



# Environment protection and quality improvement



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This edition of policy papers is developed to assist the civil society and citizens, in general, engage in an informed debate and have access to expert knowledge, views and opinions on topics of importance for EU integrations. Areas in which the Republic of North Macedonia will lead its EU accession negotiations are both complex and diverse, while reforms that need to be implemented will open many dilemmas that necessitate an expert debate. For more contents produced under the project “CSO Dialogue – Platform for Structural Participation in EU Integrations”, visit the website: **[www.dijalogkoneu.mk](http://www.dijalogkoneu.mk)**

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# 1. Addressing environment degradation and stopping biodiversity loss

## 1.1 Environment degradation

The right to healthy environment is a fundamental human right. There is no economy without sustainability, and there is no health and wellbeing without clean environment. Conservation, protection and promotion of quality of the environment and quality of life for the people to ensure sustainable growth that contributes to attainment of the UN Sustainable Development Goals under Agenda 2030 (Fig.1), is the vision that we aspire to achieve.

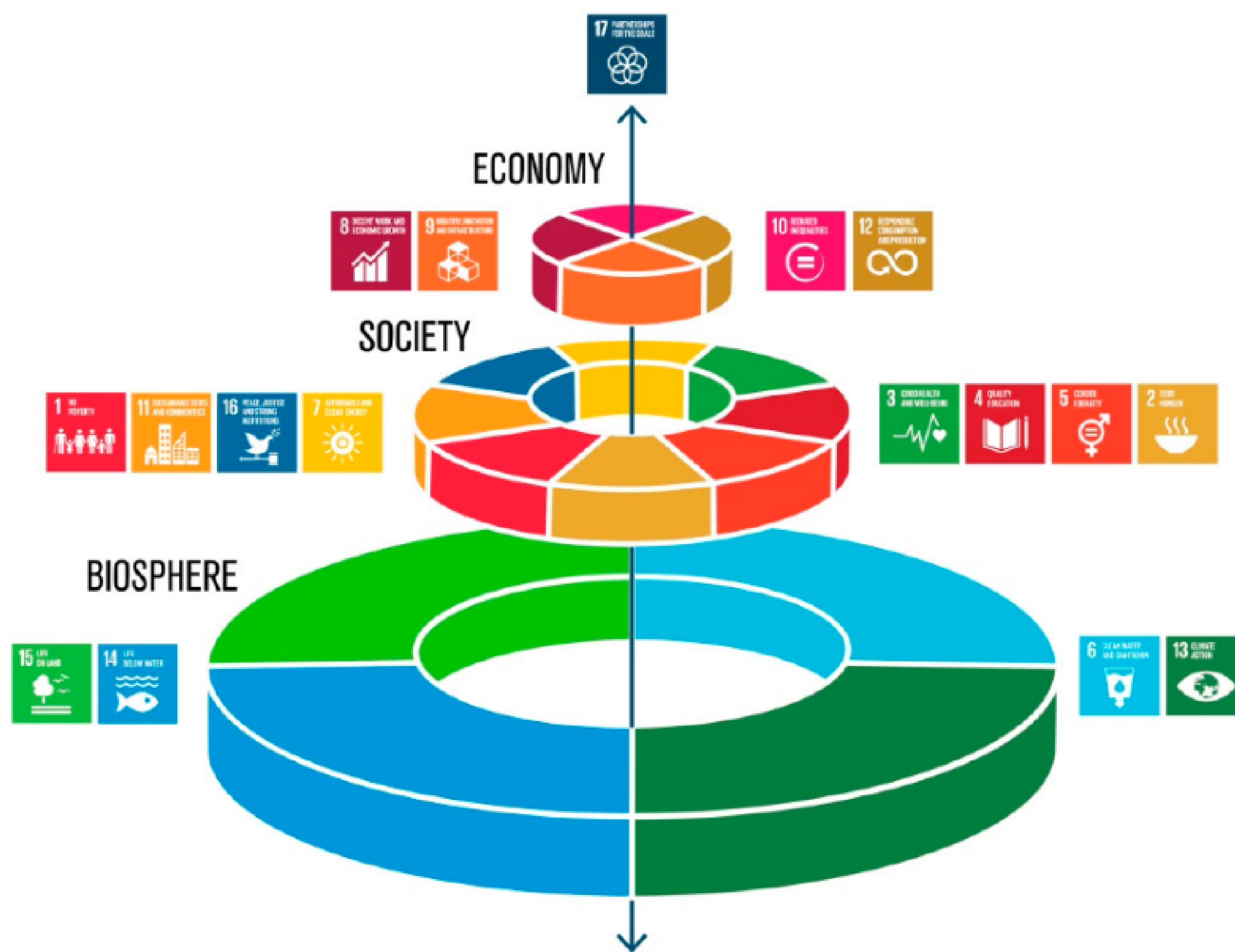


Figure 1. UN Sustainable Development Goals (UN SDGs)

Environment degradation and climate change are the cruel reality we are facing daily. More often than not, we witness distortions in the environment like draughts and floods affecting one and the same location within a short period of time, land pollution, air pollution, reduced quality and quantity of drinking and irrigation water resources, land erosion, and the like. Changes to nature ecosystems are permanent and they are caused by both, biotic and abiotic factors. Anthropogenic distortions are also observed.

The Republic of North Macedonia has adopted a series of laws and bylaws that regulate the environment, environment pollution and monitoring (water, air, noise, and waste management). All environment mediums and aspects (water, air, waste, monitoring) are covered under national strategies that provide basic guidelines for addressing the existing problems and for planning future activities. Most important documents in that regard include the First and Second National Environment Action Plan (NEAP1 and NEAP2), as well as Local Environment Action Plans (LEAPs) at the level of municipalities.

According to the National Strategy on Sustainable Development [1], key factors/pressures on the environment are identified with four sectors: energy, transport, industry and agriculture.

[1] Better Future Through Change: More Balanced Use of Our Rich Social, Cultural and Natural Heritage, project financed by SIDA, in cooperation with the Ministry of Environment and Spatial Planning of the Republic of Macedonia.

Raising awareness in these sectors about their pressures on the environment and greenhouse emissions, is a national priority. Each of the four sectors is a major factor in environment and climate change policy development and implementation and efforts are needed to improve the level of communication and cooperation between them and the Ministry of Environment and Spatial Planning.

**The energy sector** undoubtedly is among sectors that account for greatest pressures on the environment, which is directly related to and a consequence of poor-quality of coal used for energy generation. This sector represents a serious threat to the environment as nearly 90% of primary energy is generated from fossil fuels, mainly lignite and crude oil. The electricity system in North Macedonia is comprised of:

- »» lignite- and oil-fuelled thermal powerplants, with total installed capacity of 1010 MW;
- »» hydro powerplants, with total installed capacity of 580 MW;
- »» cogeneration thermal plants – natural gas-fuelled heating energy plants, with total installed capacity of 250 MW for electricity and 174 MW for heating energy;
- »» electricity transmission and distribution systems (grids).

Thermal powerplants are dominant in the electricity system of North Macedonia. TPP Bitola (80%) and REC Oslomej account for the highest share in total electricity generation, and they rely on coal excavated from the mines in Suvodol and Oslomej [2].

This problem is additionally exacerbated by use of relatively old equipment and technology, which need to be modernized and account for additional pressure on the environment. The energy sector's share in total greenhouse gas emissions accounts for around three quarters, with electricity generation being dominant [3]. As member of the Energy Community, the Republic of North Macedonia is already under obligation to align its legislation with the EU *acquis communautaire* in the field of energy, which means increased use of renewable energy, integration of energy efficiency standards for buildings and equipment, integration of the energy efficiency criterion in public procurements, and reduction of specific pollutants (e.g., SO<sub>x</sub> and NO<sub>x</sub>) emitted by electricity powerplants.

*The Strategy on Energy Development in the Republic of North Macedonia by 2040 [4], which is under competences of the Ministry of Economy, defines the most advantageous long-term development of the energy sector in the country in order to ensure reliable and quality energy supply to consumers, with maximum use of renewable energy as the priority activity.*

**Agriculture** also accounts for significant share in environment pollution. Use of pesticides and mineral fertilizers is rarely based on expert knowledge about the need thereof. Most often, excessive quantities are applied in inadequate intervals, resulting in pollution of the land, underground water and surface water ecosystems. Pressures on the environment created by agriculture activities mainly affect biodiversity [5], land erosion, agriculture waste and pollution of water recipients, but also greenhouse gas emissions.

[2] Shopova-Alushoska, B. (2013). Impact of Energy Facilities on the Environment. University of St. Clement of Ohrid, Bitola.

