



# **The Nature Protection Strategy and Action Plan of the Republic of Croatia for the period 2017-2025**

*Provisional translation*

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# PARLIAMENT OF THE REPUBLIC OF CROATIA

Pursuant to Article 81 of the Constitution of the Republic of Croatia and Article 11, paragraph 2 of the Nature Protection Act (Official Gazette No. 80/13), the Croatian Parliament, at its session on 7<sup>th</sup> July 2017 has adopted

## THE NATURE PROTECTION STRATEGY AND ACTION PLAN OF THE REPUBLIC OF CROATIA FOR THE PERIOD 2017-2025

### SUMMARY

Rich and diverse nature is one of the most valuable resources available to the Republic of Croatia. Conserved nature contributes to ensuring all functionalities necessary for livelihoods and economic development. In the Republic of Croatia, as well as in the world, nature is facing permanent pressures from human activities. Even though significant efforts are being invested in nature conservation, certain nature components are still being threatened. The aim of employing strategic planning is to target the available capacities at activities that can provide maximum contribution to nature conservation. The Nature Protection Strategy and Action Plan for the period 2017-2025 (hereinafter: the Strategy) is the core nature protection document of the Republic of Croatia. The Strategy includes guidelines of the global Strategic Plan for Biodiversity 2011-2020, adopted at the 10<sup>th</sup> meeting of the Conference of the Parties to the Convention on Biological Diversity, held in Nagoya, Japan (hereinafter: the Strategic Plan for Biodiversity) (Act on Ratification of the Convention on Biological Diversity (Official Gazette - International Treaties, No. 6/96)). During the Strategy drafting process, five strategic goals have been defined, and aligned with the aforementioned Strategic Plan for Biodiversity and with the EU Biodiversity Strategy to 2020. As stipulated by the Convention on Biological Diversity, the Strategy serves as an instrument that ensures the implementation of the main objectives of the Convention, also ensuring the integration of biodiversity conservation measures into relevant sectoral or cross-sectoral plans, programmes and policies.

In order to conserve and ensure long-term survival of wild species, and favourable status of habitats, thus fulfilling the commitments of the Republic of Croatia at both, the global and the EU level in the forthcoming period, the Strategy includes the following strategic goals, which encompass specific objectives and activities stemming from them.

#### **Five strategic goals of the Strategy:**

- 1. Increase the effectiveness of key nature protection mechanisms**
- 2. Reduce the direct pressures on nature and promote sustainable use of natural resources**
- 3. Strengthen the capacities of nature protection system**
- 4. Increase the knowledge and availability of data on nature**
- 5. Raise the level of knowledge, understanding, and support for nature protection among the general public**

The Strategy has been drafted in a consultation process involving a number of interested stakeholders, and its implementation will require active inclusion of a number of central state administration bodies (hereinafter: SABs), administrative bodies of regional self-government units and/or of the City of Zagreb, as well as local self-government units, public institutions and other institutions.

Nature protection activities and measures outlined in the Strategy will become constituent parts of all sectors whose activities depend or may have an impact (positive or negative) on biodiversity and geodiversity. These activities and measures will also be taken into account in the process of drafting the amendments of physical planning documents and natural resources management plans at the national and regional level. However, the adoption of the Strategy is merely the first step, and achieving its goals will represent a major challenge. In addition to active participation of the nature protection sector, the participation of all other relevant sectors and stakeholders at all levels is a key in order to achieve the defined goals in the forthcoming decade, thus contributing to nature conservation at the national, European and global level. The priorities in the forthcoming period will continue to be strongly connected with the commitments stemming from Croatia's membership in the European Union. In nature protection, this particularly pertains to the establishment of implementation mechanisms aimed at ensuring a favourable conservation status of species and habitat types, primarily through managing Natura 2000 areas. However, in order to achieve this goal, and in order to conserve all segments of nature in general, intersectoral cooperation is crucial, together with the understanding that conserved nature represents a prerequisite for survival and progress of society.

# 1. INTRODUCTION

## *1.1. Legal basis*

Conservation of nature and human environment represents the highest value of the constitutional order of the Republic of Croatia, and a foundation for the interpretation of the Constitution. The Strategy is the main nature protection document that defines the long-term goals and guidelines for the conservation of biodiversity and geodiversity, as well as the methods of Strategy implementation. The obligation to develop the Strategy is stipulated in Article 10 of the Nature Protection Act (Official Gazette, No. 80/13). The Strategy is adopted by the Croatian Parliament, at the proposal of the Government of the Republic of Croatia (hereinafter: the Government), pursuant to Article 11, paragraph 2 of the Nature Protection Act.

Pursuant to Article 10, paragraph 3 of the Nature Protection Act, the Strategy is prepared on the basis of the Report on State of Nature of the Republic of Croatia (hereinafter: the Report), and it contains in particular:

- Principles and general strategic goals;
- Assessment of the state;
- Specific objectives with impact indicators;
- Activities for the implementation of specific objectives, with defined priority levels and possible funding sources;
- Performance indicators for the implementation of activities.

According to the Nature Protection Act, the fulfilment of goals and the implementation of activities defined by the Strategy should be analyzed every five years. In addition, based on need, the adoption of changes and/or amendments to the Strategy or the drafting of a new Strategy should also be considered.

The Strategy is prepared by the central SAB competent for nature protection, in cooperation with other central SABs. The Report has been prepared for the purposes of analysing the fulfilment of goals and activities of the Strategy for the previous period, and as a foundation for drafting this Strategy. The draft of the Report has been prepared by the Croatian Agency for the Environment and Nature (CAEN).

The Ministry of Environment and Energy (hereinafter: the Ministry) proposes the Report to the Government, and the Government submits the Report to the Croatian Parliament for adoption. The Report contains the analysis of threats, causes of threats and problems regarding the protection of ecosystems, habitat types, wild species and geodiversity, together with status assessment, as well as the analysis of threats, causes of threats and problems regarding the protection of protected areas and the ecological network of the Republic of Croatia, together with status assessment. In addition, it also contains an analysis of the legislative and institutional framework, analysis of the implementation of the Strategy, and data on sources and use of funds for nature protection.

## ***1.2. Obligations stemming from the Convention on Biological Diversity***

The Convention on Biological Diversity is a globally accepted main document for biodiversity protection, defining the conservation of biodiversity as a fundamental international principle in nature protection, and as a joint obligation of mankind. The Convention was adopted in 1992 in Rio de Janeiro, at the United Nations Conference on Environment and Development. The Republic of Croatia became Party to the Convention with the adoption of the Act on the Ratification of the Convention on Biological Diversity.

The Convention on Biological Diversity defines biological diversity as the variability among living organisms, which includes diversity within species, between species and of ecosystems. Biological diversity represents a necessary foundation of life on Earth, and a *cornerstone* of the survival of mankind.

Signatory states to the Convention have undertaken the obligation to fulfil **three main objectives of the Convention**:

1. The conservation of biological diversity
2. The sustainable use of the components of biological diversity
3. The fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

In order to implement these objectives, Parties to the Convention have to prepare national strategies, plans and programmes for the protection and sustainable use of biodiversity.

The National Focal Point in the Republic of Croatia is the Ministry, which is competent for the implementation of the Convention, including reporting obligations.

In 2002, Parties to the Convention have agreed in their joint mission to significantly reduce loss of biodiversity by 2010 at the global, national and regional level. However, this global goal was not achieved. This is why, at the 10<sup>th</sup> meeting of the Conference of the Parties to the Convention on Biological Diversity, held in October 2010 in Nagoya, Japan, a new ten-year Strategic Plan for Biodiversity was adopted, as the main document for guiding international and national activities aimed at the conservation of biodiversity, and the fulfilment of the main objectives of the Convention. The new Strategic Plan for Biodiversity includes 20 *Aichi Biodiversity Targets* aimed at decreasing biodiversity losses and pressures, conserving biodiversity at all levels, improving and maintaining the benefits derived from biodiversity, and ensuring capacity building. This **Strategic Plan for Biodiversity serves as a flexible framework for the adoption of national and regional goals**, and it promotes a coherent and effective implementation of the three main objectives of the Convention.

The Strategic Plan for Biodiversity has defined five global Strategic Goals, where each strategic goal includes a certain number of the Aichi Biodiversity Targets that Parties to the Convention want and need to fulfil by 2020 (Annex 1).

One of the Aichi Biodiversity Targets refers to the obligation to align national biodiversity conservation strategies with the new global Strategic Plan for Biodiversity and with the Aichi Biodiversity Targets.

### ***1.3. European Union Biodiversity Strategy to 2020***

EU Biodiversity Strategy to 2020 was adopted in May 2011, and it is harmonized with the decisions adopted at the 10<sup>th</sup> Conference of the Parties to the Convention on Biological Diversity, held in Nagoya, Japan in 2010. It contains six measurable targets with the corresponding actions (Annex 2). For the first time, emphasis is placed on ecosystem services, which are beneficial for both nature and the human community, and on the urgent need to conserve and restore them.

#### *EU 2050 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.*

#### *EU 2020 HEADLINE TARGET*

*Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss.*

### ***1.4. The 2030 Agenda for Sustainable Development***

The 2030 Agenda for Sustainable Development contains 17 Sustainable Development Goals, two of which are directly focusing on nature protection (Goal 14 - Conserve and sustainably use the oceans, seas and marine resources for sustainable development; Goal 15 – Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss). These two goals are aligned with the Aichi Biodiversity Targets of the Convention on Biological Diversity; i.e. the fulfilment of globally adopted Aichi Biodiversity Targets directly contributes to the fulfilment of the 2030 Agenda for Sustainable Development.

## ***1.5. Overview of the state of nature and the nature protection system in the Republic of Croatia***

### **1.5.1. Nature status and trends**

The Republic of Croatia is characterized by a major abundance of biodiversity, geodiversity and landscape diversity, and by a high level of their protection, especially in the context of Western and Central Europe. Despite that, however, the trend of biodiversity, geodiversity and landscape diversity loss is still present in the country.

There are almost 40,000 known species and subspecies in the Republic of Croatia, and it is assumed that the actual total number is in fact significantly higher (ranging from 50,000 to over 100,000). Approximately 3% of the total number of known species are endemic species. Most of the endemic species (approx. 70%) belong to the cave fauna, representing one of the major and most interesting unique characteristics of the Republic of Croatia. During the previous period, starting from the adoption of the Strategy in 2008, there have been recorded and described: over 200 new terrestrial invertebrate species, approximately 220 freshwater invertebrate species, 20 marine invertebrate species, and over 10 new freshwater fish species. These findings have largely been a result of intensified research connected with Croatia's EU accession process, in particular with the preparation of the Natura 2000 ecological network proposal.

Despite the abundance of biodiversity and the implementation of certain conservation measures, many wild species are still endangered. The same trend is also noted at the global level. In the Republic of Croatia, based on the criteria of the International Union for Conservation of Nature (IUCN) threat status has been assessed for over 3,000 species, or around 8% of known species, including all vertebrate groups, while invertebrate group, the largest in terms of numbers, but also the least explored, has been covered to a significantly lesser degree. Out of the assessed species, 42.3% have been classified as species facing high levels of risk of extinction<sup>1</sup>. Lack of research can be seen in the fact that for about 22% of assessed species there is insufficient data to determine the level of risk of extinction. Based on the undertaken threat assessments, freshwater fish species are the most endangered of all assessed taxonomic groups. Since most of the groups have been assessed for the first time, i.e. only with the baseline data assessed, it is impossible to specify trends in terms of their threat status. Revisions of threat assessments, conducted for birds, amphibians, reptiles, butterflies and lynx, point to certain changes, such as, for example, a worsening of the threat status for lynx. However, these changes are primarily a result of new findings regarding certain species, and of a more precise application of IUCN criteria. Threat assessment revisions for other groups should be a priority activity in the future period, given the fact that species' status classification based on the IUCN criteria represents one of the key indicators of the state of nature.

Geodiversity is the totality of geological and geomorphological features, including their joint forms, relations, characteristics and systems. The Republic of Croatia is characterized by a high degree of geodiversity, including diverse types of rocks, soil, structures and relief. Karst relief is one unique feature, covering one half of the territory of the country, and including diverse surface and subterranean forms. Geodiversity is visible in a large number of highly valuable and significant geological sites, some of them important at the regional, and some even at the global level.

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<sup>1</sup> Categories CR, EN and VU based on the IUCN criteria for determining the categories of threats facing wild species: CR – Critically Endangered (species facing an extremely high risk of extinction in the wild); EN – Endangered (species facing a very high risk of extinction in the wild); VU – Vulnerable (species facing a high risk of extinction in the wild)

Loss of biodiversity and landscape diversity is predominantly caused by the loss and fragmentation of habitats, as a result of intensive agriculture and the development of infrastructure, introduction and spreading of invasive alien species, pollution, urbanization and climate change. In addition, accelerated urbanization and the expansion of settlements along the Adriatic coast have a negative impact on landscape diversity. The most significant threats to mammals are degradation and fragmentation of habitats, poaching and use of pesticides. A potential threat to large carnivores posed by motorways has been decreased with the construction of green bridges that serve as corridors to these species. Approximately 62% of all threats to vascular flora in the Republic of Croatia pertain to the loss and/or degradation of habitats due to anthropogenic impacts, with wetland habitats such as bogs and fens threatened in particular. Subterranean habitats and species are extremely sensitive and endangered by external impacts. Key threats include the destruction of habitats due to road construction; intensive urbanization; water pollution caused by industrial and municipal waste and wastewater; intensive agricultural production coupled with the use of mineral fertilizers and pesticides; changes to the groundwater regime or groundwater quality; large hydrotechnical interventions. Caves in coastal areas are threatened by pollution and construction along the coast. Submarine springs are threatened by pollution, coastal area reclamation and construction of infrastructure along the coast, while river mouths of karst rivers are exposed to anthropogenic activities. Given the fact that habitat types are linked with species that are assessed in terms of threats on the basis of clearly defined IUCN criteria, one can also make direct conclusions regarding their threat exposure as well.

Due to their almost neutral CO<sub>2</sub> balance, renewable energy sources (RES) are crucial in order to tackle and mitigate climate changes, which represent one of the biggest threats to biodiversity at the global level. In accordance with the EU 2020 Energy Strategy, renewables such as wind, solar energy, small hydroelectric power plants and biomass power plants will largely contribute to decarbonization of the energy sources, thus enabling economic development on the one hand, while mitigating the Earth's atmosphere warming on the other. However, there is also a significant conflict between biodiversity and RES power plants. Wind power plants, solar power plants and hydroelectric power plants often take spaces that are habitats of endangered species. This issue has been recognized by the relevant sectors and science, so harmonization of biodiversity protection and the development of RES must be achieved through physical and strategic planning, including the implementation of Strategic Environmental Assessment (SEA) for strategies, plans and programmes, and Environmental Impact Assessment (EIA) for procedures, as well as Ecological Network Impact Assessment (ENIA) procedures for strategies, plans, programmes and projects, undertaken within SEA or EIA, or as an independent procedure.

The biggest threat to geodiversity is pressure caused by human activity, in particular excessive exploitation of mineral raw materials, water pollution, interventions on watercourses, illegal waste disposal sites, expansion of construction areas, illegal construction and road construction. Such interventions are harming the natural landscapes, but also triggering the activation of natural processes such as landslides, which pose a danger to the population and to infrastructure. Irresponsible and excessive collection and deliberate destruction of fossils and minerals also represent a major threat to geodiversity.

## 1.5.2. National legislative and institutional framework

The Republic of Croatia established legislative and institutional framework for undertaking of activities aimed at the fulfilment of goals, guidelines and action plans regarding the conservation of biodiversity, geodiversity and landscape diversity. In addition, linking and harmonization of the state system with the international nature protection system are also successfully implemented. The period since the adoption of the Strategy in 2008 has been marked by intensive negotiations of the Republic of Croatia with the European Union. In the process of Croatia's accession to the EU, the most important obligation in the area of nature protection was designation of the areas of the Natura 2000 ecological network.

The foundation of the nature protection legal framework in the Republic of Croatia is the Nature Protection Act, which entered into force in July 2013. This Act was drafted in the context of the need to improve its structure, in order to additionally harmonize the national legal framework with the provisions of the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206, 22 July 1992), as changed and amended by the Council Directive 2013/17/EU of 13 May 2013 adapting certain directives in the field of environment, by reason of the accession of the Republic of Croatia (OJ L 158, 10 June 2013) (the Habitats Directive), and with the provisions of the Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version) (OJ L 20, 26 January 2010), as changed and amended by the Council Directive 2013/17/EU of 13 May 2013 adapting certain directives in the field of environment, by reason of the accession of the Republic of Croatia (OJ L 158, 10 June 2013) (the Birds Directive), and also in order to implement the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization. The new Act also includes provisions on invasive alien species and on discovery of speleological sites. New regulations have been adopted pursuant to the new Act, including the Regulation on the Ecological Network (Official Gazette Nos. 124/13 and 105/15); Ordinance on Conservation Objectives and Bird Conservation Measures in the Ecological Network (Official Gazette No. 15/14); Ordinance on the List of Habitat Types, Habitat Map, and Threatened and Rare Habitat Types (Official Gazette No. 88/14); Ordinance on Strictly Protected Species (Official Gazette Nos. 144/13 and 73/16); and Ordinance on Appropriate Assessment for the Ecological Network (Official Gazette No. 146/14). Regulation related to transboundary movement and trade in wild species has been covered separately within the Act on Transboundary Movement and Trade in Wild Species (Official Gazette No. 94/13). In the course of 2013, the new Environmental Protection Act (Official Gazette Nos. 80/13, 153/13 and 78/15) has entered into force, as well as other acts whose implementation has significant impact on nature protection. In the Republic of Croatia, sectoral competence is divided among different SABs and expert institutions, which is why intersectoral cooperation should be continuously strengthened in the process of drafting and using all legal acts, in particular strategic acts, in order for this cooperation to be as fruitful as possible.

In addition to a harmonized legal framework, a prerequisite for harmonizing the national and the European nature protection policy is to ensure institutional strengthening, which goes beyond additional staffing *per se*, and also includes improving the knowledge of the existing staff. It is necessary to invest funds and to strengthen human resources in the area of nature status monitoring. In addition to monitoring, it is also clearly necessary to invest additional efforts and resources in reporting and data exchange on nature between the Republic of Croatia and the European Commission, as a constituent part of implementation of the European nature protection policy.

The Republic of Croatia is a signatory of 18 international agreements on nature protection. The establishment of a new legislative and institutional nature protection framework, harmonization of the national legislation with the relevant EU directives, as well as accession to various international conventions and agreements, have resulted in an awareness on strategic goals and guidelines regarding biodiversity protection at all levels.

Nature protection affairs in the Republic of Croatia and direct implementation of the Nature Protection Act are under the competence of the Ministry, CAEN, administrative bodies of regional self-government units competent for nature protection, public institutions competent for managing of national parks and nature parks, established by the Republic of Croatia, and public institutions for the management of other protected areas and/or parts of nature, established by regional and local self-government bodies.

In the Ministry, the nature protection affairs are under the competence of the Nature Protection Directorate and the Sector for Nature Protection Inspection within the Directorate for Inspection Affairs. The Nature Protection Directorate is competent for administrative and expert affairs in relation with the conservation of biodiversity, geodiversity, sustainable use of natural resources, conservation and protection of parts of nature, including protected areas and ecological network by fulfilling or by ensuring the fulfilment of obligations stemming from international agreements, laws and other regulations; provides, supervises and monitors the implementation of measures for the protection and conservation according to the nature protection regulations, transboundary movement and trade in wild species, transboundary movements of genetically modified organisms, access and use of genetic diversity and dealing with alien, including invasive alien species; performs expert and administrative monitoring under the work of a competent expert body for nature protection and public institutions for management of protected areas and/or other protected parts of nature, including Natura 2000 ecological network; harmonizes and manages financing of nature protection activities; implements the international cooperation affairs as well as implementation of international treaties and European affairs regarding the conservation of biodiversity and nature; coordinates the development of strategic and planning documents in nature protection and the implementation of operational programs co-financed by the European Union in the field of nature protection; encourages to inform the public about nature and its conservation. The Sector for Nature Protection Inspection performs inspections regarding the fulfilment of conditions, permissions, decisions and other acts in the nature protection sphere. In addition, the Sector supervises the work of monitoring services in charge of protection, conservation and promotion of nature protected areas; participates in the drafting of acts and other regulations within the scope of work of the Sector; performs monitoring tasks regarding the implementation of nature protection regulations; supervises the use of protected nature areas; and also performs other tasks defined by special regulation which regulates the internal organization of the Ministry.

One part of administrative and nature protection expert tasks is also performed by administrative bodies of regional self-government competent for nature protection.

Nature protection expert tasks in the Republic of Croatia are performed by CAEN, which performs its work as public institution. CAEN was established by the Regulation on the Establishment of the Croatian Agency for the Environment and Nature, 1<sup>st</sup> July 2015 (Official Gazette No. 72/15). Pursuant to Article 20, paragraph 1 of the Regulation, CAEN is the legal successor of the Croatian Environment Agency and the State Institute for Nature Protection, taking over their activities within the scope defined by the Regulation and the relevant bylaws, with these two entities no longer operational from the date of registration of CAEN in the court register. The activities of CAEN include the following:

collection and aggregation of data and information on environment and nature, in order to ensure and monitor the implementation of environmental and nature protection policy, sustainable development and expert activities in connection with environmental and nature protection; establishment, development, management and coordination of environmental and nature information systems in the Republic of Croatia; development and maintenance of relevant databases on environment and nature, while ensuring the conditions for access to information on environment and nature available to and monitored by CAEN; development of the national list of indicators; preparation of expert base proposals for the drafting of documents on environmental protection and sustainable development, and participation in the drafting of these documents and of reports connected with the implementation of these documents; implementation of monitoring and reporting on the state of the environment, and monitoring and reporting on environmental impacts on health, in cooperation with the Croatian Institute of Public Health; implementation of threat assessments for the constituent elements of biodiversity, including the preparation of the Red List of Threatened Species; standardization of methodology and protocols; monitoring of the conservation status of biodiversity and geodiversity, and proposing measures for their protection; preparation of expert base proposals for the protection and conservation of protected nature areas and ecological network; preparation of expert base proposals on management planning for wild species, unless otherwise prescribed by special regulations; preparation of information for the purposes of defining nature protection requirements in natural resource management plans and nature protection requirements in spatial plans; preparation of expert base proposals for the purposes of drafting spatial plans of areas with special characteristics, such as national parks and nature parks; implementation of expert activities regarding the assessment of impact, control of spreading and eradication of alien species, regarding the reintroduction and repopulation of wild species in nature, regarding the procedure of ENIA, and regarding transboundary movement and trade in wild species; organization and implementation of education for environmental and nature stakeholders, and of educational and promotional activities in environment and nature; implementation or participation in implementation of international treaties and agreements in the area of environmental and nature protection of which the Republic of Croatia is a party, in terms of reporting on undertaken obligations.

Protected areas are managed by public institutions. Public institutions implement activities pertaining to the protection, maintenance and promotion of protected area with the aim of protecting and conserving the original state of nature, ensuring undisturbed flow of natural processes and sustainable use of natural resources; they also supervise the implementation of nature protection requirements and measures in the areas that they are managing, and they participate in the collection of data with the aim of monitoring the status of nature conservation.

