Pursuant to Article 38, paragraph 1 of the Law on the Planning System of the Republic of Serbia (*The Official Gazette of the Republic of Serbia*, No. 30/18),

the Government is hereby adopting the following

NATURE PROTECTION PROGRAMME OF THE REPUBLIC OF SERBIA FOR THE PERIOD 2021-2023

1. INTRODUCTION

The Nature Protection Programme of the Republic of Serbia for the period 2021-2023 (hereinafter: Nature Protection Programme) was prepared in accordance with the Law on the Planning System of the Republic of Serbia and the relevant by-laws. This programme is a revision of the Draft Nature Conservation Strategy of the Republic of Serbia 2019-2025, in accordance with the Law on the Planning System of the Republic of Serbia, the Strategic Plan of the UN Convention on Biological Diversity 20211-202, the Aichi Biodiversity Targets, and decisions made in regular sessions of the Conferences of members of this convention and other confirmed international agreements for nature conservation, biodiversity conservation and climate change.

The decrease of biological diversity in the Republic of Serbia arose as the consequence of the disappearance, degradation and fragmentation of habitats, reduction in wildlife species' population numbers, vulnerability of the conservation of genetic diversity of various native populations of plant and animal species, the introduction of invasive and allochthon species and GMOs in nature, climate change, natural disasters, and human impact.

The promotion of sustainable development raises awareness of the need to protect nature, preserve biodiversity, and engage in spatial development at the political, economic and social level in the Republic of Serbia, including clearly defined ecological principles of environmental protection and preservation of biodiversity at the global, national, regional and local level, environmental education, public participation and intersectoral cooperation.

Having in mind all of the above and based on the fact that protected and conserved nature provides for durable foundational values and potential for the further development of the Republic of Serbia, the Nature Protection Programme establishes the strategic goals, measures and activities for improving public policies for nature conservation and preservation of biological diversity, integration of the principle of preservation of biodiversity in sectoral development policies, in processes for finance management and planning, sustainable use of components of biodiversity, reducing the negative impact of development on biodiversity, and public participation in the decision making process.

Aiming to monitor progress in the achievement of the Nature Protection Programme, the Action Plan for the implementation of the Nature Protection Programme defines indicators for quality evaluation that will enable the appropriate presentation and realisation of progress in the implementation of the overall goal and specific programme objectives, measures and activities, in cooperation with the relevant sectors.

The acronyms and abbreviations used in the text of the Nature Protection Programme shall have the following meaning:

AP Autonomous Province

ASCI Areas of Special Conservation Importance in accordance with the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)
BD Bilateral donors
BF Faculty of Biology of the University of Belgrade
BPSSS Bird Protection and Study Society of Serbia
CHM Clearing House Mechanism under the Convention on Biological Diversity
CMS Convention on the Conservation of Migratory Species of Wild Animals
CITES Convention on International Trade in Endangered Species of Wild Flora and Fauna
CSO Civil Society Organisation
DNA Deoxyribonucleic acid
EC European Community
EC European Commission
EEA European Environmental Agency
EIA Environmental Impact Assessment
EIONET European Environment Information and Observation Network
EPA Environmental Protection Agency
ESPOO Convention on Environmental Impact Assessment in a Transboundary Context
EU European Union
EUF European Union funds
EUGreenDeal European Green Deal
EUNIS EUNIS habitat classification
FAO Food and Agriculture Organization of the United Nations
FF Faculty of Forestry of the University of Belgrade
FG Faculty of Geography of the University of Belgrade
FGM Faculty of Mining and Geology of the University of Belgrade
FI Forestry Institute
GDP Gross domestic product
GEF Global Environment Facility
GF Green Fund
GI Geographic Institute Jovan Cvijić - SANU
GIS Geographic Information System
GM Geopark Management
GMO Genetically modified organism
GZS Geological Institute of Serbia
IBA Important Bird Area
INCS Institute for Nature Conservation of Serbia
INISB Integrated national information system for biodiversity
INSPIRE Directive on establishing an Infrastructure for Spatial Information in the European Community
IPA European Union Instrument for Pre-Accession Assistance
IPA Important Plant Area
IPARD EU Instrument for Pre-Accession Assistance for Rural Development
IPCMS Institute for the Protection of Cultural Monuments of Serbia
IUCN International Union for Conservation of Nature
IUCNECARO IUCN Regional Office for Eastern Europe and Central Asia
LSU Local self-government unit