[3] <https://www.moep.gov.mk/wp-content/uploads/2014/11/Vtor%20NEAP%202006.pdf>

[4] [https://economy.gov.mk/Upload/Documents/Energy%20Development%20Strategy\\_FINAL%20DRAFT%20%20For%20public%20consultations\\_MK\\_29.10.2019\(4\).pdf](https://economy.gov.mk/Upload/Documents/Energy%20Development%20Strategy_FINAL%20DRAFT%20%20For%20public%20consultations_MK_29.10.2019(4).pdf)

[5] In the last decade, biodiversity has been particularly threatened by agriculture activities such as draining areas (natural wetlands), lake eutrophication processes and loss of local species.

*Institution competent for implementation of agriculture and rural development policy is the Ministry of Agriculture, Forestry and Water Economy, which has 33 regional offices located in all regions. In order to reduce environment degradation from the agriculture sector, efforts are needed to stimulate agriculture activity that promotes the environment and rural areas (agroecological measures). This activity anticipates policies aimed at promoting agriculture production practices for sustainable use of agriculture land, promoting and protecting the environment and rural areas to preserve vegetation and animal diversity, and advancing the quality of land, water and air.*

Forests are an invaluable natural resource and could serve as global storage for carbon and biodiversity. However, growing demand for forest products and land under forest leads to degradation and usurpation of forest lands, with serious immediate effects on local populations. For this reason, reducing the level of forest degradation and destruction is one of the biggest challenges in the **forestry sector**, both for developing countries and the global community. The greatest cause behind the unfavourable status of forests is identified in fires, vegetation diseases and pests, inadequate individual woodcutting that had taken place in the past and has led to complete deforestation of entire areas, specific natural conditions, and lack of public awareness on the importance of forests. All these pressures resulted in forest degradation and land erosion.

*The sector on forestry and hunting at the Ministry of Agriculture, Forestry and Water Economy (MAFWE) participated in several projects and activities of international significance that implied directing forest policy and activities in line with European contemporary trends. However, the Republic of North Macedonia still remains one of the rare countries in the region that has not completed its forest inventory and certification according to the concepts of internationally recognized standards for sustainable management. The country has still not designated forest areas of significance, as well as forest types and ecosystems of fundamental significance for the nature and biodiversity. Although, in the past, significant areas under rainforest have been identified (e.g., Emirichka River, 482 ha), today these are not specified and are largely turned into economic forests[6].*

The growing volume of **transport infrastructure** leads to even greater pressure on the environment, and is closely linked to climate change and biodiversity loss. Great efforts are aimed at preventing these trends. Construction of infrastructure facilities requires enormous space for performance of building activities which, in turn, have a major effect on the nature and biodiversity, causing degradation and fragmentation of lands and habitats. To some extent, negative effects of the road infrastructure could be avoided or compensated.

*The Ministry of Transport and Communications is competent for the country's transport policy. Except for this ministry, several other bodies and public institutions are responsible for different fields in the transport sector. Public Enterprise (PE) on State Roads is responsible for planning, construction, maintenance and financing of state roads.*

*In order to prevent degradation, more serious planning of routes is needed to avoid the negative impact on important environmental values. In the future and for the purpose of reducing biodiversity fragmentation, the process and methodology of spatial planning needs to be changed in terms of integrated and comprehensive definition of space and compliance with spatial plans. A positive example is seen in some projects financed with loans from EBRD, World Bank, WBIF, KfW and other financial institutions, which impose particular environmental and social requirements and criteria for project funding. In particular, the European Bank for Reconstruction and Development (EBRD)*

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[6] NATIONAL STRATEGY ON BIODIVERSITY AND ACTION PLAN 2018 - 2023

*has defined ten requirements for construction works that cover key areas of environmental and social reconsiderations [7]. EBRD-financed projects are expected to be designed and managed in compliance with good international practices on sustainable development.*

By discharging enormous quantity of pollutants, greenhouse gas emissions, acidic substances, vaporising organic compounds and generating waste, **industrial production** is a major contributor in the overall environmental pollution. At the same time, industrial production is of crucial importance for economic growth, poverty reduction and improved standard of living. That is why the models of sustainable production and sustainable consumption become the baseline for food provision and balanced future, accompanied by economic growth, social cohesion, poverty reduction and good environmental conditions. Vast portion of the industry is greatly dependant on natural resources and therefore it is very important to encourage effective use of energy and mineral resources.

*The legislative framework on industrial pollution control is established under the Law on Environment, which introduces a system of permits based on integral pollution prevention and control (IPPC) and a system of gradual compliance with environmental protection standards and norms on the part of the industry. Large portion of big polluters in North Macedonia have still not established relevant systems for prevention of harmful emissions in spite of the obligations imposed under the IPPC procedure for obtaining integrated permits.*

*On the account of significant discharge of polluting substances in all environment mediums, these practices need to be reduced in order to preserve the biodiversity and maintain the function performed by ecosystems (in addition to preservation of human health). Achievement of these objectives necessitates introduction of systems for reduced discharge of harmful materials in the environment (air, water, soil).*

## **1.2 Addressing biodiversity loss**

Albeit being assigned small significance, biodiversity loss is a common type of environment degradation. According to expert assessments, the planet is facing a loss of 27,000 species on annual basis, and if this trend continues, 25% of all living organisms, i.e. one quarter of all life on the Earth, will be lost in the next 30 years.

Due to human activity, species are extinguishing at a rate that is 100 to 1000 times faster compared to the natural course of extinction. According to the Food and Agriculture Organization (FAO), 60% of global ecosystems are degraded or used in unsustainable manner, 75% of fish stock is overfished or depleted and 75% of genetic biodiversity in agriculture was lost since 1990; in the case of livestock, 30% of global mammalian and bird species (1,200 and 1,500, respectively) are endangered or extinct in the second half of the last century; around 13 million ha of tropical forests are cut down every year; 20% of tropical coral reefs have already disappeared, and as many as 95% would be seriously threatened by 2050 as a result of climate change [8].

Biodiversity is a key and basic component for maintenance of life in the nature. All types of living organisms and all ecosystems are intertwined into one global ecosystem network and even the smallest change, such as loss of animal species or destruction of certain ecosystems, could completely disturb this network. Biodiversity affects almost all aspects of life.

[7] <https://www.ebrd.com/who-we-are/our-values/environmental-and-social-policy/performance-requirements.html>

[8] FAO. 2019. The State of the World's Biodiversity for Food and Agriculture, J. Bélanger & D. Pilling (eds.). FAO Commission on Genetic Resources for Food and Agriculture Assessments. Rome. 572 pp. (<http://www.fao.org/3/CA3129EN/CA3129EN.pdf>) Licence: CC BY-NC-SA 3.0 IGO.

Greater biodiversity of plants means higher quantity of food, but also diversity of food, greater vegetation keeps and maintains drinking waters, river plants help the natural cleansing of river waters. Fungai, insects and worms participate in formation of soil, while trees with deep root systems protect the soil from erosion. Simply put, biodiversity represents a singular and main food resource for everyone in the nature. It keeps our health because all medicines are a result of plant activity and metabolism, while some plants and algae take part in cleaning polluted air and reducing the climate change effect [9].



Figure 2. Causes for loss of natural ecosystems

Each destructive activity to biodiversity brings about almost irreversible change. Main sectors with negative effect on the natural ecosystems (Fig.2) and especially on the survival of wildlife are energy, forestry, agriculture, as well as construction of infrastructure and other industrial and urban complexes. According to MAFWE, in the last decade, main pressures were noted in respect to water ecosystems, especially basins of major rivers, but also capture of smaller waterflows within mountain ecosystems for electricity generation. Effects are registered also with herbaceous ecosystems and communities, with livestock depopulation and decrease in rural areas and changes that are a result of invasive plant species expansion (succession). Land erosion is present due to unsustainable forest management, also resulting in vegetation loss. Moreover, forest fires negatively affect the stability of forest ecosystems. Climate change has a more prominent negative effect on the stability of natural ecosystems and the structure of living species. Most prominent are changes with swamp and water ecosystems because distortions to water regimes result in loss of important vegetation communities, as well as habitats, especially loss of endemic and rare wild plants and animals.