Taking into account the existing scope of work, as well as new commitments undertaken following the accession of the Republic of Croatia to the European Union, it is necessary to ensure the strengthening of human resources in the institutional framework in the forthcoming period. At the national level, the institutional framework for support to civil society development includes the Office of the Government of the Republic of Croatia for Cooperation with NGOs, Council for Civil Society Development, and the National Foundation for Civil Society Development that provides significant support to the development and work of civil society organizations (CSOs) through funding support, counselling, education, etc. The number of organizations is one of the most important indicators of civil society development. According to the data from October 2014, there were 944 registered organizations in the country active in the area of nature protection and ecology. Despite that, only a small number of organizations (approx. 5%) prioritize

nature protection. In recent years, CSOs have developed capacities in the form of professional and specialized staff, pointing out their important role also by actively advocating public policies. Only a small number of CSOs active in the sphere of nature protection deal with the protection of species and habitats (approx. 5%), and "environmental" and "nature" activities overlap and mutually complement each other. In addition, organizations active in the sphere of nature protection play a crucial role in the collection of information on species and habitats, and in monitoring species and habitats in accordance with the Birds Directive and the Habitats Directive. CSOs have thus developed specialized staff networked at the international level through networks and umbrella organizations. Furthermore, CSOs are involved in activities aimed at the drafting of management plans for protected areas and areas of the Natura 2000 ecological network, and they also organize workshops, educational and training programmes, thus contributing to capacity building among the staff of public institutions competent for managing protected areas and Natura 2000 areas at the national, regional and local level. The successfulness of CSOs can also be seen in a large percentage of absorption of EU pre-accession funds in the sector of environmental and nature protection.

According to available data, there are 21 scientific, higher education and museum institutions collecting data on biodiversity, geodiversity and/or landscape diversity in the Republic of Croatia through their scientific and expert activities, and such data can be used in nature protection to a higher or lesser degree, primarily through the implementation of scientific research projects.

In February 2014, the Ministry and the United Nations Development Programme in the Republic of Croatia (UNDP) have started the implementation of the four-year PARCS Project (*Strengthening the Institutional and Financial Sustainability of the National Protected Area System in the Republic of Croatia*), in cooperation with public institutions competent for managing of national parks and nature parks, and in cooperation with the CAEN. The Project is fully funded by a Global Environment Fund (GEF) grant in the amount of 27 million HRK, and by the operational and financial support provided by UNDP in the amount of 3 million HRK. The aim is to ensure long-term financial sustainability of parks in their core protection and conservation activities, by improving the management model in the national park and nature park system through mechanisms of standardizing business process, more equitable distribution of resources and education of the staff, coupled with the development of visitor infrastructure and introduction of energy efficient technologies.

Through implementation of the EU Natura 2000 Integration Project (NIP) in the period from 2011 until 2016, the Ministry has invested 140 million HRK in various development and infrastructure projects. NIP project funds have ensured stable funding of priority nature protection projects in the period from 2011 until 2016. In addition, the support to the nature protection sector provided by the Environmental Protection and Energy Efficiency Fund (EPEEF) has increased more than 20-fold in comparison with the situation in 2011 and 2012. In other words, the EPEEF is now investing over 20 million HRK in nature protection projects per year.

The synergy of funds provided by the EPEEF and by the Ministry via NIP Project has resulted in a high preparedness level of projects proposed for EU funding, with approximately 950 million HRK ensured for projects directly contributing to nature protection in the financial perspective 2014-2020.

The Ordinance on the Unique Visual Identity of the Protected Area Management System in the Republic of Croatia (Official Gazette No. 108/14), the development of visitor infrastructure and a high preparedness level of projects

proposed for EU funding represent essential preconditions for further improvement of the national protected area management, and for achieving the full potential for the development of local areas and wider regions.

### 1.5.3. Strategy development process

The Convention on Biological Diversity entered into force in the Republic of Croatia in 1996, the first Strategy was adopted in 1999, and the second Strategy was adopted in 2008. The process of adoption of this Strategy has commenced in June 2014, within the project entitled *National Biodiversity Planning to Support the Implementation of the CBD 2011-2020 Strategic Plan in Croatia*, with the Ministry and the CAEN as project beneficiaries, and with the UNDP as the implementing agency.

The CAEN prepared the proposal of the Report, on the basis of which the Ministry initiated the procedure of drafting of the new Strategy. Expert proposals have been prepared in order to define strategic goals, including the participation of the staff of the Ministry and of the CAEN. Preparatory activities to determine the specific objectives, activities and status assessments have also been performed, by working groups consisted of the staff from nature protection institutions. In order to define specific objectives and priority activities, intersectoral working group was established with the representatives of competent SABs, expert institutions, public institutions competent for managing protected areas, inspection services, scientific institutions, the economy and CSOs.

Five presentations and workshops were held during the drafting process, including the participation of other SABs, public institutions competent for managing protected areas, as well as CSOs. A survey was conducted, analyzed and published on the website of the Ministry ([www.mzoip.hr](http://www.mzoip.hr)), with the aim of collecting the opinions of stakeholders in the nature protection sector and other sectors (private and public), CSOs and individuals. The electronic survey involved 115 stakeholders, and its results were taken into account in the drafting of specific objectives and activities.

The idea behind the involving of large number of stakeholders in the drafting of the Strategy was to approach nature protection planning in an integrated manner, thus creating the preconditions for the integration of nature-related aspects in all the relevant sectors.

Working groups began operating in June 2014. The first draft of the Strategy was prepared towards the end of 2014. In the second quarter of 2015 the Strategy entered into the procedure of public consultation and adoption. The draft of the Strategy was available within the central state portal for public consultations »e-Savjetovanja« during the time period from 10 June until 9 July 2015, with the aim of collecting objections, proposals and opinions of the interested public. In this period, 89 comments were received from 7 stakeholders in total. The Strategy was adopted at the 253<sup>rd</sup> session of the Government of the Republic of Croatia, held on 17 September 2015, and sent to the Croatian Parliament, but it was not discussed there until its dissolution in September 2015. The Strategy adoption procedure was initiated again in the second quarter of 2016.

The analysis of the state of nature that represents the foundation of this Strategy includes an overview of the state of nature in the Republic of Croatia in the period from 2008 until 2012, and it has been published on the CAEN website. In the context of legislative, institutional and implementation framework of nature protection, the Strategy takes into account the state taken to the end of 2016.

Even though the analysis performed in the context of assessing the Strategy of 2008 has shown that most of the assessed action plans (almost 74%) have been implemented either partially or fully, it also looked at shortcomings of the Strategy, and useful guidelines have been obtained in this process and taken into account during the drafting of this Strategy.

Compared to the implementation of the Strategy of 1999, the share of implemented plans in the Strategy of 2008 has increased by approximately 20%. Certain shortcomings noticed in the Strategy of 2008 in terms of the definitions of target values and corresponding indicators have been properly embedded in the draft of the new Strategy.

The Strategy is a result of integration of goals from the Strategic Plan for Biodiversity, and it reflects intensive involvement not only of the central, regional and local administration, but also of various experts and scientists, CSOs and private sector stakeholders that cooperated in the process.

## 2. NATURE PROTECTION STRATEGY AND ACTION PLAN OF THE REPUBLIC OF CROATIA

The Strategy, even though it reflects the obligations stemming from the Convention on Biological Diversity, does not include only biodiversity, but also geodiversity. Over time, an awareness has arisen that – in addition to biology – sectors such as geology, geomorphology and pedology also play a major role. Geodiversity is thus included in the Strategy as a constituent part, given the fact that it represents an important segment of landscapes, conditioning biodiversity and serving as a foundation for ecosystems. As can be seen from the overview (Figure 1), the Strategy consists of the vision, strategic goals and specific objectives accompanied by activities.

A developed Action Plan for the implementation of the Strategy will provide a detailed description of the methods to achieve strategic goals. Specific objectives will be achieved through a range of activities *tailored* to individual areas of implementation and/or to various stakeholders and sectors of the economy. Defined activities also clarify where and when legislation at the state level needs to be changed or amended in order to enable the implementation of the Strategy.

Priorities in the forthcoming period are firmly connected with obligations stemming from the membership of the Republic of Croatia in the European Union. In nature protection, this particularly pertains to the establishment of implementation mechanisms needed in order to ensure favourable conservation status of species and habitat types, primarily through the management of the Natura 2000 ecological network. However, in order for this goal to be achieved, and in order for conservation of all segments of nature to be ensured in general, intersectoral cooperation will be crucial, together with the understanding that conserved nature represents a prerequisite for the survival and progress of modern society.

## 2.1. Structure of the Strategy



Figure 1. Overview of the structure of the Strategy

Protected and conserved nature will ensure preservation of fundamental national values and potential for further development of the country. The Republic of Croatia will be a country with increased awareness on the importance of conservation of nature that allows multiple development paths through smart and sustainable use. Stronger involvement at local and regional level, education, intersectoral cooperation and public participation will lead to increased awareness on the need to protect nature through all forms of political, economic and social engagement.

**Increase the effectiveness of key nature protection mechanisms**

**Specific objectives**

1. Ensure a clear, harmonized and feasible legislative and institutional framework for the implementation of nature conservation mechanisms;
2. Design and establish a representative and functional network of areas important for nature conservation;
3. Standardize management in nature protection and establish a performance monitoring system;
4. Develop co-operative management modalities and strengthen communication.

**Reduce the direct pressures on nature and promote sustainable use of natural resources**

**Specific objectives**

1. Ensure sustainable use of natural resources through sectoral planning documents;
2. Strengthen the system for implementation of Ecological Network Impact Assessment
3. Ensure sustainable use of native wild species where their use is not regulated by special regulations;
4. Protect genetic diversity and sustainably use genetic resources;
5. Conserve unfragmented natural areas and restore the most threatened degraded habitats;
6. Establish a management system for alien species and implement measures for the prevention of introduction and spread and control of Invasive Alien Species

**Strengthen the capacities of nature protection system**

**Specific objectives**

1. Strengthen institutional capacities in nature protection;
2. Continue strengthening technical knowledge and skills for effective implementation of nature protection;
3. Improve financial sustainability of the nature protection system.

**Increase the knowledge and availability of data on nature**

**Specific objectives**

1. Increase the knowledge on the state of nature;
2. Increase availability of data on the state of nature;
3. Evaluate and map ecosystem and their services with the goals of assessing and improving their status.

**Raise the level of knowledge, understanding, and support for nature protection among the general public**

**Specific objectives**

1. Improve understanding and representation of nature-related topics and nature protection in the educational system and strengthen cooperation with the education sector;
2. Promote and implement informal education on nature protection;
3. Improve public information in order to raise awareness on nature and nature protection;
4. Improve participation in decision-making directly or indirectly connected with nature protection.

## *2.2. Vision*

**Protected and conserved nature will ensure preservation of fundamental national values and potential for further development of the country. The Republic of Croatia will be a country with increased awareness on the importance of conservation of nature that allows multiple development paths through smart and sustainable use. Stronger involvement at local and regional level, education, intersectoral cooperation and public participation will lead to increased awareness on the need to protect nature through all forms of political, economic and social engagement.**

### ***2.3. Principles of the Strategy***

The Republic of Croatia is aware that the totality of nature represents its core value and a key resource for further development.

The basic principles underlying the Strategy are as follows:

- Everyone must act in a manner that contributes to the conservation of biodiversity, landscape diversity, geodiversity and the beneficial role of nature;
- Non-renewable natural resources should be used rationally, and renewable natural resources should be used sustainably;
- Principles of sustainable use must be applied in the use of natural resources and in physical planning;
- Nature protection is an obligation of every natural person and legal entity, and these persons and entities have the duty to cooperate in order to avoid and prevent any harmful actions or damage, in order to eliminate and remedy the consequences of any damage, and in order to restore natural conditions that existed prior to damage;
- Precautionary principle must be applied wherever there is a threat of serious or irreparable harm to nature;
- The public has the right to free access to information on the state of nature.

The goals and tasks in nature protection are to:

- Conserve and/or restore biodiversity, geodiversity and landscape diversity in a state of natural balance and harmony with human activities;
- Determine and monitor the state of nature;
- Establish a system of nature protection for the purposes of its permanent conservation;
- Ensure sustainable use of natural resources without major harm to any segment of nature, and with the lowest possible disruption of balance of its elements;
- Contribute to the conservation of the natural character of soil; quality, quantity and availability of water; sea; atmosphere and oxygen production; climate;
- Prevent or mitigate harmful projects and disturbances in nature as consequences of technological development and human activities.

The Strategy aims to conserve the diversity of living nature and to ensure its restoration in the territory of the Republic of Croatia. The aim is to maintain functional ecosystems and to enable long-term sustainable development. The Strategy promotes a decrease of direct and indirect impacts on biodiversity and geodiversity, sustainable use of natural resources, and an equitable distribution of benefits arising from the utilization of genetic resources. The Strategy brings together all stakeholders – SABs, institutions active in the area of nature protection, regional and local self-government, private and science sector, CSOs and other stakeholders – in the planning, implementation and evaluation of its effects. It drives us to get better acquainted with the state of nature in the Republic of Croatia through intensified research, monitoring and innovation, and it strengthens education and integration of nature protection measures in planning documents, and thus also in activities, of all sectors that impact upon nature either positively or negatively.

## **2.4. Strategic goals**

What follows is an overview of strategic goals of the Strategy, i.e. priority areas that should be targeted by stakeholders in their activities, so that their joint efforts could result in significant impacts and clear results in these areas. Each strategic goal contains several specific objectives. The fulfilment of these strategic goals and specific objectives is foreseen through the implementation of a series of activities.

Five strategic goals of the Strategy:

1. Increase the effectiveness of key nature protection mechanisms
2. Reduce the direct pressures on nature and promote sustainable use of natural resources
3. Strengthen the capacities of nature protection system
4. Increase the knowledge and availability of data on nature
5. Raise the level of knowledge, understanding of, and support for, nature protection among the general public

## **2.5. Overview of the state of affairs, specific objectives and foreseen activities per Strategic Goal**

### **2.5.1. Strategic Goal 1: Increase the effectiveness of key nature protection mechanisms**

Nature protection in the Republic of Croatia and conservation of overall biodiversity, landscape diversity and geodiversity is ensured by the protection and conservation of areas and by the protection of individual species, their habitats and habitat types.

In the Republic of Croatia, there is a long tradition of granting protection to valuable areas, with the aim of their long-term protection within national and/or international categories of protection, as well as a long tradition of conservation of parts of nature or comprehensive ecosystems, i.e. conservation of biodiversity, geodiversity and landscape diversity in general. All protected areas are registered in the Register of Protected Areas, maintained by the Ministry. According to the data from the Register<sup>2</sup>, there are 407 permanently protected areas in nine national categories of protection, representing 8.49% of the total territory of the Republic of Croatia, or 7,476.28 ha. With the accession of the Republic of Croatia to the European Union, areas of the Natura 2000 ecological network have been defined, covering 36.73% of the terrestrial area and 15.42% of the sea (internal marine waters and territorial waters), i.e. 29.08% of the total surface of the Republic of Croatia. The Natura 2000 ecological network consists of 781 areas in total, out of which 38 Special Protection Areas and 743 Special Areas of Conservation. Proclamation of the Natura 2000 ecological network areas represents a precondition to ensure favourable conservation status of vulnerable species and habitat types of importance to the European Union and the Republic of Croatia. The Natura 2000 ecological network is not yet complete, especially when it comes to marine habitats and migratory marine species that need to be additionally researched and assessed, including the Ecological and Fisheries Protection Zone of the Republic of Croatia (ZERP) over which Republic of Croatia has its sovereign rights. In addition, having in mind the aim to conserve target species and habitat types as effectively as possible, and taking into account the mapping of the boundaries of the ecological network on a scale of 1:5,000, the zoning of the ecological network needs to be performed as well. For planned strengthening of cooperation

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<sup>2</sup> Register of Protected Areas, December 2016

between the nature protection sector and other sectors it is necessary to define effective conservation measures and their sectoral implementation, in order to get more involved in management planning for Natura 2000 ecological network areas, and in the management itself, including the financing of management. In practice, conservation of Natura 2000 ecological network areas and protected areas is ensured through the integration of appropriate nature protection requirements in spatial plans and natural resource management plans, through the implementation of ENIA, and through the implementation of activities stemming from protected areas management plans for areas where such plans have been adopted. Management of protected areas is performed through management plans and annual programmes of protection, maintenance, conservation, promotion and use of protected area, and in accordance with physical planning documentation and other sectoral management plans of natural resources. In addition, conditions and measures concerning the protection, conservation, upgrading and use of protected area is more specifically prescribed by ordinances on protection and conservation or by decisions on measures of protection, conservation, upgrading and use of protected area, depending on the category of protection. Problems in effective management of such areas include imprecisely defined boundaries of protected areas; only partial inclusion of protected area boundaries in cadastre and land registry documentation; fragmentation of protected areas (large number of areas small in surface); clear domination of categories that are demanding in management terms due to many permitted forms of use, such as nature parks, regional parks and significant landscapes/seascapes (over 80% of the total surface of protected areas); as well as incompletely performed audit of protected areas.

The Republic of Croatia is characterized by major diversity of wild plant and animal species in diverse ecosystems. This is a result of the geographic position of the Republic of Croatia at the boundaries of three biogeographic regions, and of a considerable diversity of habitats, resulting in a wide spectrum of diverse ecological conditions favourable for the development of flora and fauna. This is why the Republic of Croatia is one of the richest countries of Europe in terms of biodiversity. The abundance of wild species in the Republic of Croatia is also reflected in the share of endemic species. The Republic of Croatia has prepared Red Lists for 18 groups, and the Red List of Cave Fauna, covering more groups connected with this specific habitat type – mostly invertebrates, with only one amphibian species (olm) representing the vertebrates. Conservation of species in their overall diversity and favourable status is one of the fundamental goals of nature protection. Wild species belonging to high-risk categories of threats, as well as species granted such protection status under the provisions of EU Directives or international agreements, are strictly protected pursuant to the Nature Protection Act, which ensures essential prerequisites for their conservation. The system of permissions for transboundary movement and trade prevents uncontrolled international trade and commercial exploitation of endangered species. In order to ensure more effective management and conservation of wild species in nature, primarily it is necessary to define protection and conservation priorities, taking into account threats and pressures. Priority species and habitats, in terms of the implementation of required conservation measures, are determined and published by the CAEN. In accordance with the defined priorities, it is necessary to draft action plans for the conservation of species and their habitats; implement specific activities, such as the improvement in the work of care centres for injured, wounded, sick and exhausted strictly protected wild animal species; and establish a functional system for alerting and monitoring concerning dead, injured or sick strictly protected wild animals. In addition, it is also important to work on improving the legislative framework in terms of defining specific measures for the protection of species when implementing projects in nature.

The conservation of habitat types is ensured by the integration of nature protection measures into spatial plans, sectoral planning documents, and individual projects. Habitat types of interest to the European Union are covered by defining the areas of the Natura 2000 ecological network.

Geodiversity of the Republic of Croatia is characterized by major diversity of geological, geomorphological and pedological features. Unlike biodiversity, geodiversity is not renewable, and it is subject to damage or permanent destruction, which frequently results in its irreversible loss. One of the preconditions for its conservation is the protection of geoheritage, i.e. the protection of rocks, minerals, fossils and soil that have an important role in the understanding of geological and geomorphological processes. The Nature Protection Act protects 52 geological sites in total, mostly categorized as nature monuments. Since 1998, five geological sites have been assessed, and expert base proposals have been prepared for their protection, but only one geological site is protected. Barac caves are protected in the category of significant landscape in 2016. Two expert opinions have also been prepared for the protection of minerals and fossils, but only the Stone Spheres of the Municipality of Pojezerje have been officially protected in the category of protected minerals. Some of geological sites have lost their values that had originally resulted in their protection, and the existing categories of protection are frequently inappropriate. In order to ensure effective protection, as well as better management, it is necessary to define the evaluation criteria, to re-examine the need for new categories of protection or for adaptation of the existing categories, and to initiate the review process for protected geoheritage. Interpretation, suitable education and promotion will contribute to a better understanding of the values of geoheritage.

**Specific objectives:**

**1.1 Ensure a clear, harmonized and feasible legislative and institutional framework for the implementation of nature conservation mechanisms**

**Related result/impact indicators (NLI):**



**ZDP 1**

Protected areas pursuant to the Nature Protection Act



**BR 2**

Areas of European interest

Activity	Implementation indicator
<b>1.1.1 Analyze the effectiveness of the legislative and institutional framework in connection with the management of species, protected areas, the ecological network and geoheritage</b>	Prepared proposals on improvement of the legislative framework for nature protection and for other relevant sectors, based on results of the performed analysis.
<b>1.1.2 Implement the assessment process for protected areas in accordance with IUCN management categories</b>	Number of protected areas with defined protection goals and with assessment of management category according to the IUCN criteria.
<b>1.1.3 Define targets and basic conservation measures, and implement spatial zoning on the basis of ecological requirements for target species and habitat types in the area of the ecological network</b>	Prepared analysis and defined targets and basic conservation measures; undertaken spatial zoning for target species and habitat types in the area of the ecological network.
<b>1.1.4 Identify the implementers of basic conservation measures in the area of the ecological network and planning documents for the existing or potential implementation of these measures</b>	Number of identified implementers of basic conservation measures in the area of the ecological network and the number of relevant planning documents.

**Contribution to Global Strategic Goals and Targets of the EU 2020 Biodiversity Strategy**



**1**

**3**

Bodies participating in the implementation: *central SAB competent for nature protection and other SABs within their jurisdiction; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; CSOs active in the area of nature protection.*

## 1.2 Design and establish a representative and functional network of areas significant for nature conservation

### Related result/impact indicators (NLI):



**ZDP 1**

Protected areas pursuant to the Nature Protection Act



**BR 2, 16**

Areas of European interest  
Marine protected areas



**GR 1, 2**

Protected geological sites / geodiversity  
Geoparks of the Republic of Croatia

Activity	Implementation indicator
<b>1.2.1 Amend the ecological network with Special Areas of Conservation in those areas in the Republic of Croatia assessed as "scientific reserve" in biogeographic seminars, if research shows that there is a need for such actions</b>	Number of species and habitat types covered by performed research.
<b>1.2.2 Analyze the functionality of existing protected areas, determine the species and problem levels, as well as priorities and methods (legislative or other) of problem-solving, and initiate review in accordance with the analysis</b>	Number of analytical studies on protected areas in regard to protection goals, status of natural values, category of protection, spatial coverage; number of reviewed protected areas compared with the situation in the Register in 2016.
<b>1.2.3 Record the boundaries of protected areas in cadastre and land registry</b>	Prepared documentation for the recording of national parks' boundaries in cadastre and land registry.
<b>1.2.4 Analyze the representativeness of protected areas at the national level; develop criteria for the proclamation of new protected areas and propose protection priorities in accordance with these criteria</b>	Performed analysis of the representativeness of protected areas and defined list of criteria for the proclamation of new protected areas.
<b>1.2.5 Analyze the representation of Croatian protected areas in global networks with international designation (UNESCO World Heritage, UNESCO Man and the Biosphere, Ramsar, Geopark, SPAMI, etc.); determine priorities for new candidacies</b>	Performed analysis with identified priorities; number of prepared candidacies for one of the international networks.
<b>1.2.6 Develop criteria for the assessment of geoheritage, and propose protection of valuable geological sites in accordance with these criteria</b>	Developed criteria for the assessment of geoheritage. Number of expert base proposals for the protection of geological sites.
<b>1.2.7 Implement legal protection procedures for the areas with already prepared expert base proposals</b>	Number of new areas classified as protection priorities.