MAB	MAB programme - Man and Biosphere
MAFWM	Ministry of Agriculture, Forestry and Water Management
MCI	Ministry of Culture and Information
MESTD	Ministry of Education, Science and Technological Development
MFA	Ministry of Foreign Affairs
MME	Ministry of Mining and Energy
MoF	Ministry of Finance
MoI	Ministry of the Interior
MoJ	Ministry of Justice
MTTT	Ministry of Trade, Tourism and Telecommunications
NEAS	National Environmental Approximation Strategy
NPM	National Park Management
NSM	Natural Science Museum in Belgrade
PA	Protected Areas
PAM	Protected Area Management
PBA	Prime Butterfly Areas
PE	Public enterprise
PINC	Provincial Institute for Nature Conservation
PPS	Public Policy Secretariat
pSCI	potential Sites of Community Importance- pSCIs
PSUPEP	Provincial Secretariat for Urban Planning and Environmental Protection
RB	Republic Budget
RGA	Republic Geodetic Authority
RHMI	Republic Hydrometeorological Institute
RPPO	Republic Public Prosecutor's Office
RS	Republic of Serbia
SACs	Special Areas of Conservations –SACs in accordance with the EU Habitat Directive
SEA	Strategic Environmental Impact Assessment
SORS	Statistical Office of the Republic of Serbia
SPAs	Special Protection Areas –SAPs in accordance with the EU Birds Directive
SRO	Scientific Research Organisations
UNCBD	United Nations Convention on Biological Diversity
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
ZOO	Zoos

2. NATURE OF THE REPUBLIC OF SERBIA

2.1. Biological Diversity of the Republic of Serbia

Through succession, the Republic of Serbia became a signatory of the Declaration on Environment and Development (Rio Declaration) of 1992, while the Law confirming the Convention on Biological Diversity was adopted in 2001.

A comprehensive overview of the biodiversity[1] of Serbia is presented in the publication "Biodiversity of Yugoslavia" (Stevanović i Vasić eds., 1995). During the past 20 years, this data was partly updated for certain taxa and ecosystems, mainly through the work of researchers under scientific research projects by the ministry competent for science affairs and ministry competent for environmental protection affairs, while new data is being collected by scientific institutions, expert organisations, civil society organisations, and certain scientific and professional experts.

The Republic of Serbia is characterised by a large genetic, species, ecosystem and landscape diversity. The highland and mountainous areas of the Republic of Serbia, as part of the Balkans peninsula, represent one of a total of six centres of European biodiversity.

During the glaciation period, the territory of modern-day Republic of Serbia represented the refuges or refugia (spatial units exposed to a lower impact of climate change) for a large number of species. Thus, the territory of the Republic of Serbia is to date inhabited by many relic and endemic-relic species. The Balkans endemites comprise around 14.94% of the flora of the Republic of Serbia (547 species), while local endemic species comprise 1.5% (59 species).

Genetic resources in the Republic of Serbia are highly diverse and cover a large number of native varieties of domestic plant species and breeds of domestic animals. Genetic resources of importance for food production and agriculture and maintained in traditional agricultural systems or in ex-situ conditions.

2.1.1. Species Diversity

Species diversity in the Republic of Serbia has been partly studied and documented for certain taxonomic groups. However, existing data needs to be complemented regarding the number of prokaryotic species, i.e. species belonging to the Monera kingdom (a total of 220 species of cyanobacteria belonging to this kingdom are listed within the territory of the Republic of Serbia and the broader region), and the records also must be updated for the number of taxa of the most heterogeneous kingdom – Protista, in the Republic of Serbia. Limited information is available on the diversity of freshwater algae (1,400 species) and Rhizopoda – amoebas with shells (236 species).

The situation with the kingdom of Fungi is similar, although reports indicate there are between 3,000 and 6,000 species of macromycetes in the Republic of Serbia, 1,300 species of fungi have been described (Ivančević, 2006; Mijović et al, 2021), while new research into the diversity of lichen (Lichenes) indicates there are 586 species of lichen in the Republic of Serbia.

The kingdom Plantae is the most studied kingdom. The numbers of vascular flora (Pterydophyta, Pinophyta, Magnoliophyta) range from 3,900 to 4,000.