Legal basis for protection of the nature is provided under international treaties [10], signed or ratified in the field of nature protection. The Republic of North Macedonia has defined the National

[9] <http://www.bregalnica-ncp.mk>

[10] Convention on Biological Diversity; Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar); Convention on the Conservation of Migratory Species of Wild Animals (Bonn); Convention on the Conservation of European Wildlife and Natural Habitats (Berne); Convention on Protection of the World Cultural and Natural Heritage; Convention on International Trade in Endangered Species of Wild Fauna and Flora; European Convention for the Protection of Vertebrate Animals Used for Experimental and Other Scientific Purpose; Agreement on the Conservation of Populations of European Bats, Amendment to the Agreement on the Conservation of Populations of European Bats; Convention on the Conservation of African-Eurasian Migratory Waterbirds (the Hague); Cartagena Protocol on Biosafety to the Convention on Biological Diversity (signed) and Memorandum of Understanding on the Conservation and Management of the Middle-European Population of the Great Bustard (*Otis tarda*) (signed)



Goals for Nature and Biodiversity Protection set forth in the Law on Nature Protection. They are elaborated in details under several strategy documents: National Strategy on Nature and Action Plan (2017-2027), National Strategy on Biodiversity and Action Plan (2018-2023), National Strategy on Sustainable Development, Strategy on Spatial Development of MK and other documents. National Strategy on Biodiversity specifies 19 national goals for biodiversity conservation, which are aligned with the UN Global Biodiversity Goals (Aichi Biodiversity Targets) and the EU Biodiversity Strategy. Based on expert analyses, it was established that national goals under the Law on Nature Protection and the National Strategy on Biodiversity and Action Plan by 2020 have not been achieved at the point of review in 2015. Notably, the analysis showed that local, regional and national capacity is not enhanced and that national awareness on nature and biodiversity protection is still very low. Global and regional economic downturns had and still have a major effect in terms of securing financial resources for implementation of nature and biodiversity protection programs and projects in the region and in North Macedonia.

However, it should be noted that significant progress is achieved in valorisation of nature heritage whereby, only in the last several years, nature valorisation studies were developed for the Shar Mountain, Osogovo Mountains, Prespa Lake, Vodno and National Park Pelister. Underway is development of studies for Chengin Kale in the Maleshevo Mountains, Ohrid Lake, and addition to the study on Studenchishta Swamp. The First National Red List of Herpetofauna (amphibians and reptiles), Plants and Mammals is developed according to the criteria, guidelines and procedures of the International Union for Nature Conservation (IUNC).

One of the biggest achievements is adoption of the Law on Declaring the Shar Mountain as National Park (30.06.2021). According to MAFWE's communication, adoption of this law has resulted in the country having its fourth national park after declaration of the last national park in 1958 and the first since the independence of the Republic of North Macedonia. Declaring the Shar Mountain as natural protected area has put under protection and allowed introduction of sustainable management system for an area rich in biodiversity, the home of two thirds of all vegetation species in North Macedonia and area abounding in endemic plant and animal life. It disposes with exceptional natural beauties, geodiversity, hydrology, landscapes, areal and cultural values. Most importantly, it is expected for this step to turn a new page and open new opportunities not only in terms of protecting natural heritage in the country, but also for sustainable socio-economic development of this area and the country, establishment of wider cross-border cooperation, use of new funding opportunities and development of local brands and various forms of tourism and enhanced supply powers.

Increased number and surface covered under declared national protected areas is important for nature and biodiversity conservation. That will improve the national policy on nature protection, by implementing measures and activities for protection, conservation and sustainable use of biodiversity.

According to the statistics kept by MESP, the system of protected areas now includes 86 areas, with total of 230,083 ha or around 8.9% of the territory of the Republic of North Macedonia.

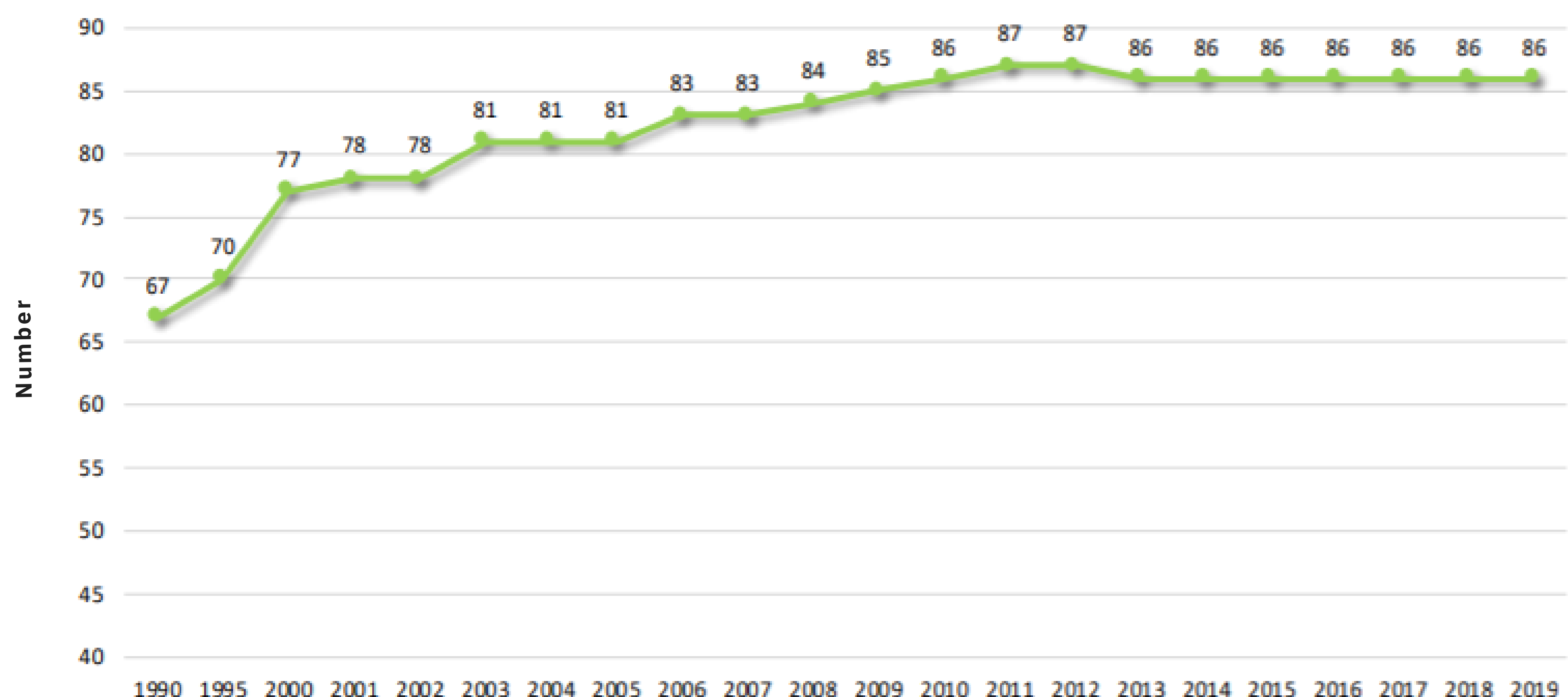


Figure 3. Total number of protected areas

Greater involvement in nature protection should be secured from other sectors, in order to achieve progress and increase the percentage of protected areas, but also to ensure compliance with legislation on nature protection, and in that regard, with protected areas in other sectors (forestry, agriculture, energy, economy, transport, tourism, etc.). In particular, efforts are needed to increase education at national, regional and local level on the significance of protected areas and benefits they could provide, especially in respect to ecosystem services.

At EU level, an ambitious strategy is adopted for prevention of biodiversity loss and ecosystem services in EU member-states. The EU 2030 Biodiversity Strategy is a comprehensive, ambitious and long-term plan for nature conservation and restoration of degraded ecosystems. It aims to put biodiversity in Europe on the path to recovery by 2030 and contains specific activities and commitments. Forming an integral part of the European Green Agenda, it also supports green recovery after the COVID-19 pandemic.

The EU vision: *“By 2050, European Union biodiversity and the ecosystem services it provides – its natural capital – are protected, valued and appropriately restored for biodiversity’s intrinsic value and for their essential contribution to human wellbeing and economic prosperity, and so that catastrophic changes caused by the loss of biodiversity are avoided.”.*

The strategy contains six interdependent targets (and 20 actions) that correspond to the Aichi Targets, as follows:

1. Full implementation of the EU nature legislation, especially the Bird Directive (Directive 2009/147/EC on the conservation of wild birds) and the Habitats Directive (Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) to prevent further loss of biodiversity;
2. Better protection and restoration of ecosystems and the services they provide, and greater use of green infrastructure and revitalisation of at least 15% of degraded ecosystems;
3. Increased contribution of agriculture and forestry in biodiversity maintenance and promotion;

4. Better management of fish stocks and more sustainable fisheries;

5. Tighter control on invasive alien species;

6. Greater EU contribution to averting global biodiversity loss.

In general, systemic measures and activities (societal, policy, social, economic, technical, educational, etc.) are needed to ensure support and create conditions for protection against pollution, degradation and impact on/of mediums and individual areas in the field of environment.

“ It is our responsibility to do everything within our power to create a planet that provides a home not just for us, but for all life on Earth.

