

# North Macedonia

## Environmental Performance Reviews



### Third Review – Highlights





## Sustainable Development Goals

**In North Macedonia, the formal institutional framework for coordination of the implementation and monitoring of the Sustainable Development Goals of the 2030 Agenda for Sustainable Development is established; however, it is not active.** The national institutional framework includes the Cabinet of the Deputy Prime Minister responsible for Economic Affairs and Coordination with the Economic Sectors, and the National Council on Sustainable Development. The Cabinet of the Deputy Prime Minister oversees sustainable development policies and coordinates the implementation and monitoring of the Sustainable Development Goals. The National Council, established in 2010, has the role of the political body mandated to guide implementation of the Sustainable Development Goals. However, the Council last convened in 2015.

**The national policy framework is still under development. No document adopted at the national level refers to the Sustainable Development Goals.** Efforts are made to update the 2010 National Strategy for Sustainable Development for the period 2010–2030 by mainstreaming the Sustainable Development Goals in the Strategy. A Rapid Gap Assessment was prepared during 2016 through a multi-stakeholder consultation process but it was neither adopted nor made available to the public, ministries and stakeholders. The country did not make any specific effort to mainstream the Sustainable Development Goals into sectoral policy documents.

**The Government has not conducted any assessment of the costs of implementation of the Sustainable Development Goals.** The Cabinet of the Deputy Prime Minister responsible for Economic Affairs and Coordination with the Economic Sectors intends to undertake an assessment of costs and prioritization of the Sustainable Development Goals and targets.

**The national availability of Sustainable Development Goals global indicators was not assessed.** In 2018, the State Statistical Office published a book entitled “Sustainable Development” that included a compilation of sustainability-related data; some Sustainable Development Goals global indicators are covered in this book.

**Ownership of the Sustainable Development Goals is low, as is awareness of them among local government authorities.** Government officials have heard about the Sustainable Development Goals but believe that specific instructions should come from the Cabinet of the Deputy Prime Minister responsible for Economic Affairs and Coordination with the Economic Sectors, asking their institution to commence any work towards achieving them. While the general public’s level of awareness of the Sustainable Development Goals is also quite low, the level of awareness is much better among civil society organizations (CSOs).

**North Macedonia uses the Partnership for Sustainable Development in its efforts to achieve Sustainable Development Goals.** The Partnership is the United Nations strategy for 2016–2020, structured around five focus areas: employment, social inclusion, good governance, environmental sustainability and gender equality. The Partnership provides a framework for activities aligned with the Sustainable Development Goals, European Union (EU) accession, the National Sustainable Development Strategy and sectoral strategies in the country.

**Overall, North Macedonia is at the inception stage for setting the premises for delivering on many targets reviewed in the Environmental Performance Review. However, the country took some action to support achieving several targets.** The status of the country vis-à-vis relevant targets is addressed in each chapter, as appropriate, including progress made and challenges faced by the country. In many cases, a comprehensive analysis of the Sustainable Development Goals and targets is hindered by the lack of data and information.

Concerning achieving target 8.4 to improve resource efficiency in consumption and production and decouple economic growth from environmental degradation, **North Macedonia took policy action in the waste management sector.** The country established targets related to material resource productivity within the framework of the extended producer responsibility (EPR) policy, with a view to creating incentives for producers to prevent waste at the production stage, take environmental considerations into account at the product design stage and support public recycling and materials management goals.

Regarding targets 16.7 and 16.10 related to good governance through participatory decision-making and access to information, **North Macedonia established two Commissions** – the State Commission for Decision-Making in Administrative Procedures and Labour Relations Procedures in Second Instance and the Commission for the Protection of the Right to Free Access to Public Information – **enabling the right of the public to challenge decisions on environmental matters and to file complains for non-provision of environmental information.**

To deliver on target 11.4 to strengthen efforts to protect and safeguard the world's cultural and natural heritage, **the country has appropriate legal measures in place for the protection of cultural heritage**, in particular the 2004 Law on Protection of Cultural Heritage. The National Strategy for Culture Development 2018–2022 identifies most related policy priorities for this target and the Ministry of Culture represents the institutional framework.

**North Macedonia has data for reporting on achieving target 11.6 to reduce the adverse environmental impact of cities, including air pollution levels.** However, the achievement of this target already presents a challenge for the country, given that the whole population is exposed to inhalable particulate matter (PM<sub>10</sub>) concentrations exceeding the annual limit value of 40 µg/m<sup>3</sup>, since there is exceedance of the annual limit value recorded at all measurement stations throughout the country.

Concerning delivering on target 15.4 to ensure the conservation of mountain ecosystems, including their biodiversity, **as at 2017, North Macedonia's value on the Mountain Green Cover Index was 96.5 per cent**, while coverage by protected areas of important sites for mountain biodiversity accounts for some 23 per cent of Mountain Key Biodiversity Areas and remains unchanged since 2006.

## Recommended measures:

- **Revitalize the National Council on Sustainable Development and ensure its active role to guide efforts to achieve and monitor progress towards the Sustainable Development Goals;**
- **Proceed with setting up aspirational and measurable national targets through a participatory and transparent process;**
- **Ensure the production of indicators to measure progress towards achievement of the Sustainable Development Goals;**
- **Ensure the preparation of reports presenting the results of monitoring of progress towards achievement of the Sustainable Development Goals;**
- **Ensure that the Sustainable Development Goals are integrated into future planning documents;**
- **Raise awareness of the Sustainable Development Goals among central and local government authorities;**
- **Establish relevant environmental indicators for reporting on the environmental dimension of the Sustainable Development Goals.**



## Legal, policy and institutional framework

**The implementation of existing legislation remains a challenge, especially in the areas of issuing permits, EPR and waste management, protected areas and noise.** However, the speed of the approximation process in the environmental area has been commensurate with the national capacities for implementation.

**Although the integration of environmental requirements into sectoral legislation has seen some progress,** it is still limited in the spatial planning, mining and tourism sectors, and remains insufficient in the energy, industry, agriculture, transport and health sectors. The mechanism for intersectoral consultations preceding the adoption of laws, amendments to laws and subsidiary legislation is not used to its full potential to advance the environmental agenda of the economic sectors.

**North Macedonia has started to integrate environmental requirements into sectoral policies, though not at an adequate level.** Especially in spatial planning and energy development, they are scarcely reflected at all. Environment-related objectives in policy documents related to forestry, transport, agriculture and health have been implemented insufficiently. No policy document addresses environmental impacts from mining, despite high levels of public concern about the impacts of new mines.

**Delayed adoption of strategic documents and a persistent lack of reporting on implementation are bottlenecks for efficient strategic planning in North Macedonia.** Some policy documents are never adopted despite the significant efforts made to develop them. Preparing a national environmental action plan (NEAP), which is supposed to underpin planning in the environmental field, was discontinued following the second NEAP 2006–2012.

**North Macedonia committed to the full and efficient use of the strategic environmental assessment (SEA) instrument, in line with the best international practice, by ratifying in 2013 the Protocol on Strategic Environmental Assessment.** The country has limited practical experience with conducting transboundary consultations as part of the SEA procedure.

**The number of national planning documents undergoing SEA has increased during the past five years.** However, some national planning documents are prepared by sectoral ministries and adopted without an SEA procedure, despite the legal requirement to conduct one. The quality of SEA reports also remains an issue. No regular training and capacity-building on SEA at the national and local levels takes place.

**The separation of the State Environmental Inspectorate (SEI) from the Ministry of Environment and Physical Planning in 2014 constitutes the major environmental institutional change since 2011.** An environmental protection agency has not been established.

**The Ministry of Environment and Physical Planning has yet to establish a policy to lead environmental protection efforts by its own example** and demonstrate opportunities for functioning in an environmentally friendly way to other governmental bodies and non-governmental stakeholders. Green procurement is not practised for the purchase of goods and services in the framework of projects coordinated by the Ministry.

**A system for regular training of staff of the Ministry of Environment and Physical Planning is in place but it does not function properly.** Despite the provisions for specialized training in the annual training programme, such training lacks resources



allocated from the state budget and it is solely project based. Training and professional development on environmental issues for staff in sectoral ministries is lacking.

**Municipalities face significant difficulties with the implementation of their environment-related competences.** The provision of guidance and assistance by the Ministry of Environment and Physical Planning is at an insufficient level. Regular consultations and meetings with the local self-government units (LSGUs) on environmental policy issues, as well as specialized training, are not organized by the Ministry.

#### BOX 1: PASSENGER CAR EMISSION STANDARDS

The 2008 Law on Vehicles limited the importation of new motor vehicles to those that complied with the Euro-4 emission standard. At the same, the importation of second-hand cars that complied with the Euro-3 standard was also permitted. Used vehicles that did not comply with the Euro-3 standard had to undergo a type approval (homologation) process before they could be registered.