The presence of 800 species of moss (Bryophyta) has been registered in the Republic of Serbia, i.e. 654 true mosses, 120 liverworts, and one hornwort.

Data on the species diversity in the kingdom of Animalia in the Republic of Serbia is known for tubular worms (Nematodes) – 139 species, Anostraca, Notostraca and Conchostraca –

[1] The terms biological diversity and biodiversity are used as equal in the document, relating to the totality of genes, species and ecosystems on land or a clearly designated area.

18 species, Amphipoda – 33 species, fish (Osteichthyes) – around 100 species, amphibians (Amphibia) – 19 species, reptiles (Reptilia) – 26 species, birds (Aves) – around 360 species, and mammals (Mammalia) – 95 species.

The territory of the Republic of Serbia, occupying 0.82% of the European continent, contains:

1) 44.4% of Bryophytes (mosses, liverworts and hornworts) of Europe (registering around 1,800 species of Bryophytes) (Stojanović, V. et al, 2015; Hill et al., 2006);
2) 18.6% of European vascular flora (over 20,000 species, Bilz et al., 2011 Stojanović, V. et al, 2015);
3) 12% of invertebrates (around 100,000 species); https://en.wikipedia.org/wiki/Fauna_of_Europe#cite_note-11);
4) 16.25% of the fish fauna (603 species, Kottelat & Freyhof,2007; Freyhof & Brooks, 2011);
5) 15.46% of amphibian and reptile fauna (291 species), with 20.88% of amphibians (91 species) and 13% of reptiles (200 species, Arnold & Ovenden, 2002);
6) 66% of bird fauna (533 species in Europe, BirdLife International, 2015);
7) 43.4% of land mammal fauna of Europe (219 species, (http://biodiversity.europa.eu/topics/species/ mammals).

2.1.1.1. Endangered Species

The first Red Book in Serbia was drafted in 1999 – The Red Book of Flora of Serbia I, related to extinct and extremely endangered plant species, containing 171 plant taxa, comprising around 5% of the total flora of the Republic of Serbia. Of this number, four endemic taxa are irretrievably lost from the global gene fund; 46 taxa have disappeared from the Republic of Serbia, but can still be found in neighbouring areas or in ex-situ conditions (botanical gardens); 121 species are extremely endangered, with a high likelihood of disappearance from our territory or globally in the near future, unless they are given the appropriate attention.

The second Red Book – Red Book of Butterflies of Serbia, was published in 2003 and contains an analysis of 57 species of butterflies comprising 34% of the butterfly fauna of the Republic of Serbia. One species is registered as extinct (Leptidea morsei), while 11 species are registered as endangered.

The third and fourth Red Book – Red Book of the Fauna of the Republic of Serbia I for amphibians and Red Book of the Fauna of the Republic of Serbia II for reptiles were published in 2015. The Red Book of amphibians contains five species of tailed (one species of salamander and four species of newts) and five species of tailless amphibians (frogs). The Red Book of reptiles contains three types of turtle, seven species of lizards and six species of snakes.

The Red Book of the Fauna of the Republic of Serbia II – Birds was issued in early 2019 by the Institute for Nature Conservation of Serbia, Department for Biology and Ecology of the Faculty of Natural Science and Mathematics of the University of Novi Sad and Bird Protection and Study Society of Serbia. This publication, the result of the work of 36 authors, provides information on the importance of red books and historical overview of bird research in the Republic of Serbia, on general properties of birds, their endangerment and diversity, sources and structure of data for the assessment of the risk of extinction, and assessment of the vulnerability of birds in the Republic of Serbia, their habitats, risk factors and protection measures, and an overview of the endangered nesting and non-nesting populations based on a database with over

312,000 findings collected by the authors themselves and numerous bird experts. The book covers 352 reliably registered taxa in the Republic of Serbia by 2016, estimates the risk of extinction of the nesting population of 255 species and non-nesting population of all species. More than half the nesting and non-nesting populations of analysed species (56%) are under the "least care" category. A total of 14 species have disappeared as nesting birds from the Republic of Serbia. A total of 49 species are characterised by a vulnerable non-nesting population – four critically endangered, 14 endangered, 17 vulnerable, and 14 nearly endangered.