David Attenborough ”

## 2. Economic valorisation of the nature: the concept of ecosystem services

There are no doubts that all changes affecting biodiversity automatically affect functions of ecosystems, and thereby, the human wellbeing. As indicated in the definition: biodiversity (variety of species, genes and ecosystems) is the foundation for a broad spectrum of ecosystem services that contribute to human wellbeing. This refers to the fact that biodiversity is equally important for natural ecosystems, but also those managed by people. Consequently, human decisions related to biodiversity, inter alia, affect the wellbeing of the humankind. Biodiversity plays a key role in maintaining functionality of ecosystems, thus ensuring specific goods and services of essential importance for humans. Food provision, water supply, medicines and clean air are just few basic services known to every man and received from ecosystems. Processes that take place in natural ecosystems have beneficial effect on the people – they protect against flood, erosion, climate change. Finally, the opportunity for people to enjoy and recreate in the nature is something invaluable offered to the humankind that cannot exist when normal functioning of ecosystems is disturbed by any factor [11].

The concept of ecosystems and services they offer, is becoming a more frequently used model to underpin their importance in the decision-making process on nature protection. According to recommendations made under the UN Millennium Ecosystem Assessment (MEA, 2005), which united more than 1,300 scientists from around 100 countries, ecosystem services are defined as *“benefits that people receive from ecosystems”*.

Ecosystem is an interactive unit comprised of biotic (living) and abiotic (non-living) elements within a defined area, which could be of various size and various type. With the introduction of the concept of ecosystem services, numerous researches focus on connections between humans and ecosystems and what they offer in terms of human wellbeing. This introduced the notion of ecosystem services to describe and assess benefits created by ecosystems. Nowadays, ecosystem services more frequently find their place in policy initiatives at global, regional and national level. Examples thereof include the Intergovernmental Platform for Biodiversity and Ecosystem Services (IPBES), the European Union’s Biodiversity Strategy by 2020, and ecosystem services assessments

[11] National Biodiversity Strategy and Action Plan [2018-2023](#)

conducted at national level. Aichi Targets no. 1 and 2 from the Global Biodiversity Strategy are particularly focused on ecosystem services, which provides a solid starting point and stimulus for formal introduction of the concept of ecosystem services in national strategies on biodiversity. Examples from Europe and the world provide evidence on frequent valuation and economic assessment of ecosystem services to select a reasonable business scenario and solution that would not harm the nature. This proves that the concept of ecosystem services provides a practical method for balancing economic development or achieving sustainable development in the country [12].

““ We need to think of biodiversity in terms of how species interact together, to capture water, light, nutrients and how in doing this they provide services to society.

Harold Mooney ””

*Ecosystem functions and services they offer are of particular importance in the context of environmental protection in RNM.*

“Ecosystem service” (Fig.4) is very important for economic valorisation of natural resources and consequently for operation and management of protected areas.

Integration of ecology and economy allows much clearer and more effective explanation of the environment’s importance for the life of people and the economy. The key idea under this concept is that systemic determination of benefits and beneficiaries of ecological processes will improve integration of social, economic and environmental aspects in adoption of strategic policies. It also represents an important step towards operation and management of protected areas, and will help the country fulfil its commitments on nature protection and conservation under different international documents (conventions and treaties) it has ratified and under EU Directives on Habitats and Birds. This approach does not replace the concept of sustainable development, which is broadly accepted and used in policy-making, but aims to upgrade this concept through greater integration between ecology and economy.

[12] Brochure developed under the Program for Nature Conservation in North Macedonia, a project of the Swiss Agency for Development and Cooperation (SDC), coordinated by Farmahem, in cooperation with the Ministry of Environment and Spatial Planning.

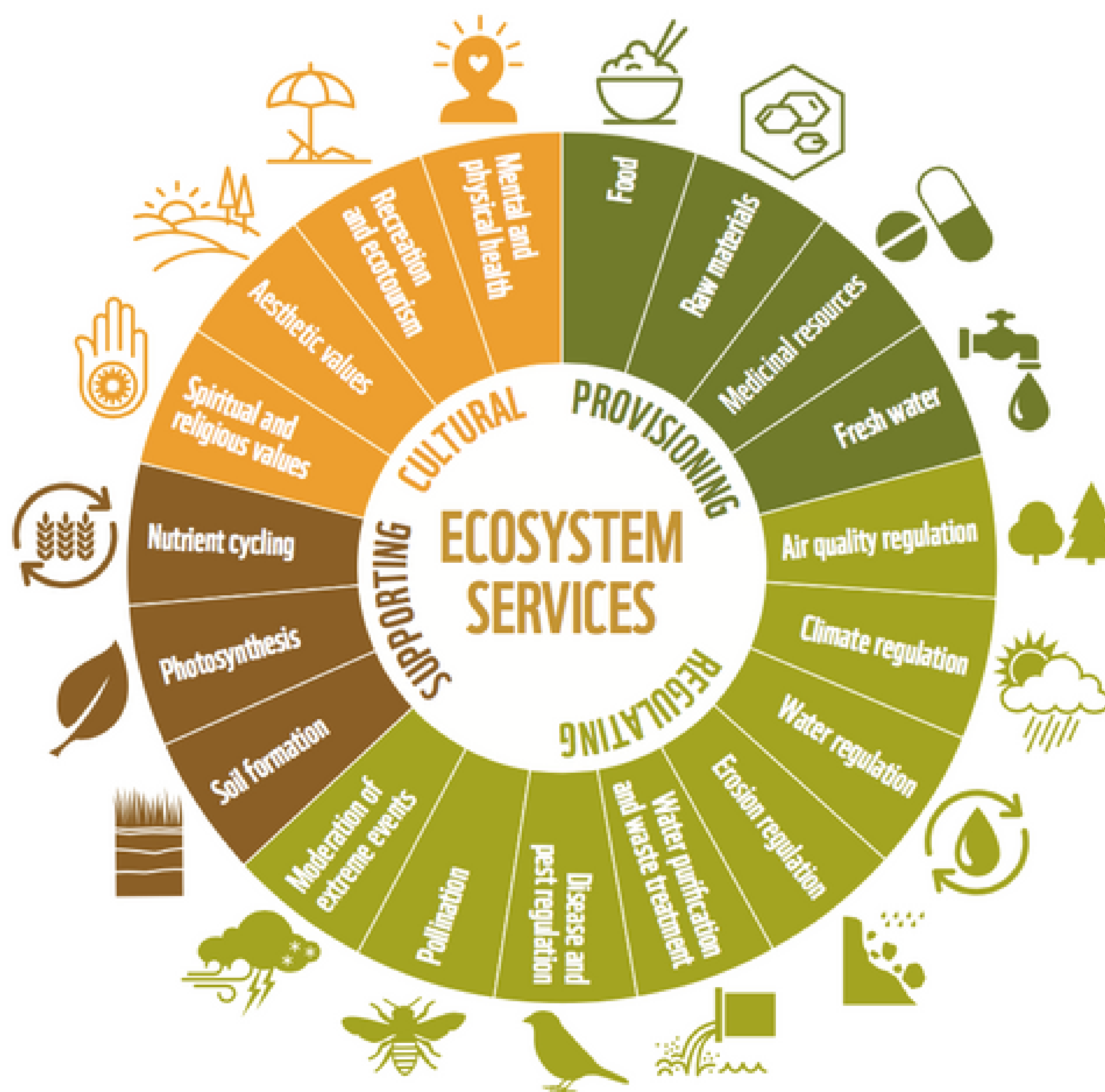


Figure 4. Ecosystem services (source: WWF Living Planet Report 2016)

North Macedonia has identified 18 basic ecosystem groups. The number of such generalized ecosystem types is indicative of the vast ecosystem diversity in Macedonia. Many of these are under different threats, resulting in further degradation in terms of structure (deforestation by illegal woodcutting, uncontrolled urbanization, etc.) and function (disturbed flow of matters and energy within ecosystems, resulting in degradation of the basic ecosystem services, especially those with regulatory effect).

The concept of ecosystem services has great potential for application in natural resource and environment management. However, application of this concept to ecosystem management in RNM is modest. An ecosystem approach to natural resource management is needed. According to the analysis performed as part of the National Strategy on Nature Protection 2017-2027, first attempts are noted under the projects for integral management of Prespa and Ohrid Lakes, and recently in respect to the Bregalnica River Basin.

Identifying pressures and taking urgent measures for preservation or revitalization of crucial ecosystems that provide essential services for the people's wellbeing is urgently needed. Involvement of key stakeholders in activities for determining key ecosystem services and implementing activities for revitalization of ecosystems that sustain them would contribute to a fairer approach to ecosystem services. Revitalization of these ecosystems will undoubtedly contribute to biodiversity conservation in the country.

Of course, protection is preferred before revitalization, which is usually more expensive and long-term activity.