During 2010, the Government allowed the temporary importation of used vehicles that met the Euro-1 and Euro-2 standards. This was largely motivated by the need to replace heavily polluting old cars dating from socialist times and for social policy reasons. In December 2014, against the backdrop of deteriorating urban air pollution, the importation of used vehicles was restricted to those that complied with at least the Euro-3 standard. From July 2015, the minimum emission standard for used vehicles was raised to Euro-4 and, for new vehicles, to Euro-5.

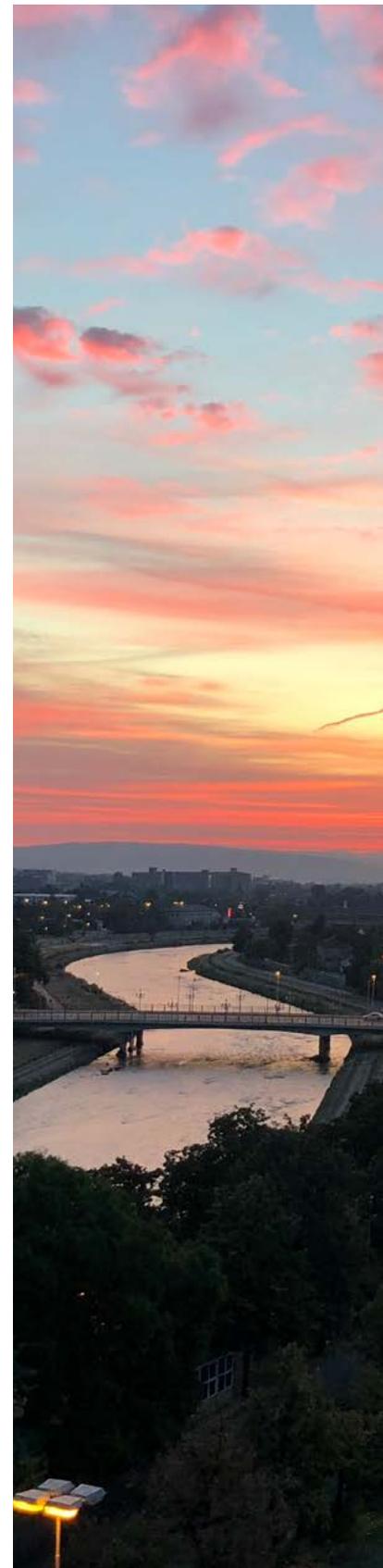
**Table 1: Strategic environmental assessment dossiers received by the Ministry of Environment and Physical Planning, 2011–2017, number**

	2011	2012	2013	2014	2015	2016	2017
Total dossiers received from LSGUs and central government bodies	488	483	430	373	430	259	226
of which:							
Suggesting that SEA procedure is needed	266	195	152	98	129	80	70
Suggesting that SEA procedure is not needed	215	235	268	274	294	179	154
of which:							
SEA procedure requested by the Ministry	..	24	46	15	6	6	4
Incomplete dossiers	7	53	10	1	7	..	2

Source: Ministry of Environment and Physical Planning, 2018.

## Recommended measures:

- **Develop comprehensive coverage of environmental issues in the national policy framework;**
- **Ensure compliance with the legal requirement to conduct an SEA, raise awareness and provide capacity building on SEA;**
- **Reorganize and strengthen the relevant main departments, including the Department for the European Union, in the Ministry of Environment and Physical Planning, with required capacity for the EU approximation process;**
- **Ensure careful planning and allocation of tasks in the process of approximation to the EU acquis.**



## Regulatory and compliance assurance mechanisms

**The legislation for and implementation of single-medium environmental permitting are generally well in place.** Since 2011, the Ministry of Environment and Physical Planning has put significant efforts into the issuance of the A- and B-type permits in the country. No public register of the permits issued was established. The current integrated environmental permitting (IEP) process is not implemented according to the relevant EU directives.

**Relevant best practices for control of the issued A- and B-type permits are not applied.** Enforcement capacity does not keep up with the pace at which legislation and rulebooks are being enacted. The reports of the inspections are not publicly available or are outdated. The self-monitoring reports submitted each year by the operators of the permitted installations are not validated by SEI and are not used for the national pollutant release and transfer register.

**The administrative capacity of LSGUs to process applications for B-type permits and monitor their implementation is limited.** Therefore, the Ministry of Environment and Physical Planning helped compensate for delays at the municipal level with the issuance of B-type permits. As a result, visible progress was made in IEP issuance, with 140 A-type and 180 B-type permits issued in the period 2011–2018. Even though the Ministry oversees the issuing of all B-type permits, there is a lack of systematic communication and support from the central to the local level. In the period 2015–2016, the country strengthened the administrative capacity of LSGUs in the framework of a twinning project.

**The existing procedure, by which the Ministry has both policy development functions and those of policy implementation, including environmental permitting, environmental impact assessment (EIA) and environmental elaborates proceedings, monitoring, assessment and reporting, is in contradiction with good practice in environmental governance and limits access to justice in environmental decision-making.**

**The legislation on EIA does not provide for a clear EIA screening process and does not set out clearly the decision-making process.** The list of activities does not follow the annexes of the relevant EU EIA directives and, at the same time, the listed activities do not refer to national classification of activities.

**The state environmental inspectors have put in a lot of effort to discipline operators and to change their behaviour towards the implementation of environmental legislation, as proven by the amount of written decisions and minutes.** In 2014–2017, 100 per cent of the inspections carried out by SEI produced minutes with conclusions and the total number of written decisions directed to the operators to undertake certain actions was 1,530.

**The Ministry of Economy undertook the only initiative to encourage corporate social responsibility (CSR) by organizing an annual national award for the best CSR practice.** Since 2011, the country did not establish any voluntary compliance promotion instruments on the environment.



**Table 2: Environmental impact assessment and environmental elaborates, 2012–Sept. 2018, number**

	Notification of investment intention	EIA studies submitted	Decisions on elaborates
2012	12	11	0
2013	10	9	0
2014	5	8	354
2015	11	5	414
2016	6	10	326
2017	18	6	357
2018	6	9	0
<b>Total</b>	<b>68</b>	<b>58</b>	<b>1 451</b>

Source: Ministry of Environment and Physical Planning, 2018.

**Table 3: Results of State Environmental Inspectorate inspections, 2014–2017, number**

Type	2014	2015	2016	2017	Total
Minutes with conclusions	3 091	3 617	2 387	2 451	<b>11 546</b>
Decisions	394	584	274	278	<b>1 530</b>
Misdemeanour charges	72	29	23	24	<b>148</b>
Criminal charges	0	1	0	1	<b>2</b>
Conclusions for procedure termination	614	1 884	1 261	82	<b>3 841</b>

Source: State Environmental Inspectorate, 2018.

## Recommended measures:

- Undertake the necessary steps to streamline the environmental impact assessment process and increase its efficiency for the public administration, investors and the public;
- Develop further integrated environmental permitting;
- Promote the adoption of the draft law on environmental inspection;
- Promote corporate social responsibility practices and encourage companies to integrate sustainability information into their reporting.



## Greening the economy

During the past decade, North Macedonia enhanced and deepened substantially the use of economic instruments in environmental protection. In terms of energy taxes, excise duties are applied to all energy products used for transport and heating, with the major exception of electricity and coal. The country levies user charges for water abstraction and the extraction of minerals.

In the absence of cost-reflective tariffs for water and waste services, water and waste companies face operational difficulties due to the lack of sufficient funds for maintenance, repair and new investments. To address this concern, as of 2018, the country delegated the regulation of water tariffs to the Energy Regulatory Commission (ERC), with the mandate to establish the principle of full cost recovery of production of water services. The user pays principle has been strengthened with that tariff reform.

To upgrade and modernize the waste management sector, LSGUs are considering adopting cost-reflective user fee policies for waste collection and disposal tariffs. In addition, potential economies of scale from regionalization of waste management have yet to be exploited. Bill collection rates at the household level are in general quite low. Measures to ensure higher rates of waste service fee bill collection are lacking.

The role of renewable energy sources (RES) in total electricity supply has been promoted with an effective system of feed-in tariffs. Most of the electricity market is now liberalized. The country's efforts are ongoing to improve energy efficiency with a system of government subsidies. Electricity tariffs have approached cost-reflective levels and cross subsidies from business entities to households have been reduced.

The Government operates since 2014 a subsidy programme for the promotion of RES and improvements in energy efficiency in households. The total budget amounts to 50 million denars (€0.8 million) in 2018. Skopje operated a similar programme in 2016 designed to stimulate households to use renewable solar energy sources for heating of their homes, as well as introducing a support scheme for purchasing pellet stoves designed to reduce air pollution.

The polluter pays principle is enshrined in legislative acts, but it is not applied effectively. The main instrument to address air and water pollution is regulation (command and control) combined with prescription of best available techniques. The flat charge rates per type of polluting substance integrated into permit fees do not create incentives for enterprises to adopt cleaner technologies. Effective financial incentives in the form of environmental taxes are lacking.