### Contribution to Global Strategic Goals and Targets of the EU 2020 Biodiversity Strategy



1

2

Bodies participating in the implementation: *central SAB competent for nature protection and other SABs within their jurisdiction; CAEN; local and regional self-government units; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; CSOs active in the area of nature protection; scientific institutions.*

### 1.3 Standardize management in nature protection and establish a performance monitoring system

#### Related result/impact indicators (NLI):



**BR 2, 6, 7**

Areas of European interest  
 Status and threat index for wild species from the Red List of the Republic of Croatia  
 Abundance and distribution of selected species

Activity	Implementation indicator
<b>1.3.1 Prepare management plans for strictly protected species with action plans for those species determined as priorities; revise the existing management plans</b>	Regular revisions of the priority species list. Number of adopted management plans for strictly protected species with action plans.
<b>1.3.2 Ensure the implementation of measures defined by management plans for strictly protected species with action plans for priority strictly protected species</b>	Number of implemented projects contributing to the conservation or achievement of favourable status of endangered species and their habitats. Number of implemented action plans for priority strictly protected species. Integration of conservation measures into all relevant planning documents.
<b>1.3.3 Establish a comprehensive care system for priority animal species</b>	Number of certified rescue centres. Ensured functionality of rescue centres for wild animals.
<b>1.3.4 Establish a comprehensive alert system on fatalities among strictly protected animal species</b>	Number of groups of strictly protected animal species with established protocols.
<b>1.3.5 Improve standards for the preparation of management documents for protected areas, the ecological network and species</b>	Number of management segments with prepared management standards.
<b>1.3.6 Develop and establish a monitoring system for the implementation of management of protected areas and species; define the methodology and analyze the effectiveness of protected area management at the level of individual public institutions and other managing authorities, and at the national level</b>	Monitoring system for management effectiveness and accompanying standards are developed and implemented in national parks and nature parks. Periodic assessment of management effectiveness. Monitoring system for the effectiveness of species management is defined and implemented in practice for large carnivores.
<b>1.3.7 Based on the defined ecological network management framework, ensure adequate integration of basic and additional conservation measures into ecological network management plans, spatial plans, sectoral natural resource management plans and other sectoral plans</b>	Surface of the ecological network covered by planning documents and spatial plans with integrated conservation measures.
<b>1.3.8 Develop an integral systems of interpretation and visitor management in protected areas and in individual parts of the ecological network</b>	Prepared analysis of the state of affairs with guidelines for visitor management. Established visitor recording system in parks with a large number of visitors.

#### Contribution to Global Strategic Goals and to Targets of the EU 2020 Biodiversity Strategy



Bodies participating in the implementation: *central SABs competent for nature protection, forestry, hunting, veterinary services, water management, fisheries and maritime affairs; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; scientific institutions and experts for taxonomic groups; CSOs active in the area of nature protection.*

## 1.4 Develop co-operative management modalities and strengthen communication

### Related result/impact indicators (NLI):



**BR 2, 18**

Areas of European interest  
Public awareness about nature protection



**PO 1**

Areas under agri-environment incentives



**Š 5**

Forest areas under certification for sustainable management

Activity	Implementation indicator
<b>1.4.1 Enable entities that are neither owners nor rights holders to assume care for protected areas, parts of protected area or for areas of the ecological network, with the exception of forests and forest land owned by the Republic of Croatia</b>	Number of areas under the care of other entities.
<b>1.4.2 Promote communication on protected areas, the ecological network and strictly protected species</b>	Number of projects focusing on communication regarding the values of protected areas, the ecological network and strictly protected species.
<b>1.4.3 Ensure participation of stakeholders in the management of protected areas, the ecological network and strictly protected species</b>	Share of adopted management plans for protected areas and strictly protected species prepared through participatory stakeholder approach. Number of protected areas managed with stakeholder participation through cooperation councils or similar mechanisms.
<b>1.4.4 Promote international cooperation in managing protected areas, areas of the ecological network and species</b>	Number of areas of the Natura 2000 ecological network and/or protected areas with prepared transboundary management models. Established transboundary management model for large carnivores.

### Contribution to Global Strategic Goals and to Targets of the EU 2020 Biodiversity Strategy



1

3

Bodies participating in the implementation: *central SAB competent for nature protection and other SABs within their jurisdiction; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; Office of the Government of the Republic of Croatia for Cooperation with NGOs; CSOs active in the area of nature protection.*

## **2.5.2. Strategic Goal 2: Reduce the direct pressures on nature and promote sustainable use of natural resources**

### **Sustainable use of natural resources**

Sustainable use of natural resources is use of natural resources in a manner that preserves their potential to fulfil the relevant current and future ecological, economic and social functions at the local, national and global level.

Economic and other human activities impact upon biodiversity due to the use of natural resources, or due to takeover and use of space; as a result, both habitats and wild species in the Republic of Croatia are predominantly threatened by anthropogenic activities. On the other hand, disappearance of certain human activities, such as mowing or grazing, can also have a negative impact on biodiversity and result in natural succession, change in ecological conditions and disappearance of species. Succession also poses a threat to wetland areas that require active management. Regulation of watercourses and changes in the water regime represent the key threats to all water-dependant habitat types such as river gravels, sand shores and muddy shores, karst watercourses with tufa-creating communities and tufa barriers, as well as all types of wet grasslands and floodplain forests. Coastal habitats are under strong pressures due to expanding construction areas. Furthermore, it is important to better regulate the commercial collection of plants, mushrooms and marine species in order to prevent their excessive use, and to eliminate the possibility of deterioration of the living conditions of these species to the extent that would render them endangered. One must not also neglect climate change, considered to be one of the key reasons of the loss of biodiversity at the global level due to impacts on nesting times, migrations and distribution of species. These effects have already been detected in the Republic of Croatia, particularly changes in the periods of arrival of certain migratory bird species and the beginning of their nesting, as well as the phenomenon of coral bleaching.

One specific problem is the illegal disposal of waste in nature, which can have harmful effects on the living world and on nature in general, depending on the quantity and type of disposed waste.

Despite the regulations in the area of nature protection, harmonized with the EU acquis, and despite the defined legal framework for sustainable use of natural resources, additional efforts are needed in order to ensure effective implementation of these regulations, and also in order to raise awareness on the need for sustainable use of natural resources. In addition, there is a need to strengthen the principles of conservation and sustainable use of natural resources and space in sectoral plans, strategies, programmes and policies, and in natural resource management plans and physical planning documents, in order to ensure effective protection of biodiversity, geodiversity and landscape diversity.

Natural resource management plans include integrated nature protection requirements, and physical planning documents include integrated nature protection requirements, while protected area management plans ensure biodiversity protection through targeted implementation of sectoral activities. Ecological Network Impact Assessment (ENIA) is carried out for strategies, plans, programs and projects. When it comes to strategies, plans and programmes, ENIA is performed within the SEA, and when it comes to projects, it is performed either as an independent procedure, or within the EIA. Problems of insufficient capacities of competent bodies and the need to improve the quality of studies are the key issues in the implementation of ENIA. For more detailed information, please consult the chapter of the Strategy “Mechanisms for the integration of nature protection measures”.

Pressures in the context of human activities, natural phenomena and impacts on nature are covered in detail in the Report, and pressures on biodiversity and geodiversity are addressed in the activities of this Strategic Goal.

### **Fragmentation and degradation of habitats**

Fragmentation and degradation of natural areas are decreasing the surface and quality of habitats, isolating animal populations into smaller and more vulnerable groups. According to assessments, the process of habitat fragmentation is expected to continue in Europe in the future as well, particularly in the eastern part of the continent, due to the development of infrastructural projects.

The construction of transport infrastructure (roads, railways, navigation channels) represents one of the key reasons behind habitat fragmentation. Impacts of increasing traffic can be seen in increased noise, consequential disturbance of animals and pollution along roads and railways, resulting in unfavourable living conditions in the surrounding habitats. Additional consequences include road kills, inability of animals to access natural resources, and intensified spreading of invasive species. Habitat fragmentation is also caused by increasing urbanization and intensive agriculture; projects that impact upon integral units of forest areas have a particularly significant impact. Grassland habitats are predominantly threatened due to the expansion of commercial and industrial areas. Dams also represent physical barriers that interrupt the migrations of organisms along rivers and watercourses, and they impact upon changes in habitat conditions both upstream and downstream. As a consequence of degradation, the most threatened vertebrate group are freshwater fish species. The impact of dams is present along most of the Croatian rivers, and the consequences include the disappearance of certain fish species and changes to the structure of fish communities. Habitat fragmentation results in complex negative impacts on a large number of species; however, when it comes to direct road kills, impacts are particularly significant for those species with interrupted migration paths (large carnivores, amphibians and reptiles). All these factors result in a decrease of population numbers, and ultimately contribute even to the extinction of vulnerable and endangered species. The restoration of degraded and lost habitats is very difficult, and sometimes almost impossible.

Inclusion of green infrastructure in physical planning can significantly contribute to a decrease in habitat fragmentation. The conservation of large and uninterrupted spaces, coupled with decreasing spatial fragmentation, represents a key criterion of sustainable development. In order to present the overview of area fragmentation in the Republic of Croatia caused by transport infrastructure, an adjusted indicator of infrastructure fragmentation was used, focusing on areas larger than 100 km<sup>2</sup> that are not divided by motorways, state roads, county roads, railway lines or urban areas. The average surface of individual unfragmented areas in the Republic of Croatia is 240 km<sup>2</sup>, and the share of such areas in the land surface of the Republic of Croatia is 58%. The average share of unfragmented areas per county is 48%. Ličko-senjska County has the largest share of uninterrupted or unfragmented areas larger than 100 km<sup>2</sup> (89.59%), while Međimurska County has the lowest share (8.03%), reflecting the higher degree of fragmentation in the northwestern counties in the country that are also smaller in surface. This indicator points to a significantly lower level of fragmentation due to roads compared to the Western European countries.

## **Invasive Alien Species**

Invasive Alien Species (IAS) are one of the key threats to biodiversity. In addition, they have a negative social impact, can transmit disease or cause health issues such as pollen allergies or dermatitis. Furthermore, IAS have a negative impact on ecosystem services, which can be seen in damage caused in agriculture, fisheries, forestry, etc. IAS have a direct negative impact on the economy, due to the harm caused to infrastructural and hydroenergy facilities, but also an indirect negative impact, due to decreased labour effectiveness caused by the health problems associated with allergies. Costs caused to the EU due to IAS are estimated to be at least 12 billion EUR per year, and they are growing continuously. In the Republic of Croatia, the total scope of damage has not been determined, but there are individual examples illustrating the financial significance of the problem, such as e.g. damage caused to hydroenergy facilities HE Varaždin, HE Čakovec and HE Dubrava, as a result of growth of thick layers of the bivalve species zebra mussel (*Dreissena polymorpha*), and the plant Canadian waterweed (*Elodea canadensis*). The cost of zebra mussel removal over the past four-year period exceeded 1.5 million HRK, while costs due to the removal of the Canadian waterweed and repair of the damage caused by the plant at the HE Čakovec amounted to approximately 500,000 HRK. The trends are such that the situation is likely to worsen, unless measures are undertaken to resolve this issue at the national level, based on harmonized actions of stakeholders. This problem is also rising due to the introduction of new IAS, coupled with uncontrolled spread of the already existing ones, which results in increasing damage and management costs. Obstacles to a systematic and effective resolution of the IAS issue include lack of systematic knowledge on the paths of introduction and on the impact of alien species, lack of a comprehensive list of alien species, and lack of systematic prioritization of alien species in the Republic of Croatia. Furthermore, insufficient financial, human and technical resources pose an obstacle to the establishment of a management system for alien species. In addition, it would be necessary to harmonize intersectoral activities through the national legislative framework, as that would create a foundation for effective inclusion of various stakeholders in resolving the IAS issue. A public opinion survey conducted in 2013 has shown that the public is insufficiently educated and informed on IAS (for example, over 60% of the inhabitants of the Republic of Croatia have never heard of the concept of IAS). Some of these issues are covered by the Marine Environment and Coastal Area Management Strategy.

Even though the IAS issue transcends state borders, current regional cooperation is insufficiently developed, and it is not coordinated, which poses an additional problem. One positive example worth mentioning is the participation in the BALMAS Project, with the main goal of establishing a joint cross-border system that would link all research efforts ongoing in the Adriatic, experts and national institutions, in order to avoid unwanted risks for the environment and people due to IAS transport. The undertaken activities have resulted in a framework of precautionary measures aimed at mitigating the risks from new biological invasions. The trend of negative IAS impacts on biodiversity is rising. Analysis of the state of nature in the Republic of Croatia in the period from 2008 until 2012 has shown that IAS result in biggest threats to amphibians, freshwater fish species, reptiles, marine fish species and dragonflies, while the number of alien species is rising. IAS data collection and database maintenance, coupled with education and awareness raising among the general public, represent important segments of IAS management. Activities pertaining to these segments are also defined within other strategic goals, in particular strategic goals 4 and 5 of the Strategy.

Specific objectives:

**2.1 Ensure sustainable use of natural resources through sectoral planning documents**



Representation of certain types of ecosystems  
 Representation of threatened habitat types in the Republic of Croatia  
 Conservation status of habitats of European interest  
 Status and threat index for wild species from the Red List of the Republic of Croatia  
 Agricultural areas under Natura 2000  
 High nature value farmland



Capture of fish and other marine organisms  
 Aquaculture production



Areas under agri-environment incentives  
 Areas under ecological agricultural production



Forest areas under certification for sustainable management

Related result/impact indicators (NLI):

Activity	Implementation indicator
2.1.1 Improve the effectiveness of nature protection procedures through cooperation and communication with sectors when drafting/adopting sectoral plans and spatial plans	Number of conservation measures integrated in all relevant management documents. Number/share of strategies and plans with undertaken ENIA.
2.1.2 Increase the number of targeted inspections of the integration and implementation of nature protection terms in targeted planning documents compared to the current level	Increased share of inspections of fisheries management plans.
2.1.3 Promote the acceptance and implementation of biodiversity conservation measures within the Rural Development Programme of the Republic of Croatia 2014-2020 and monitor their implementation	Increased surface covered by agri-environment incentives (ha). Number of beneficiaries of agri-environment measures.
2.1.4 Ensure effective implementation of nature protection measures in the annual Maintenance Works Programme Against Harmful Effects of Waters	Prepared procedural regulation on cooperation between the water management sector and the nature protection sector in the process of preparation of nature protection requirements. In cooperation with the water management sector, prepared technical manual with instructions on the implementation of nature protection requirements for maintenance works in the area of protection against harmful effects of waters.
2.1.5 Determine species and habitat types sensitive to climate change and develop specific conservation measures	Prepared list of sensitive species and habitats with the proposal of specific measures for adaptation to climate change and with guidelines on status monitoring.

Contribution to Global Strategic Goals and to Targets of the EU 2020 Biodiversity Strategy



1

2

Bodies participating in the implementation: *central SABs competent for nature protection, forestry, fisheries, hunting, water management, agriculture, economy and physical planning; CAEN; Croatian Chamber of Economy; Croatian Chamber of Trades and Crafts; Croatian Employers' Association; Paying Agency for Agriculture, Fisheries and Rural Development; administrative bodies of regional self-government units; legal entities and natural persons managing natural resources; Advisory Service; Hrvatske vode [Croatian Waters company]; Hrvatske šume d.o.o.[Croatian Forests company]; scientific institutions; CSOs active in the area of nature protection.*

## 2.2 Strengthen the system for implementation of Ecological Network Impact Assessment

### Related result/impact indicators (NLI):

Activity	Implementation indicator
<b>2.2.1 Improve control of implementation of mitigation measures for the ecological network and monitoring of their effects</b>	Number of received feedback reports for target projects subject to obligatory reporting on status monitoring. Number of inspections compared to the current annual level.
<b>2.2.2 Prepare thematic manuals/guidelines for the preparation of Main Assessment studies for specific types of projects</b>	Number of prepared thematic manuals/guidelines for the preparation of Main Assessment studies for specific types of projects.
<b>2.2.3 Introduce consolidated records of ENIA procedures</b>	Created database of ENIA procedures.

### Contribution to Global Strategic Goals and to Targets of the EU 2020 Biodiversity Strategy



1



6

Bodies participating in the implementation: *central SAB competent for nature protection; CAEN; administrative bodies of regional self-government units; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level.*

**2.3 Ensure sustainable use of native wild species where their use is not regulated by special regulations**

**Related result/impact indicators (NLI):**



Abundance and distribution of selected species  
 Population trends of common farmland birds  
 Public awareness about nature protection

Activity	Implementation indicator
<b>2.3.1 Analyze the possibility of compensations for the collection of indigenous wild species in nature, where such collection is undertaken for the purposes of processing, trade or other business in accordance with the provisions of the Nature Protection Act</b>	Performed analysis on the establishment of the compensation system.
<b>2.3.2 Intensify coordinated inspections of commercial use of wild species compared to the current level; coordinated activities with the inspections of other sectors and with the staff of the Ministry of the Interior and the Ministry of Finance, Customs Administration</b>	Number of coordinated inspections.

**Contribution to Global Strategic Goals and to Targets of the EU 2020 Biodiversity Strategy**



Bodies participating in the implementation: *central SABs competent for nature protection, agriculture, forestry, hunting, fisheries, internal affairs, finance and customs affairs; CAEN; CSOs active in the area of nature protection.*

## 2.4 Protect genetic diversity and sustainably use genetic resources

Related result/impact indicators (NLI): –

Activity	Implementation indicator
2.4.1 Expand <i>ex-situ</i> protection of indigenous wild species	Number of authorized gene banks for strictly protected native wild species.
2.4.2 Implement the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization	National legislation is continuously harmonized with the provisions of the Nagoya Protocol and of the Regulation (EC) No 511/2014 <sup>3</sup>

Contribution to Global Strategic Goals and to Targets of the EU 2020 Biodiversity Strategy



Bodies participating in the implementation: *central SABs competent for nature protection, agriculture, forestry and economy; CAEN; botanical and zoological gardens; Croatian Chamber of Economy; Croatian Chamber of Trades and Crafts; Croatian Employers' Association; CSOs active in the area of nature protection.*

<sup>3</sup> Regulation (EU) No 511/2014 of the European Parliament and of the Council of 16 April 2014 on compliance measures for users from the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization in the Union (OJ L 150, 20 May 2014)

## 2.5 Conserve unfragmented natural areas and restore the most threatened degraded habitats

### Related result/impact indicators (NLI):



**BR 3, 4, 15**

Representation of certain types of ecosystems  
 Representation of threatened habitat types in the Republic of Croatia  
 Fragmentation of natural and semi-natural areas

Activity	Implementation indicator
<b>2.5.1 Develop a list of national indicators for habitat fragmentation</b>	List of national indicators amended with indicators on the fragmentation of habitats.
<b>2.5.2 Prepare a map of habitat corridors important for the migrations of the fauna threatened by fragmentation, with impact mitigation measures</b>	Prepared corridor map and defined mitigation measures. Prepared guidelines to ensure continuity of watercourses for fish fauna. Prepared guidelines to ensure transport infrastructure permeability for threatened groups.
<b>2.5.3 Implement measures for conservation and restoration of green infrastructure</b>	Number of green infrastructure restoration projects.
<b>2.5.4 Improve the existing monitoring of fatalities among strictly protected animal species due to road and railway transport and due to power lines, primarily through intensified intersectoral cooperation</b>	Number of workshops with sectors aimed at improving cooperation in monitoring.

### Contribution to Global Strategic Goals and to Targets of the EU 2020 Biodiversity Strategy



2

Bodies participating in the implementation: *central SABs competent for nature protection, economy, transport, maritime affairs and infrastructure; CAEN; scientific institutions; legal entities and natural persons managing natural resources; CSOs active in the area of nature protection; Paying Agency for Agriculture, Fisheries and Rural Development; local and regional self-government units; Hrvatske ceste [Croatian Roads company]; Hrvatske autoceste [Croatian Motorways company], HŽ Infrastruktura d.o.o.[Croatian Railways Infrastructure company].*

**2.6 Establish management system for alien species, and implement measures for the prevention of introduction, spread and control of Invasive Alien Species**

**Related result/impact indicators (NLI):**



Invasive alien species



Introduction of alien and invasive species

Activity	Implementation indicator
<b>2.6.1 Establish a comprehensive legislative framework of the Republic of Croatia for IAS management</b>	Adopted required laws and bylaws. Established functional intersectoral committee for IAS and for coordination (communication) of competent bodies.
<b>2.6.2 Prepare standards for the invasiveness risk assessment of alien species</b>	Number of groups with defined risk assessment standards.
<b>2.6.3 Establish training programmes for improving official IAS controls</b>	Number of workshops for training of officials of competent bodies on IAS procedures and IAS identification: Customs Administration, competent inspections (phytosanitary inspection, border veterinary inspection, nature protection inspection, etc.); number of participants per workshop.
<b>2.6.4 Define pathways of introduction and establish management system for IAS</b>	Prepared planning documents for management of IAS and pathways of their introduction. Established regional cooperation and data exchange on IAS. Number of IAS management-related projects.

**Contribution to Global Strategic Goals and to Targets of the EU 2020 Biodiversity Strategy**



Bodies participating in the implementation: *central SABs competent for nature protection, finance, health, maritime affairs, transport, infrastructure, economy, forestry and hunting, and other SABs within their jurisdiction; CAEN; relevant inspections (phytosanitary inspection, border veterinary inspection, nature protection inspection); Croatian Chamber of Economy; CSOs; scientific institutions; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; legal entities and natural persons managing natural resources.*

### 2.5.3. Strategic Goal 3: Strengthen the capacities of nature protection system

In the period from 2008 until today, significant efforts have been invested in capacity building in nature protection, but the results achieved so far are still not entirely satisfactory. Decreasing standard of living and long-term recession had impact upon the initiated strengthening of the nature protection system capacities. The observed stagnation in system capacity building is the cause of the frequent changing of priorities connected with the nature protection system, at the state level, but also at the regional level. For establishing an effective nature protection system it is necessary to conduct further alignment of legislation, as well as additional training of employees of administrative and expert bodies at the state level, but also at the regional level.

Expert qualifications and education of administrative and expert bodies at the state and regional level, together with the involvement of the interested public, have been recognized as foundations for effective nature management and conservation. Expert qualifications and education of administrative and expert bodies will contribute to their strengthening and to more successful implementation of decentralization in nature protection affairs, but also to more effective management of protected areas, areas of the Natura 2000 ecological network, and natural resources as a whole.