Interdepartmental cooperation among bodies responsible for infrastructure development, agriculture, rural development and environment is of crucial importance in that regard. The challenge is great also in respect to urgently needed action, having in mind that integrated policy development and planning, and investment mechanisms, are still rare. The situation is worsened by continuous increase of demand for natural resources, climate change effects and migration from rural areas [13].

Effective policies on ecosystem services rely on continuous research and innovation. Biodiversity knowledge needs to be improved and biodiversity policy needs to be supported with updated scientific data and information. Ensuring that ecosystems are functional and continue to supply basic services, thereby maintaining the diversity of living things on the planet, will contribute to human wellbeing and poverty eradication.

### **3. Sustainable development and green economy: an imperative for contemporary living**

The concept of green economy is not a completely new idea. It was first indicated by the London Environmental Economics Centre (LEEC) in its publication titled “Blueprint for a Sustainable Economy” (1989) by David Pearce, Anil Markandya and Ed Barbier. However, at the time, the concept was not broadly accepted until the eruption of 2007 financial crisis and the failure of most countries to take the path of sustainable development, when it became evident that current paradigms of development do not yield the desired results on all fronts – economic, social and environmental.

The United Nations Environment Programme (UNEP) defines green economy as “*one that results in improved human wellbeing and social equity, while significantly reducing environmental risks and ecological scarcities*” (2010).

Investment in research, technology advancement, innovation and continuous promotion of knowledge are of crucial importance for the shift to green economies. Countries that have allocated sufficient resources and have greatly invested in research and development are those that managed to accelerate the pace of their economic growth. However, research areas have to be clearly identified and they need to comply with and support sustainable development goals. Research, technology and innovative efforts should be geared towards efficiency of resources and areas like wastewater treatment and disinfection, renewable energy, waste reduction and recycling, green buildings and best technology available.

We need to change the way in which we address problems if we want to find actual solutions to environmental challenges. On daily basis, we are bombarded by news about “lack of food”, “lack of energy”, “lack of clean air and drinking water”, “lack of resources” and “lack of space”. In other words, nothing is available in sufficient quantity: from food to fuel, from clean air to parking space. Looking at the world through the prism of such shortages, we see them everywhere. Luckily, there are many examples, good practices and successful stories that cover almost all sectors and demonstrate how actions can be taken in a more sustainable way. We must continue forward with integrated, coherent and ambitious approach. Acceptance of an integrated, multidisciplinary approach to sustainable development, focused on environment protection and restoration, while

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[13] MANAGING natural resources in SEE: forests, lands and waters / [editors Nada Dragovikj et. al]. – Skopje, GIZ, 2018. - 280 pp.: illustration; 30 cm

ensuring the fundamental human rights and needs of all people, is an imperative. In the coming years, the concept of green economy will become broadly accepted through numerous initiatives, international conferences and involvement of new groups of actors (entrepreneurs, socially responsible corporations, financial institutions, academic institutions, civil society organizations, international development institutions, business incubators, employment agencies, etc.).

“A green economy takes into account the vital links between economy, society and environment and transforms production processes, production and consumption models, while contributing to reduced waste, pollution, and the use of resources, materials and energy, and creating decent employment opportunities, promoting sustainable trade, reducing poverty, and improving equity and income distribution.”



#### 4. Climate change and climate change management

Although a natural process, climate change is one of the most serious problems we are facing. Evident is that people impact the climate and cause changes of unfathomable consequences. Extreme weather events will occur more frequently and will be stronger in effect, becoming a common occurrence. Temperature is raising, rainfalls are decreasing, sea levels are increasing, while extreme weather phenomena, such as floods, draughts and heat waves, are more frequent. Moreover, predictions are that dramatic consequences from climate change will only intensify in the coming period. Therefore, a lot of work is needed in the next years. The EU's climate change policy aims to make Europe adequately-oriented region by its continued leadership in the fight against climate change.

Under the Third National Communication to UNFCCC, an analysis was made of climate hesitancy in North Macedonia. Namely, the analysis of multiannual changes in terms of mean annual temperature shows that in the last 20 years (1994 - 2012) the mean annual temperature has been constantly higher than the multiyear average. Differences in mean annual temperature compared to the period 1961 - 1990 range from 0.2°C to 0.5°C, which corresponds to results in the broader region. The hottest years noted on the territory of the country between 1951 and 2012, for which data are available from all meteorology stations, include 1952, 1994, 2008, 2007 and 2010. The highest maximum air temperature on earth, unrecorded to that point in time, was 45.7°C, as measured on 24 July 2007 in Demir Kapija. Similar analysis of rainfalls was made for different regions in the country and different seasons, with special focus on May and November as the months of heaviest rains in the year, and it shows a general trend on decreased quantity of rainfall. However, due to changes in the level of rainfall from year to year, it is difficult to determine the actual quantity of such decrease in respect to total annual rainfall. Analysis of data on extreme weather events (1961-2012) showed that the number of summer days has significantly increased in the last years compared to the beginning of the analysed period. Similarly, there is a significant increase in the number of tropical nights in the last years. Analysis of cold waves and cold weather provides the conclusion that cold waves are less frequent than heat waves. In spite of the general trend on decreased number of dew-point days in the course of one year, there is no general change in the number of frost-point days in the year.

“We are the first generation to feel the impact of climate change, and the last generation that can do something about it”.

Barac Obama



Especially welcomed is the adoption of the Enhanced Nationally Determined Contribution to the Paris Agreement on Climate Change, proposed by the Ministry of Environment and Spatial Planning.

“The goal is to achieve 51% reduction in greenhouse gas emissions by 2030, compared to 1990 levels.”

This submission integrates results from analyses on the potential for greenhouse gas emissions reduction, based on analysis of 63 policies and mitigation measures in sectors such as: energy (including energy supply, residential sector, unspecified sectors, industry and transport), agriculture, forestry, and other use of land, waste and additional measures (facilitating measures for climate mitigation).

Enhanced Nationally Determined Contribution to the Paris Agreement reflects the green scenario under the Strategy on Energy Development by 2040 and is fully aligned with the Draft National Plan on Energy and Climate [14].

#### 4.1 North Macedonia’s vulnerability to climate change

According to [FAO](#), the Republic of North Macedonia is a country of upper middle income that is particularly vulnerable to climate change. The country’s economic growth is dependent on climate-sensitive natural resources, including land, forest and water, leading to relatively high climate adaptation and mitigation costs. According to North Macedonia’s Nationally Determined Contribution to UNFCCC [15], almost 80% of total emissions are CO<sub>2</sub> emissions originating from fossil fuel combustion, with dominant share of sectors such as energy supply, buildings and transport. Although emissions from agriculture, forestry and other land uses, as well as from industrial processes and waste, have relatively small share in greenhouse gas emissions, agriculture and food sector plays an important role in the country’s economy and is among the most vulnerable sectors to natural hazards and climate change. These sectors are determined as priority under the initial prioritisation of sectors conducted during the first preparedness project for the Green Climate Fund, together with energy, transport, water resources, biodiversity, health, forestry and cultural heritage.

*Water resources* in the Republic of Macedonia are sensitive to climate change both, in terms of quantity and quality. Negative effects from climate change on agriculture are especially prominent on small farms, which are expected to be exposed to continuous heat waves, serious draughts and floods. As regards livestock breeding, it was noted that, on annual level, the number of liveborn piglets is decreasing by 2.14% per litter, due to rising temperatures. The analysis of grapevine growing has shown that table and wine grapes are vulnerable to temperature rises, which could be mitigated by effective irrigation and UV networks. Forestry sector in the Republic of Macedonia is expected to suffer significant impact from climate change, especially boreal forests, in which case

[14] <https://meta.mk/>

[15]]UN Framework Convention on Climate Change



the impact could be truly dramatic. Forests in the country are most vulnerable to increased temperatures, frequent fires and changes to forest productivity. Vulnerability assessment for the biodiversity sector has identified a total of 18 vulnerable habitats, 58 vegetation and 224 animal species. Stratification changes are expected for all habitats and species (vertical and horizontal distribution, changes to phenology, especially with some bird species), and even extinction of certain habitats (lowland swamps) and species (vegetation and animal species tied to mountain, swamp and river-basin habitats). The health sector is equally vulnerable. Findings show that activity and vector potential of many flees and mosquitos as potential carriers of infectious diseases, especially in the southeast region, would increase in the next several decades. Hospitals, health centres and care centres would be seriously affected by high temperatures during heat waves and floods.

