Report of the third meeting of the parties – Compliance by Albania with its obligations under the convention (ECE/MP.PP/2008/2/Add.9).* Available from http://www.unece.org/fileadmin/DAM/env/pp/mop3/ODS/ece_mp_pp_2008_2_add_9_e_Albania.pdf

116. UNECE and UNESCO (2007). *Good practices in education for Sustainable Development in the UNECE region*. Paris. Available from http://www.unece.org/fileadmin/DAM/env/esd/01_Typo3site/ece.belgrade.conf.2007.inf.9.e.pdf

117. UNECE (2008). *Report on the Compliance by Albania with its Obligations Under the Convention.* Meeting of the Parties to the Convention on Access to Information, Public

Participation in Decision-Making and Access to Justice in Environmental Matters. Riga. Available from http://www.unece.org/fileadmin/DAM/env/documents/2008/pp/mop3/ece_mp_pp_2008_5_add_1_e.pdf

118. UNEP (2007). *Albania National Report on the Application of the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean. UNEP(DEPI)/MED WG.308/3, Annex III.*

119. UNEP Vienna ISCC (2010). *Feasibility Study on establishing a transboundary protected area Prokletije / Bjeshkët e Nemuna Mountains.* 2010.

120. UNEP Vienna ISCC (2010). *Feasibility Study on establishing a transboundary protected area Sharr/Šar Planina – Korab -Dešat/Deshat.* 2010.

121. UNEP, Mediterranean Action Plan (2009). *Evaluation of the economic impacts of extreme events in Mediterranean countries*. Athens.

122. UNEP, Western Balkans Environmental Programme (2008). *Assessment of Capacity Building Needs of National and Local Stakeholders.*

123. UNEP-ISCC (2006). *Identification and verification of "environmental hot spots" in Albania, Bosnia & Herzegovina, Macedonia, Montenegro and Serbia.*

124. UNICEF Albania. Child-Led Environmental Education Initiative. Available from http://www.unicef.org/albania/ and from http://www.unicef.org/albania/education_8440.html

125. United Nations (2009). *Learning from each other -The UNECE Strategy for Education for Sustainable Development.* New York and Geneva. Available from http://www.unece.org/fileadmin/DAM/env/esd/01_Typo3site/LearningFromEachOther.pdf

126. United Nations Albania (2010). *National Report on Progress Towards Achieving Millennium Development Goals.* Tirana. Available from http://www.un.org.al/editor-files/file/Albania%20National%20MDG%20Report%20-%20July%202010.pdf

127. United Nations Children's Fund (2009). *The State of the World's Children Special Edition.* Available from http://www.unicef.org/publications/index_51775.html

128. United Nations Food and Agriculture Organization (2010). *Global Forest Resources Assessment 2010, Albania Country Report.* Rome, 2010.

129. USAID/Albania ARD-BIOFOR IQC Consortium (2003). *Albania Biodiversity Assessment.* November 2003.

130. WaterBase - EEA's databases on the status and quality of Europe's rivers, lakes, groundwater bodies and transitional, coastal and marine waters, and on the quantity of Europe's water resources. Available from http://www.eea.europa.eu/data-and-maps/data/waterbase-groundwater-7

131. Western Balkans Environmental Programme (2008). *Review of Policy Integration and Capacity Development Need Assessment Studies.*

132. World Bank (2003). *Final Environmental Impact Assessment-Vlore Combined Cycle Generation Facility.* Available from http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2003/11/05/000012009_20031105154027/Rendered/INDEX/E8130PAPER.txt

133. World Bank (2007). *Integrating Environment into Agriculture and Forestry Progress and Prospects in Eastern Europe and Central Asia, Volume II – Albania Country Review*. November 2007.

134. World Bank (2010). *Improving coverage and management effectiveness of marine and coastal protected areas.* Request for CEO Endorsement/Approval - GEF Medium Sized Project,

UNDP and Ministry of Environment, Forestry and Water Administration of Albania. 28 April 2010.

135. World Bank (2010). *Public Awareness Strategy and Action Plan (SAP) prepared under the Nature Resource Development Project. Final draft document.* April 2010.

136. World Bank (2011). *Albania Partnership Program Snapshot.* September 2011.

137. World Bank (2011). *World Economic Outlook.*

138. World Bank and Urban Research Institute (2004). *Participatory Budget Pilot Project.* Available from http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/ECAEXT/ALBANIAEXTN/0,,contentMDK:20932332~pagePK:141137~piPK:141127~theSitePK:301412,00.html

139. World Bank Report (2009). *An Assessment of Climate Change Vulnerability, Risk, and Adaptation in Albania's Power Sector.* Available from http://www-ws.worldbank.org/external/default/WDSContentServer/WDSP/IB/2010/03/14/000333038_20100314233821/Rendered/PDF/533310REPLACEM1arch0100FINAL0TO0IDU.pdf

140. World Health Organization (2006). *Air Quality Guidelines Global Update 2005*. Available from http://whqlibdoc.who.int/hq/2006/WHO_SDE_PHE_OEH_06.02_eng.pdf

141. World Health Organization (2006). *Highlights on health in Albania 2005.* Available from http://www.euro.who.int/__data/assets/pdf_file/0005/97700/E88282.pdf