The Institute for Nature Conservation of Serbia and Department for Biology and Ecology of the Faculty of Natural Science and Mathematics in Novi Sad published the Red Book of the Fauna of Serbia IV – Orthoptera in late 2018, authored by Dragan Pavićević, Dr Ivo Karaman and Dr Mladen Horvatović. The publication, like the other red books published, describes the importance of red books and categories and criteria of vulnerability in accordance with IUCN criteria, and provides an overview of the general properties and diversity of orthoptera in the Balkans peninsula, history of orthoptera research in Serbia, their habitats, risk factors and protection measures. It provides an overview of 45 endangered taxa of orthoptera in the fauna of the Republic of Serbia, including one regionally extinct species Bradyporus (Callimenus) macrogaster longicollis, four critically endangered (such as Pančić's grasshopper), three endangered and 27 vulnerable species, along with ten species with the status of nearly endangered. Before the publication of the red books, a Preliminary Lists of Species for the Red List of Vertebrates 1990-1991 was drafted. This list contains one species of Cyclostomata and 30 species of fish, 22 species of amphibians, 21 species of reptiles, 72 species of mammals, and a large number of birds (353 species).

It should be noted that in the meantime, the Red List criteria and vulnerability categories for certain species established at the time have changed considerably. The drafting of red books is under way (algae, fungi and lichen, flora: mosses and vascular plants; fauna: invertebrates – insects, Crustaceans, Bivalvia, snails, etc. and vertebrates – mammals), along with the adoption of the Red List of Flora, Fauna and Fungi in the Republic of Serbia, in accordance with the law.

2.1.2. Ecosystem Diversity

Four of the twelve globally registered terrestrial biomes are present within the territory of the Republic of Serbia:

1) Zonobiome of deciduous (broadleaf) forests. This zonobiome in the Republic of Serbia is mainly in the form of oak and beech forests;
2) Steppe zonobiome – with chernozem as the zonal soil and steppe vegetation (predominantly forest-steppe vegetation in the Republic of Serbia);
3) Zonobiome (orobiome) of evergreen boreal forests – in mountainous climate conditions in the west, southwest and southeast parts of the Republic of Serbia;
4) Zonobiome (orobiome) of the high-mountain "tundra" – under conditions of alpine climate of the highest mountains in the Republic of Serbia.

Between these zoobiomes there is a number of transitions and mutual influences, as the consequence of geographic, petrographic and orographic characteristics of the territory of the Republic of Serbia.

A total of 1,200 associations are registered in the territory of the Republic of Serbia, dominated by vascular plants, 59 vegetation classes and 10 base types of zonal ecosystems. The majority of plant associations of an endemic character in the Republic of Serbia occur in the

vegetation compositions of rock, sward, and rock creep. Of particular importance for the conservation of biological diversity are forest ecosystems, ecosystems of thermophilic serpentine orthents, Pannonian salt marshes, mountain bogs, tall green areas and mountainous mesophilic meadows, considering the high number of endemic species present. Among forest ecosystems of particular importance are forest and shrubland communities with endemic woody plants: forests of spruce (Piceion omorikae), Bosnian pine (Pinion heldreichii), Balkan pine (Pinion peucis), sycamore (Aceretum heldreichii, Aceri-Fagetum), a type of polydominant forest with Balkan maple (e.g. Fago-Aceri intermedii-Coryletum colurnae, Querco-Aceri intermedii-Coryletum colurnae and Fraxino-Aceri intermedii-Coryletum colurnae) and Turkish hazel (Fago-Corylenion colurnae), copses of lilac (Syringion) and others.

The most important centres of ecosystem diversity in the Republic of Serbia with a large number of endemic, relic and endemic-relic communities are: highland areas (Kopaonik, Tara, Šar-planina, Prokletije, Stara Planina and Suva Planina), sandstone and steppe habitats (Deliblatska Peščara and Subotičko-Horgoška Peščara and mosaic salt marshes in Banat and Bačka, in Vojvodina) and refugial areas (Đerdap Gorge, Drina Canyon, Sićevac Gorge, Pčinja River Valley).

2.1.2.1. Types of Habitat

The first integral system for the classification of habitats in the Republic of Serbia, produced based on an analysis of the phyto-cenological, ecological and bio-geographic data, compatible with the EUNIS classification of habitats in Europe, was defined during 2003-2005.