To manage climate change, urgent actions are needed for climate adaptation and/or mitigation. *Climate adaptation* denotes adjustments of environmental, social and economic systems in response to actual or anticipated climate stimulations or their effects. It also implies changes to processes, practices and structures, aimed at mitigating potential damages or utilizing opportunities that emerge due to climate change. *Climate mitigation* denotes public and private sector efforts to reduce greenhouse gas emissions released in the atmosphere and to decrease current concentration of carbon dioxide (CO<sub>2</sub>) by increasing greenhouse gas drops (for example, by increasing forest-covered areas).

Children are more vulnerable to heat waves, especially infants and sportsmen. Climate change has led to increased infections with the Lyme disease, diarrhoea and parasites, which are often more dangerous for children than for adults. In some parts of the world, climate change has led to less food and drinking water for children.

## **5. Prevention, preparedness and response to natural disasters**

According to the World Bank analyses, published by the Government of the Republic of Macedonia, the country will be under increased threat from natural disasters as a result of environment degradation and climate change. Hence, the institutions must be prepared to address these challenges and minimize damages to lives, health and property of citizens. In the last two years, floods have brought to the surface all systemic weaknesses within the institutions, especially in respect to prevention, and have led to many casualties, late and insufficient relief and major discrimination.

Inadequate forest and agriculture land exploitation and management, as well as uncontrolled urbanization have intensified the impact of natural disasters such as excessive flooding. As enlisted in the City of Skopje's Local Environment Action Plan (LEAP 3), in the last years excessive flooding has become common and more destructive occurrence in the country. Floods, which in the past were considered to have an incidence of 1 every 100 years, are now nature events that occur once every 50 years or less. Different factors that contribute to this nature phenomenon are identified in transformation of regions from rural to urban, reduction of forest vegetation, unsustainable agriculture practices, etc. Another important factor is seen in dramatically reduced consumption in the water sector over the last decades, which will contribute to deterioration of water infrastructure in the country. Obsolete infrastructure and inadequate investment in maintenance of public infrastructure has exposed many flood control facilities to the risk of losing their function. In addition to floods caused by the River Vardar, certain areas in the urban part of the City of Skopje are under threat from floods created by heavy waterflows from the Mountain Vodno, as well as

sewage floods caused by excess surface waters entering the drainage network or due to inadequate capacity of surface water networks. For a number of years, during events of heavy rainfall, Skopje is witnessing flooded underpasses, especially on several critical points in the downtown area, but also on the periphery. Moreover, the Skopje Region is extremely complex and sensitive to climate change effects. While the impact of climate change on overall intensity and frequency of hydrological threats cannot be predicted with certainty, past experiences and data show that climate change has significantly changed frequency and intensity of extreme weather events and natural disasters, which underlines the high level of risk and uncertainty. In 2016, the broader area of 15 municipalities around the capital was affected by a storm deluge (Fig.5). Most serious consequences were noted in the northeast part of the region, around the base of Mountain Skopska Crna Gora, i.e. in the Municipalities of Gazi Baba and Arachinovo, where fast and significant water levels from heavy waterflows stretching from the mountain tops to the River Vardar had destructive effects on several suburban settlements and villages.



Figure 5. Photograph from the flooding in Skopje, 2016

Based on data recorded by automated rainfall stations in Gazi Baba and Karposh, more than 100 mm rain on square meter had fallen within an interval of 2 hours, which is three times more than the average monthly amount or almost equal to the maximum rainfall quantity measured in Skopje for the entire month of August. Compared to rainfall records for the region in the period from 1978 to 2010, this rainstorm was categorized as event of 0.1% (one in thousand) probability. The storm took 22 casualties, and many people lost their homes.

The City of Skopje is categorized as area of high-level threat from natural disasters due to its geographic position and natural characteristics. After the last disastrous flood in 1962, the authorities have taken measures to protect the Skopje Region from heavy waters, but the defence system is not completed, and is insufficiently effective in some places. In 2010, the City of Skopje developed a protection and rescue plan from natural disasters, primarily floods, fires and earthquakes.

Except for natural, technology-driven disasters are also possible. At national level, there are many installations operating with chemically hazardous matters – used in production processes or stored, and it should be noted that many of them are located in the urban area of Skopje. They include: AD OHIS, AD Alkaloid, AD Okta, AD Makpetrol, Balkan Energy, AD Technical Gas, Cement Plant USJE, and others. In the case of technical or technology disasters/shutdowns, all of them could imply a major hazard for citizens and assets and could cause serious consequences on health of the population and environment. According to the Law on Environment (Chapter XV: Prevention and Control of Shutdowns with Presence of Hazardous Substances, Art. 145), any operator in possession or engaging in production, transport or storage of hazardous substances in quantities that exceed or are equal to upper thresholds stipulated under the Rulebook on hazardous substances, thresholds for presence of hazardous substances and the criteria or characteristics qualifying the substance as hazardous, are obliged to:

- » take all measures necessary to prevent shutdowns and limit consequences thereof on the environment and on the life and health of people;
- » take measures to limit consequences that might occur in the case of shutdown on the life and health of people and environment mediums;
- » notify the state administration body competent for matters in the field of environment, pursuant to national legislation [16a].

The Centre for Crisis Management (CCM) is responsible for coordination of its own and other necessary activities with all participants in the crisis management system, continuous communication and cooperation in collecting data and information, information dissemination and proposal of measures to address risk and dangers that might threaten the republic's safety. The Centre for Crisis Management has formed a steering committee and assessment group to propose decisions and provide continuous consultations, coordination, timely reaction, efficiency and adequate use of available resources at times of crisis, quality and actual assessment of threats to the security of the Republic of North Macedonia from risks and dangers. Namely, in the capacity of independent state administration body organized as directorate and separate legal entity, the Centre for Crisis Management performs the following activities:

- » ensuring continuity in interdepartmental and international cooperation, consultation and coordination in crisis management;
- » developing and updating a unique assessment of risks and dangers to resolve the crisis situation;
- » proposing measures and activities for resolution of the crisis situation and performing other activities as defined by law.

## **6. Policies to support the transition to efficient, safe and sustainable low-carbon economy**

Dealing with global challenges like climate change necessitates urgent and comprehensive transition to low-carbon economy, and thereby, investment in low-carbon technologies. This approach became popular in the discourse of international institutions such as OECD, UN and EU, during the 2008 financial downturn as potential way out of the crisis (Olsen 2012; & Clouth 2012). Low-carbon economy, low fossil fuel economy or decarbonized economy is an economy based on low-carbon energy sources and, accordingly, on minimum production of greenhouse gas emissions in the biosphere, especially carbon dioxide in greenhouse gases.