Education within the nature protection system is currently ongoing in several ways and at several levels. In order to exchange professional knowledge, skills and practical experiences, and in order to educate the staff of nature protection services, Annual Seminars for ranger services, as well as Meetings of expert services of public institutions competent for managing protected areas, are being organized. Rangers are required to pass professional exams, and preparatory training seminars for exams are being organized since 2008. The development of the Education Programme for the Staff of Nature Protection Institutions began in 2010, and some thematic modules<sup>4</sup> have been prepared, and are implemented since the end of 2011. So far, various Education Programme modules have been attended by 314 employees of the Ministry, CAEN and public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level. In addition, expert training programme<sup>5</sup> for permanently appointed expert witnesses authorized for determining and assessing damage due to strictly protected wild species is in implementation since 2008. Workshops of the Intervention Team for Wolf and Lynx are also organized, as well as the workshops of the Intervention Team for Bear. When it comes to the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the supervision of transboundary movement and trade in endangered wild species, training seminars and workshops are continuously organized since 2006 for customs officers; border police officers; veterinary, phytosanitary and nature protection inspectors; as well as for other staff in charge of matters regarding the transboundary movement and trade in wild species. Given the accession of the Republic of Croatia to the European Union, in addition to members of these services, police officers must also be additionally

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<sup>4</sup> The modules are as follows: Basics of Interpretation and Education in Nature Protection; Management Planning; Public Inclusion in Protected Area Management; Limits of Acceptable Change as Visitor Management Framework; Status Monitoring and Reporting Pursuant to the Habitats Directive; Strengthening the Role of Rangers and Expert Service Staff in Natura 2000 Species Monitoring; Fish Passes – Theory and Practice; Development of Core Managerial Competences; Geographic Information System (GIS) in Nature Protection; Introduction to Spatial and Non-Spatial Data Analyses Using QGIS Open-Source Software Solutions; Internal Portal of the Nature Protection Information System; Capacity Building for the Implementation of Legislation on Transboundary Movement and Trade in Wild Species in the European Union; Strengthening Expert Knowledge and Technical Capacities of all Relevant Institutions for Ecological Network Impact Assessment .

<sup>5</sup> Topics: regulations and competence; strictly protected large carnivores; biology and habitat; determination and assessment of damage due to strictly protected wild species; etc.

educated, as well as other stakeholders involved in breaches and criminal procedures (state attorney's office and courts), so that sanctions for violations of relevant provisions could be adequately applied. Within the development of the Monitoring System for Captured, Dead, Injured and/or Sick Animals of Strictly Protected Species, training courses are being organized for training of veterinarians in procedures involving dead, sick or injured sea turtles.

Almost all projects<sup>6</sup> implemented by nature protection institutions and some CSOs since 2008 have also included education for sectoral staff, most frequently on topics such as adaptive management; participatory management planning for areas and species; stakeholder inclusion and facilitation; Natura 2000 ecological network; GIS use and monitoring. CSOs have continued implementing such efforts within IPA projects as well, specifically through the IPA 2011 grant scheme entitled "Supporting CSOs in Development of Partnerships for Sustainable Use of Protected Areas in Croatia, Including Potential NATURA 2000 Sites" in the course of 2014 and 2015. CAEN manages an internal mailing list of employees in the nature protection system (at [uzp@dzzp.hr](mailto:uzp@dzzp.hr)), intended for the exchange of experiences, information and expert resources, as well as for discussions on expert topics; it contains 350 members, and it is regularly updated.

The comparison of identified shortfalls and education courses developed and implemented so far makes it clear that education programmes are heading in the right direction. However, capacity assessments of the nature protection system and the efforts aimed at its strengthening have mostly been focusing on one segment in the system – public institutions that manage protected areas. The results of undertaken analyses of capacity-building needs have made it clear that the nature protection system includes significant differences in educational levels of the staff, as well as in levels of knowledge and skills; there are significant capacity gaps, but also internal capacities that can be used in education programmes.

In order to ensure proper assessment and definition of priorities, there is a need to implement a national survey that would cover all institutions within the system and all employee profiles. In the future, greater attention should be dedicated to maintaining the records on education in various institutions, as well as to topics neglected so far.

To a large extent, financing of nature protection in the Republic of Croatia still relies on funds from the State Budget of the Republic of Croatia, and to a lesser extent also on the budgets of regional and/or local self-governments. Individual institutions in the system are funded by own revenue to a larger or lesser degree, also through the assistance of international organizations and EU institutions, and donations of natural persons and legal entities. Since the end of the 1990s, European Union funds, granted at project level through pre-accession funds, have been playing a very important and increasing role, together with other international funding sources. According to the available data for reporting period until 2012, total investments in nature protection amounted to approximately 71 million kuna, out of which almost 57 million were budgetary funds. Other funds mostly include own revenues from the implementation of activities in protected areas, and a very low share of financing from the private sector (merely 0.03%). With the accession of the Republic of Croatia to the EU, and the opening of opportunities for use of funding for nature protection projects stemming from various EU funds, the problem of ensuring the funding for interim financing and co-financing of projects has become an increasingly prominent challenge. This problem is particularly clear in case of institutions managing

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<sup>6</sup> COAST (The Collaborative Actions for Sustainable Tourism in Croatia); PAMS (Protected Areas Management System in Republic of Croatia); PHARE Natura 2000 in Croatia (Institutional strengthening and Implementation of Natura 2000 ecological network in Croatia); MedPAN South (Strengthening of the Marine Protected Areas Network in Croatia); NIP Project; BALMAS (Ballast water management for Adriatic Sea protection) etc.

protected nature areas at the regional and/or local level, as well as in case of CSOs active in environmental and nature protection. Having identified this problem, the EPEEF has been investing significant funds in the preparation and co-financing of nature protection projects since 2012, especially when it comes to projects of public institutions, while models to ensure part of co-financing for approved projects have been prepared for specific EU programmes (e.g. LIFE Programme). For more detailed information, please consult the Strategy chapter on the Resource Mobilization Plan.

From 2011, the Ministry has started the implementation of the five-year NIP Project, fully funded by a World Bank loan. This Project ensures stable funding of priority activities in nature protection until April 2017, when the completion of the Project is expected. These funds represent a bridge of sorts prior to the use of EU Funds. Within the Operational Programme Competitiveness and Cohesion 2014 – 2020 through Thematic objective 6 “Preserving and protecting the environment and promoting resource efficiency” and the corresponding Investment priority “Protecting and restoring biodiversity and soil and promoting ecosystem services, including through Natura 2000, and green infrastructure” nature protection projects that have a stronghold in EU Biodiversity Strategy to 2020 are supported, which is related to reversal of biodiversity loss trend and acceleration of transition on resource efficiency economy.

Specific objectives:

**3.1 Strengthen institutional capacities in nature protection**

Related result/impact indicators (NLI): –

Activity	Implementation indicator
<b>3.1.1 Systematically consult with other sectors important for nature protection, with the aim of mutual understanding, harmonization of legislative solutions and strengthening of the role of these sectors in the implementation of nature protection regulations</b>	Number of established and operational intersectoral working groups for work on harmonization of legislative solutions relevant for nature protection. Number of annual events bringing together the staff of the nature protection sector and another sector important for nature protection.
<b>3.1.2 Work on further decentralization of administrative responsibility in nature protection; intensify communication between the competent state administration and regional self-governments</b>	Number of thematic gatherings with regional self-government bodies responsible for nature protection. Competencies and tasks of administrative bodies and public institutions decentralized and clearly defined by law.
<b>3.1.3 Prepare expert assessment of the existing and required capacities of the system at the state, regional and local level; in accordance with the results, promote human resources strengthening of institutions in the system</b>	Prepared expert analysis with proposals on how to improve effective use of human resources.
<b>3.1.4 Prepare expert analysis of the capacities of public institutions competent for managing protected nature areas, with proposals on how to optimize and prioritize; act in accordance with the results of the analysis</b>	Prepared expert analysis of the capacities of public institutions competent for managing protected nature areas, with proposals on how to optimize and prioritize. Increased level of capacities of public institutions competent for managing protected nature areas compared to the prepared analysis.
<b>3.1.5 Start the development of the system for monitoring staff effectiveness in the nature protection system, and of the system for valuation of work performance in career promotions and/or reelection</b>	Developed and tested pilot system for the monitoring of staff effectiveness in the nature protection system and for the valuation of work performance in career promotions and/or reelection.
<b>3.1.6 Prescribe the obligation of continuous staff education in the nature protection system and develop the system for valuation of continuous education in career promotions</b>	Legally regulated obligation of continuous staff education in the nature protection system; system for valuation of continuous education in career promotions regulated by the acts of Public Institutions.
<b>3.1.7 Start the process of professionalization of the nature protection field through a description of competences and registration of profession; in cooperation with educational institutions, start the development of external education programmes</b>	Performed registration of professions connected with nature protection and defined core competencies for individual occupations.

Contribution to Global Strategic Goals and to Targets of the EU 2020 Biodiversity Strategy



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Bodies participating in the implementation: *central SABs competent for nature protection, economy, health, finance, transport, maritime affairs and infrastructure, construction, agriculture, forestry, hunting, fishing, water management, culture and physical planning; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; local and regional self-government units; CSOs active in the area of nature protection; educational institutions.*

### 3.2 Continue strengthening technical knowledge and skills for effective implementation of nature protection

Related result/impact indicators (NLI): –

Activity	Implementation indicator
3.2.1 Implement systematic research of the needs to strengthen knowledge and skills of the staff in nature protection system institutions, as well as in other legal entities involved in the implementation of regulations in the area of nature protection	Assessed needs for strengthening knowledge and skills within the nature protection sector.
3.2.2 Prepare the plan for capacity building of the staff in the nature protection sector	Prepared plan for capacity building of the staff in the nature protection sector.
3.2.3 Continue developing a comprehensive Nature Protection Staff Education Programme; regularly implement training modules and prescribe the obligation of basic education for all staff entering the nature protection system on nature conservation, regulations, strategic planning and financial responsibility; develop the corresponding basic module	Fully developed nature protection staff education programme. Number of new thematic modules fully developed and implemented. Number of training modules of the Programmes implemented each year. Developed multi-day internal basic education programme for the staff, with prescribed enrolment obligation for all new employees in the system. Number of developed and implemented training modules for the staff of other sectors linked with the implementation of regulations in the nature protection area.
3.2.4 Continue holding regular annual events, develop new platforms for exchange of knowledge and experience, and increase the visibility of information	Regular annual seminars for rangers and regular annual events of expert services. Internal portal Nature Protection Information System upgraded with content connected with education and exchange of knowledge and experience.

#### Contribution to Global Strategic Goals and to Targets of the EU 2020 Biodiversity Strategy



Bodies participating in the implementation: *central SAB competent for nature protection; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; local and regional self-government units; CSOs active in the area of nature protection.*

### 3.3 Increase financial sustainability of the nature protection system

#### Related result/impact indicators (NLI):



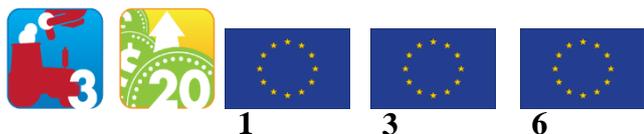
Financing of biodiversity protection and conservation



Areas under agri-environment incentives

Activity	Implementation indicator
<b>3.3.1 Revise existing legal mechanisms for funding, in order to ensure better availability of funds</b>	Number of changed and amended legal mechanisms ensuring better availability of funds.
<b>3.3.2 Improve innovative funding mechanisms for the nature protection sector</b>	Introduced new methods of ticket purchase and other services in protected areas. Adopted programmes and number of implemented projects focused on energy efficiency improvements and use of renewables in national parks and nature parks.
<b>3.3.3 Strengthen financial sustainability of nature protection institutions through revenue diversification, coordination and rationalization</b>	Increase in the number of parks fully funded from own revenue. Increase in diversity of utilized revenue sources. Established financing model for the nature protection sector utilizing part of revenue obtained through ticket sales and through other park services, based on the principle of solidarity.
<b>3.3.4 Focus the nature protection system towards project-based funding from available European Union funds and from other funding sources</b>	Increase in the share of funding resources from EU funds in the total realized budget of institutions in the nature protection sector. Increase in the number of institutions from the nature protection sector that are beneficiaries of EU funds. Share of funds utilized for the relevant measures in the Operational Programme Competitiveness and Cohesion 2014-2020 (Specific Objective 6c2; Investment Priority 6iii).
<b>3.3.5 Perform analysis and establish a system of recording, monitoring and reporting on investments in the nature protection sector</b>	Performed analysis. Established mechanisms for the monitoring of investments in nature protection (state budget of Republic of Croatia, local and regional self-government units budgets, private sector, CSOs and other sources).
<b>3.3.6 Continue investments in biodiversity conservation in countries in transition through the mechanism of Official Development Assistance</b>	Level of Official Development Assistance funding determined on the basis of the baseline according to the Convention on Biological Diversity (for the period 2006 - 2010). Retained minimum level of Official Development Assistance funding.
<b>3.3.7 Assess the subsidies harmful to biodiversity and eliminate and/or reform them based on need</b>	Performed assessment of subsidies potentially harmful to biodiversity. Subsidies that may cause the biggest negative impact on biodiversity are eliminated and/or reformed.
<b>3.3.8 Ensure availability of subsidies with a positive impact on biodiversity and promote their use</b>	Number of active measures and operations for biodiversity conservation through the Rural Development Programme of the Republic of Croatia for the period 2014 - 2020 and through the Operational Programme for Maritime Affairs and Fisheries 2014 - 2020. Number of contracts with beneficiaries for the implementation of these measures and operations.

## Contribution to Global Strategic Goals and to Targets of the EU 2020 Biodiversity Strategy



Bodies participating in the implementation: *central SABs competent for nature protection, agriculture, fisheries, finance and EU Funds; EPEEF; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; Paying Agency for Agriculture, Fisheries and Rural Development; Office of the Government of the Republic of Croatia for Cooperation with NGOs; local and regional self-government units; CSOs active in the area of nature protection.*

## **2.5.4. Strategic Goal 4: Increase the knowledge and availability of data on nature**

### **Knowledge regarding the state of nature**

CAEN establishes and organizes the inventories of all constituent elements of biodiversity and geodiversity, as well as mapping of threatened species, habitat types and geological sites, and it ensures their continuous and timely updating. In addition, the Agency establishes and organizes monitoring of the nature conservation status. There are approximately 40,000 species recorded in the Republic of Croatia so far, and it is assumed that the actual number of species in the country is considerably higher. In recent times, it can be noted an increase in the number of known and recorded species in the Republic of Croatia, mostly due to better knowledge on biodiversity, and due to intensified research targeted at inventories of flora and fauna in the Republic of Croatia particularly the ones linked with the implementation of the Birds Directive and the Habitats Directive. Institutions in the nature protection sector also provide their contribution, through (co)financing of a large number of research projects. Multiannual activities are being implemented, targeted at the collection of available historical data for priority taxonomic groups and the collection of current field data<sup>7</sup>. In 2011 and 2012, activities regarding the establishment of status monitoring system have intensified<sup>8</sup>, and the first national monitoring programmes for species and habitats have been prepared. Further work is ongoing in the establishment of the monitoring system. The Habitat Map of the Republic of Croatia on a scale of 1:100,000 has provided an overview of all habitat types and their spatial distribution in the Republic of Croatia for the first time. However, over time, it became clear that the current map scale is insufficiently detailed for the purposes of planning, management and status monitoring in nature protection, and that for the implementation of these activities requires the preparation of a more precise map. The existing map has thus been amended with a more detailed mapping of protected areas, but only to a minor extent. More detailed mapping of habitat types<sup>9</sup> is ongoing, on a scale of 1:25,000.

There is still no single joint cadastre of speleological sites, which is why a three-year project was started in 2014, aiming to collect, update and verify data on speleological sites through the work of speleological associations. Even though the relevant regulations exist, there is no organized and systematic collection of data on geodiversity at the national level, as a prerequisite for high-quality assessment and conservation of significant geological sites, minerals and fossils. The methods applied in geodiversity data collection at the local level are diverse and frequently not comparable.

Preparation of inventory, typological classification and assessment of landscapes have been performed only in individual project areas (UNDP/GEF). Intersectoral Group for Landscapes has been established, and it has reached certain recommendations, but lack of consolidation and lack of a harmonized approach to this issue are still present.

Even though data collection on species and habitat types has improved significantly in the recent period, additional work is still required in order to standardize data collection, and in order to improve the collection itself. This primarily pertains to the collection of existing data for those groups where that has not been done so far, in order to enable the analysis of trends and desirable status, and in order to ensure reference values needed for the assessment of conservation status. Related to this issue, there is a need to continue working on the establishment of a monitoring system, having in

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<sup>7</sup> Within the NIP Project

<sup>8</sup> Within the IPA MAN-MON Project

<sup>9</sup> Within the NIP Project

mind the country's obligation to submit reports on the implementation of undertaken conservation measures within the framework of the Habitats Directive every six years, which must also include monitoring results regarding the conservation of species and habitat types listed in the Annexes to the Directive. In addition, pursuant to the provisions of the Birds Directive, member states have the duty to report on the population status of all bird species naturally occurring in the territory of a given member state. As an EU member state, the Republic of Croatia thus has the duty to report on the conservation status of almost 600 species and habitat types from the Annexes of these Directives every six years, and the first such report is due in 2019. In addition, having in mind the planning and implementation of effective management, and the implementation of ENIA procedures, there is recognized need to collect data in the areas of the ecological network, in order to properly define conservation goals, to create spatial zoning in view of target species and habitat types, and in order to define conservation measures on the basis of nature protection requirements in the areas of the ecological network. The collected data will also be used to create new and to update the existing Red Lists, which would serve as base proposals for nature valuation and for the planning of conservation measures. Due to increasing pressures on natural resources, there is also a need to collect data on species, in order to define usage quotas. In addition, data collection regarding marine biodiversity, including the mapping of marine habitats, needs to be continued, since the data is currently lacking on account of expensive and demanding nature of this type of research.

The biggest challenge in the fulfilment of all legal obligations will be posed by lack of human resources for field data collection, but also for data processing and project implementation, and internal and intersectoral coordination in this area. In addition, shortage of financial resources poses a constraint on the systematic collection of a large quantity of standardized data consolidated in the joint information system.

### **Availability of data on the state of nature**

In 1998, the Republic of Croatia has ratified the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) Act on Ratification of the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Official Gazette - International Treaties No. 1/07), and the Convention is integrated into the Croatian legislation. Pursuant to the Act on the Right of Access to Information (Official Gazette No. 25/13 and 85/15), some institutions in the nature protection sector have established appropriate information catalogues containing systematized overviews of available data on nature protection. In addition, all institutions in the system receive and respond to individual requests for access to information. Analysis of the level and speed of response to such requests has not been performed for individual institutions in the system. CAEN has been registered as the official entity of the National Spatial Data Infrastructure (NSDI) in the nature protection sector, and it has the obligation and duty to maintain and share spatial data in connection with specific themes of the National Spatial Data Infrastructure Act (Official Gazette No. 56/13) – Protected Areas, Habitats and Biotopes, and Species Distribution.

In accordance with the provisions of the Nature Protection Act, CAEN establishes and maintains the Nature Protection Information System of the Republic of Croatia, taking into account internationally accepted standards and obligations. The Nature Protection Information System (NPIS) consists of a set of thematic databases (flora, fauna, habitats, speleological cadastre, protected areas, Natura 2000 ecological network, etc.), application solutions and web services intended for storage, maintenance and sharing of data connected with various components of biodiversity, geodiversity and landscape diversity, and connected with nature protection in the Republic of Croatia. Some NPIS thematic databases

are fully operational, and some are in the final phases of completion. Since May 2015, the web portal of the NPIS called *Biportal* is also available. Activities regarding the collection, processing, verification and publication of data on nature are continuously implemented through regular programmes and through domestic and international projects, thus respecting the right of the public to access information and the provisions of the National Spatial Data Infrastructure Act. Web services (WMS/WFS) have been established for overview and download of data on protected areas in the Republic of Croatia (according to national categories of protection), areas of the Natura 2000 ecological network, and the habitat map of the Republic of Croatia. Intensive work is ongoing in the preparation and verification of data on species distribution.

In cooperation with the expert community, CAEN is implementing a range of projects and activities connected with the improvement of the NPIS;<sup>10</sup> harmonization of the spatial data infrastructure with the provisions of the National Spatial Data Infrastructure Act; standardization of data collection; preparation and verification of expert literature and field data on findings regarding species, habitat types and speleological sites. Activities are also focused on improving the precision of spatial data: preparation of a detailed habitat map of the Republic of Croatia is ongoing (scale 1:25,000, MMU 1,56 ha), and the process of improving the precision of boundaries of the Natura 2000 ecological network areas has been completed in April 2015 (scale 1:5,000). Further upgrades of the NPIS web portal will allow interactive access to spatial data and attributes regarding biodiversity and nature protection for the general public and for the nature protection sector. The web portal also includes published data from the Register of Protected Areas. In accordance with the Nature Protection Act, the NPIS will also require the setting up of a geodiversity database of the Republic of Croatia, to be registered in the NSDI as a new source of data for the Geology thematic group.

In order to fulfil the obligations stemming from the Nature Protection Act, Act on the Right of Access to Information, and the National Spatial Data Infrastructure Act, it is necessary to continue working on improving all components of the NPIS and on ensuring its stable operation, so that expert and scientific sector, as well as the wider public, could have timely and unhindered access to data within the competence of CAEN. Having this aim in mind, it is necessary to ensure adequate long-term financial and staffing support to activities aimed at improving the NPIS and to activities aimed at standardizing the collection, processing and verification of data. It is necessary to clearly define and prescribe the conditions of use of data from the NPIS, and to continuously work on strengthening the cooperation with the scientific and expert community and with other institutions in the nature protection sector and in connected sectors, with the aim of ensuring mechanisms for effective data collection and maintenance, and for monitoring and reporting on the state of nature.

### **Ecosystem services**

Ecosystems and natural wealth that they produce are decisive for the functioning and preservation of life on Earth, and they contribute to the wellbeing of mankind directly and indirectly, thus representing a constituent part of the overall economic value of the planet. The concept of ecosystem services encompasses all benefits provided by ecosystems to mankind. Continuous degradation and fragmentation of habitats, coupled with the loss of biodiversity, make ecosystems vulnerable and threaten their services such as clean water, food production, pollination, protection against floods and erosion, etc. A study of 2005 has shown that over 60% of global ecosystem services (water, forest, fish stock, soil, raw

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<sup>10</sup> With financial support provided by the NIP Project and EPEEF

materials, rare metals, etc.) are being degraded due to anthropogenic impacts, mostly as a consequence of economic and development pressures<sup>11</sup>. It is precisely due to doubtless loss and destruction of natural ecosystems that a need has arisen to assess their condition, in order to properly manage these ecosystems.

The concept of ecosystem services has a major potential as an added value in the existing approach to nature protection, but it is still not sufficiently recognized in various sectors. Inter alia, the goals are to make natural values more visible, in order to use state-of-the-art approaches and scientific knowledge to ensure the adoption of high-quality strategic decisions at the local and national level, aligned with sustainable use of natural resources.

The first step in preparing the foundations for the defining of priorities in maintenance and improvement of the natural capital is to aggregate and improve knowledge about ecosystems and their services through mapping and assessment of their status. The next step is to assess their economic value and to assess all costs and benefits at the ecosystem level, as that will contribute to the improvement of our knowledge and to the understanding of ways in which the economy depends on natural capital.

The previous Strategy has not dealt with ecosystem services directly, and this topic was tackled comprehensively for the first time in the Report on the State of Nature in the Republic of Croatia for the period 2008-2012. However, in the early 1990s, this topic was recognized within the services provided by forest ecosystems, as reflected in the concept of "non-market forest functions" (NMFF) that was integrated in the Forest Act<sup>12</sup>. Some of these non-market functions are: protection of soil against water and wind erosion; balancing of water dynamics in landscape and prevention of torrents and major water waves; treatment of water by filtering through forest soil, and water supply of groundwater flows and sources of drinking water; favourable impact on climate and agriculture; provision of space for rest and recreation; provision of foundations for the development of ecological, hunting and rural tourism; conservation of the genetic fund of forest trees and other types of forest biocenosis; mitigation of greenhouse gas impacts by carbon assimilation and oxygen enrichment of the environment; etc. According to the Act, legal entities and natural persons that perform economic activities in the Republic of Croatia are subject to paying a fee for use of NMFF, reflecting the utilization of these ecosystem services. The funds obtained in such a manner are utilized in forest management works aimed at the conservation of biodiversity and at ensuring the principles of sustainable management, social responsibility and ecological acceptability.