The basic types of habitats in the Republic of Serbia, as per the EUNIS classification of habitats in Europe, are:

1) Land surface water habitats;
2) Swamp, bog and fen habitats;
3) Grasslands and habitats dominated by tall herbs, mosses and lichen;
4) Heaths, shrublands and tundra;
5) Forests and forest habitats and other forested areas;
6) Intra-continental habitats with poorly developed vegetation;
7) Regularly or recently cultivated agricultural, horticultural or domestic habitats;
8) Structures, industrial and other artificial habitats.

As part of this project, a Manual was produced with basic data on the habitats of the Republic of Serbia, covering all natural and semi-natural habitats in Serbia. It is necessary to produce an additional supplement with data and descriptions of artificial habitats, including habitats in urban, industrial and agricultural areas, as well as data on artificially raised plantations of various forest cultures. The Republic of Serbia is in the process of preparing a classification of national habitats.

2.1.3. Genetic Diversity

Research and analyses produced to date regarding the genetic diversity of plants in the Republic of Serbia were conducted on certain genii and/or species, mainly as part of larger regional projects, usually at the European or global level. In this regard, there are certain results in the field of genetic differentiation of types of genii: Asyneuma, Cerastum, Edraianthus, Hypericum and Ramonda, and for certain species of moss.

The genetic diversity of certain populations or groups of populations of animal species inhabiting the territory of the Republic of Serbia is known based on the results of an analysis of

the genetic variability of populations within the entire range. Thus, the level of genetic differentiation of populations in the Republic of Serbia is known for some wild species under the exploitation regime, such as the horned viper (Vipera ammodytes) or green frogs (Rana synklepton esculenta), or these are species of game/mammals, such as the roe deer (Capreolus capreolus) and other species. Studies indicate that these populations require particular attention from the aspect of conservation, since they contribute significantly to the total genetic diversity of these species. Testing has also been performed of the genetic diversity of certain species of fish, such as the brown trout (Salmo trutta), grayling (Thymallus thymallus), sterlet (Acipenser ruthenus), and certain species of barbels from the genus Barbus.

2.1.3.1. Genetic Resources

Genetic resources (in the sense of total diversity of DNA structure among species that are directly or indirectly used by human beings) represent a key component of agro-biodiversity. The agro-biodiversity of the Republic of Serbia covers species and habitats of cultivated plants and animals, and species and ecosystems important for the production of human food and animal fodder (species in agro-ecosystems, pastures and meadows, forest and aquatic ecosystems).

Plant and animal genetic resources are of key importance for the sustainable development of many rural areas of the Republic of Serbia, but simultaneously the conservation of these resources is conditional, inter alia, on the still insufficiently active role of the rural population in the nurture, sustainable use and economic valuation of agro-biodiversity.

2.1.3.1.1. Plant Genetic Resources

Plant genetic resources are natural resources important for feeding people and animals, and providing raw materials for industry. The conservation, research, collection, characterisation, valuation and documentation of plant genetic resources for food and agriculture are of key importance for achieving international goals defined by the FAO Rome Declaration on World Food Security and World Food Summit Plan of Action (Rome, 1996 and 2009). The FAO International Treaty on Plant Genetic Resources for Food and Agriculture was signed in 2002, confirmed by the Republic of Serbia with a Law in 2013 (*The Official Gazette of the Republic of Serbia – International Agreements,* No. 1/13). The goals of this treaty are the conservation and sustainable use of plant genetic resources for food and agriculture, and equal participation in the distribution of benefits stemming from their use, in accordance with the Convention on Biological Diversity.

In the Republic of Serbia, the conservation of plant genetic resources is performed in two basic ways: in-situ and ex-situ. The genetic resources of fruits and grapevines in the Republic of Serbia are maintained in-situ in private farms and in cooperation with state institutions: experimental farms of agricultural faculties in Belgrade and Novi Sad, Institute for Fruit Cultivation in Čačak and Institute for Viticulture and Wine Production in Niš. The majority of genetic resources are currently protected ex-situ, i.e. outside their natural habitats, in a Bank of Plant Genes and in collections of breeding institutes in the Republic of Serbia.

The number of samples and names of groups of crops currently in the National Collection of Plant Genetic Resources kept at the Bank of Plant Genes (a total of 4,238 samples from 249 plant species) is shown in the following table.

Table1: Current status of the National Collection of Plant Genetic Resources kept at the Bank of Plant Genes

Plant genetic resources – crops	No. of samples
Cereals	2.983
Industrial plants	367
Vegetables	214
Fodder crops	285
Medicinal and aromatic plants	389
Total	4.238

Source: Ministry competent for agricultural affairs, 2015.