North Macedonia established excise duties and other charges for motor vehicles and pump prices of motor fuels in an effort to address air pollution from road transport, a major source of air pollution in the country. However, the potential environmental effectiveness of these charges could be strengthened further.

Government environmental expenditure has been constrained by limited fiscal space. The business sector is the major source for mobilizing funds for the transition to green economy. The tax system provides generous incentives for business investments; however, they are not differentiated between green investment and other investments.

Environmental expenditures are financed mainly from the general budget; little use has been made of earmarked revenue from environmental taxes and



**charges.** Available funds for environmental investments, notably in municipal infrastructure, have been supported by significant foreign financial assistance. The potential benefits from public–private partnerships in the provision of municipal utility services and the financing of the associated infrastructure are not explored. Public procurement is focused on the lowest price bid, thereby limiting its use to support environmental protection.

#### **BOX 2: DEFINING AND MEASURING GREEN FOREIGN DIRECT INVESTMENT (FDI)**

Gauging the magnitude of green FDI requires an internationally agreed definition of green FDI, which does not exist. In 2011, the Organization for Economic Cooperation and Development (OECD) proposed a definition of green FDI that distinguishes between: (i) FDI in the environmental goods and services sectors; and (ii) FDI that is associated with the use of cleaner and more energy-efficient technologies in industrial sectors than apply in the host country (“compliance plus”), with associated improvements in environmental performance. Such environmentally favourable FDI flows will tend to be mainly associated with greenfield investments as compared with mergers and acquisitions, which can simply be a transfer of ownership or corporate reorganization with little or no positive effect on operations and productive capacities.

Measuring FDI based on this definition faces the challenge that internationally harmonized and reliable statistics on production processes and environmental performance associated with FDI at the enterprise level are lacking. Based on a number of assumptions, rough estimates suggest that the first component of green FDI corresponded to 2.8 per cent of world FDI flows in the period 2005–2007, while the second component, which is approximated by using the concept of environmentally relevant FDI, corresponded to 41 per cent of world FDI flows in the period 2005–2007. The estimates of green FDI, should, however, be taken *cum grano salis* as they are based on exploratory work and imperfect statistics that illustrate the manifold challenges that exist in measuring green FDI.

Source: S. S. Golub, C. Kauffmann and P. Yeres, “Defining and Measuring Green FDI: An Exploratory Review of Existing Work and Evidence”, OECD Working Papers on International Investment No. 2011/02 (Paris, OECD Publishing, 2011). <http://dx.doi.org/10.1787/5kg58j1cvcvk-en>.

### **Recommended measures:**

- **Adopt effective financial incentives to stimulate pollution abatement to complement the existing regulatory framework;**
- **Review available policies and measures for overcoming the current obstacles to the implementation of cost-effective waste tariffs for the collection of waste and its disposal on landfills, while considering the needs of poor and vulnerable groups;**
- **Implement measures that are effective in raising bill collection rates for waste service fees;**
- **Adjust excise duties on motor fuels to move towards EU minimum rates and eliminate the differentiation between rates on diesel and petrol;**
- **Reform the vehicle registration tax and the excise duty on imports of passenger motor cars by taking into account environmentally relevant factors such as emission standards, including for CO<sub>2</sub>, the age of the vehicle and type of motor fuel;**
- **Make more use of green procurement, building on international experience of how to integrate environmental considerations into public tenders, including by setting credible standards for what constitutes green products and services, such as eco-labels;**
- **Create a favourable policy framework for attracting green investment and innovation, including for nature-based solutions;**
- **Join the 2016 Batumi Initiative on Green Economy.**



## Environmental monitoring and information

**The air quality monitoring network has improved with the addition of new monitoring stations, new parameters monitored and the replacement of old instruments.** However, these activities depend solely on technical cooperation projects. Proper operation of the network is hindered by the lack of adequate maintenance and servicing capacity and resources.

**The monitoring networks for surface water and groundwater, atmospheric precipitation and snow cover have been declining and do not meet the requirements of the national water-related legislation.** The quality of groundwater is not monitored, and surface water resources are partially monitored, covering mostly rivers.

**Even though the noise monitoring methodology was harmonized and standardized, the status of the noise monitoring network remains unchanged since 2011.** Noise is monitored in three localities but not systematically and using outdated equipment. Municipalities are also responsible for noise monitoring and for the production of noise maps, but comprehensive city-wide noise maps have not yet been produced. There is no monitoring of vibrations, nor are data available on environmental exposure to vibrations.

**Monitoring of biodiversity is on an ad hoc basis depending on funding from international projects.** Most data reporting activities have been under multilateral environmental agreement (MEA) obligations and in nationally designated areas. Comprehensive monitoring of forests and the development of a forest inventory are lacking.

**The country did not perform soil monitoring systematically.** The City of Skopje carried out a series of soil monitoring campaigns in the Skopje Region, focusing on heavy metals pollution, the results of which were made publicly available on the website of the City of Skopje.

**The Ministry of Environment and Physical Planning collects waste-related data from various sources by waste typology.** The Ministry's Environmental Information Centre collects reports from municipalities on municipal solid waste (MSW) generation and management. However, only around one third of all municipalities provided reports in the last round, despite the legal obligation to do so.

**The two laboratories under the Ministry of Environment and Physical Planning and one under the National Hydrometeorological Service face operational challenges and are not accredited under the ISO/IEC 17025 standard on "General requirements for the competence of testing and calibration laboratories".** The Institute of Public Health operates 14 accredited reference laboratories, including for quality control of food and of water, for sanitary microbiology, for contaminants and eco-toxicology, and for radioecology and ionizing radiation.

**North Macedonia made progress in developing databases and thematic information management systems.** A national integrated environmental information system to support informed decision-making and satisfy various reporting obligations, including on the Sustainable Development Goals, is lacking.

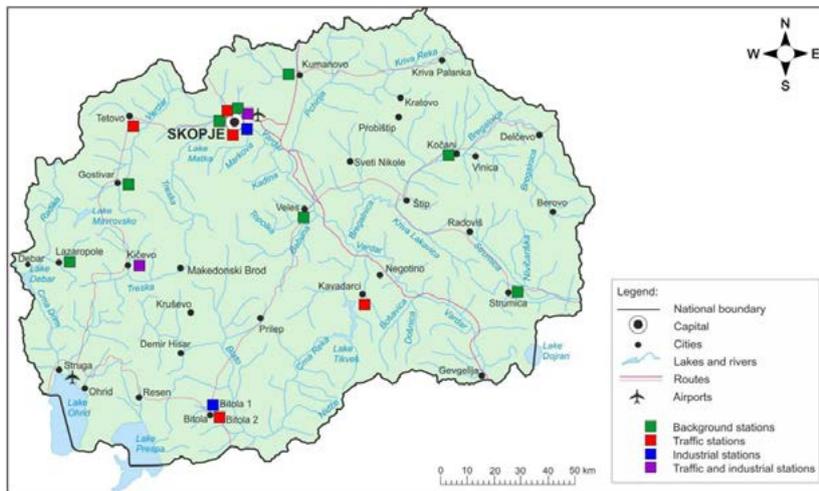
**The country has a robust system for producing environmental statistics and indicators and, in general, promotes the Shared Environmental Information System principles of open access to data and use of data for multiple reporting purposes.** Producing all relevant indicators in the ECE list of environmental indicators, initiating the production of the OECD green growth indicators and establishing relevant



environmental indicators for reporting on the environmental dimension of the Sustainable Development Goals remain challenges for the country.

**The three main environmental-data-based publications produced by the Ministry of Environment and Physical Planning have limited use in support of policymaking processes.** They lack a multisector integrated environmental assessment approach and projections of negative trends and implications vis-à-vis national goals and policies, and do not address cross-cutting issues, such as the impact of transport on the environment and of air quality on public health.

**Map 1: State automatic monitoring system for ambient air quality**



Source: Ministry of Environment and Physical Planning, 2018.

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

## Recommended measures:

- **Ensure adequate capacity of the environmental monitoring networks;**
- **Prepare a national strategy and action plan on environmental monitoring and integrated information management supported by an updated National Book of Environmental Parameters and protocols for data sharing;**
- **Ensure financial and human resources and capacity for the measuring of air quality and water quality;**
- **Establish a fully functional national integrated environmental information system;**
- **Continue to support the implementation of Shared Environmental Information System principles;**
- **Continue with the regular production of national and regional environmental indicators;**
- **Establish relevant environmental indicators for reporting on the environmental dimension of the Sustainable Development Goals;**
- **Establish data collection and processing mechanisms for environmental indicators where such data are not yet available;**
- **Produce regularly reports on the state of the environment;**
- **Strengthen the policy relevance of these reports by moving towards multisector integrated environmental assessment approaches.**



## Environmental democracy and education for sustainable development

**Environmental democracy is under development with uneven progress in the implementation of its three pillars.** The legislative framework is in place and efforts are concentrated on putting it into practice.