## Low-carbon strategy for 2050

Targets compared to 1990 levels

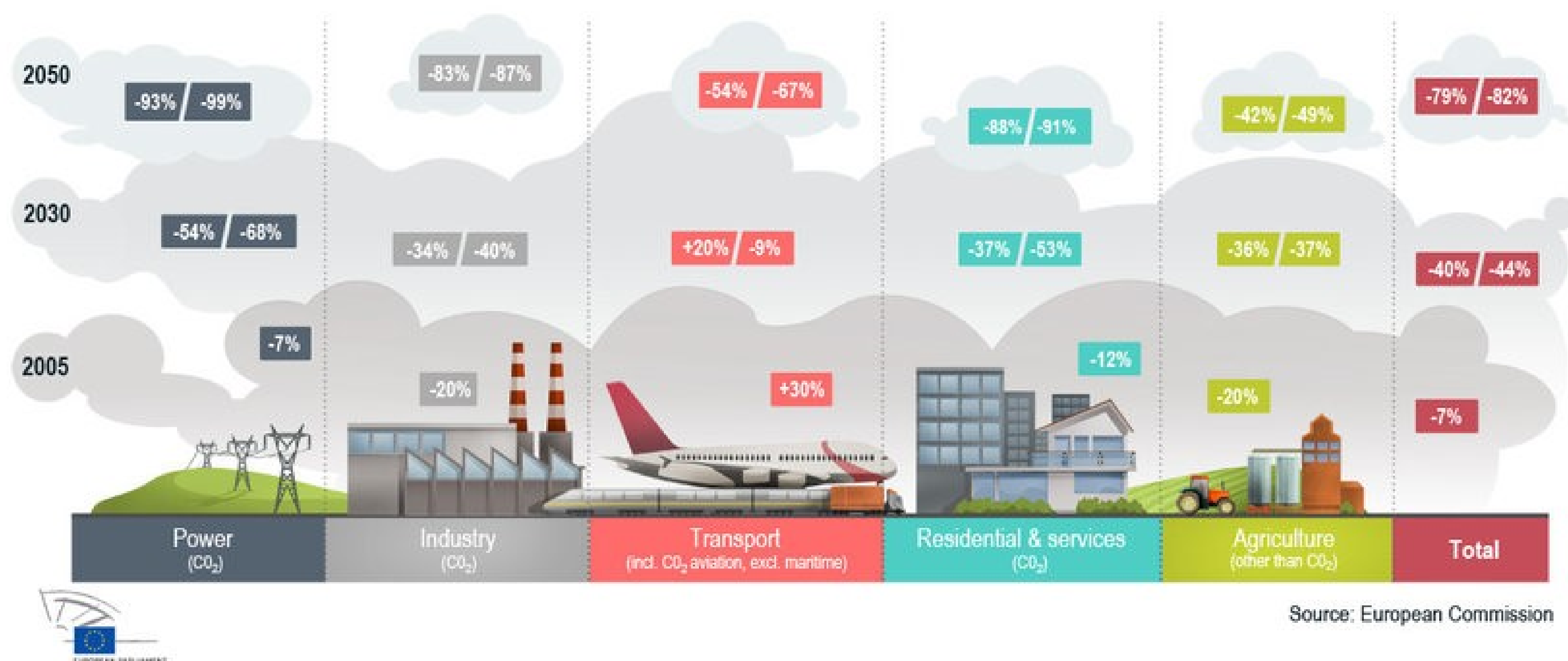


Figure 6. EC Strategy on Low-Carbon Economy

The shift to sustainable economy by 2050 is a strategic commitment of the European Commission (Fig.6). The Europe 2020 Strategy enlists three priorities: smart, sustainable and inclusive growth. Priority actions for sustainable growth concern competitiveness, fight against climate change, and clean and efficient energy. The flagship initiative for clean and efficient energy includes specific targets: increase efficiency of energy use by 20%, increase the share of renewable energy sources by 20% to help reduce gas and oil imports, including costs and emissions, while ensuring energy supply and creating new jobs.

The overall goal of this policy is resource efficient and low-carbon economy (EC 2010). One of the most attractive pioneering bodies in developing green growth approaches, i.e. OECD, defines this concept as “fostering economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our wellbeing relies. To achieve this, green growth must catalyse investment and innovation that underpins sustained growth and gives rise to new economic opportunities” (OECD 2011) (Joint Integrated Policy for Low-Carbon Economy in the Cross-Border Region). Developing a low-carbon society and economy requires enormous investments, as well as technical and social innovation. At the same time, it provides an opportunity for creation of new and green jobs, develop new products and design new business models in various industries. According to the clean energy study published by the Friedrich Ebert Foundation, promoting energy transition achieves goals related to moving the society forward. First, renewable energy democratises electricity systems and infrastructure. Second, it helps ensure affordable access to cheap and reliable energy for all: workers, businesses and consumers. Third, it helps combat climate change and accompanying social distortions. And finally, renewable energy improves individual and public health. In order to comprehend the scope of this task, we need to reconsider in detail different sectors in the economy and measures to be taken in each of them:

In the electricity sector, thermal power plants that use fossil fuel will have to be replaced with renewable energy plants, such as photovoltaic systems, wind power plants, biomass plants and hydro powerplants.

The industry will have to replace carbon-intensive production processes with non-carbon alternatives. This also concerns use of energy in affected industries and chemical processes that produce CO<sub>2</sub> or are accompanied by carbon-intensive processes.

The mobility sector will have to invest in flexibility (so-called multimodality) of the transport system. This requires, inter alia, expanding and making the public transport greener, developing shared transport services (for example, car sharing), and high-level interconnectivity between different mobility options and mobility digitalization. As a result, people will be even more mobile than today, but they would not be required to own cars. The heating and cooling sector is oftentimes overlooked, although it is of crucial importance. It conditions the way houses and public spaces are heated in winter and cooled in summer, and how we cook food. This sector has an enormous untapped potential for reduction of carbon emissions. A twofold strategy of energy efficiency and conversion to renewable energy is needed in this sector. The final sector equally deserving of attention concerns agriculture. It is the biggest source of methane and nitrogen emissions – greenhouse gases that are more detrimental to the climate than carbon dioxide. Although it is often said that decarbonizing the agriculture sector is difficult, it is not impossible if we manage to change production and marketing of agricultural products. A key role in this regard plays the climate-smart farming, and the first step is redirecting agriculture subsidies towards ecological land farming [16]. Main steps in transition towards low-carbon economies are described in the Handbook “Building a Low-Carbon Economy”. Namely, the handbook enlists 10 developmental steps to be taken by the regions in order to move towards low-carbon economy. In many cases, the steps can be applied at local level:

Step 1. Ensure availability of adequate and regularly updated information and data on emissions characteristics of the regions.

Step 2. Decouple emissions and energy use from growth through multiple energy efficiency and renewable energy solutions.

Step 3. Develop policies for energy efficiency and increasing use of renewables.

Step 4. Develop integrated strategic and policy planning for low-carbon development.

Step 5. Prioritise cost-effective low-carbon measures that have benefits for the climate, economy and social domain.

Step 6. Establish adequate institutions with delineated responsibility and securing string regional leadership for achieving low-carbon growth.

Step 7. Actively involve business stakeholders, scientists, academics and the public in the decision-making process.

Step 8. Raise awareness among the public and business sector to encourage low-carbon consumer and production choices.

Step 9. Use regional public investment funds as a catalyst for investing in low-carbon development by prioritizing spending to stimulate decarbonization of the economy.

Step 10. Regularly monitor emissions in the region to identify where reductions are the most efficient.

## **7. Support from international organizations in the area of environment**

In May 2021, the Annual Results Report for North Macedonia was published [17], developed by the UN Resident Coordinator Office (UN RCO) in North Macedonia, on behalf of the UN country team in North Macedonia [18]. The report is a summary of achievements in investments in several areas, including environment as top priority. Below is an elaboration taken from this report in its entirety.

[16] Manual of Arguments for Fair and Ecological Society - FES

[17] [https://northmacedonia.un.org/sites/default/files/2021-06/MK-UNCT-2020-ARR\\_MK\\_Final\\_3.pdf](https://northmacedonia.un.org/sites/default/files/2021-06/MK-UNCT-2020-ARR_MK_Final_3.pdf)

[18] UN Agencies: FAO, IOM, UNDP, UNEP, UNFPA, UNIDO, WHO

UN support was invaluable in all areas, starting from providing evidence through four editions of Environmental Performance Reviews and promotion of sustainable use of natural resources with capacity development and demonstrations in 25 protected areas and support for proclamation of new national parks and protected areas, as well as developing a National Forest Inventory and a Green Cadastre of the City of Skopje. With UN support, the Government has advanced a long and complex process of land consolidation to overcome the excessive fragmentation of agricultural land, introduced climate-smart agriculture technologies, established national agroecological zoning and land resources information management system to improve agricultural production and adaptive capacity of agricultural producers, while mainstreaming climate change aspects into sectoral planning. A land cover assessment on the land use and changes in the forestry sector and a methodology for designing a future national forest monitoring system was supported to enable evidence-based decision-making and viable policy formulation for sustainable forest management. In the area of integrated river basin management, UN supported watershed management plan for the Prespa Lake, later replicated in the Strumica River Basin, and transferred protection and management functions to the municipalities. Transboundary cooperation and integrated water resources management in the extended basin of Drim River were also initiated. Waste management was strengthened with fourth waste water treatment facilities and the first EU standard landfill in Gevgelija. Research of heating practices and air pollution provided valuable evidence for developing a holistic area-based approach of close-to-zero emission neighbourhoods demonstrated in one of the most polluted areas of Skopje. Also, the UN provided policy support for the National Communications/Biennial Update Reports on climate change and for the first climate action plan that integrates gender considerations into the UN Framework Convention on Climate Change (UNFCCC) reporting. In the area of disaster risk reduction, UN assisted the national institutions to proactively improve flood risk management following the severe floods in 2015-2016 with integrated systems to manage hazards, vulnerabilities and exposure of communities and assets. With these interventions, protected areas under improved management increased to about 190,000 ha. In Prespa, over 80% of local farmers adopted agroecological practices on 360,000 ha (compared to zero), the use of water for irrigation fell by nearly 60%, and the use of pesticides went down by 30%. Activities started for the clean-up of the hazard waste from one of the major hot-spots in the country – OHIS factory, which is a major environmental threat in the capital. In Polog and Strumica regions, 50% increase of discharge capacity of rehabilitated canals prevent an average annual economic loss of 50,000 to 100,000 USD from future flood events with high probability. In Pelagonija region, the prevented damage surpassed 2 million USD for over 230,000 people. In total, around 5,500 ha of agricultural land, 35 ha of urbanized area and industrial zone, and 10 ha of transport infrastructure were covered in the disaster risk reduction programming

In respect to climate change, special progress was made by the Green Climate Fund. GCF is a new global fund established by the UN Framework Convention on Climate Change that supports efforts of developing countries to respond to the challenges brought about by climate change. GCF helps countries in development, including North Macedonia, to limit or reduce their greenhouse gas emissions and to adapt to climate change. The Green Climate Fund aims to mobilize funding at a scale to invest in low-emission and climate-resilient development, as well as to change the paradigm in global response to climate change, taking into account the needs of countries that are particularly vulnerable to its effects.