Several studies on these topics have been published in the Republic of Croatia so far. One study on the valuation of protected area ecosystems in the Republic of Croatia was published in 2011, dedicated to the valuation of the contribution of ecosystems in the Northern Velebit National Park and in the Velebit Nature Park to economic growth and human wellbeing<sup>13</sup>. In 2012, within the *National Biodiversity Planning to Support the Implementation of the CBD 2011-2020 Strategic Plan in Croatia*, valuation of ecosystem services at a more general level was initiated for the rivers Sava, Drava and Danube as large rivers of the Danube basin, including their floodplain areas. Other activities include the preparation of a study entitled *Mapping and Assessment of Ecosystems and Their Services in the Republic of Croatia*,

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<sup>11</sup> Millennium Ecosystem Assessment, 2005: Ecosystems and Human Well-being: Synthesis.  
<http://www.millenniumassessment.org/documents/document.356.aspx.pdf>

<sup>12</sup> Official Gazette No. 140/05, 82/06, 129/08, 80/10, 124/10, 24/12, 68/12, 148/13 and 94/14

<sup>13</sup> Flores M., Ivičić I. 2011: Valuation of the Contribution of the Ecosystems of Northern Velebit National Park and Velebit Nature Park to Economic Growth and Human Wellbeing

also intended for the wider public, as well as the Ecosystem Map of the Republic of Croatia, which will be available via the GIS web service of CAEN.

A framework for the valuation of ecosystem services has been defined at the global level and at the level of the European Union. For example, one of the targets of the Strategic Plan for Biodiversity states the following: "By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable." Furthermore, the EU Biodiversity Strategy to 2020, adopted in May 2011, defines mapping and assessment of ecosystem services, as well as the assessment of their economic value, as one of the strategic targets, including an action requiring maintenance and enhancement of ecosystems and their services by 2020 through the establishment of green infrastructure and through the restoration of at least 15% of degraded ecosystems. The European Union encourages member states to implement various aspects of ecosystem services and green infrastructure at all levels (local, regional, national and transboundary), in order to enable the fulfilment of goals founded upon natural values and sustainable development for various sectors.

Given the increasing scope of the issues, and given the complexity of the management system for natural values, we are facing a major challenge of establishing an effective interaction between science and policies, needed in order to improve the evidence and knowledge foundation of policies in the area of biodiversity conservation and ecosystem service conservation. These reasons have led to the establishment of the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES). The initiative for the establishment of IPBES resulting from the need to continue monitoring the Millennium Development Goals process for the period 2006-2010, representing the first scientific assessment of the trend and status of world's ecosystems and their services (natural capital), but also representing the scientific foundation for actions aimed at the conservation and sustainable use of these ecosystems and services. Therefore, the IPBES process is structured as an independent intergovernmental platform that is expected to provide answers to these challenges, while improving the science-policy interface in the area of biodiversity and ecosystem assessments.

Specific objectives:

**4.1 Increase the knowledge on the state of nature**

Related result/impact indicators (NLI):



**BR 1, 6, 7**

Conservation status of species of European interest  
Status and threat index for wild species from the Red  
List of the Republic of Croatia  
Abundance and distribution of selected species



**GR 1**

Protected geological sites

Activity	Implementation indicator
<p><b>4.1.1 Determine the actual status of population distribution and size for indigenous wild species, with species listed in the Annexes of the Habitats Directive and the Birds Directive as priorities, followed by species facing high extinction risk (categories CR, EN, VU), data deficient (DD) species, species facing the highest commercial exploitation pressures, and alien species</b></p>	<p>Number of species and habitats from the Annexes of the Habitats Directive and the Birds Directive for which the population distribution and size has been determined at the national level. Determined population distribution and size for at least 4 priority species facing the highest commercial exploitation pressures. Number of groups with collected existing inventory data. Prepared list of alien species in the Republic of Croatia.</p>
<p><b>4.1.2 Standardize data collection on geodiversity and commence systematic preparation of inventory and valuation of geodiversity</b></p>	<p>Prepared standard for data collection on geodiversity. Number of regional self-government units with prepared inventory and valuation of geodiversity.</p>
<p><b>4.1.3 Map alien species in the Republic of Croatia and their introduction routes</b></p>	<p>Number of prepared maps of alien species distribution.</p>
<p><b>4.1.4 Establish monitoring system for priority IAS</b></p>	<p>Number of established IAS monitoring system.</p>
<p><b>4.1.5 Undertake targeted genetic and taxonomic research of wild species, needed to determine the status of populations, segments of populations important for conservation, ecological conditions for their appearance, etc.</b></p>	<p>Number of species with the assessment of "scientific reserve" assigned in biogeographic seminars for which the necessary research has been performed</p>
<p><b>4.1.6 Prepare missing lists (check lists) of wild species in the Republic of Croatia and conduct taxonomic reviews of existing lists of wild species in the Republic of Croatia</b></p>	<p>Number of groups with new lists prepared.</p>
<p><b>4.1.7 Prepare Red Lists and Red Books of unanalyzed groups on the basis of scientific data; revise the existing Red Lists and Red Books</b></p>	<p>Number of prepared Red Lists. Number of revised existing Red Lists.</p>
<p><b>4.1.8 Perform valuations of individual habitats and/or ecosystems, and determine the level of threats that they face</b></p>	<p>Defined methodology to determine the level of threats faced by individual habitats and/or ecosystems. Performed analysis of threats faced by priority habitat types. Prepared maps of sensitivity zones for species and habitat types.</p>
<p><b>4.1.9 Create programmes for monitoring of the conservation status of habitat types from Annex I and wild species from Annexes II, IV and V of the Habitats Directive, wild bird species in accordance with the Birds Directive, as well as commercially exploited species and other endangered, endemic and rare wild species; perform monitoring of the conservation status</b></p>	<p>Number of species and habitats with established monitoring programmes.</p>
<p><b>4.1.10 Collect detailed data on the distribution of target species and habitat types in areas of the ecological network for the purposes of management</b></p>	<p>Number and surface of ecological network areas with determined detailed distribution of target species and habitat types.</p>
<p><b>4.1.11 Revise the National Habitat Classification of the Republic of Croatia</b></p>	<p>Revised National Habitat Classification of the Republic of Croatia.</p>
<p><b>4.1.12 Revise habitat map, including a more detailed mapping of terrestrial and marine habitats, and create map of marine habitats in marine areas under the jurisdiction of the Republic of Croatia, with an emphasis on threatened and</b></p>	<p>Share of the land territory of the Republic of Croatia covered by the map of terrestrial habitats on a scale of 1:25,000. Share of surface of mapped marine habitats.</p>

<b>rare habitat types and on habitat types listed in Annex I of the Habitats Directive</b>	
<b>4.1.13 Ensure harmonization and exchange of data required for reporting pursuant to the Habitats Directive and the Birds Directive with data required for reporting pursuant to the Water Framework Directive<sup>14</sup> and the Marine Strategy Framework Directive<sup>15</sup></b>	Performed analysis of the equivalence of data required for reporting pursuant to the stated Directives.
<b>4.1.14 Collect, update and verify existing data on speleological sites and prepare inventory of speleological sites in cooperation with speleological associations</b>	Number of processed literature references regarding speleological sites. Number of speleological sites included in the Speleological Cadastre of the Republic of Croatia.
<b>4.1.15 Strengthen communication within the nature protection sector regarding the planning and implementation of inventory preparation and status monitoring</b>	Number of public institutions within the nature protection sector that use NPIS web portal for exchange of information.
<b>4.1.16 Ensure continuous exchange of data with other institutions that possess data of interest to the nature protection sector</b>	Signed agreements on planning and implementation of inventory preparation and status monitoring, and on data exchange, with at least four sectors (forestry, hunting, fisheries, water management).
<b>4.1.17 Promote changes to the legal criteria for career promotions in scientific-educational and scientific professions, in terms of proper valuation of expert work in the preparation of inventories and in the assessment of constituent elements of biodiversity</b>	Valuation of expert work in the preparation of inventories and in the assessment of constituent elements of biodiversity is integrated into the legal criteria for career promotions in scientific-educational and scientific professions.
<b>4.1.18 In higher education programmes in the areas of nature, biotechnology and biomedicine, promote the importance of biodiversity and geodiversity research, with the introduction of adequate courses; promote specialization in those biodiversity components (taxonomic groups) where capacity shortage is present</b>	Number of taxonomic groups with available educated experts in the Republic of Croatia.

#### Contribution to Global Strategic Goals and to Targets of the EU 2020 Biodiversity Strategy



Bodies participating in the implementation: *central SABs competent for nature protection, forestry, hunting, fishing, water management and maritime affairs; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; scientific and expert institutions; CSOs active in the area of nature protection.*

<sup>14</sup> Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (Water Framework Directive) (OJ L 327, 22 December 2000), changed and amended by the Decision No 2455/2001/EC of the European Parliament and of the Council of 20 November 2001 establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC (Text with EEA relevance) (OJ L 331, 15 December 2001); Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC of the European Parliament and of the Council (OJ L 348, 24 December 2008) – Article 10; Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006 (OJ L 140, 5 June 2009) – Article 32

<sup>15</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (OJ L 164 of 17 June 2008)

## 4.2 Increase the availability of data on the state of nature

### Related result/impact indicators (NLI):



**BR 9, 18**

Invasive alien species  
Public awareness about nature protection

Activity	Implementation indicator
4.2.1 Complete the implementation of CRO Fauna and CRO Speleo databases	Prepared user interfaces for CroFauna and CroSpeleo databases.
4.2.2 Create geodiversity database	Created geodiversity database with the corresponding user interface.
4.2.3 Establish a single national database on alien species	Created database on alien species is integrated into the NPIS.
4.2.4 Harmonize and transform data in accordance with the provisions of the National Spatial Data Infrastructure Act	Harmonized data for the thematic group <i>Protected Areas</i> . Harmonized data for the thematic groups <i>Habitats and Biotopes</i> and <i>Species Distribution</i> .
4.2.5 Enable data exchange and timely exchange of information within the nature protection sector on planned projects of expert services	Number of public institutions within the nature protection sector that use NPIS web portal for exchange of information
4.2.6 Through activities of NSDI working groups, continuously work on promoting the importance of data exchange and of the fulfilment of National Spatial Data Infrastructure Act provisions among other sectors and institutions	Number of institutions in other sectors integrated in data exchange.
4.2.7 Resolve issues of legal rights regarding the publication of research results and their further distribution and use, with clearly defined conditions of use of NPIS data	Defined rights and conditions of use of NPIS data.
4.2.8 Encourage expert/scientific public, but also the wider public, to collect inventory data and to enter data into the NPIS, by developing and presenting technical solutions that facilitate the use and analysis of data	Share of observations entered into NPIS thematic databases. Designed mobile application for entry of data on species and habitat observations into at least one NPIS thematic database.
4.2.9 Define a more detailed legislative framework for the NPIS	Prepared legal act that regulates NPIS structure, content, form and method of work, method of NPIS management and maintenance, and method of managing data and information contained in the system.

### Contribution to Global Strategic Goals and to Targets of the EU Biodiversity Strategy to 2020



1

Bodies participating in the implementation: *central SAB competent for nature protection; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; scientific and expert institutions; CSOs active in the area of nature protection.*

### 4.3 Evaluate and map ecosystem and their services with the goals of assessing and improving their status

#### Related result/impact indicators (NLI):

	Representation of certain types of ecosystems Representation of threatened habitat types in the Republic of Croatia		Surface area of forests and forestland Damage to forest ecosystems
	Assessment of ecological status of rivers (at measurement stations) Assessment of ecological status of lakes at monitoring stations		Biological quality of transitional and coastal waters, and biological properties of the marine environment Hydromorphological elements of the quality of transitional and coastal waters, and the hydrographic properties of marine waters
	Intensification / extensification		

Activity	Implementation indicator
<b>4.3.1 Map ecosystem services and prepare analysis of the state of ecosystems</b>	Revised map of ecosystem services at the national level. Prepared list of priorities for restoration and enhancement of ecosystems and their services.
<b>4.3.2 Assess economic value of ecosystem services in additional pilot areas</b>	Number of pilot areas with assessed economic value of certain ecosystem services.
<b>4.3.3 Promote national intersectoral and interdisciplinary cooperation on the issue of ecosystem services</b>	Established intersectoral working group.
<b>4.3.4 Improve the state of ecosystems and their services</b>	Number of prepared and implemented intersectoral projects for status improvement.
<b>4.3.5 Raise the level of knowledge on ecosystem services within the nature protection sector and among other sectors</b>	Number of staff members in the nature protection sector educated on ecosystem services mapping, status assessment and valuation.

#### Contribution to Global Strategic Goals and to Targets of the EU Biodiversity Strategy to 2020



Bodies participating in the implementation: *central SABs competent for nature protection, agriculture, forestry, water management, fisheries, culture and economy; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; regional and local self-government units; Hrvatske vode [Croatian Waters company]; CSOs active in the area of nature protection.*

### **2.5.5. Strategic Goal 5: Raise the level of knowledge, understanding, and support for nature protection among the general public**

Informing and educating the public is a very important aspect of the nature protection system. In order to engage in the implementation of measures aimed at protection and conservation of natural values as effectively as possible, it is particularly important to ensure support of all stakeholders directly or indirectly involved in nature protection.

Even though children first come across nature protection themes as early as in the preschool age, they start receiving initial tangible information on these issues during their elementary school education, through courses covering science and society, nature, biology and geography. In high schools, nature protection themes are covered in biology and geography programmes, with vocational schools covering these themes depending on the specific high school programme and depending on the volume of biology classes. In addition to the compulsory part of the curriculum, interested pupils can expand their knowledge through various optional and extracurricular activities, but also through other programmes connected with environmental and nature protection.

The Croatian higher education system includes study programmes thematically focused on nature protection. However, courses fully dedicated to nature protection typically exist in study programmes educating future experts in biology, marine ecology /fisheries/aquaculture, agronomy, forestry and hunting, while programmes for other profiles typically include more optional than compulsory courses dealing with nature protection. In the area of education (teacher education and pedagogy), there are quite many courses covering some of the segments of nature protection, without being fully dedicated to this issue. A similar situation exists in study programmes in geography, while study programmes in social sciences and the economy cover nature protection information only superficially.

The analysis of the situation has shown that there is a need to establish permanent cooperation between state bodies competent for education and those competent for nature protection; to design and implement additional programmes for active monitoring of individual plant and animal species and habitats that would be implemented in elementary schools and high schools; and to work on the introduction of as much project-based teaching as feasible. In addition, it is also necessary to improve vocational training of elementary school and high school teachers, and to strengthen the cooperation of institutions in the nature protection sector with higher education institutions in the designing of curricula and in systematic transfer of practical experiences.

Institutions participating in the process of educating the public and raising public sensibility regarding the nature protection topics in the Republic of Croatia include institutions in the nature protection sector, museums, zoological and botanical gardens, as well as CSOs active in environmental and nature protection.

Among various institutions in the nature protection sector, public institutions competent for managing protected areas and areas of the Natura 2000 ecological network are most intensely involved in communication with the public, and they have the widest scope of action. Meeting points for visitors and visitor centres, educational trails and information panels, as well as installations in nature, are used as tools that bring the values of a given area closer to visitors. Another powerful form of education are various events and education programmes, most frequently in the form of professional guided tours and workshops. There is a clear growth trend that can be observed in the use of information panels and interpretation panels, as well as newly designed educational trails, but also in the number of various events organized by public institutions. However, the analysis points to a conclusion that interpretation, development of infrastructure

and education programmes, as well as events, are implemented and organized in a manner that is neither systematic nor planned in most cases; instead, efforts of this kind are taking place predominantly on an ad-hoc basis and/or depending on the financial and staffing capacities of a given public institution. In addition, the intensity of activities in this management segment varies quite strongly, and it seems as if it depends on personal interest or preference of one or several staff members in a given public institution. Individual public institutions still have not recognized the importance of this management segment.

Numerous institutions outside of the nature protection sector, as well as CSOs, also actively inform and educate the public on topics connected with nature conservation. Almost all CSOs active in the area of environmental and nature protection also implement educational activities to a higher or lesser extent within their overall activities.

It is worth pointing out that the Office of the Government of the Republic of Croatia for Cooperation with NGOs will initiate calls for proposals in the period from 2016 until 2018, with the aim of establishing a system of informal education on nature protection and sustainable development in schools in the Republic of Croatia. The calls for proposals will be funded by the Swiss-Croatian Cooperation Programme, which is focusing on mitigation of economic and social inequalities within the enlarged European Union.

Within their main activity of protection and presentation of natural history and popularization of natural science, natural science museums in Zagreb, Rijeka, Split and Dubrovnik very frequently provide education on nature conservation. In addition, many city museums and regional museums also organize regular or occasional educational activities regarding this topic. Education with the aim of raising awareness of visitors regarding the need to conserve animal and plant species also represents one of the main activities of modern zoological and botanical gardens.

The Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) is integrated into the Croatian legislation governing nature protection matters.

The adoption of the Code of Practice on Consultations with the Interested Public in Procedures of Adopting Laws, Other Regulations and Acts (Official Gazette No. 140/09), Act on Regulatory Impact Assessment (Official Gazette No. 90/11), Regulation on the Implementation of Regulatory Impact Assessment Procedure (Official Gazette No. 66/12) and Rules of Procedure of the Government of the Republic of Croatia (Official Gazette 154/11, 121/12, 61/15 and 99/16), as well as the adoption of the Act on the Right of Access to Information, have resulted in significant steps forward when it comes to the process of improving the normative framework for consultations with the interested public in the Republic of Croatia.

May 2015 saw the establishment of *Biportal* – a web portal of the NPIS. This unique web portal brings together all data connected with biodiversity and nature protection in the Republic of Croatia for the first time. The establishment of the portal ensures access to information and transparent data sharing, promotes expert scientific research, and also provides educational opportunities to the wider public when it comes to learning about the natural wealth of the Republic of Croatia and about the importance of biodiversity conservation. Additional sources of information for the wider public are available on the website of the Ministry and on the websites of all institutions in the nature protection sector. Popularization of nature protection is ongoing quite intensively through thematic publications as well. Numerous informative and educational materials are being published, tailored to various user groups.

All institutions in the system are also informing the public through local and national media, and through cooperation with individual print media outlets. They issue press releases, and also regularly participate in individual radio and television broadcasting shows. In addition, dedicated media campaigns on specific occasions are also a prominent occurrence (e.g. a campaign on proper conduct when encountering a Mediterranean monk seal, Bottlenose dolphin or whale).

Nature protection is covered by the Croatian media, but not always adequately. Some special editions dedicated to nature continue to be published, and nature is also present in radio and television programmes. Public opinion surveys have been introduced as well. One such survey looked at the attitudes and knowledge of the general public regarding nature protection in the Republic of Croatia, showing that nature protection is perceived positively and that the respondents are acquainted with the concept of biodiversity, but also that they are still not particularly well informed about the Natura 2000 ecological network. Another survey analyzed the opinions and level of knowledge on IAS among the general public, showing that there is lack of education on potential danger to biodiversity posed by the IAS. The analysis points to the need for more intensive cooperation with journalists, through thematic lectures and workshops, in order to ensure maximum punctuality in reporting to the public on specific topics important for nature protection.

On the basis of the analysis of the state of nature in the Republic of Croatia, the following priority themes have been defined within the Strategic Goal 5:

1. Natura 2000 ecological network;
2. Ecosystem services;
3. Invasive alien species;
4. Genetic diversity;
5. Sustainable use, trade and transboundary movement of species.

Public participation is ensured at several levels:

1. Provision of information to stakeholders (regarding adopted decisions or performed activities);
2. Collection of information (looking for information that might assist in decision making);
3. Consultations (stakeholders are asked for their opinion, while retaining the right to accept or reject their proposals);
4. Joint decision making (participation of stakeholders in decision making through dialogue).

The first level of public participation provides the lowest amount of social capital, while joint decision making is the best way to ensure that adopted decisions are accepted and implemented by all stakeholders.

**Specific objectives:**

**5.1 Improve understanding and representation of nature-related topics and nature protection in the educational system and strengthen cooperation with the education sector**

**Related result/impact indicators (NLI):**



Public awareness about nature protection

Activity	Implementation indicator
<b>5.1.1 Define concepts connected with nature and nature protection and propose their inclusion into the new teaching plan and programme for high schools and elementary schools</b>	Number of defined concepts connected with nature protection for inclusion into the teaching plans and programmes. Proposed concepts connected with nature protection for inclusion into the teaching plans and programmes.
<b>5.1.2 Prepare content for publishers of textbooks and for expert groups in order to enrich textbooks and field teaching with activities that can enable the participation of schools in nature protection</b>	Volume of content prepared for publishers and for expert groups. Number of workshops in expert group activities of teachers.
<b>5.1.3 Perform the analysis of higher education curricula in order to determine the share of nature protection content and improve cooperation between the nature protection sector and higher education institutions</b>	Performed detailed analysis and proposed curriculum improvements.

**Contribution to Global Strategic Goals and to Targets of the EU Biodiversity Strategy to 2020**



Bodies participating in the implementation: *central SABs competent for nature protection, science, education and sports; higher education institutions and scientific institutions; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; Education and Teacher Training Agency; CSOs active in the area of nature protection.*

## 5.2 Promote and implement informal education on nature protection

### Related result/impact indicators (NLI):



**BR 18**

Public awareness about nature protection

Activity	Implementation indicator
<p><b>5.2.1 Promote further development and improve systematic implementation of informal education and strengthen cooperation with organizations dealing with natural values and nature protection</b></p>	<p>Analyzed collected data on the existing programmes.            Number of implemented programmes and events (conferences, public events and debates, campaigns, marking of days significant for nature protection) compared to the baseline analysis data.            Number of developed programmes of public institutions competent for managing protected nature areas.            Number of interpretation facilities in protected areas (educational trails, visitor centres, etc.).            Number of implemented CSO projects that include informal education on nature protection and sustainable development.            Number of informal education programmes prepared by CSOs.</p>
<p><b>5.2.2 Promote certification of education programmes connected with nature protection by the Education and Teacher Training Agency</b></p>	<p>Number of public institutions competent for managing protected nature areas that participated in the education.            Number of certified programmes.</p>
<p><b>5.2.3 Promote development and implementation of volunteer programmes in the area of nature protection</b></p>	<p>Number/share of public institutions competent for managing protected nature areas that include volunteers in their work.            Number/share of public institutions competent for managing protected nature areas with volunteer programmes in implementation.</p>

### Contribution to Global Strategic Goals and to Targets of the EU Biodiversity Strategy to 2020



1

2

Bodies participating in the implementation: *central SAB competent for nature protection; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; Office of the Government of the Republic of Croatia for Cooperation with NGOs; CSOs active in the area of nature protection; zoological and botanical gardens; museums; Education and Teacher Training Agency.*

### 5.3 Improve public information in order to raise awareness on nature and nature protection

#### Related result/impact indicators (NLI):



Public awareness about nature protection

Activity	Implementation indicator
<b>5.3.1 Create communication strategies for nature protection targeted at the general public and other stakeholders</b>	Number of communication strategies on relevant nature protection topics. Number of public institutions that have prepared their communication strategies.
<b>5.3.2 Implement targeted campaigns with the aim of raising awareness among the general public, promoting nature protection and informing the general public about the activities and functioning of the nature protection system</b>	Number of targeted campaigns per year, primarily based on priority topics. Number of partner organizations. Number of performed surveys and analyzed results.
<b>5.3.3 Continue cooperating with, and additionally strengthen cooperation between, institutions in the nature protection system and entities in the public information sector, with the aim of ensuring permanent representation of nature protection topics</b>	Number and frequency of workshops for journalists.
<b>5.3.4 Through the work of public institutions, promote energy efficiency, green building, waste prevention, waste collection and sorting, and sustainable tourism</b>	Share of public institutions implementing projects that contribute to the promotion of energy efficiency, green infrastructure, waste collection and sorting, and sustainable tourism. Number of implemented projects promoting energy efficiency, green building, waste collection and sorting, and sustainable tourism.