**The public has access to environmental information published by the Ministry of Environment and Physical Planning.** However, some information is outdated or not easy to find. Access to environmental information on the websites of other public institutions is largely lacking. Consolidated versions of laws and secondary legislation are not available to the public free of charge.

**Civil society lacks awareness about the availability of environmental information and procedures to access it.** An open, updated and user-friendly environmental portal supported by a single-window integrated information system would facilitate public access to information related to environmental media.

**Effective public participation procedures are largely not developed and those in place are not aligned with the provisions of the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention).** Such procedures are established mostly for activities covered by EIA, SEA and IEP. Challenges exist with effective public participation in public hearings. However, in all cases, the public concerned has the right to challenge a decision before the State Commission for Decision-Making in Administrative Procedures and Labour Relations Procedures in Second Instance.

**Access to justice in environmental matters has been promoted since 2012, mostly as a project-based activity to develop the capacity of the judiciary and CSOs.** The governmental authorities, judiciary and independent review bodies lack adequate knowledge, capacity and expertise in promoting and implementing effective access to justice in environmental matters.

**The public can submit cases related to environmental matters to the Ombudsman before deciding whether to file a court case.** The time periods for challenging court decisions on specific activities relating to the environment – 30 days for the submission of an administrative lawsuit against an administrative act and 15 days for an appeal against the decision of a court of first instance to a court of appeal – might be too short for complex cases requiring extensive coordination among CSOs.

**Environmental education is driven by CSOs, mostly within project-based activities.** Progress has been made in promoting environmental education, mostly in primary and secondary schools and mostly through the eco-school programme.

**In North Macedonia, eco-schools serve as a good example of integrating environmental education and demonstrate the interest and involvement of teachers, students and parents in environmental activities.** The expansion of eco-schools represents a good practice for promoting environmental education in the country.

**Education for sustainable development (ESD) as an approach is not embraced by the country,** although some themes of the environmental and social dimensions of sustainable development are included in civic education and offered as elective courses. The lack of a legal framework or a policy document on ESD is a key barrier towards integrating ESD in a consistent and continuous manner.

**Preschool educators have the opportunity to study environmental education as part of elective courses offered during their university years.** The study programmes of future biology and geography teachers for secondary education include environment-related courses. In-service training for teachers does not include mandatory courses on



environmental education or ESD. Ad hoc in-service training on environmental education and ESD was conducted by CSOs in the period 2010–2015 for teachers in eco-schools.

### **BOX 3: ENVIRONMENTAL EDUCATION IN THE KINDERGARTEN OJSC "MLADOST"–TETOVO**

The kindergarten OJSC "Mladost"–Tetovo, established in 1960 for children from 9 months to 6 years old, includes environmental education in its annual programme and has a coordinator for environmental activities. Environmental education started as a project financed by the Ministry of Labour and Social Policy. Outdoor activities include greening the premises by engaging 3- to 6-year-old children in planting trees and maintaining an eco-garden. The kindergarten has renovated its premises and installed equipment for indoor air cleaning and modern sanitation facilities adapted for children.

### **BOX 4: PESTALOCI PUBLIC PRIMARY SCHOOL COMMITTED TO ENVIRONMENTAL EDUCATION**

The Pestaloci public primary school, established in Skopje in 1969, is embracing environmental education within the framework of the Programme on integration of environmental education into the education system. The school is an ecoschool participating in the International Network of Eco-Schools, having been awarded the green flag and following diligently the seven steps required for an eco-school with the involvement of teachers, students and parents. The school has an ecocodex and an ecological anthem, and runs several projects on energy saving, separate collection of PET and of e-waste, and maintains an eco-garden. International days related to environmental protection are observed by organizing special events in the school, such as the International Day for the Protection of the Ozone Layer, World Water Day and Global Day of Action.



## **Recommended measures:**

- **Ensure free online access to environmental information, and enhance the use of social media through the Ministry of Environment and Physical Planning's website;**
- **Ensure effective public participation procedures to environmental information;**
- **Establish detailed procedures to ensure effective public participation in decision-making on the deliberate release of genetically modified organisms (GMOs) into the environment;**
- **Amend the 2010 Law on Food Safety to include provision for public participation in decision-making on food and food products containing or consisting of GMOs;**
- **Ensure regular training on environmental legislation for judges, prosecutors, lawyers and law students;**
- **Raise awareness, train public officials and develop other preventive measures to protect environmental defenders;**
- **Consider establishing mechanisms to actively promote access to information, public participation and access to justice in relation to environmental matters;**
- **Develop an action plan for ESD;**
- **Assign a clear mandate on ESD to the Ministry of Education and Science.**



## Implementation of international agreements and commitments

**The country is a party to nearly all relevant global and regional environmental agreements.** Since 2011, North Macedonia ratified several MEAs, including the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on the Protection and Use of Transboundary Watercourses and International Lakes. The country has yet to join a number of MEAs, such as the Minamata Convention on Mercury, the Protocol on Water and Health and the Nagoya Protocol, and to ratify several amendments to a few MEAs, such as the Aarhus and Espoo Conventions.

**Comprehensive implementation of and compliance with MEAs remain a challenge, especially recently ratified agreements.** No efficient coordination structure among relevant state institutions charged with the implementation of obligations deriving from global and regional environmental agreements is established. The quality and timeliness of national reporting to MEAs is affected by the lack of environmental monitoring data. CSOs are neither involved in reporting nor do they participate in the development of the country's position for international meetings.

**The list of ratified MEAs is available to the public on the website of the Ministry of Environment and Physical Planning.** However, there is a general absence of information on the status of implementation of MEAs, including the national reports submitted, except the national reports to the Aarhus Convention and to the Convention on Biological Diversity (CBD).

**The country has made some progress in establishing synergies among the Basel, Rotterdam and Stockholm Conventions** and in 2017 reported that coordination mechanisms existed at intraministerial level. Although national focal points have been appointed for MEAs and national committees have been established for certain conventions, communication, cooperation and coordination among the institutions dealing with biodiversity conservation, forestry and land use planning remain challenging. In general, experience on synergies at the national, regional and international levels is not shared through joint activities.

**North Macedonia had a case filed under the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention), because of construction of hydropower plants (HPPs) being planned in protected areas.** CSOs have raised their concerns about the lack of transparency on the number and locations of the proposed HPPs. As a result, in 2015, the country received a recommendation to suspend the implementation of all government projects, in particular the HPPs foreseen and related infrastructure, within the territory of the Mavrovo National Park, until an SEA is completed.

**The country did not identify hazardous activities falling under the scope of the Convention on the Transboundary Effects of Industrial Accidents and subsequently did not notify potentially affected countries.** Since 2012, the country did not submit an updated national self-assessment and action plan under the Convention's strategic approach, nor related project proposals addressing needs and challenges identified through the self-assessment and in the national action plan. No progress has been made on transposing the Seveso III Directive.

**North Macedonia is committed to preventing and combating air pollution.** The country joined the Protocol on the Reduction of Sulphur Emissions or their Transboundary Fluxes by 30 per cent (Sulphur Protocol) in 2010, and both the Protocol on Further Reduction of Sulphur Emissions (Oslo Protocol) and Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (Gothenburg Protocol) to the Convention on Long-Range Transboundary Air Pollution (Air Convention) in 2014. The country is yet to accept amendments to the Protocol on Heavy Metals, Protocol on Persistent Organic Pollutants (POPs) and Gothenburg Protocol to the Air Convention.



### **BOX 5: ACHIEVING THE HUMAN RIGHT TO WATER AND SANITATION**

The report “Achieving the Human Right to Water in Sanitation”, prepared by the country in 2016, provides an assessment of the country’s current situation and capacity to provide equitable access to water and sanitation “for all members of the population, especially those who suffer a disadvantage or social exclusion”. The score card for equitable access to water and sanitation served as a tool for self-assessment of access to water and sanitation, and was applied in the country for the period April 2015–February 2016. The score card was used to establish a baseline, track progress, prompt discussions on actions needed to achieve equitable access to water and sanitation and support the implementation of policies and practices. During implementation of the project, a descriptive and quantitative approach was used in three municipalities, Skopje, Veles and Kumanovo, with a detailed focus on the gender dimensions of equitable access to water and sanitation.

The results of the study identified a number of gender-related challenges related to access to water and sanitation, in particular: (i) toilets that sometimes are not suitable for menstrual hygiene management; (ii) no access to accurate and pragmatic information for menstrual hygiene (in the educational system); (iii) no accessible facilities; (iv) no access to water and soap in places that provide an adequate level of privacy; (v) lack of finance in the municipalities to develop and maintain access to water and sanitation; (vi) access for disabled people to public health facilities but not to a toilet; and (vii) no access to drinking water and sanitation in religious facilities.

The report highlights recommended actions to address gender-specific challenges based on the results of the study, which include: (i) improving menstrual hygiene management facilities in educational facilities, as part of Equitable Access Action Plans; (ii) increasing the capacity of municipalities to develop and maintain access to water and sanitation; (iii) setting standards for toilets in public institutions, schools and religious facilities; and (iv) setting up and implementing measures for social protection of the population.