142. World Health Organization (2007). *Country brief Albania*. Available from http://www.who.int/countries/alb/en/

143. World Health Organization (2009). *Road safety country profiles Albania.* Available from http://www.who.int/violence_injury_prevention/road_safety_status/country_profiles/albania.pdf

144. World Health Organization (2009). *Vision 2030: The resilience of water supply and sanitation in the face of climate change.* Available from http://www.who.int/water_sanitation_health/publications/9789241598422/en/

145. World Health Organization (2010). *General Trends in Maternal Mortality: 1990 to 2008 Estimates developed by WHO, UNICEF, UNFPA and The World Bank.* Available from http://whqlibdoc.who.int/publications/2010/9789241500265_eng.pdf

146. World Health Organization (2010). *Guidelines for indoor air quality: selected pollutants.* Available from http://www.euro.who.int/__data/assets/pdf_file/0009/128169/e94535.pdf

147. World Health Organization (2010). *Health and Environment in Europe: progress assessment*. Available from http://www.euro.who.int/__data/assets/pdf_file/0010/96463/E93556.pdf

148. World Health Organization (2011). *E-atlas of disaster risk for the European Region.* Available from http://www.who-eatlas.org/europe/countries/albania/albania-hazard.html

149. World Health Organization (2011). *General health statistical profile Albania*. Available from http://www.who.int/gho/countries/alb.pdf

150. World Health Organization (2011). *Guidelines for drinking-water quality, fourth edition*. Available from http://www.who.int/water_sanitation_health/publications/2011/dwq_guidelines/en/index.html

151. World Health Organization (2011). *Small-scale water supplies in the pan-European region: Background – challenges - improvements.* Available from http://www.euro.who.int/__data/assets/pdf_file/0018/140355/e94968.pdf

152. World Health Organization (2011). *World Health Statistics 2011*. Available from http://www.who.int/gho/publications/world_health_statistics/en/index.html

153. World Health Organization Regional Office for Europe (2009). *Assessment of progress in the prevention of injuries in WHO European Region, Albania*. Available from http://www.euro.who.int/__data/assets/pdf_file/0007/98701/Albania.pdf

154. World Health Organization Regional Office for Europe and Institute of Public Health, Albania. *Flood in Shkodra, Initial rapid assessment 9-10 December 2010.* Available from http://klima.developingcorner.com/images/stories/publikime/flood_in_shkodra.pdf

**Websites:**

155. Albania, Ministry of Environment, Forests and Water Administration http://www.moe.gov.al

156. CEMSA. EU IPA project "Consolidation of Environmental Monitoring System in Albania" http://cemsaproject.net/project_information/summary_english

157. Chemical safety in Albania http://www.chemicals.al

158. EIONET – European Information and Observation Network http://www.eea.europa.eu/about-us/countries-and-eionet

159. EU CARDS project for Albania. "Strengthening of the environmental monitoring system in Albania" StEMA project (2006-2008). http://www.seda.org.al/Documents/StEMA%20English.pdf

160. EU-Albania relations http://ec.europa.eu/enlargement/potential-candidate-ountries/albania/eu_albania_relations_en.htm

161. European Movement Albania – all EU Progress Reports http://www.em-al.org/?fq=artikuj&gj=gj2&bir=26

162. European Topic Centre on Air and Climate Change (ETC/ACC) AirBase - public air quality database. http://www.eea.europa.eu/data-and-maps/data/airbase-the-european-air-quality-database-3/albania

163. GEF projects Albania http://www.thegef.org/gef/gef_country_prg/AL

164. Ministries of the Albanian Government http://www.keshilliministrave.al

165. Municipality of Fier http://www.bashkiafier.com

166. Municipality of Korça http://www.bashkiakorce.gov.al

167. Municipality of Kukës http://www.bashkiakukes.com

168. Municipality of Pogradec http://www.bashkiapogradec.gov.al

169. Municipality of Shkodra http://www.bashkiashkoder.gov.al

170. Municipality of the city of Tirana http://www.tirana.gov.al

171. Municipality of Vlora http://www.bashkiavlore.org

172. National Agency for Environment and Forestry Albania
http://aefalbania.org/

173. National Agency of Natural Resources of Albania
http://www.akbn.gov.al

174. National Profile Agency of Environment and Forestry of Albania
www.epanet.ew.eea.europa.eu

175. OSCE Albania
http://www.osce.org/albania/48353

176. Phase 1 - REREP
http://archive.rec.org/REC/Programs/REREP/Publications.html

177. Phase 2 – RENA
http://www.renanetwork.org/
http://ec.europa.eu/environment/enlarg/dablas/pdf/09_11_2010/9%20RENA_DSemeneine.pdf
http://www.humandynamics.org/reference/regional-environmental-network-accession-rena

178. REC Albania office
http://archive.rec.org/REC/Introduction/CountryOffices/Albania.html

179. Republic of Albania People's Advocate
http://avokatipopullit.gov.al/English/index.htm

180. UNDP and Albanian Agency of Environment and Forestry. Identification and prioritization of environmental hotspots in Albania
http://hotspotsproject.org

181. UNDP ENV projects Albania
http://europeandcis.undp.org/environment/albania

182. UNDP office Albania
http://www.undp.org.al/index.php?page=WWD/e_env

183. United Nations Development Programme Albania
http://www.undp.org.al/

184. World Health Organization Regional Office for Europe Environment and Health Information System (ENHIS)
http://www.euro.who.int/ENHIS

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