#### Contribution to Global Strategic Goals and to Targets of the EU Biodiversity Strategy to 2020



Bodies participating in the implementation: *central SAB competent for nature protection; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; CSOs active in the area of nature protection; zoological and botanical gardens; museums.*

## 5.4 Improve participation in decision-making directly or indirectly connected with nature protection

### Related result/impact indicators (NLI):



Public awareness about nature protection

Activity	Implementation indicator
<b>5.4.1 Promote and enable a higher level of public participation and participation of individual stakeholder groups in planning and implementation of protection and in the adoption of planning and legislative documents</b>	Number and frequency of surveys examining stakeholder inclusion. Analysis of the existing legislative framework regarding the consultation process. Provided proposal on how to improve the existing legislative framework regarding the consultation process.
<b>5.4.2 Strengthen communication and cooperation with the local population in protected areas and in areas of the ecological network, with the aim of implementing measures that improve the state of nature and contribute to the fulfilment of conservation goals for the ecological network, while ensuring active involvement of the local population in nature protection</b>	Prepared analysis of the methods of communication of, and the availability of information from, public institutions competent for managing protected nature areas. Share of public institutions competent for managing protected nature areas with established cooperation councils. Number of protected areas with performed analyses of public opinion surveys among the local population.
<b>5.4.3 Strengthen cooperation with stakeholders in order to ensure more effective nature protection through education</b>	Number of annual educational events with stakeholders whose activities impact upon nature. Number of participants in the education. Number of initiated joint projects.

### Contribution to Global Strategic Goals and to Targets of the EU Biodiversity Strategy to 2020



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Bodies participating in the implementation: *central SAB competent for nature protection; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; CSOs active in the area of nature protection.*

## 3. STRATEGY IMPLEMENTATION PLAN

### 3.1. Capacity development plan and communication development plan for Strategy implementation

Strategic Goal 3 – *Strengthen the capacities of the nature protection system* – foresees a number of activities targeted at the strengthening of institutional capacities, technical knowledge and skills for effective management, as well as the strengthening of financial sustainability of the nature protection system.

Strategic Goal 5 – *Raise the level of knowledge, understanding, and support for nature protection among the general public* – foresees communication strategies, not only per theme, but also in the context of work of public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level.

In the course of drafting of the Strategy, a significant emphasis was placed on communication with other interested stakeholders through presentations, workshops and consultations with the involved stakeholders, but also through an online questionnaire intended for the wider public. In addition, pursuant to the Regulation on Information of the Public and Public Concerned in Environmental Matters (Official Gazette No. 64/08), the draft of the Strategy was also provided to the public for consultation through the central web portal *e-Savjetovanja*. The aim is to ensure easy availability and overview of foreseen goals and activities to the public and to all interested stakeholders via the website, as well as to ensure effective provision of information on results of the implementation.

### 3.2. Clearing-House Mechanism (CHM)

The Convention on Biological Diversity places a major emphasis on exchange of information and cooperation between countries. In order to assist this process, the Convention has established an international partnership network – the Clearing-House Mechanism (CHM). This Mechanism of the Convention on Biological Diversity has been established pursuant to Article 18 of the Convention, which governs technical and scientific cooperation. In accordance with the decision from the 10<sup>th</sup> Conference of the Parties ([Decision X/15](#)), the purpose of this Mechanism is to provide a significant contribution to the implementation of the Convention and of the Strategic Plan for Biodiversity, with Target 19 of the latter Strategic Plan clearly defining CHM maintenance and operationalization:



*By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.*

The purpose of CHM is to significantly contribute to the implementation of the Convention and of its Strategic Plan for Biodiversity through an effective information system and other appropriate methods, with the aim of promoting and facilitating scientific and technical cooperation, knowledge sharing and exchange of information, while establishing a fully operational network of partners and Parties.

At the European level, the role of CHM for EU member states is covered by the [Biodiversity Information System for Europe \(BISE\)](#) – a result of successful cooperation between the European Commission and the European Environment Agency (EEA).

This cooperation is ongoing at three levels: (i) central CHM ensures effective global information services, in order to assist the implementation of the Strategic Plan for Biodiversity; (ii) national CHM provides an effective information system that ensures the implementation of the Strategy; (iii) the development of partnerships significantly widens the CHM network and services.

CHM is the crucial mechanism for the implementation of priorities, objectives and activities of the Strategy. In order for this mechanism to be effectively implemented, existing databases within the NPIS will be continuously upgraded, while the establishment of the web portal of the NPIS will ensure a mechanism for exchange of information on biodiversity in the Republic of Croatia between involved institutions, organizations and persons. In addition, this service enables international access to information regarding the state of nature and biodiversity management in the Republic of Croatia.

The system will collect and harmonize information collected from various stakeholders, ensuring clear access and availability of information for the purposes of public exchange and provision of information, and for the purposes of using the information in databases. In order to achieve this, steps foreseen within the Strategic Goal 4: *Increase the knowledge and availability of data on nature* will be undertaken.

The central SAB competent for nature protection affairs is responsible for the implementation of the Protocol on Biosafety (the Cartagena Protocol). One significant obligation stemming from Article 20 of the Protocol on Biosafety is exchange of information on biosafety through the Biosafety Clearing-House (BCH) mechanism. The national biosafety portal contains a mechanism for the exchange of information on biosafety, but it is also designed with a significantly wider reach in mind, aiming to provide information to competent bodies, experts, scientists, CSOs and the wider public regarding the implementation of the Protocol on Biosafety and regarding all the relevant topics connected with the Protocol (<http://www.gmo.hr/cro/BCH/Sto-je-BCH>).

### ***3.3. Sectoral integration of nature conservation and protection measures (integration in sectoral mechanisms, documents and regulations)***

#### **3.3.1. Implementation of the Strategy at the regional/local level**

Regional self-government units are obliged to conserve biodiversity and geodiversity in their areas; to ensure conditions for the protection and conservation of species, habitats and habitat types; to ensure conditions for the protection and conservation of protected areas and areas of the ecological network within their jurisdiction; to participate in the procedure of establishment of protected areas proclaimed by the Government or by the Croatian Parliament; and to participate in the preparation of management plans for protected areas and areas of the ecological network within their jurisdiction. Furthermore, regional self-government units are obliged to promote nature protection and to support the work of professional and other associations whose activities are aiming at nature protection, to monitor the state of nature conservation, and to submit reports on the conservation status to the Ministry and to CAEN; to maintain records of data important for nature protection; to report to the public on the state of nature in their respective territories, and on measures undertaken for the purposes of its protection and conservation. In addition, they also have the duty to provide expert and other assistance to local self-government bodies in nature protection in their area.

Public institutions competent for managing protected areas are important stakeholders in the implementation of protection in the field, i.e. in protected areas and in areas of the ecological network under their management. Therefore, it is extraordinarily important that public institutions integrate the objectives and activities of this Strategy into their management plans and annual work programmes, in order to contribute to the joint fulfilment of the goals. Communication with stakeholders, which include regional and local self-government units, also represents an important aspect of the Strategy, covered within the Strategic Goal 5 of the Strategy.

### **3.3.2. Mechanisms of the integration of nature protection measures**

In order to ensure the fulfilment of goals of the Strategy as the core document for nature protection, it is necessary to cooperate in the preparation of all relevant strategies, as well as in the preparation of all plans and programmes adopted according to special regulations, for all sectors impacting upon nature either positively or negatively in their activities. The list of sectoral strategies that include activities with impacts on nature is provided in Annex 5.

Various sectors, in particular those that include use of natural resources, also include certain impacts on nature. Their impact largely depends on the extent to which and the manner in which attention is paid to the conservation of constituent elements of nature impacted upon by sectoral activities. One of the most important direct mechanisms of nature protection implemented in other sectors is the integration of nature protection requirements in physical planning documents and in natural resource management plans. Nature protection requirements are integrated in spatial plans adopted at the state, regional and local level<sup>16</sup>. Natural resource management plans must contain nature protection requirements, and owners and rights holders have the duty to obtain these requirements from the central SAB competent for nature protection. At the request of the Ministry, CAEN prepares an expert base proposal that contains an overview of the protected parts of nature, areas of the ecological network and ecologically significant areas with the corresponding maps; proposal of protection measures and guidelines for sustainable use of natural resources and areas of the ecological network; and proposal of measures for the conservation of biodiversity, landscape diversity and geodiversity. A similar procedure is also applied in the drafting of physical development documents and spatial plans. In order to improve the mechanisms of integration of nature protection requirements into the planning activities for freshwater and marine fisheries, there is a need to involve the nature protection sector more strongly in the forthcoming period. The integration of nature protection requirements, nature protection measures and conservation guidelines for the ecological network is also ensured in the process of adoption of water area management plans, and in the preparation and implementation of projects and works in water management. The Water Act itself (Official Gazette No. 153/09, 63/11, 130/11, 56/13 and 14/14) requires the achievement of good ecological status of waters, which includes chemical, biological and hydromorphological elements of water quality. When it comes to watercourses with disrupted hydrological status due to performed works, provisions of the Water Act require the implementation of revitalization/restoration measures. Provisions on the integration of nature protection requirements and nature protection measures also pertain to the agricultural sector.

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<sup>16</sup> Documents adopted at the state level are the Physical Planning Strategy of the Republic of Croatia, State Physical Development Plan, Physical Plans for Areas with Special Characteristics (national parks, nature parks, etc.), and the state-level Urban Development Plan. Documents adopted at the regional level are County Physical Plans and the City of Zagreb Spatial Plan, as well as county-level Urban Development Plans. Physical planning documents at the local level are Spatial Plans of cities or municipalities, General Urban Development Plans, and Urban Development Plans.

Furthermore, ENIA is implemented for projects or for parts of projects that may have a significant negative impact, either independently or in combination with other projects, on conservation objectives and on the integrity of areas of the Natura 2000 ecological network. If the ENIA concludes that the negative impact is significant, project mitigation measures are prescribed in relation to conservation objectives for the areas of the ecological network where the project is implemented or where the project may have an impact.

Other significant mechanisms in the environmental protection legislation include EIA and SEA. These procedures are being increasingly harmonized with the obligations stemming from international agreements, and in particular with the obligations stemming from the EU acquis.

SEA is a procedure aimed at assessing probably significant environmental impacts that may arise out of the implementation of strategies, plans or programmes. In such a manner, already in the early planning stages, favourable solutions are chosen in order to avoid or mitigate possible negative impacts on the environment and nature. When it comes to plans that are subject to SEA, the procedure of ecological network impact assessment of plan and programme is carried out within the same procedure, and the results of the assessment are obligatory in such cases.

The mechanism of EIA is also defined by special regulations in the area of environmental protection. EIA is used to appropriately recognize, describe and assess the environmental impact or acceptability of a project. In such a manner, the precautionary principle is used as a starting point, already in the early stages of project planning, in order to mitigate project impacts as much as possible, and also in order to maximise the conservation of environmental quality. Ultimately, a decision is reached on whether a project can be implemented and – if it can – which mitigation measures are required. For the projects that are subject to EIA, ENIA mechanism is also carried out within a single comprehensive procedure.

Guidelines on the Provision of Information and Participation of the Interested Public in EIA and SEA Procedures have also been prepared, in order to ensure high-quality inclusion and provision of information to the public.

Tangible progress and stronger intersectoral cooperation can be seen in the fact that all sectoral regulations point out the conservation of biodiversity and resources used in the sectors as a general aim. Key sectoral mechanisms that support biodiversity and nature conservation in general include mechanisms of spatial protection, temporary and permanent hunting season closure, and various forms of subsidies. In addition, relevant regulations prescribe that planning documents themselves must take into account the conservation of natural resources used (fish species, game species, etc.). In this context, it is important to ensure that management is based upon the actual state of resources, assessed as realistically as possible.

### **3.3.3. Monitoring of implementation**

In order to enable the monitoring of Strategy implementation, indicators have been prepared for the purposes of monitoring the implementation of activities (**performance indicators of the activity implementation**), and also for the purposes of monitoring the progress in the achievement of specific objectives, and thus also achievement of strategic goals (**impact indicators**). Implementation indicators of the Strategy indicate whether the planned activities are being implemented, while impact indicators refer to the National List of Indicators (NLI) prepared and maintained by CAEN. The indicators represent a central aspect of effective decision making and adaptive management. They indicate progress

and successes in the implementation of policies, but they also represent a constituent part of an *early warning system* aimed at detecting problems. A successful indicator is simple, easily understandable and based upon available data, but also firmly grounded in science. Indicators are an essential tool in monitoring and reporting on the fulfilment of goals and objectives of the Strategy. National circumstances, possibilities and priorities have been taken into account in the process of their preparation.

Indicators from the NLI that are relevant for specific objectives of the Strategy are listed in Annex 3. National indicators are harmonized with the European indicators to the highest possible degree. As a result, they will enable the assessment of progress in the fulfilment of goals defined for the period until 2020 at the national level, and they will also significantly facilitate the reporting to international bodies (European Commission, EEA, Organisation for Economic Cooperation and Development (OECD), Convention on Biological Diversity and other Conventions).

Annex 4 provides a comparative overview of the alignment of strategic goals and specific objectives foreseen by the Strategy with the global strategic goals of the Convention on Biological Diversity (Aichi Biodiversity Targets), and with the targets of the EU Biodiversity Strategy to 2020. A complete list of indicators that will be used to measure progress in the achievement of specific objectives of the Strategy is provided in Annex 4, and specific indicators relevant for specific objectives are also provided in the description of each objective. In addition, each activity also includes the corresponding implementation indicators. In such a manner, the assessment of effectiveness of Strategy implementation will be significantly facilitated, including future analyses of the state of nature and the preparation of Reports. Even though the proposed set of indicators is comprehensive, actual utilization of some indicators will not commence immediately; in such cases, the utilization of an indicator will start the moment preconditions for its monitoring become fulfilled.

## 4. RESOURCE MOBILIZATION PLAN

### *4.1. Establishment of the global framework for resource mobilization*

In the process of harmonization with the Strategic Plan for Biodiversity and with the Aichi Biodiversity Targets of the Convention on Biological Diversity, it is important to focus on financial resources required for the implementation of the Strategy. Aichi Biodiversity Target 20 calls for significant increase in mobilization of financial resources by 2020 compared to baseline, for the purposes of effective implementation of the Strategic Plan for Biodiversity. However, costs of implementation of the Strategic Plan for Biodiversity and of Aichi Biodiversity Targets are extraordinarily high. In order for all Parties to the Convention to be able to implement their national strategies, as well as the global Strategic Plan for Biodiversity, major transformation is required in approaching and identifying the participants, and also in the mode of mobilization of resources for biodiversity. This includes not only new funding sources and the implementation of innovative financial mechanisms, but also the implementation of fiscal reforms, such as changes to subsidies that are harmful to biodiversity or the introduction of positive subsidies and incentives. The achievement of Aichi Biodiversity Target 20 requires each Party to the Convention to collect data on the earmarking of national funds for biodiversity conservation, including data on the costs of subsidies harmful to biodiversity, as well as to estimate the full cost of implementation of all activities and objectives from national strategy. In addition, it is necessary to develop a detailed resource mobilization plan that includes a wide range of participants and various mechanisms for the mobilization of financial resources.

### *4.2. Fulfilment of international obligations*

The adoption of resource mobilization targets at the 12th Conference of the Parties to the Convention on Biological Diversity, held in October 2014, confirmed the *Hyderabad commitment*<sup>17</sup> requiring developed countries to double international financial flows for biodiversity conservation to developing countries by 2015, compared to the average annual level of investment in the period 2006-2010, and to maintain the reached level of investments by 2020 in order to successfully support the fulfilment of Convention goals at the global level.

In January 2016, in its resource mobilization report, the Republic of Croatia reported on financial resources for biodiversity intended for developing countries, and on the availability of national financial resources for biodiversity in the period from 2006 until 2014. Based on the reporting obligations, the data covering the period from 2006 until 2010 is used in order to determine the baseline of biodiversity investments, while the data for the period after 2010 is used to monitor progress in resource mobilization. The preliminary report, delivered in February 2014, contained the data on funds, but also basic information on the steps undertaken in resource mobilization, as well as on ongoing initiatives and innovative financing mechanisms used during the reporting period.

In one part of the reporting period, the Republic of Croatia had the status of a developing country, and it was a beneficiary of substantial Official Development Assistance (ODA). However, given the fact that membership fees for most international agreements in the area of nature protection paid by the Republic of Croatia as a party have ODA status, and given the gradual increase in the amounts of these fees for the Republic of Croatia in the period from 2006 until

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<sup>17</sup> 11th Conference of the Parties to the Convention on Biological Diversity was held in Hyderabad, India (October 2012)

2014, the Republic of Croatia has fulfilled the obligation to double financial flows for biodiversity to developing countries compared to the baseline.

The role of the Republic of Croatia in relation to developing countries remains to be more clearly defined in the forthcoming period, given the fact that Croatia itself was a beneficiary of support from external financial instruments until recently. As the youngest member state, the Republic of Croatia can certainly focus its newly acquired potential in the form of assistance to neighbouring countries that are currently in the process of accession to European Union, having in mind clear similarities in terms of biodiversity, and also having in mind the joint obligation to ensure the conservation of individual species and habitat types.

#### ***4.3. Resource mobilization plan at the national level***

The data on financial resources, and the analysis of the existing biodiversity funding mechanisms and funds available through these mechanisms from various sources, point to a significant share in total financing. At the same time, however, one can also note that there is a lack of systematic records, as well as absence of data or insufficient data from the private and the non-governmental sector, and from research institutions. The available data includes funds from the state budget of the Republic of Croatia; funds from the budgets of regional and local self-government units; funds from CAEN and the EPEEF; as well as own revenue of public institutions of national parks, nature parks and public institutions competent for managing other protected areas and other protected parts of nature. In accordance with the decision of the 12th Conference of the Parties to the Convention on Biological Diversity, held in 2014, domestic financial resources from all sources must be activated in order to fulfil the resource mobilization targets and thus decrease the gap between determined needs and available resources at the national level, all with the aim of reaching the Aichi Biodiversity Target 20 by the year 2020. One prerequisite for Croatia to reach this target as Party to the Convention is to achieve significant improvements in the existing monitoring and reporting mechanisms, in particular when it comes to establishing a clearly defined system of communication and a clearly defined method of data collection among stakeholders. The data on national funds earmarked for biodiversity and assessments of costs necessary to implement activities and achieve resource mobilization targets are neither collected nor processed at the system level. This is therefore one of the crucial activities for successful implementation of the Strategic Objective 3 of the Strategy, and also a necessary ingredient to determine the link with the results of policy implementation, all with the aim of improving the effectiveness of financing from funds and programmes of the European Union and from national funding, and with the aim of fulfilling the Convention reporting obligations of the Republic of Croatia.

The introduction of positive biodiversity incentives, such as agri-environment incentives or subsidies for temporary suspension of activities in fisheries in order to ensure the recovery of fish stock, as well as the introduction of new financial mechanisms during the previous period, point to the presence of fiscal reform efforts and to the implementation of a system of incentives and financial mechanisms. In order to mitigate or eliminate negative impacts on biodiversity, in accordance with the Aichi Biodiversity Target 3, the forthcoming period will include an analysis of subsidies harmful to biodiversity, and as needed, reform and/or elimination of those subsidies that may cause the biggest negative impact on biodiversity will be proposed.

Additional potential in biodiversity funding also includes further development of innovative financial mechanisms. The Republic of Croatia has had positive experiences in the implementation of such mechanisms so far, such as the

introduction of fiscal reforms through the system of fees payable by environmental polluters and users in the private and public sector on the basis of the polluter pays principle, where the EPEEF provides one part of the collected funds to projects contributing to biodiversity conservation. One of the globally accepted mechanisms being applied in the Republic of Croatia for a fairly long period of time is the mobilization of additional funds in protected areas through the improvement of services and content, and through entry ticket sales. Furthermore, use of non-market forest and water functions can significantly contribute to the mobilization of funds for biodiversity conservation.

The plan for the next programming period also includes an increase in total funding of nature protection in relation to total national funding, by using the EU Funds. The funding of projects directly targeted at biodiversity conservation, primarily those aimed at the fulfilment of obligations stemming from the EU nature protection acquis, is planned within the Operational Programme Competitiveness and Cohesion 2014-2020, with significant funds foreseen for nature protection compared to the pre-accession period, and with separate measures prepared for that purpose. The Ministry is involved in the management structure for the disbursement of funds, which will additionally ensure proper targeting of cohesion policy funds to nature protection and conservation. Relying on the participatory approach to stakeholder involvement in nature conservation, adequate measures aimed at achieving nature conservation goals have been integrated through the Rural Development Programme for the period 2014-2020 and through the Maritime Affairs and Fisheries Programme for the period 2014-2020, such as the system of subsidies that would be paid out to beneficiaries as compensation for lost revenue and additional costs due to the voluntary implementation of measures ensuring the conservation of valuable species and habitat types at the EU and national level. One novelty – particularly important for the regional management level – is that all European territorial cooperation programmes foresee funds for projects contributing to biodiversity protection and conservation; to the promotion of ecosystem services, including the Natura 2000 ecological network and green infrastructure; and to the conservation of natural heritage, primarily through the improvement of visitor infrastructure. These opportunities represent a significant rise in support compared to cross-border programmes during the pre-accession period.

Also worth pointing out is the established cooperation between the Government of the Republic of Croatia and the Federal Council of Switzerland, reflected in the signing of the Framework Agreement on the Implementation of the Swiss-Croatian Cooperation Programme. The Cooperation Programme is aimed at decreasing the economic and social inequalities within the enlarged European Union, and it will serve as a framework for tenders focusing on capacity building of CSOs that will be able to implement informal education programmes on nature protection and sustainable development in schools in the Republic of Croatia, in partnership with local self-government units. The support to these efforts will amount to 5.28 million CHF in the period from 2016 until 2018.

In order to use this potential, and in order to ensure maximum utilization of EU funding, the nature protection system must focus on project-based financing in the forthcoming period. This will require additional adjustments in the system, in particular in terms of human resources.

#### ***4.4. Establishment of the monitoring and reporting framework***

The Republic of Croatia is yet to develop a framework for monitoring national resources in accordance with the defined funding needs and priorities, by using measurable objectives for the establishment and development of the Strategy as

a flexible framework aimed at achieving the Aichi Biodiversity Targets, with continuous and systematic upgrades and improvements.

Key activities in the establishment of a high-quality monitoring and reporting framework include the following:

- Enabling and strengthening the existing capacities in resource mobilization;
- Systematic monitoring and reporting on funds used for biodiversity conservation;
- Increasing the number of resource mobilization mechanisms and improving the existing mechanisms;
- Analysis of trends and systematic revision of the resource mobilization plan.