## **Recommended measures:**

- **Establish efficient coordination mechanisms among relevant state institutions, scientific institutions and civil society organizations;**
- **Implement obligations deriving from multilateral environmental agreements;**
- **Ensure that site selection criteria applied to hydropower plants are based on international best practice;**
- **Conduct a transboundary study into the environmental effects of planned small hydropower plants and associated new infrastructure construction;**
- **Promote the production of electrical energy from renewable sources other than hydropower;**
- **Ensure that SEAs carried out on energy sector plans and programmes under development are based on international best practice and provide greater transparency and public engagement;**
- **Transpose the Seveso III Directive and work on implementing it;**
- **Identify hazardous activities falling under the scope of the Convention on the Transboundary Effects of Industrial Accidents and notify potentially affected countries accordingly;**
- **Make publicly available the information on the participation of the country in environmental agreements and international environmental processes and commitments, and the related national implementation and progress reports;**
- **Join the MEAs to which North Macedonia is not a party.**



## Climate change

**The country is vulnerable to climate change, especially to extreme weather events.**

The policy framework and the human and technical capacities devoted to combatting climate change are not sufficient to tackle the challenges posed by climate change.

**North Macedonia regularly fulfils its reporting obligations under the UNFCCC, Kyoto Protocol and Paris Agreement.** It has been praised as one of only 16 countries that are on track to honour their commitments under the Paris Agreement.

**Within the national plans on climate change, vulnerability and adaptation assessments have been prepared for the sectors of agriculture, forestry, water, health, biodiversity, crisis management, tourism and cultural heritage protection.** These assessments serve as strategic documents for adaptation to climate change. However, legislation to specifically address climate change or an overall strategic document setting climate change priorities are lacking. Coordination among the different ministries takes place in the National Climate Change Committee.

**Mitigation measures have been implemented in the energy sector, ranging from the introduction of energy audits to subsidies for energy efficiency measures in households.** Because of the dominant use of domestic lignite for electricity production, the country has a potential for greenhouse gas (GHG) emissions reductions.

**The waste sector is the second highest emitting sector in the country, accounting for 19 per cent of the total GHG emissions in 2014, excluding the Forestry and Other Land Use sector.** Solid waste disposal is by far the greatest contributor to the GHG emissions of the waste sector, which is also the highest growing category in terms of emissions.

**While the country expects access to international funding sources to significantly contribute to the implementation of adaptation and, especially, mitigation measures, the country is also dedicating internal resources to climate-related activities.** According to the Second Biennial Update Report on Climate Change, in 2017, 1.98 per cent of the planned government budget contributed directly or indirectly to climate change mitigation, while the budget of Skopje for the same year anticipated an almost US\$2 million contribution to climate-related initiatives. Additionally, in the period 2015–2017, the Fund for Innovation and Technology Development financed climate-related projects in the amount of €447,592.

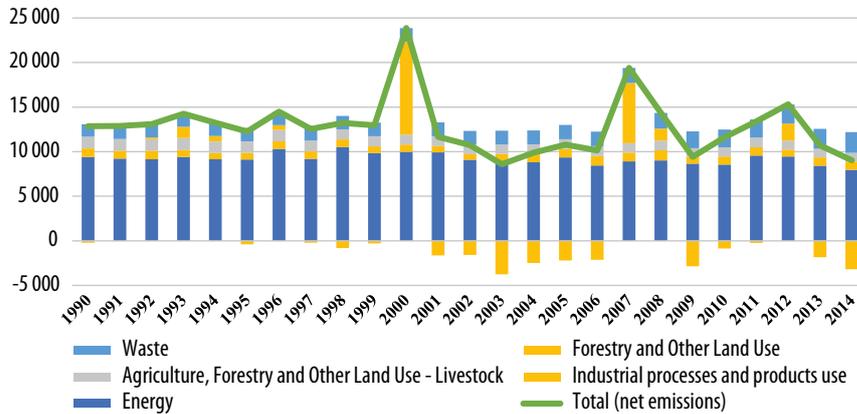
**Despite the economic impact that climate change has already had or is expected to have on various economic sectors in the country,** no estimation of the costs of inaction for the different sectors is carried out.

**At local level, the country acts on climate change.** For example, the City of Skopje has implemented some measures included in the 2011 Skopje Sustainable Energy Action Plan, mostly in the building sector and, to a limited extent, in the transport sector. In 2015, eight municipalities developed through a participatory process and adopted climate change strategies with a 10-year time frame within the Municipal Climate Change Strategies Project financed by the United States Agency for International Development.

**Climate change issues are not integrated into primary, secondary and tertiary education curricula.** Awareness-raising measures relay mostly on donor-financed projects. Overall public awareness on climate change issues remains limited.

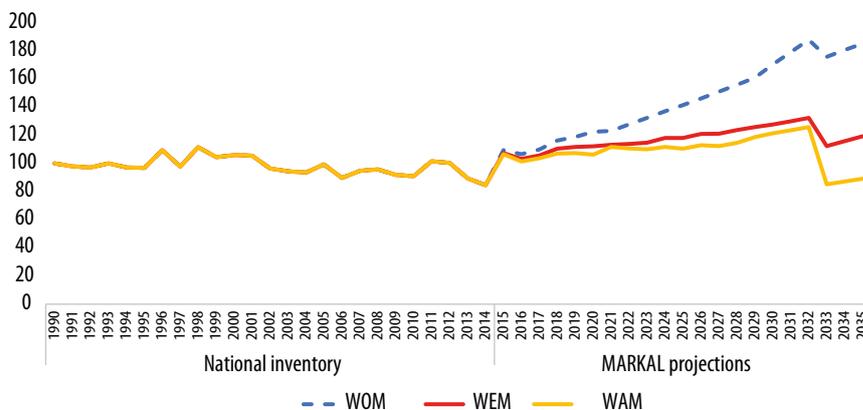


**Figure 1: Greenhouse gas emissions and removals by sector, 1990–2014, Gg of CO<sub>2</sub>-eq.**



Source: Second Biennial Update Report on Climate Change, 2017.

**Figure 2: Comparison of historical greenhouse gas emissions with emissions in the WOM, WEM and WAM (without measures, with existing measures and with additional measures) scenarios, 1990–2034, 1990=100**



Source: Second Biennial Update Report on Climate Change, 2017.

## Recommended measures:

- **Develop a law on climate change and an overall long-term strategy on climate action;**
- **Strengthen human capacities and provide a stronger institutional framework to the GHG inventory preparation process;**
- **Develop a dedicated strategy for adaptation to climate change and disaster risk reduction;**
- **Integrate climate change issues into overall energy planning;**
- **Encourage cities to become signatories to the Covenant of Mayors for Climate and Energy;**
- **Support at the municipal level the implementation of measures that would achieve GHG emissions reduction;**
- **Regularly and systematically implement measures aimed at raising awareness on climate-change-related issues;**
- **Ensure that climate-change-related issues are integrated into education.**



## Air protection

**North Macedonia's efforts to decrease air pollution were successful in the period 2006–2016, in particular because of reduced use of fossil fuels in energy production and gasification of the heating sector.** Since 2013, there have not been any exceedances of the limit values for concentrations of NO<sub>x</sub>, but values close to the limit at stations affected by frequent traffic indicate the need for further action. The whole population of the country is exposed to PM10 concentrations exceeding the annual limit value. Exceedances of air quality standards established for CO still occur occasionally during the heating season.

**Data on air quality are often fragmented, due to inconsistent measurement that leads to a failure to meet data quality objectives (75 per cent of measurements valid during the year) and makes them unsuitable for official use.** Despite the regular calibration of existing equipment, the lack of an accredited calibration laboratory brings data quality into question.

**Reliable data are lacking to assess the impact of air pollution on human health and the environment, establish cause-and-effect relationships and design appropriate actions to mitigate negative impacts.** Although some project-based environmental health assessment activities are performed in the country, the mortality rate attributed to indoor and outdoor air pollution is not monitored. Integrated air quality and health assessments are not carried out on a systematic basis.

**The lack of monitoring of air quality at rural sites prevents assessments of the impact of air pollution on ecosystems and biodiversity.** The only rural background station is at a high altitude and measurements of ozone and its precursors is highly inconsistent. There is no information on parallel assessments of foliar damage or other indicators of the impact of air pollution on vegetation.

**The country maintains an air quality portal that provides complete information on the state of ambient air in the country; all data are public.** Among other information, the portal contains information on measures for improvement of air quality, on sustainable transport and cleaner domestic heating practices for citizens, instructions to the public in the event of exceedances of information and alert thresholds set for certain pollutants, health advice from the Institute of Public Health, as well as information on monitoring network activities, legislative and policy documents, projects, emission inventories and results of air quality modelling.

**Policy documents and measures for the improvement of air quality are not regularly updated, their implementation is not monitored and the effectiveness of their implementation is not assessed.** The strategic framework for air protection has not been updated since its development in 2012. There are no reports on its implementation and the effect of the implemented measures.