In order to strengthen institutional capacity for increased investment in climate, the Green Climate Fund allocated resources under the Readiness and Preparatory Support Programme (readiness program) to help countries improve information, develop capacity and engage all relevant stakeholders at national/local level.

The readiness program aims to improve national capacity for access to GCF funds for implementation of national climate adjustment and mitigation measures led by the country. The overall goal is for the country to be fully prepared to comply with its obligations under the Paris Climate Agreement, as well as obligations on climate action within the EU accession process, while advancing climate action in priority sectors, including agriculture, energy, transport, health, forestry, water resources, waste, biodiversity and cultural heritage.

#### *Access to the Green Climate Fund*

There are five ways to access GCF resources that could be used by the national designated authority (NDA) and selected national entities in partnership with entities that have direct access or international accredited entities, depending on the country needs, the country ownership stage and the project development stage. NDA is involved in the overall process, in all methods for access to GCF, through implementation of activities on country preparedness, generation and approval of project proposals, approval of national accredited entities or supervision of project implementation.

Enhancing national capacity for climate change mitigation and adjustment is a particularly important step. For that purpose, under the leadership of the Office the Deputy Prime Minister for Economic Affairs in the capacity of national designated authority for the Green Climate Fund, FAO implements the second project that is expected to finalize the Operational Program for the Green Climate Fund of the Republic of North Macedonia [19].

### **8. Chapter 27: Environment and Climate Change**

EU environment policy aims to promote sustainable development and protect the environment for present and future generations. It is based on preventive action, the principle “polluter pays”, fight against sources of environmental damage, shared responsibility and integration of environmental protection in other EU policies. Chapter 27 contains more than 200 legal acts that cover horizontal legislation, water and air quality, waste management, nature protection, industrial pollution control and risk management, chemicals and genetically modified organism (GMOs), noise and forestry. Alignment with the environment acquis requires significant investments. Professional and well-equipped administration at national and local level is precondition for proper application and adequate enforcement of the environment acquis [20].

As indicated in the Strategy on Environment and Climate Change 2014-2020, Chapter 27 or the environment sector is one of the most complex chapters that require great coordination efforts, investments and enormous responsibilities for the administration at central and local level. Moreover, the environment sector is one of the most expensive chapters in the EU accession process. Rights and responsibilities, as defined in the environment acquis, cover a vast number of stakeholders, starting from citizens as individuals and part of the collective system, through civil society organizations, the business sector, local self-government and various other parties, all of which have their own interest in ensuring a healthy environment. It should be noted that EU integration is not only about legislation alignment, but also about implementation of European standards and criteria established under the national legislation, as comprehensive process for harmonization in the area of environment and climate change. That would imply changes to the existing institutional setup and engagement of sufficient human and financial resources for attainment of defined objectives. Ministry of Environment and Spatial Planning is the governmental reporting body on Chapter 17 and its role implies coordination of activities for preparation and monitoring further implementation of this strategy document.

[19] <http://www.greendevlopment.mk/mk/gcf.aspx>

[20] <https://dijalogkoneu.mk/>

## EU Green Deal

Climate change and environment degradation are an existential threat to Europe and the world. To overcome these challenges, the European Green Deal will transform the EU into a modern, resource-efficient and competitive economy, ensuring:

- » no net emissions of greenhouse gases by 2050;
- » economic growth decoupled from resource use;
- » no person and no place left behind.

The European Green Deal is also our lifeline out of the Covid-19 pandemic. One third of 1.8 trillion euros in investments from the Next Generation EU Recovery Plan and the EU's seven-year budget will finance the European Green Deal.

## EU GREEN DEAL

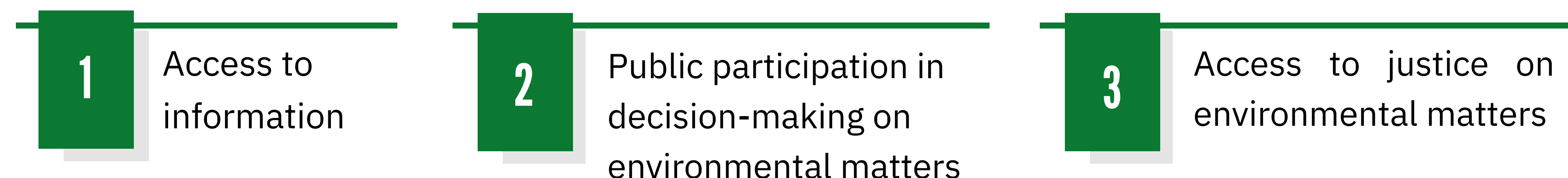
01	Decarbonisation of the energy sector and energy supply
02	Energy efficient new buildings and reconstruction of existing buildings
03	Innovative industry (mobilization of circular economy industry)
04	Smart transport
05	Provision of ecologically suitable food chains
06	Preservation of biodiversity and ecosystems
07	Clean and non-toxic environment

Objective: Climate-neutral and more resilient Europe by 2050. To achieve this objective, a European Climate Law is proposed that requires legal actions in all sectors of economy



## 9. Role of the civil society in respect to environment

Citizens of the Republic of North Macedonia, by the effect of the Aarhus Convention, have a guaranteed right to access to information, the right to participation in decision-making, and access to justice through the institutions in environmental matters. As indicated in the *Guide for Citizens and Civil Society Organizations* [21], citizens that are well informed about status and quality of the environment are aware of challenges in addressing the climate change, health risks due to pollution of most environment mediums, and the need to take adequate steps for timely implementation of relevant legislation



Each citizen should enjoy the right to easy access to environment information, to be able to participate in decision-making and have access to justice on environmental matters. All that would lead to improved cooperation with the civil society and business sector, local self-government or governmental institutions in decision-making related to the environment. The space for action by civil society organizations is vast and depends on capacity of individual organization, primarily their human resources and expertise, but also access to information, integrity of members and organizations, networking and access to funding sources

Namely, one of the most important and proactive factors under Chapter 27 are civil society organizations profiled in the sector on environment and climate change.

*Informed citizens are initiators and promoters of social responsibility and environment and health protection!*

In this respect it is important to raise awareness of civil society organization about the EU accession process, especially in regard to main steps under this process and their understanding how to assume an active role in EU negotiations. In July 2020, the Centre for Climate Change, with support from Civica Mobilitas, started implementation of the project “Citizen Platform for Monitoring EU Negotiations for Chapter 27”, whose main objective is to monitor EU negotiations under Chapter 27: Environment and Climate Change, i.e. to develop and present a shadow report on current state-of-affairs, challenges and future priorities in the area of environment and climate change, in cooperation with other civil society organizations profiled in this area. Notably, by establishing the platform for monitoring accession negotiations for Chapter 27 and development of shadow reports, the civil society attempts to engage in active and constructive participation in the negotiations and serve as partner to public actors, primarily the Ministry of Environment and Spatial Planning, in ensuring transparency and participation of all stakeholders in determining current state-of-affairs and setting priorities in the area of environment and climate change.

[21] [https://www.thru.de/fileadmin/SITE\\_MASTER/content/Dokumente/Projekte\\_International/201803\\_The\\_Power\\_Is\\_in\\_Your\\_Hands\\_CS0\\_Brochure\\_PRTR\\_Macedonia.pdf](https://www.thru.de/fileadmin/SITE_MASTER/content/Dokumente/Projekte_International/201803_The_Power_Is_in_Your_Hands_CS0_Brochure_PRTR_Macedonia.pdf)

## **10. Concluding observations**

Environmental protection requires greater efforts by the country and its partners for development, including enhanced human resources and improved access to funding. As indicated in the UN report, air pollution is a serious threat to the health in urban area settings, which are ranked among the top ten most polluted areas in Europe for the years 2017 and 2018. Fortunately, climate change has become an area that is emphasised and among top priorities in the country.

Better understanding of the value of ecosystems, i.e. presentation of benefits from their protection before the economy sector in the country could result in better management of these systems and adequate policy decisions. As enlisted in the Biodiversity Strategy, emphasizing the link between biodiversity and human wellbeing would, most likely, change the current (non)perception of the urgent need to take measures and address the problem of biodiversity protection in the Republic of North Macedonia.

Stricter standards on environmental protection should not be perceived as imposed obligation. There are many examples of countries that are not EU members and do not aspire toward EU membership, but have exceptionally high standards in respect to environment protection.

Care for the environment is actually care for oneself and for the future generation. Anybody can be the change they want to see in society!