This chapter on Resource Mobilization Plan for the purposes of Strategy implementation pertains to all activities, objectives and corresponding indicators integrated within the Strategy, and in particular within the Strategic Goal 3.

# ACRONYMS

CAEN – Croatian Agency for the Environment and Nature  
CHM – Clearing-House Mechanism  
CITES – The Convention on International Trade in Endangered Species of Wild Fauna and Flora  
CLC – Corine Land Cover  
CR/EN/VU – Critically Endangered / Endangered / Vulnerable species  
CSO – Civil society organization  
EC – European Community  
EEA – European Environment Agency  
EEC – European Economic Community  
EIA – Environmental Impact Assessment  
ENIA – Ecological Network Impact Assessment  
EPEEF – Environmental Protection and Energy Efficiency Fund  
EU – European Union  
GEF – Global Environment Facility  
GIS – Geographic Information System  
IAS – Invasive Alien Species  
IPA – Instrument for Pre-Accession Assistance  
IPBES – Intergovernmental Platform on Biodiversity and Ecosystem Services  
IUCN – International Union for Conservation of Nature  
MMU – Minimum mapping unit  
NIP – EU Natura 2000 Integration Project  
NLI – National List of Indicators  
NMFF – Non-market forest functions  
NPIS – Nature Protection Information System  
NP – National Park  
NP – Nature Park  
NSDI – National Spatial Data Infrastructure  
ODA – Official Development Assistance  
PARCS – Project *Strengthening the Institutional and Financial Sustainability of the National Protected Area System in the Republic of Croatia*  
RES – Renewable energy sources  
SAB – State Administration Body  
SEA – Strategic Environmental Assessment  
SPAMI – Specially Protected Areas of Mediterranean Importance  
UNDP – United Nations Development Programme in Croatia  
UNESCO – United Nations Educational, Scientific and Cultural Organization  
ZERP – Ecological and Fisheries Protection Zone of the Republic of Croatia

## **5. ANNEXES**

**Annex 1. Targets of the Strategic Plan for Biodiversity (Strategic Goals and Aichi Biodiversity Targets)**

<b>STRATEGIC GOAL A. Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society</b>	
	By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.
	By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.
	By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.
	By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.
<b>STRATEGIC GOAL B. Reduce the direct pressures on biodiversity and promote sustainable use</b>	
	By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.
	By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.
	By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.
	By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.
	By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.
	By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

<b>STRATEGIC GOAL C. To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity</b>	
	By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.
	By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.
	By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.
<b>STRATEGIC GOAL D. Enhance the benefits to all from biodiversity and ecosystem services</b>	
	By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.
	By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.
	By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.
<b>STRATEGIC GOAL E. Enhance implementation of the Convention through participatory planning, knowledge management and capacity building</b>	
	By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.
	By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.
	By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.
	By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.

## Annex 2. Targets of the EU Biodiversity Strategy to 2020

### EU 2050 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 well-being and economic prosperity, and so that catastrophic changes caused by the loss of biodiversity are avoided.

### EU 2020 HEADLINE TARGET

Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss.

For the first time, there is **emphasis on ecosystem services**, and on the urgent need to conserve and restore the benefits stemming from these services for nature and for the human community.



1

### **E 1 Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive**

To halt the deterioration in the status of all species and habitats covered by EU nature legislation and achieve a significant and measurable improvement in their status so that, by 2020, compared to current assessments,

- 100% more habitat assessments and 50% more species assessments under the Habitats Directive show an improved conservation status;
- 50% more species assessments under the Birds Directive show a secure or improved status.

a	Complete the establishment of the Natura 2000 network and ensure good management.
b	Ensure adequate financing of Natura 2000 sites.
c	Increase stakeholder awareness and involvement and improve enforcement.
d	Improve and streamline monitoring and reporting.



2

### **E 2 Maintain and restore ecosystems and their services**

By 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15 % of degraded ecosystems.

a	Improve knowledge of ecosystems and their services in the EU.
b	Set priorities to restore and promote the use of green infrastructure.
c	Ensure no net loss of biodiversity and ecosystem services.



3

### **E 3 Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity**

**Agriculture:** By 2020, maximise areas under agriculture across grasslands, arable land and permanent crops that are covered by biodiversity-related measures under the Common Agricultural Policy (CAP) so as to ensure the conservation of biodiversity and to bring about a measurable improvement in the conservation status of species and habitats that depend on or are affected by agriculture and in the provision of ecosystem services as compared to the EU2010 Baseline, thus contributing to enhance sustainable management.

**Forests:** By 2020, Forest Management Plans or equivalent instruments, in line with Sustainable Forest Management (SFM), are in place for all forests that are publicly owned and for forest holdings above a certain size (to be defined by the Member States or regions and communicated in their Rural Development Programmes) that receive funding under the EU Rural Development

Policy so as to bring about a measurable improvement(*) in the conservation status of species and habitats that depend on or are affected by forestry and in the provision of related ecosystem services as compared to the EU 2010 Baseline.	
a	Enhance direct payments for environmental public goods in the EU Common Agricultural Policy.
b	Better target Rural Development to biodiversity conservation.
c	Conserve Europe's agricultural genetic diversity.
d	Encourage forest holders to protect and enhance forest biodiversity.
e	Integrate biodiversity measures in forest management plans.
 <b>E 4 Ensure the sustainable use of fisheries resources</b> 4 Achieve Maximum Sustainable Yield (MSY) by 2015. Achieve a population age and size distribution indicative of a healthy stock, through fisheries management with no significant adverse impacts on other stocks, species and ecosystems, in support of achieving Good Environmental Status by 2020, as required under the Marine Strategy Framework Directive.	
a	Improve the management of fished stocks.
b	Eliminate adverse impacts on fish stocks, species, habitats and ecosystems.
 <b>E 5 Combat Invasive Alien Species</b> 5 By 2020, Invasive Alien Species (IAS) and their pathways are identified and prioritised, priority species are controlled or eradicated, and pathways are managed to prevent the introduction and establishment of new IAS.	
a	Strengthen the EU Plant and Animal Health Regimes (phytosanitary and veterinary sanitary regulations).
b	Establish a dedicated instrument on Invasive Alien Species.
 <b>E 6 Help avert global biodiversity loss</b> 6 By 2020, the EU has stepped up its contribution to averting global biodiversity loss.	
a	Reduce indirect drivers of biodiversity loss.
b	Mobilise additional resources for global biodiversity conservation.
c	"Biodiversity proof" EU development cooperation.
d	Regulate access to genetic resources and the fair and equitable sharing of benefits arising from their use.

### *Annex 3. National List of Indicators for biodiversity and geodiversity (CAEN)*

#### *Biodiversity*



- BR 1 Conservation status of species of European interest – number of species in each conservation status category
- BR 2 Areas of European interest (map and surface)
- BR 3 Representation of certain types of ecosystems (share of surface according to the CLC database)
- BR 4 Representation of threatened habitat types in the Republic of Croatia – representation trends for individual classes of threatened and rare habitat types
- BR 5 Conservation status of habitats of European interest – number of habitats in each conservation status category
- BR 6 Status and threat index for wild species from the Red List of the Republic of Croatia – number of species and assessment of the threat status
- BR 7 Abundance and distribution of selected species – trends in the numbers and distribution of frequent bird species (with the exception of farmland birds) and grassland butterflies
- BR 8 Population trends of common farmland birds – trends in the numbers of common farmland birds
- BR 9 Invasive alien species – trends in the introduction and spreading of alien (allochthonous) species or invasive alien species
- BR 10 Conservation of genetic resources in agriculture – number of breeds according to the threat status
- BR 11 The Share of agricultural areas in the areas of European interest – trends in the representation of Natura 2000 ecological network areas in habitat types dependent on the maintenance of extensive forms of agriculture
- BR 12 High nature value farmland – distribution of farmland important for biodiversity
- BR 13 Freshwater fishponds with high nature value – trends in the representation of freshwater fishponds with high nature value
- BR 14 Deadwood in forests – quantity of dead standing and fallen trees in forests
- BR 15 Fragmentation of natural and semi-natural areas – map
- BR 16 Marine protected areas – number and surface of marine protected areas
- BR 17 Financing of biodiversity protection and conservation – trends in the funding used for biodiversity protection and conservation
- BR 18 Public awareness about nature protection – changes in public awareness level (survey results)

#### *Protected nature areas*



- ZDP 1 Protected areas pursuant to the Nature Protection Act – surface and map

#### *Geodiversity*



- GR 1 Protected geological sites – number and map
- GR 2 Geoparks of the Republic of Croatia – number
- GR 3 Protected fossils and minerals – number

### *Agriculture*



- PO 1 Areas under agri-environment incentives
- PO 4 Areas under ecological agricultural production
- PO 14 Intensification / extensification

### *Fisheries and aquaculture*



- RA 2 Capture of fish and other marine organisms
- RA 4 Aquaculture production

### *Marine ecosystem*



- ME 8 Biological quality of transitional and coastal waters, and biological properties of the marine environment
- ME 9 Hydromorphological elements of the quality of transitional and coastal waters, and the hydrographic properties of marine waters
- ME 17 Introduction of alien and invasive species

### *Freshwater quality*



- KAV 1 Assessment of ecological status of rivers (at measurement stations)
- KAV 2 Assessment of ecological status of lakes at monitoring stations

### *Forestry*



- Š 1 Surface area of forests and forest land
- Š 4 Damage to forest ecosystems
- Š 5 Forest areas under certification for sustainable management

**Annex 4. Comparative overview of specific objectives of the Strategy, global strategic goals (Aichi Biodiversity Targets), targets of the EU Biodiversity Strategy to 2020 and the National List of Indicators (NLI)**

Strategic Goal		Specific Objective	Aichi Biodiversity Target	EU Biodiversity Strategy to 2020 Target	National List of Indicators (NLI)
<b>Increase the effectiveness of key nature protection mechanisms</b>	1.1	Ensure a clear, harmonized and feasible legislative and institutional framework for the implementation of nature conservation mechanisms	<p>4. By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.</p> <p>19. By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.</p>	<p>1. <i>Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive (A1, A2).</i></p> <p>3. <i>Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity (A9).</i></p>	<p>ZDP 1 Protected areas pursuant to the Nature Protection Act</p> <p>BR 2 Areas of European interest</p>
	1.2	Design and establish a representative and functional network of areas significant for nature conservation	<p>5. By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.</p> <p>11. By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.</p> <p>12. By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.</p> <p>13. By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.</p> <p>15. By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.</p>	<p>1. <i>Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive (A1).</i></p> <p>2. <i>Maintain and restore ecosystems and their services (A7).</i></p>	<p>ZDP 1 Protected areas pursuant to the Nature Protection Act</p> <p>BR 2 Areas of European interest</p> <p>BR 16 Marine protected areas</p> <p>GR 1 Protected geological sites</p> <p>GR 2 Geoparks of the Republic of Croatia</p>

			19. By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.		
	1.3	Standardize management in nature protection and establish a performance monitoring system	<p>1. By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.</p> <p>2. By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.</p> <p>4. By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.</p> <p>5. By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.</p> <p>6. By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.</p> <p>11. By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.</p> <p>12. By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.</p>	<p>1. <i>Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive (A1).</i></p> <p>2. <i>Maintain and restore ecosystems and their services (A7).</i></p>	<p>BR 2 Areas of European interest</p> <p>BR 6 Status and threat index for wild species from the Red List of the Republic of Croatia</p> <p>BR 7 Abundance and distribution of selected species</p>
	1.4	Develop co-operative management modalities and strengthen communication	<p>1. By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.</p> <p>4. By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.</p>	<p>1. <i>Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive (A1, A2, A3).</i></p>	<p>BR 2 Areas of European incentives</p> <p>BR 18 Public awareness about nature protection</p>

				3. <i>Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity (A11, A12).</i>	PO 1 Areas under agri-environment support Š 5 Forest areas under certification for sustainable management
<b>Reduce the direct pressures on nature and promote sustainable use of natural resources</b>	2.1	Ensure sustainable use of natural resources through sectoral planning documents	<p>2. By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.</p> <p>3. By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.</p> <p>4. By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.</p> <p>7. By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.</p> <p>8. By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.</p>	<p>1. <i>Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive (A3).</i></p> <p>2. <i>Maintain and restore ecosystems and their services (A13, A14).</i></p>	<p>BR 3 Representation of certain types of ecosystems</p> <p>BR 4 Representation of threatened habitat types in the Republic of Croatia</p> <p>BR 5 Conservation status of habitats of European interest</p> <p>BR 6 Status and threat index for wild species from the Red List of the Republic of Croatia</p> <p>BR 11 The Share of agricultural areas underin the areas of European interest</p> <p>BR 12 High nature value farmland</p> <p>RA 2 Capture of fish and other marine organisms</p> <p>RA 4 Aquaculture production</p> <p>PO 1 Areas under agri-environment support</p> <p>PO 4 Areas under ecological agricultural production</p>

					Š 5 Forest areas under certification for sustainable management
2.2	Strengthen the system for implementation of Ecological Network Impact Assessment	11. By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.	1. <i>Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive (A1).</i>  6. <i>Intensify actions aimed at combating the global biodiversity crisis (A19).</i>		
2.3	Ensure sustainable use of native wild species where their use is not regulated by special regulations	4. By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.  6. By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.  19. By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.	2. <i>Maintain and restore ecosystems and their services (A7).</i>  3. <i>Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity (A13).</i>	BR 7 Abundance and distribution of selected species  BR 8 Population trends of common farmland birds  BR 18 Public awareness about nature protection	
2.4	Protect genetic diversity and sustainably use genetic resources	12. By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.  13. By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.  16. By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.	3. <i>Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity (A10).</i>		

	2.5	Conserve unfragmented natural areas and restore the most threatened degraded habitats	<p>5. By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.</p> <p>15. By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.</p>	<p>2. <i>Maintain and restore ecosystems and their services (A6, A7).</i></p>	<p>BR 15 Fragmentation of natural and semi-natural areas</p> <p>BR 3 Representation of certain types of ecosystems</p> <p>BR 4 Representation of threatened habitat types in the Republic of Croatia</p>
	2.6	Establish a management system for alien species, and implement measures for the prevention of introduction, spread and control of Invasive Alien Species	<p>4. By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.</p> <p>9. By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.</p> <p>19. By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.</p>	<p>5. <i>Combat Invasive Alien Species (A15, A16).</i></p>	<p>BR 9 Invasive alien species</p> <p>ME 17 Introduction of alien and invasive species</p>
<b>Strengthen capacities of the nature protection system</b>	3.1	Strengthen institutional capacities in nature protection	-	<p>1. <i>Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive (A1).</i></p>	
	3.2	Continue strengthening technical knowledge and skills for effective implementation of nature protection	<p>3. By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.</p> <p>20. By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be</p>	<p>1. <i>Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive (A1).</i></p> <p>3. <i>Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity</i></p>	

			subject to changes contingent to resource needs assessments to be developed and reported by Parties.	<i>6. Intensify actions aimed at combating the global biodiversity crisis</i>	
	3.3	Increase financial sustainability of the nature protection system	<p>3. By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.</p> <p>20. By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.</p>	<p>1. <i>Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive (A2).</i></p> <p>3. <i>Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity (A8, A9).</i></p> <p>6. <i>Intensify actions aimed at combating the global biodiversity crisis (A17, A18).</i></p>	<p>BR 17 Financing of biodiversity protection and conservation</p> <p>PO 1 Areas under agri-environment support</p>
<b>Increase the knowledge and availability of data on nature</b>	4.1	Increase the knowledge on the state of nature	<p>1. By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.</p> <p>12. By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.</p> <p>19. By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.</p>	<p>1. <i>Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive (A4).</i></p>	<p>BR1 Conservation status of species of European interest</p> <p>BR 6 Status and threat index for wild species from the Red List of the Republic of Croatia</p> <p>BR 7. Abundance and distribution of selected species</p> <p>GR 1 Protected geological sites / geodiversity</p>
	4.2	Increase the availability of data on the state of nature	<p>1. By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.</p> <p>19. By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.</p>	<p>1. <i>Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive (A3, A4).</i></p>	<p>BR 9 Invasive alien species</p> <p>BR 18 Public awareness about nature protection</p>

	4.3	Evaluate and map ecosystem and their services with the goal of assessing and improving their status	<p>14. By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.</p> <p>15. By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.</p>	2. <i>Maintain and restore ecosystems and their services (A5, A7).</i>	<p>BR 3 Representation of certain types of ecosystems</p> <p>BR 4 Representation of threatened habitat types in the Republic of Croatia</p> <p>KAV 1 Assessment of ecological status of rivers (at measurement stations)</p> <p>KAV 2 Assessment of ecological status of lakes at monitoring stations</p> <p>ME 8 Biological quality of transitional and coastal waters, and biological properties of the marine environment</p> <p>ME 9 Hydromorphological elements of the quality of transitional and coastal waters, and the hydrographic properties of marine waters</p> <p>PO 14 Intensification / extensification</p> <p>Š 1 Surface area of forests and forestland</p> <p>Š 4 Damage to forest ecosystems</p>
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<b>Raise the level of knowledge, understanding and support for nature protection among the general public</b>	5.1	Improve understanding and representation of nature-related topics and nature protection in the educational system and strengthen cooperation with the education sector	<p>1. By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.</p> <p>19. By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.</p>	<p>1. <i>Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive</i></p> <p>2. <i>Maintain and restore ecosystems and their services</i></p>	BR 18 Public awareness about nature protection
	5.2	Promote and implement informal education on nature protection	<p>1. By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.</p> <p>19. By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.</p>	<p>1. <i>Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive</i></p> <p>2. <i>Maintain and restore ecosystems and their services</i></p>	BR 18 Public awareness about nature protection
	5.3	Improve public information in order to raise awareness on nature and nature protection	<p>1. By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.</p>	<p>1. <i>Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive.</i></p> <p>2. <i>Maintain and restore ecosystems and their services.</i></p>	BR 18 Public awareness about nature protection
	5.4	Improve participation in decision-making directly or indirectly connected with nature protection	<p>18. By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.</p>	<p>1. <i>Improve European Union legislation; i.e., fully implement the Birds Directive and the Habitats Directive.</i></p> <p>2. <i>Maintain and restore ecosystems and their services.</i></p>	BR 18 Public awareness about nature protection

## ***Annex 5. List of relevant Strategies and Plans***

1. Sustainable Development Strategy of the Republic of Croatia (Official Gazette No. 30/09)
2. Tourism Development Strategy of the Republic of Croatia until 2020 (Official Gazette No. 55/13)
3. Energy Development Strategy of the Republic of Croatia (Official Gazette No. 130/09)
4. National Forest Policy and Strategy (Official Gazette No. 120/03)
5. National Chemical Safety Strategy (Official Gazette No. 143/08)
6. Waste Management Strategy of the Republic of Croatia (Official Gazette No. 130/05)
7. Waste Management Plan of the Republic of Croatia 2017-2022 (Official Gazette No. 3/17)
8. National Health Care Strategy 2012-2020 (Official Gazette No. 116/12)
9. Development Strategy for Inland Waterway Transport in the Republic of Croatia (2008-2018) (Official Gazette No. 65/08)
10. Water Management Strategy (Official Gazette No. 91/08)
11. Transport Development Strategy of the Republic of Croatia 2014-2030 (Official Gazette No. 131/14)
12. Industrial Strategy of the Republic of Croatia 2014-2020 (Official Gazette No. 126/14)
13. Strategy for Education, Science and Technology (Official Gazette No. 124/14)
14. Regulation on the Preparation and Implementation of Documents of the Marine Environment and Coastal Area Management Strategy (Official Gazette No. 112/14)
15. Rural Development Programme of the Republic of Croatia 2014-2020
16. National Strategic Plan for Aquaculture Development 2014-2020 (*in adoption procedure*)
17. LEDS – Low-Emission Development Strategy (in drafting stage)
18. Ballast Water Management Strategy of the Republic of Croatia (in drafting stage)
19. National Noise Protection Strategy and Action Plan (in drafting stage)
20. Nautical Tourism Development Strategy 2009-2019  
(<http://www.mppi.hr/UserDocsImages/Strategija%20razvoja%20nautickog%20turizma%20HR%201.pdf>)
21. Decision Adopting the Water Area Management Plan (Official Gazette No. 82/13)
22. Initial Assessment of the State of Marine Environment in the Croatian Part of the Adriatic Sea
23. A Set of Features of Good Environmental Status of Marine Waters Under the Sovereignty of the Republic of Croatia and Set of Targets to Protect the Marine Environment with Related Indicators
24. Physical Planning Strategy of the Republic of Croatia, adopted on 27 June 1997, and changes and amendments to the Physical Planning Strategy of the Republic of Croatia (Official Gazette No. 76/13)
25. Spatial Development Strategy of the Republic of Croatia (in drafting stage)
26. Physical Planning Programme of the Republic of Croatia (Official Gazette No. 50/99, 96/12 and 84/13)

## ***Annex 6. Corresponding international legislation and national laws and bylaws in the nature protection sector***

### **International legislation (with links):**

- Convention on Biological Diversity (Rio de Janeiro, 1992), <http://www.cbd.int>
- Act on the Ratification of the Convention on Biological Diversity (Official Gazette - International Agreements No. 6/96)
- Strategic Plan of the Convention on Biological Diversity 2011-2020 (Nagoya, 2010), <http://www.cbd.int/decision/cop/?id=12268>
- Strategy for Resource Mobilization of the Convention on Biological Diversity <http://www.cbd.int/financial/mobilization.shtml>
- EU 2020 Biodiversity Strategy (COM (2011)244) <http://ec.europa.eu/environment/nature/info/pubs/docs/brochures/2020%20Biod%20brochure%20final%20lowres.pdf>
- Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 1979) [http://www.coe.int/t/dg4/cultureheritage/nature/Bern/default\\_en.asp](http://www.coe.int/t/dg4/cultureheritage/nature/Bern/default_en.asp)
- Act on the Ratification of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) (Official Gazette - International Agreements No. 6/00)
- Act on the Ratification of the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (Official Gazette - International Agreements No. 5/15)
- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206, 22 July 1992), as changed and amended by the Council Directive 2013/17/EU of 13 May 2013 adapting certain directives in the field of environment, by reason of the accession of the Republic of Croatia (OJ L 158, 10 June 2013)
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version) (OJ L 20, 26 January 2010), as changed and amended by the Council Directive 2013/17/EU of 13 May 2013 adapting certain directives in the field of environment, by reason of the accession of the Republic of Croatia (OJ L 158, 10 June 2013)
- Act on the Ratification of the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) (Official Gazette - International Agreements No. 1/07)
- Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species (OJ L 317, 4 November 2014)
- Act on the Ratification of the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (Official Gazette - International Agreements No. 11/01)
- Convention on Wetlands of International Importance especially as Waterfowl Habitat (Official Gazette - International Agreements No. 12/93)
- Convention concerning the Protection of the World Cultural and Natural Heritage (Official Gazette - International Agreements No. 12/93)
- Act on the Ratification of the European Landscape Convention (Official Gazette - International Agreements No. 12/02)

### **Laws and implementing regulations:**

- Nature Protection Act (Official Gazette No. 80/13)
- Act on Transboundary Movement and Trade in Wild Species (Official Gazette No. 94/13)
- Ordinance on Conservation Objectives and Essential Bird Conservation Measures in the Ecological Network (Official Gazette No. 15/14)
- Ordinance on the List of Habitat Types, Habitat Map, and Threatened and Rare Habitat Types (Official Gazette No. 88/14)
- Ordinance on the Ecological Network Impact Assessment (Official Gazette No. 146/14)
- Regulation on the Ecological Network (Official Gazette Nos. 124/13 and 105/15)
- Ordinance on Strictly Protected Species (Official Gazette Nos. 144/13 and 73/16).