The ministry competent for agricultural affairs maintains records of recognised varieties based on the Law on the Recognition of Varieties of Agricultural Plants (*The Official Gazette of the Republic of Serbia*, No. 30/10). This ministry also maintains a Register of protected plant varieties in accordance with the Law on the Protection of Rights of Breeders of Plant Varieties (*The Official Gazette of the Republic of Serbia*, Nos. 41/09 and 88/11), shown in the following table.

Table 2: Plant varieties protected in the Republic of Serbia

Type of culture	Number of varieties
Small grains and corn	82
Fodder crops	2
Vegetables	30
Fruits	55
Soy	11
Horticultural and medicinal plants	6

Source: Ministry competent for agricultural affairs, 2015.

2.1.3.1.2. Genetic Resources of Domestic Animals

Animal genetic resources cover all species, breeds and strains that have a scientific, cultural or economic importance for a state. Under coordination by FAO, a Global Action Plan (GAP) was adopted for animal resources in 2007, along with the Interlaken Declaration. The strategic priorities for action in this plan are:

1) Characterisation, census and monitoring of trends and risks in this regard;
2) Sustainable use and development;
3) Conservation;
4) Policy measures, development of institutions and capacities.

The Republic of Serbia is actively participating in the implementation of the Global Plan of Action for Animal Genetic Resources adopted by the Commission on Genetic Resources for Food and Agriculture of the United Nations (Rome, 2007) and has unique breeds of domestic animals produced by the long-term process of selection by humans and natural conditions that dominate certain areas. However, the depopulation of mountainous areas, and the neglect and abandonment of cattle-farming production in marginal areas have led to the disappearance of numerous breeds and strains of domestic animals.

According to the Rulebook on the List of genetic reserves of domestic animals, method of conservation of genetic reserves of domestic animals and the List of native breeds of domestic animals and endangered native breeds (*The Official Gazette of the Republic of Serbia*, No. 33/17),

the following native breeds of domestic animals have been defined, as presented in the following table.

Table 3.

Species	Breed	Population number/estimate
Cattle	Buša	1,087
	Podolski ox	310
Buffalo	Domestic buffalo	808
Horses	Domestic mountain horse	418
	Nonius	83
Donkeys	Balkans donkey	436
Pigs	Mangalica	1,972
	Moravka	417
	Resavka	57
Sheep	Bardoka	143
	Vlaško-vitoroga	834
	Karakačanska	193
	Lipska	992
	Pirotska	161
	Svrljiška	7,500
	Sjenička	30,000
	Cigaja	5,289
	Čokanska cigaja	1,451
	Šarplaninska	n/a
Goats	Balkans goat	566
	Domestic white goat	50

Source: Ministry competent for agricultural affairs, 2017.

Furthermore, this rulebook defines native breeds of poultry that include: banatski gološijan, kosovski pevač, svrljiška hen, somborska kaporka, domestic guinea fowl, domestic goose, domestic drake and domestic turkey, as well as the native breed of bees Apis melifera carnica, native breeds of dogs (Serbian hound, Serbian tricolour hound and šarplaninac), and 49 native breeds of pigeon.

The majority of these breeds, where the total number of female breeding heads is lower than defined (e.g. for cattle 7,500 heads, for horses 5,000 heads, for pigs 15,000 heads, for sheep and goats 10,000, for poultry 25,000) holds the endangered status.

2.1.3.1.3. Other Genetic Resources

Independently of cultivated plants, a considerable contribution to the total agro-biodiversity of the Republic of Serbia is provided by wild plant species of importance for food production and agriculture (fodder crops, medicinal and aromatic plants, decorative plants, honey plants, and wild fruit species, microorganisms and fungi), as well as meadows, pastures, border and ruderal habitats, including weed flora and vegetation.

The total number of medicinal and aromatic plant species in our flora is around 700, with 420 officially registered, and around 280 in circulation. Honey plant species are primarily components of meadow, forest and agro-ecosystems, with their number in the Republic of Serbia

estimated at around 1,800. Studies of the diversity of weed flora in the Republic of Serbia to date have shown that the number of weed species understood in the broadest sense comprises about 28% of the total flora.