**The 2018 Programme for Reduction of Air Pollution does not contain precise deadlines and institutions competent for its implementation, measurable indicators, financial estimations** and other elements to enable the smooth realization of proposed measures, their monitoring and estimation of their impact on the improvement of air quality.

**The Ministry of Environment and Physical Planning does not give enough political backing to ensure implementation of the measures** proposed to improve air quality, even those proposed by an intersectoral working group.

**Transport is a significant source of air pollution, especially in Skopje,** primarily because of old vehicles (average age of 18.6 years), and the high share of passenger cars (77 per cent) and low share of urban and suburban public transport use (11.9 per cent in 2016). Public transport buses are also old, with an average age of 17.8 years.



**Energy production (electricity and heat production) contributed 91 per cent of the SO<sub>2</sub> emissions and 41 per cent of the NO<sub>x</sub> emissions in 2016.** Energy production is also a dominant source of emissions of lead (38 per cent), mercury (45 per cent) and cadmium (49 per cent).

**Residential heating represents a major air quality concern in the country.** It has a major share in total national emissions of polycyclic aromatic hydrocarbons (PAHs) (79 per cent) and polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD/Fs) (77 per cent). It also contributes 67 per cent of the CO emissions, although emissions of this pollutant decreased by 14 per cent in 2016 compared with 2015, due to greater use of natural gas and briquettes and pellets for residential heating instead of fossil fuels and wood.

**Public awareness of the sources and impacts of air pollution as well as on the measures to mitigate those impacts has increased during the last decade.**

The Ministry of Environment and Physical Planning produced public awareness-raising brochures on understanding the effects of air pollution, good wood-burning practices at home and smart means of mobility and better living.

**Table 4: State automatic monitoring system for ambient air quality**

AQ zone	Location	Station type	Parameters measured
Agglomeration Skopje	Centre	Urban traffic	O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO, PM <sub>10</sub> , PM <sub>2.5</sub> , BTX
	Gazi Baba	Suburban background	NO <sub>2</sub> , SO <sub>2</sub> , CO, PM <sub>10</sub>
	Karpos	Urban background	O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO, PM <sub>10</sub> , PM <sub>2.5</sub> , BTX
	Lisiče	Urban traffic/industrial	O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO, PM <sub>10</sub>
	Rektorat	Urban traffic	O <sub>3</sub> , NO <sub>2</sub> , CO, PM <sub>10</sub> , BTX
	Miladinovci	Industrial	O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO, PM <sub>10</sub> , BTX
Western zone	Bitola 1	Industrial	O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO, PM <sub>10</sub>
	Bitola 2	Urban background	O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO, PM <sub>10</sub> , PM <sub>2.5</sub>
	Kicevo	Suburban background	O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO, PM <sub>10</sub>
	Lazaropole	Rural background	O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , PM <sub>10</sub>
	Tetovo	Urban traffic/industrial	O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO, PM <sub>10</sub> , PM <sub>2.5</sub>
	Gostivar	Suburban background	O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO, PM <sub>10</sub>
Eastern zone	Veles 2	Suburban background	O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO, PM <sub>10</sub>
	Kavadarci	Urban traffic	O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO, PM <sub>10</sub>
	Kocani	Suburban background	O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO, PM <sub>10</sub>
	Kumanovo	Suburban background	O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO, PM <sub>10</sub> , PM <sub>2.5</sub>
	Strumica	Suburban background	O <sub>3</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO, PM <sub>10</sub>

Source: Ministry of Environment and Physical Planning, 2018.

Note: BTX refers to mixtures of benzene, toluene and the three xylene isomers.

## Recommended measures:

- **Ensure sufficient financial and human resources for the air quality monitoring network;**
- **Monitor population exposure to PM<sub>2.5</sub> and PM<sub>10</sub>;**
- **Implement an integrated environmental and health monitoring system;**
- **Ensure the monitoring of the negative impacts of air pollution on ecosystems;**
- **Establish a system to monitor the implementation of policy documents on air protection;**
- **Introduce measures for renewal of the passenger vehicle fleet;**
- **Introduce measures to improve energy efficiency and move towards more sustainable fuels in the housing and energy sectors.**



## Water management

**Water availability is expected to decrease in North Macedonia.** Due to the lack of accurate data, unknown and unregulated use of surface water and groundwater, especially by industry, can occur. Water demand from other areas, such as for drinking water, is increasing.

**In North Macedonia, the monitoring of quality and quantity of both surface water and groundwater is insufficient to provide a picture of the state of water resources.** The network of water monitoring stations has deteriorated.

**Major concerns related to water supply are the loss of water in drinking network systems, leakage from degraded irrigation systems, awareness of and technical devices for saving water resources and lack of sanitary protection of the sources.** The existing irrigation structures, facilities and equipment are in poor technical condition. The fee for irrigation water is defined by area and the cultivated crop and not by the water consumed.

**About 12.5 per cent of rivers assessed are of good ambient water quality.** The main source of water pollution is poorly treated wastewater. Although 25 per cent of necessary wastewater treatment plants have been built, most wastewater – especially industrial wastewater – is still discharged untreated into the rivers. Therefore, rivers are largely polluted, and it can be assumed that those river sections will not comply with the EU Water Framework Directive (WFD) criteria for “good” status.

**Bigger cities still have no sewage treatment plants.** Certain rural areas have developed combined domestic sewage and storm wastewater collection systems, but no treatment is performed prior to wastewater discharge. Landfills close to rivers or lakes are a further source of pollution by infiltration or run-off into surface water and groundwater.

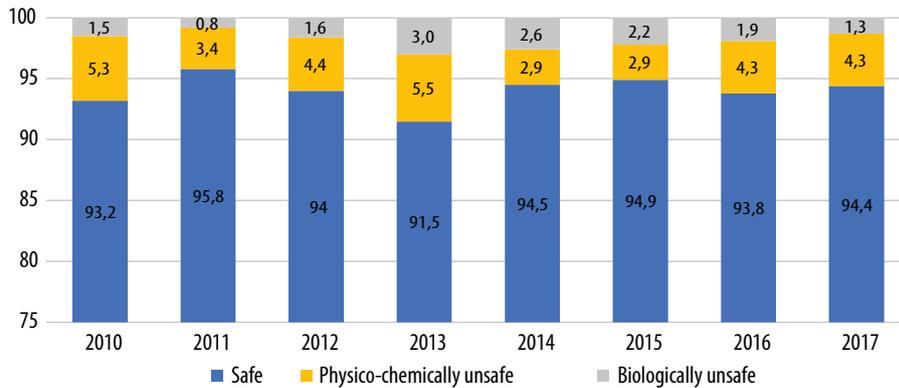
**The WFD has been transposed in the Law on Waters and Directive 2007/60/EC on the assessment and management of flood risks is intended to serve as a guideline for further action on flooding in the future.** However, practical implementation is lagging behind significantly. The country is very vulnerable to river floods and flash floods, but an effective system of flood prediction, warning and appropriate measures in the event of a flood is missing.

**The country is yet to establish river basin management councils** and to develop detailed criteria for representation of various groups of stakeholders, methodological guidance and funding issues. The National Water Council is not in operation.

**River basin management plans (RBMPs) for Lake Prespa and the Bregalnica River have been developed,** while RBMPs for the Strumica and Vardar River Basins have been drafted. None of the RBMPs so far developed has been adopted by the Government and none of them has been subject to SEA.

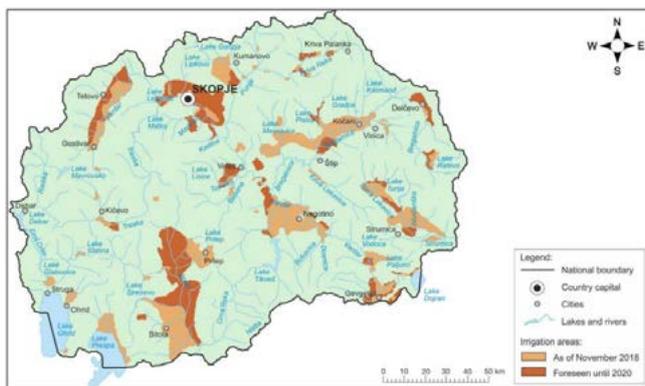


Figure 3: Drinking water quality, 2010-2017, percentage



Source: Institute of Public Health, 2018 ([www.moepp.gov.mk/?page\\_id=4900](http://www.moepp.gov.mk/?page_id=4900))

Map 2: Irrigation areas



Source: Agency for Real State Cadastre, Ministry of Environment and Physical Planning, 2010.