## Annex 7. Indicative overview of implementation of proposed activities

STRATEGIC GOAL 1	SPECIFIC OBJECTIVE 1. ENSURE A CLEAR, ALIGNED AND FEASIBLE LEGISLATIVE AND INSTITUTIONAL FRAMEWORK FOR THE IMPLEMENTATION OF NATURE CONSERVATION MECHANISMS											
	Activity	Bodies participating in the implementation	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.	
INCREASE THE EFFECTIVENESS OF KEY NATURE PROTECTION MECHANISMS	1.1.1 Analyze the effectiveness of the legislative and institutional framework in connection with the management of species, protected areas, the ecological network and geoh heritage	Central SAB competent for nature protection and other SABs within their jurisdiction; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional, and local level; CSOs active in the area of nature protection.										
	1.1.2 Implement the assessment process for protected areas in accordance with IUCN management categories											
	1.1.3 Define targets and basic conservation measures, and implement spatial zoning on the basis of ecological requirements for target species and habitat types in the area of the ecological network											
	1.1.4 Identify the implementers of basic conservation measures in the area of the ecological network and planning documents for the existing or potential implementation of these measures											
	SPECIFIC OBJECTIVE 2. DESIGN AND ESTABLISH A REPRESENTATIVE AND FUNCTIONAL NETWORK OF AREAS SIGNIFICANT FOR NATURE CONSERVATION											
	1.2.1 Amend the ecological network with Special Areas of Conservation in those areas in the Republic of Croatia assessed as "scientific reserve" in biogeographic seminars, if research show that there is a need for such actions	Central SAB competent for nature protection and other SABs within their jurisdiction; CAEN; local and regional self-government units; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; CSOs active in the area of nature protection; scientific institutions										
	1.2.2 Analyze the functionality of existing protected areas, determine the species and problem levels, as well as priorities and methods (legislative or other) of problem-solving, and initiate review in accordance with the analysis											
	1.2.3 Record the boundaries of protected areas in cadastre and land registry											
	1.2.4 Analyze the representativeness of protected areas at the national level; develop criteria for the proclamation of new protected areas and propose protection priorities in accordance with these criteria											
	1.2.5 Analyze the representation of Croatian protected areas in global networks with international designation (UNESCO World Heritage, UNESCO Man and the Biosphere, Ramsar, Geopark, SPAMI, etc.); determine priorities for new candidacies											
	1.2.6 Develop criteria for the assessment of geoh heritage, and propose protection of valuable geological sites in accordance with these criteria											
	1.2.7 Implement legal protection procedures for the areas with already prepared expert base proposals											
	SPECIFIC OBJECTIVE 3. STANDARDIZE MANAGEMENT IN NATURE PROTECTION AND ESTABLISH A PERFORMANCE MONITORING SYSTEM											
	1.3.1 Prepare management plans for strictly protected species with action plans for those species determined as priorities; revise the existing management plans	Central SABs competent for nature protection, forestry, hunting, veterinary services, water management, fisheries, and maritime affairs; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; scientific institutions and experts for taxonomic groups; CSOs active in the area of nature protection.										
1.3.2 Ensure the implementation of measures defined by management plans for strictly protected species with action plans for priority strictly protected species												
1.3.3 Establish a comprehensive care system for priority animal species												
1.3.4 Establish a comprehensive alert system on fatalities among strictly protected animal species												
1.3.5 Improve standards for the preparation of management documents for protected areas, the ecological network and species												
1.3.6 Develop and establish a monitoring system for the implementation of management of protected areas and species; define the methodology and analyze the effectiveness of protected area management at the level of individual public institutions and other managing authorities, and at the national level											*	
1.3.7 Based on the defined ecological network management framework, ensure adequate integration of basic and additional conservation measures into ecological network management plans, spatial plans, sectoral natural resource management plans and other sectoral plans												
1.3.8 Develop an integral systems of interpretation and visitor management in protected areas and in individual parts of the ecological network												
SPECIFIC OBJECTIVE 4. DEVELOP CO-OPERATIVE MANAGEMENT MODALITIES AND STRENGTHEN COMMUNICATION												
1.4.1 Enable entities that are neither owners nor rights holders to assume care for protected areas, parts of protected area or for areas of the ecological network, with the exception of forests and forest land owned by the Republic of Croatia	Central SAB competent for nature protection and other SABs within their jurisdiction; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; Office of the Government of the Republic of Croatia for Cooperation with NGOs; CSOs active in the area of nature protection.											
1.4.2 Promote communication on protected areas, the ecological network and strictly protected species												
1.4.3 Ensure participation of stakeholders in the management of protected areas, the ecological network and strictly protected species												
1.4.4 Promote international cooperation in managing protected areas, areas of the ecological network and species												

STRATEGIC GOAL 2										
SPECIFIC OBJECTIVE 1. ENSURE SUSTAINABLE USE OF NATURAL RESOURCES THROUGH SECTORAL PLANNING DOCUMENTS										
Activity	Bodies participating in the implementation	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.
		2.1.1 Improve the effectiveness of nature protection procedures through cooperation and communication with sectors when drafting/adopting sectoral plans and spatial plans	Central SABs competent for nature protection, forestry, fisheries, hunting, water management, agriculture, economy and physical planning; CAEN; Croatian Chamber of Economy; Croatian Chamber of Trades and Crafts; Croatian Employers' Association; Paying Agency for Agriculture, Fisheries and Rural Development; administrative bodies of regional self-government units; legal entities and natural persons managing natural resources; Advisory Service; Hrvatske vode [Croatian Waters company]; Hrvatske šume d.o.o.[Croatian Forests company]; scientific institutions; CSOs active in the area of nature protection.							
2.1.2 Increase the number of targeted inspections of the integration and implementation of nature protection requirements in targeted planning documents compared to the current level										
2.1.3 Promote the acceptance and implementation of biodiversity conservation measures within the Rural Development Programme of the Republic of Croatia 2014-2020 and monitor their implementation										
2.1.4 Ensure effective implementation of nature protection measures in the annual Maintenance Works Programme Against Harmful Effects of Waters										
2.1.5 Determine species and habitat types sensitive to climate change and develop specific conservation measures										
SPECIFIC OBJECTIVE 2. STRENGTHEN THE SYSTEM FOR IMPLEMENTATION OF ECOLOGICAL NETWORK IMPACT ASSESSMENT										
Activity	Bodies participating in the implementation	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.
2.2.1 Improve control of implementation of mitigation measures for the ecological network and monitoring of their effects	Central SAB competent for nature protection; CAEN; administrative bodies of regional self-government units; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level.									
2.2.2 Prepare thematic manuals/guidelines for the preparation of Main Assessment studies for specific types of projects										
2.2.3 Introduce consolidated records of ENIA procedures										
SPECIFIC OBJECTIVE 3. ENSURE SUSTAINABLE USE OF NATIVE WILD SPECIES WHERE THEIR USE IS NOT REGULATED BY SPECIAL REGULATIONS										
Activity	Bodies participating in the implementation	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.
2.3.1 Analyze the possibility of compensations for the collection of indigenous wild species in nature, where such collection is undertaken for the purposes of processing, trade or other business in accordance with the provisions of the Nature Protection Act	Central SABs competent for nature protection, agriculture, forestry, hunting, fisheries, internal affairs, finance and customs affairs; CAEN; CSOs active in the area of nature protection.									
2.3.2 Intensify coordinated inspections of commercial use of wild species compared to the current level; coordinated activities with the inspections of other sectors and with the staff of the Ministry of the Interior and the Ministry of Finance, Customs Administration										
SPECIFIC OBJECTIVE 4. PROTECT GENETIC DIVERSITY AND SUSTAINABLY USE GENETIC RESOURCES										
Activity	Bodies participating in the implementation	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.
2.4.1 Expand ex-situ protection of indigenous wild species	Central SABs competent for nature protection, agriculture, forestry and economy; CAEN; botanical and zoological gardens; Croatian Chamber of Economy; Croatian Chamber of Trades and Crafts; Croatian Employers' Association; CSOs active in the area of nature protection.									
2.4.2 Implement the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization										
SPECIFIC OBJECTIVE 5. CONSERVE UNFRAGMENTED NATURAL AREAS AND RESTORE THE MOST THREATENED DEGRADED HABITATS										
Activity	Bodies participating in the implementation	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.
2.5.1 Develop a list of national indicators for habitat fragmentation	Central SABs competent for nature protection, economy, transport, maritime affairs and infrastructure; CAEN; scientific institutions; legal entities and natural persons managing natural resources; CSOs active in the area of nature protection; Paying Agency for Agriculture, Fisheries and Rural Development; local and regional self-government units; Hrvatske ceste [Croatian Roads company]; Hrvatske autoceste [Croatian Motorways company], HŽ Infrastruktura d.o.o. [Croatian Railways Infrastructure company].									
2.5.2 Prepare a map of habitat corridors important for the migrations of the fauna threatened by fragmentation, with impact mitigation measures										
2.5.3 Implement measures for conservation and restoration of green infrastructure										
2.5.4 Improve the existing monitoring of fatalities among strictly protected animal species due to road and railway transport and due to power lines, primarily through intensified intersectoral cooperation										
SPECIFIC OBJECTIVE 6. ESTABLISH A MANAGEMENT SYSTEM FOR ALIEN SPECIES, AND IMPLEMENT MEASURES FOR THE PREVENTION OF INTRODUCTION, SPREAD AND CONTROL OF INVASIVE ALIEN SPECIES										
Activity	Bodies participating in the implementation	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.
2.6.1 Establish a comprehensive legislative framework of the Republic of Croatia for IAS management	Central SABs competent for nature protection, finance, health, maritime affairs, transport, infrastructure, economy, forestry and hunting, and other SABs within their jurisdiction; CAEN; relevant inspections (phytosanitary inspection, border veterinary inspection, nature protection inspection); Croatian Chamber of Economy; CSOs; scientific institutions; public institutions in charge of managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; legal entities and natural persons managing natural resources.									
2.6.2 Prepare standards for the invasiveness risk assessment of alien species										
2.6.3 Establish training programmes for improving official IAS controls										
2.6.4 Define pathways of introduction routes and establish management system for IAS										

REDUCE THE DIRECT PRESSURES ON NATURE AND PROMOTE SUSTAINABLE USE OF NATURAL RESOURCES

STRATEGIC GOAL 3											
SPECIFIC OBJECTIVE 1. STRENGTHEN INSTITUTIONAL CAPACITIES IN NATURE PROTECTION											
Activity	Bodies participating in the implementation	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.	
		3.1.1 Systematically consult with other sectors important for nature protection, with the aim of mutual understanding, harmonization of legislative solutions and strengthening of the role of these sectors in the implementation of nature protection regulations	Central SABs competent for nature protection, economy, health, finance, transport, maritime affairs and infrastructure, construction, agriculture, forestry, hunting, fishing, water management, culture and physical planning; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; local and regional self-government units; CSOs active in the area of nature protection; educational institutions.								
3.1.2 Work on further decentralization of administrative responsibility in nature protection; intensify communication between the competent state administration and regional self-governments											
3.1.3 Prepare expert assessment of the existing and required capacities of the system at the state, regional and local level; in accordance with the results, promote human resources strengthening of institutions in the system											
3.1.4 Prepare expert analysis of the capacities of public institutions in charge of managing protected nature areas, with proposals on how to optimize and prioritize; act in accordance with the results of the analysis											
3.1.5 Start the development of the system for monitoring staff effectiveness in the nature protection system, and of the system for valuation of work performance in career promotions and/or re-election											
3.1.6 Prescribe the obligation of continuous staff education in the nature protection system and develop the system for valuation of continuous education in career promotions											
3.1.7 Start the process of professionalization of the nature protection field through a description of competences and registration of profession; in cooperation with educational institutions, start the development of external education programmes											
SPECIFIC OBJECTIVE 2. CONTINUE STRENGTHENING TECHNICAL KNOWLEDGE AND SKILLS FOR EFFECTIVE IMPLEMENTATION OF NATURE PROTECTION											
Activity	Bodies participating in the implementation	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.	
3.2.1 Implement systematic research of the needs to strengthen knowledge and skills of the staff in nature protection system institutions, as well as in other legal entities involved in the implementation of regulations in the area of nature protection	Central SAB competent for nature protection; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; local and regional self-government units; CSOs active in the area of nature protection.										
3.2.2 Prepare the plan for capacity building of the staff in the nature protection sector											
3.2.3 Continue developing a comprehensive Nature Protection Staff Education Programme; regularly implement training modules and prescribe the obligation of basic education for all staff entering the nature protection system on nature conservation, regulations, strategic planning and financial responsibility; develop the corresponding basic module											
3.2.4 Continue holding regular annual events, develop new platforms for exchange of knowledge and experience, and increase the visibility of information											
SPECIFIC OBJECTIVE 3. INCREASE FINANCIAL SUSTAINABILITY OF THE NATURE PROTECTION SYSTEM											
Activity	Bodies participating in the implementation	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.	
3.3.1 Revise existing legal mechanisms for funding, in order to ensure better availability of funds	Central SABs competent for nature protection, agriculture, fisheries, finance and EU Funds; EPEEFE; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; Paying Agency for Agriculture, Fisheries and Rural Development; Office of the Government of the Republic of Croatia for Cooperation with NGOs; local and regional self-government units; CSOs active in the area of nature protection.									*	
3.3.2 Improve innovative funding mechanisms for the nature protection sector										*	
3.3.3 Strengthen financial sustainability of nature protection institutions through revenue diversification, coordination and rationalization											*
3.3.4 Focus the nature protection system towards project-based funding from available European Union funds and from other funding sources											
3.3.5 Perform analysis and establish a system of recording, monitoring and reporting on investments in the nature protection sector											
3.3.6 Continue investments in biodiversity conservation in countries in transition through the mechanism of Official Development Assistance											
3.3.7 Assess the subsidies harmful to biodiversity and eliminate and/or reform them based on need											
3.3.8 Ensure availability of subsidies with a positive impact on biodiversity and promote their use											

STRENGTHEN THE CAPACITIES OF NATURE PROTECTION SYSTEM

STRATEGIC GOAL 4	SPECIFIC OBJECTIVE 1. INCREASE THE KNOWLEDGE ON THE STATE OF NATURE											
INCREASE THE KNOWLEDGE AND AVAILABILITY OF DATA ON NATURE	Activity	Bodies participating in the implementation	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.	
	4.1.1 Determine the actual status of population distribution and size for indigenous wild species, with species listed in the Annexes of the Habitats Directive and the Birds Directive as priorities, followed by species facing high extinction risk (categories CR, EN, VU), data deficient (DD) species, species facing the highest commercial exploitation pressures, and alien species	Central SABs competent for nature protection, forestry, hunting, fishing, and water management and maritime affairs; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; scientific and expert institutions; CSOs active in the area of nature protection.										
	4.1.2 Standardize data collection on geodiversity and commence systematic preparation of inventory and valuation of geodiversity											
	4.1.3 Map alien species in the Republic of Croatia and their introduction routes											
	4.1.4 Establish monitoring system for priority IAS											
	4.1.5 Undertake targeted genetic and taxonomic research of wild species, needed to determine the status of populations, segments of populations important for conservation, ecological conditions for their appearance, etc											
	4.1.6 Prepare missing lists (check lists) of wild species in the Republic of Croatia and conduct taxonomic reviews of existing lists of wild species in the Republic of Croatia											*
	4.1.7 Prepare Red Lists and Red Books of unanalyzed groups on the basis of scientific data; revise the existing Red Lists and Red Books											*
	4.1.8 Perform valuations of individual habitats and/or ecosystems, and determine the level of threats that they face											*
	4.1.9 Create programmes for monitoring of the conservation status of habitat types from Annex I and wild species from Annexes II, IV and V of the Habitats Directive, wild bird species in accordance with the Birds Directive, as well as commercially exploited species and other endangered, endemic and rare wild species; perform monitoring of the conservation status											
	4.1.10 Collect detailed data on the distribution of target species and habitat types in areas of the ecological network for the purposes of management											*
	4.1.11 Revise the National Habitat Classification of the Republic of Croatia											
	4.1.12 Revise habitat map, including a more detailed mapping of terrestrial and marine habitats, and create map of marine habitats in marine areas under the jurisdiction of the Republic of Croatia, with an emphasis on threatened and rare habitat types and on habitat types listed in Annex I of the Habitats Directive											*
	4.1.13 Ensure harmonization and exchange of data required for reporting pursuant to the Habitats Directive and the Birds Directive with data required for reporting pursuant to the Water Framework Directive and the Marine Strategy Framework Directive											
	4.1.14 Collect, update and verify existing data on speleological sites and prepare inventory of speleological sites in cooperation with speleological associations											
	4.1.15 Strengthen communication within the nature protection sector regarding the planning and implementation of inventory preparation and status monitoring											
	4.1.16 Ensure continuous exchange of data with other institutions that possess data of interest to the nature protection sector											
	4.1.17 Promote changes to the legal criteria for career promotions in scientific-educational and scientific professions, in terms of proper valuation of expert work in the preparation of inventories and in the assessment of constituent elements of biodiversity											
4.1.18 In higher education programmes in the areas of nature, biotechnology and biomedicine, promote the importance of biodiversity and geodiversity research, with the introduction of adequate courses; promote specialization in those biodiversity components (taxonomic groups) where capacity shortage is present												
SPECIFIC OBJECTIVE 2. INCREASE THE AVAILABILITY OF DATA ON THE STATE OF NATURE												
Activity	Bodies participating in the implementation	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.		
4.2.1 Complete the implementation of CRO Fauna and CRO Speleo databases	Central SAB competent for nature protection; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; scientific and expert institutions; CSOs active in the area of nature protection.											
4.2.2 Create geodiversity database												
4.2.3 Establish a single national database on alien species												
4.2.4 Harmonize and transform data in accordance with the provisions of the National Spatial Data Infrastructure Act												
4.2.5 Enable data exchange and timely exchange of information within the nature protection sector on planned projects of expert services												
4.2.6 Through activities of NSDI working groups, continuously work on promoting the importance of data exchange and of the fulfilment of National Spatial Data Infrastructure Act provisions among other sectors and institutions												
4.2.7 Resolve issues of legal rights regarding the publication of research results and their further distribution and use, with clearly defined conditions of use of NPIS data												
4.2.8 Encourage expert/scientific public, but also the wider public, to collect inventory data and to enter data into the NPIS, by developing and presenting technical solutions that facilitate the use and analysis of data											*	
4.2.9 Define a more detailed legislative framework for the NPIS												
SPECIFIC OBJECTIVE 3. EVALUATE AND MAP ECOSYSTEM AND THEIR SERVICES WITH THE GOALS OF ASSESSING AND IMPROVING THEIR STATUS												
Activity	Bodies participating in the implementation	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.		
4.3.1 Map ecosystem services and prepare analysis of the state of ecosystems	Central SABs competent for nature protection, agriculture, forestry, water management, fisheries, culture and economy; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; regional and local self-government units; Hrvatske vode [Croatian Waters company]; CSOs active in the area of nature protection.											
4.3.2 Assess economic value of ecosystem services in additional pilot areas												
4.3.3 Promote national intersectoral and interdisciplinary cooperation on the issue of ecosystem services											*	
4.3.4 Improve the state of ecosystems and their services												
4.3.5 Raise the level of knowledge on ecosystem services within the nature protection sector and among other sectors												

STRATEGIC GOAL 5	SPECIFIC OBJECTIVE 1. IMPROVE UNDERSTANDING AND REPRESENTATION OF NATURE-RELATED TOPICS AND NATURE PROTECTION IN THE EDUCATIONAL SYSTEM AND STRENGTHEN COOPERATION WITH THE EDUCATION SECTOR											
	Activity	Tijela koja sudjeluju u provedbi	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.	
RAISE THE LEVEL OF KNOWLEDGE, UNDERSTANDING AND SUPPORT FOR NATURE PROTECTION AMONG THE GENERAL PUBLIC	5.1.1 Define concepts connected with nature and nature protection and propose their inclusion into the new teaching plan and programme for high schools and elementary schools	Central SABs competent for nature protection, science, education and sports; higher education institutions and scientific institutions; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; Education and Teacher Training Agency; CSOs active in the area of nature protection.										
	5.1.2 Prepare content for publishers of textbooks and for expert groups in order to enrich textbooks and field teaching with activities that can enable the participation of schools in nature protection										*	
	5.1.3 Perform the analysis of higher education curricula in order to determine the share of nature protection content and improve cooperation between the nature protection sector and higher education institutions											
	<b>SPECIFIC OBJECTIVE 2. PROMOTE AND IMPLEMENT INFORMAL EDUCATION ON NATURE PROTECTION</b>											
	Activity	Tijela koja sudjeluju u provedbi	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.	
	5.2.1 Promote further development and improve systematic implementation of informal education and strengthen cooperation with organizations dealing with natural values and nature protection	Central SAB competent for nature protection; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; Office of the Government of the Republic of Croatia for Cooperation with NGOs; CSOs active in the area of nature protection; zoological and botanical gardens; museums; Education and Teacher Training Agency.										
	5.2.2 Promote certification of education programmes connected with nature protection by the Education and Teacher Training Agency										*	
	5.2.3 Promote development and implementation of volunteer programmes in the area of nature protection											
	<b>SPECIFIC OBJECTIVE 3. IMPROVE PUBLIC INFORMATION IN ORDER TO RAISE AWARENESS ON NATURE AND NATURE PROTECTION</b>											
	Activity	Tijela koja sudjeluju u provedbi	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.	
	5.3.1 Create communication strategies for nature protection targeted at the general public and other stakeholders	Central SAB competent for nature protection; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; CSOs active in the area of nature protection; zoological and botanical gardens; museums.										
	5.3.2 Implement targeted campaigns with the aim of raising awareness among the general public, promoting nature protection and informing the general public about the activities and functioning of the nature protection system											
	5.3.3 Continue cooperating with, and additionally strengthen cooperation between, institutions in the nature protection system and entities in the public information sector, with the aim of ensuring permanent representation of nature protection topics										*	
	5.3.4 Through the work of public institutions, promote energy efficiency, green building, waste prevention, waste collection and sorting, and sustainable tourism											
	<b>SPECIFIC OBJECTIVE 4. IMPROVE PARTICIPATION IN DECISION-MAKING DIRECTLY OR INDIRECTLY CONNECTED WITH NATURE PROTECTION</b>											
	Activity	Tijela koja sudjeluju u provedbi	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.	
	5.4.1 Promote and enable a higher level of public participation and participation of individual stakeholder groups in planning and implementation of protection and in the adoption of planning and legislative documents	Central SAB competent for nature protection; CAEN; public institutions competent for managing protected areas and areas of the Natura 2000 ecological network at the national, regional and local level; CSOs active in the area of nature protection.									*	
	5.4.2 Strengthen communication and cooperation with the local population in protected areas and in areas of the ecological network, with the aim of implementing measures that improve the state of nature and contribute to the fulfilment of conservation goals for the ecological network, while ensuring active involvement of the local population in nature protection											
	5.4.3 Strengthen cooperation with stakeholders in order to ensure more effective nature protection through education											

\* The implementation of activities will continue

 Indicates a milestone in the implementation of activities