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

## Recommended measures:

- **Allocate an adequate regular budget for the water monitoring network and water management;**
- **Improve data collection on groundwater and surface water abstraction and use;**
- **Apply the water-user-pays and polluter-pays principles for all water users and dischargers;**
- **Ensure a special regime for the sanitary protection of sources of drinking water supply;**
- **Provide rehabilitation of irrigation systems and strengthen agricultural advice;**
- **Construct wastewater treatment plants and sewerage systems and prevent the deterioration of existing systems;**
- **Protect rivers from erosion and ensure that ecological improvements on dams are considered;**
- **Consider preparing a handbook of flood adaption planning and building, raise public awareness of floods, maintain existing flood protection systems and consider building new systems;**
- **Ensure that the National Water Council is operational and that river basin management plans are developed.**



## Waste and chemicals management

**Since 2008, the country has made little progress in developing waste management infrastructure.** The existing non-compliant municipal landfills do not meet even the basic conditions for safe waste disposal. Despite developments in the establishment of regional waste management systems and progress in the preparatory work, none of the regional landfills has been completed.

**The existing non-compliant municipal landfills will continue to operate for at least another few years,** but most of them do not fulfil the basic legal requirements and are subject to inspections checking only on limited parameters, which is not sufficient to ensure basic sanitary conditions. The lack of proper landfills makes it impossible to control the municipal disposal sites against the standards set by the legislation.

**The 2008 Strategy for Waste Management and National Waste Management Plan (2008–2020), and the relevant legislation, define and focus on targets for separate collection of waste and waste recovery and recycling,** but currently do not provide for adequate measures for the growth of a domestic recycling industry.

**Progress was made in the separate collection and recycling of waste streams** that are under the EPR schemes, such as packaging waste, waste electrical and electronic equipment and waste batteries and accumulators.

**Waste collectors are not encouraged to collect waste separately (by type) wherever waste is generated.** Industrial enterprises that use waste as raw material are not incentivized to recycle. Also, there is no encouragement of consumers to purchase products made of recycled materials.

**Since 2010, the country has worked on applying the principles of the Strategic Approach to International Chemicals Management,** upgrading policy and improving practical measures for sound chemicals management, and is focused on preparing for the remediation of contaminated sites.

**The Waste Management Information System is not operational.** Reports by municipalities, health-care facilities, enterprises on the EPR scheme and public communal companies are submitted on paper, which makes their validation, further processing and publication much more burdensome. Data collection is mostly not evidence based and, because of some overlap in institutional responsibilities, there are significant discrepancies in the published data sets for some waste types.



### BOX 6: SKOPJE'S WASTE MANAGEMENT

In Skopje, waste collection is done by the public company "Public Hygiene", which is owned by the City of Skopje. "Public Hygiene" collects waste from households and companies that produce waste similar to MSW (commercial waste) from the whole urban area of the city and also from around 60–70 per cent of the suburban areas. Different tariffs apply for the two types of consumers: 3.59 denars/m<sup>2</sup> (+ VAT) for households and 5.5 denars/m<sup>2</sup> (+ VAT) for companies (as at September 2018), while households in suburban areas have a flat rate fee equivalent to €5 per month. Tariffs are regulated by decision of the Council of the City of Skopje.

The amount collected covers costs. The payment rate is around 80 per cent, while the cumulative payment rate is 95 per cent (after forced payments or charges imposed in court). The company operating Drisla landfill was converted to a public-private partnership to ensure more funds for the necessary upgrade of the landfill. A feasibility study was carried out in 2011, which incorporated all the necessary improvements: better leachate and surface water control, construction of a new landfill body, introduction of mechanical biological treatment, green waste composting, ensuring conditions for the proper treatment of construction and demolition waste, construction of a hazardous and non-hazardous waste treatment plant and construction of a new medical incinerator plant. Due to the termination of the contract, the landfill is owned by the City of Skopje and only smaller developments have been completed since 2011.

Still, the landfill fulfils the basic requirements for safe waste disposal and it holds an A-type IEP for waste management. It has a system for monitoring the wastewater and gases inside the landfill, leachate water is collected and the residue is landfilled, atmospheric water is channelled around the landfill so that it does not enter the site, and the site is fenced and under video surveillance. Asbestos is landfilled at a special underground part of the landfill, separately from MSW. Construction and demolition waste is landfilled as MSW, but it is also used as the cover layer. Medical and hazardous waste in the country is only treated at the Drisla landfill: it is co-incinerated in the landfill's furnace, in which new filters were installed in 2018.



### Recommended measures:

- **Undertake relevant measures to stop environmentally harmful activities at non-complaint landfills;**
- **Assess the efficiency and impacts of the existing legislation on extended producer responsibility;**
- **Adopt the draft national waste prevention plan to serve as the national policy on waste reduction, reuse and recycling;**
- **Support the establishment of the regional waste management systems and take measures to speed up the construction of regional landfills;**
- **Establish an expert group to agree on waste-related indicators and adjust data collection methodologies;**
- **Ensure the implementation of the activities necessary to bring the Waste Management Information System into operation.**



## Biodiversity and protected areas

**North Macedonia has successfully preserved the abundance of wild native species of fauna, fungi and flora**, including numerous species categorized by the International Union for Conservation of Nature as globally threatened by extinction and species included in the European Red List, as well as many endemic species, such as the Balkan lynx and Balkan chamois.

**The integrity of almost all natural ecosystems in the country is currently threatened, due partly to ongoing climatic changes but also to anthropogenic pressures, resulting in habitat degradation and the increasing threat of forest fires.** The biodiversity loss continues, and populations of several rare species continue to decline in size. The currently applied management approaches and strategies do not provide for effective biodiversity conservation.

**The 2011 lists of strictly protected and protected wild species are only based on assumptions and historical data.** No national red list of threatened species has been adopted, and no corresponding red book has been published to date.

**The National Biodiversity Information System and the national biodiversity monitoring system are not operational.** Data on the size of and trends in populations of both the rare and widespread (e.g., game) species are either not available or not reliable. The level of threat to wildlife species occurring in the country cannot be assessed.

**The process of revalorization and reproclamation of existing protected areas has not yet been completed, which impeded the preparation and adoption of all required management plans for protected areas.** A land cadastre to allow the determination of land use and land ownership, and a national inventory of forest resources are lacking. The operations of national parks largely depend on own revenues deriving from the use of natural resources or external (foreign) financial support, while the majority of protected areas of other categories have neither a budget nor a management body.

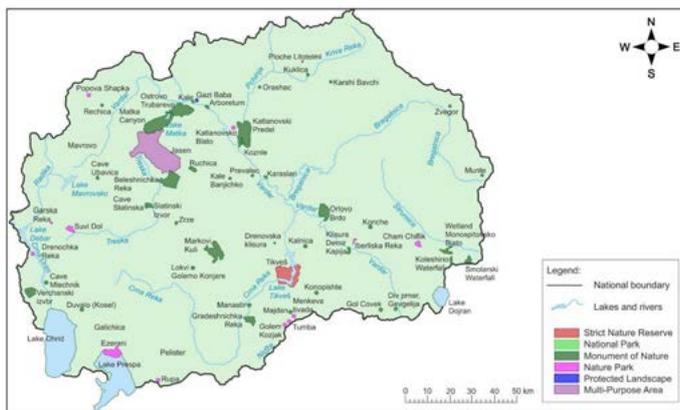
**Protected areas covered 8.93 per cent of the country's territory in 2017, which is well below the minimum value of at least 17 per cent by 2020 indicated in the CBD Aichi Biodiversity Target 11.** The current national protected area network does not ensure ecological continuity and connectivity, as linking ecological corridors are still lacking.

**North Macedonia has two Ramsar sites, one UNESCO Man and the Biosphere Reserve and one site inscribed on the World Heritage List.** Two other sites with high potential for nomination under the World Heritage "natural" criterion have remained on the Tentative List since 2004.

**The 2018 National Strategy for Nature Protection and Action Plan for the period 2017–2027 and the 2018 National Biodiversity Strategy and Action Plan for the period 2018–2023 are ambitious.** However, they require harmonization regarding timelines set for the same activities, which sometimes differ between the documents. A national wetlands policy or a programme for wetlands conservation remain to be developed. The national spatial plans do not include measures for the protection and sustainable use of wetland areas.

**Various institutions and organizations are involved in activities for biodiversity conservation and nature protection.** However, concerted efforts to coordinate activities between the responsible ministry for environmental affairs and many different sectors, such as forestry, agriculture, transport, energy and tourism, are lacking.

**Map 3: Geographical distribution of protected areas**



Source: Ministry of Environment and Physical Planning.  
 Note: The boundaries and names shown on this map do not imply official endorsement or acceptance by the United Nations.

**Table 1: Protected areas, 2012, 2014, 2016 and 2017, number and ha**

Classification	Number				Area (ha)				Percentage of territory in 2017
	2012	2014	2016	2017	2012	2014	2016	2017	
Ia: Strict nature reserve	2	2	2	2	10 673	10 023	7 787	7 714	0.3
Ib: Wilderness area	0	0	0	0	0	0	0	0	0
II: National park	3	3	3	3	115 713	115 602	114 870	114 937	4.47
III: Monument of nature	57	67	67	67	70 424	71 396	78 968	78 939	3.07
IV: Nature park	15	12	12	12	3 376	2 763	3 045	3 086	0.12
V: Protected landscape	3	1	1	1	5 387	102	108	102	0
VI: Multipurpose area	1	1	1	1	26 923	26 923	25 305	24 941	0.97
<b>Total</b>	<b>81</b>	<b>86</b>	<b>86</b>	<b>86</b>	<b>232 496</b>	<b>226 809</b>	<b>230 083</b>	<b>229 719</b>	<b>8.93</b>

Source: Fifth National Report to the Convention on Biological Diversity, 2015; National Strategy for Nature Protection and Action Plan for the period 2017–2027.

### Recommended measures:

- **Implement the national biodiversity monitoring programme;**
- **Implement research on forest ecosystems and habitats and carry out a national inventory of forest resources;**
- **Develop a national policy or a programme for wetlands conservation;**
- **Develop relevant action plans or programmes for ecosystems and species conservation;**
- **Complete the revalorization and reproclamation of existing protected areas and designate new ones;**
- **Establish effective coordination mechanisms for the development and implementation of policies on biodiversity conservation and nature protection.**



## Main achievements in 2011–2018

In 2011–2018, North Macedonia's main actions to improve its environmental performance include:

- Separating the State Environmental Inspectorate from the Ministry of Environment and Physical Planning;
- Enhancing and deepening substantially the use of economic instruments in environmental protection;
- Operating a subsidy programme for the promotion of renewable energy sources and improvements in energy efficiency in households;
- Improving the air quality monitoring network;
- Implementing climate change mitigation measures in the energy sector;
- Decreasing air pollution by reducing the use of fossil fuels in energy production and gasification of the heating sector;
- Operationalizing several renewable energy projects that contribute to an increasing share of energy from renewable sources in the energy mix;
- Advancing the separate collection and recycling of waste streams that are under extended producer responsibility schemes;
- Advancing the sound management of chemicals through enhanced legal and policy frameworks, projects and capacity development, focussing on the remediation of contaminated sites;
- Promoting environmental education in formal and non-formal education.

### PHOTO CREDITS:

*Page 2:* Sustainable mobility in Skopje – EPR Team, Sustainable mobility in Skopje – EPR Team, Youth fishing in Ohrid Lake – EPR Team. *Page 3:* Jakupica mountain range – I. Milevski, Jablanica – D. Bogner. *Page 4:* Dramatic sky over Skopje – EPR Team. *Page 5:* Dramatic sky over Skopje – EPR Team. *Page 6:* Mountaintop view, National Park Galicica – H. Lindahl. *Page 7:* Mountaintop view, National Park Galicica – H. Lindahl. *Page 8:* Electric car in Skopje – A. Guti, Promoting collection of electronic waste – EPR Team, Drying red paprika (*Capsicum annum L.*) – EPR Team. *Page 9:* "Trash" fashion, made by students – EPR Team. *Page 10:* National Park Galicica – D. Bogner. *Page 11:* Šar Mountains – D. Bogner, Lake Ohrid biodiversity – EPR Team. *Page 12:* Skopje Public Information Centre – EPR Team, Learning about nature on the shores of Lake Ohrid – EPR Team, Street in Ohrid – EPR Team. *Page 13:* E-waste collection at school – EPR Team, Eco-codex in school – EPR Team, Children handmade teaching material (local seeds) – EPR Team. *Page 14:* Šar Mountains – A. Stavrevska. *Page 15:* Nezilovo steni – V. Trpeski. *Page 16:* Lake Prespa – UNDP North Macedonia. *Page 17:* Lake Prespa – UNDP North Macedonia. *Page 18:* Skopje – UNDP North Macedonia. *Page 19:* Skopje – UNDP North Macedonia. *Page 20:* Ohrid view from National Park Galicica – D. Bogner. *Page 21:* Lake Ohrid – Jan Ulrich Job. *Page 22:* Separate waste collection – A. Guti, Wastewater treatment plant in Novo Selo – UNDP North Macedonia, Glass recycling – A. Guti. *Page 23:* Old culvert in Cheshinovo-Obleshevo Municipality – UNDP North Macedonia. Cleaning the riverbed – UNDP North Macedonia. Composting factory near the city of Resen – UNDP North Macedonia. Newly built landfill in Gevgelija – UNDP North Macedonia. *Page 24:* Šar Mountains, sticky catchfly (*Viscaria vulgaris* or *Lychnis viscaria*) – D. Bogner. *Page 25:* Šar Mountains, bistort (*Bistorta officinalis* or *Persicaria bistorta*) – D. Bogner.

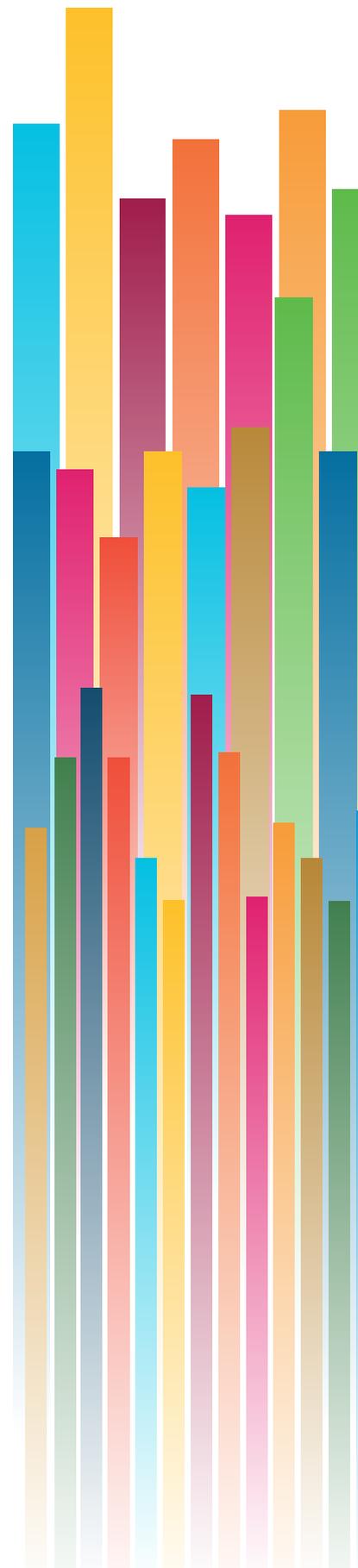
## Priorities for the future

The priorities for improving the country's environmental performance in the future include:

- Nationalizing the Sustainable Development Goals, raising awareness and ensuring multi-stakeholder participation in achieving the Goals;
- Advancing the use of integrated approaches to environmental sustainability such as Strategic Environmental Assessment, Integrated Water Resources Management and Environmental Impact Assessment, including in a transboundary context;
- Establishing an environmental protection agency;
- Establishing an effective mechanism for regular consultation and assistance to municipalities for implementing their environment-related competences;
- Greening the public procurement process to support environmental protection;
- Improving or establishing monitoring networks for surface water and groundwater, atmospheric precipitation and snow cover, biodiversity, soil and noise and vibration;
- Promoting and supporting eco-schools;
- Improving waste and wastewater management, with the construction of regional landfills and sewage treatment plants;
- Completing the process of revalorization and re-proclamation of existing protected areas and implementing the recent policy documents on biodiversity conservation and nature protection;
- Implementing legally-binding renewable energy targets by tapping the country's potential for solar photovoltaic power, thus reducing reliance on fossil fuels and hydropower and dependence on electricity imports.

### COVER PAGE PHOTOS: COVER PAGE PHOTOS:

Nature Protected Area Kuklica – UNDP North Macedonia, Ohrid Lake – EPR Team, Vardar River, Skopje – EPR Team  
Ohrid Lake promenade – EPR Team, Drying red paprika (*Capsicum annum L.*) – EPR Team



# North Macedonia Environmental Performance Reviews Third Review - Highlights

The United Nations Economic Commission for Europe Environmental Performance Review Programme assesses progress made by individual countries in reconciling their economic and social development with environmental protection, as well as in meeting international commitments on environment and sustainable development.

The third EPR of North Macedonia examines the progress made by the country in the management of its environment since it was reviewed for the second time in 2011 and assesses the implementation of the recommendations made in the second review. The third review covers legal and policy frameworks, greening the economy, environmental monitoring, public participation and education for sustainable development. Furthermore, it addresses issues of specific importance to the country related to air protection, biodiversity and protected areas, as well as water, waste and chemicals management. The review further provides a substantive and policy analysis of the country's climate change adaptation and mitigation measures and its participation in international mechanisms. The review has an additional thematic angle on the Sustainable Development Goals: it includes an assessment of relevant targets and recommendations related to the achievement of Sustainable Development Goals.

The Highlights of the third Environmental Performance Review of North Macedonia draw attention to the key findings of the review to inform and guide policymakers and representatives of civil society, as well as the international community, in their efforts to improve environmental management and to further promote sustainable development in Uzbekistan.

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