From the standpoint of biodiversity and ecosystem services, of greatest importance are natural tall components of forests of natural origin. In forests of natural origin, 38 species of trees have been recorded, with two allochthones (black locust tree and Douglas fir, present in low numbers according to the National Inventory of Forests). The best-represented species is the beech with 40.5% of share in the total volume. Within native forest genetic resources the highest value is held by endemic and endemic-relic taxa (Pinus peuce, Pinus heldreichii, Pinus nigra subsp. gocensis, Picea omorika, Taxus baccata, Prunus laurocerasus, Acer heldreichii, Fraxinus pallisiae, Forsythia europaea, Corylus colurna, Daphne blagayana, Daphne mesereum, etc.). Furthermore, within forest genetic resources, of high importance are also wild fruit species as genetic resources for food and agriculture (there are 88 wild fruit species registered, 12 of them in considerable decline in numbers), particularly in the breeding of fruits, grafting, and as a resource being gathered. Another considerable genetic and economic resource are truffles, present as symbionts in many deciduous forests.

Among genetic resources of medicinal and aromatic plants, the highest importance is held by the genetic diversity of economically important species (chamomile, mint, sage, St. John's wort, yarrow, oregano, bearberry, valerian, plantago, primrose, etc.), and of species with limited ranges and those in decline for various reasons. More attention needs to be given to the assessment and monitoring of the status of populations of genetic resources of medicinal and aromatic plants and the need for their preservation. There are currently 63 plant species, ten species of lichen, 15 species of fungi, and 9 species of animals under control.

2.1.4. Conservation of Biological Diversity

Conservation of biological diversity in Serbia is achieved through the implementation of measures for the conservation and improvement of species, their populations, natural habitats and ecosystems in accordance with the Law on Nature Protection (*The Official Gazette of the Republic of Serbia*, Nos. 36/09, 88/10, 91/10-corrigendum, 14/16 and 95/18-other law).

2.1.4.1. Protected Areas

Protected areas in the Republic of Serbia are areas that, based on their ecological, biogeographic and other characteristics, represent areas of exceptional importance with ecosystems and landscapes of particular value regarding their originality, diversity of vegetation, flora and fauna, representative geomorphological, geological, hydrological and other phenomena and processes, cultural-historical value and anthropo-phenomena created through the interaction of humans and nature, and as such under state protection. Protected areas, as assets of general interest, are placed in the function of implementing total conservation and development of natural resources and all other values, specificities and phenomena in accordance with the Law on Nature Protection and acts declaring protected areas.

At the end of 2020, protected areas declared in accordance with the Law on Nature Protection covered a surface area of 678,237 ha, i.e. 7.66% of the territory of the Republic of Serbia. Protection covers 5 national parks, 18 nature parks, 21 landscapes of exceptional properties, 70 nature reserves, six protected habitats, 315 natural monuments and 36 areas of cultural and historical importance, i.e. a total of 471 protected areas. A cartographic overview of

the protected areas is provided under Annex 1 – Map of protected areas, printed along with this programme and comprising its integral part.

Management of protected areas in the Republic of Serbia is being implemented in accordance with the Law on Nature Protection and special laws regulating the conservation and sustainable use of natural resources – forests, waters, agricultural land and mineral raw materials, including spatial and urban planning and development. The main instruments for management over protected areas are: protection zones, management plans and programmes, the institutional-organisational framework, monitoring, information-documentation basis, and funding.

The Law on Nature Protection establishes a single method of managing protected areas, including the development of planning documents, system of funding, control and oversight, public participation in the process of declaring protected areas and cooperation with local self-governments, the population, beneficiaries and owners in protected areas.

In accordance with the Law on Nature Protection, Protected Area Managers are: public enterprises established by a special law to manage national parks; public enterprises and institutions established by the Government, AP Vojvodina or local self-government for: managing natural resources and performing other duties of general interest; joint stock companies; companies established by the Government; associations, and/or non-government organisations and religious communities. Management of protected areas of smaller surface areas under private ownership, declared at the local level, is also entrusted to natural persons.

A protected area manager may be a legal person, entrepreneur or natural person that complies with the professional, staffing and organisational conditions to perform the duties of conservation, improvement, promotion of natural and other values, and sustainable use of the protected area, prescribed by the act defining the manager's obligations. The manager shall be appointed through the act on the declaration.

Funding for the management of protected areas is secured from the budget of the Republic of Serbia, AP Vojvodina, and local self-governments, through the use of natural resources, revenues from tourism, donations, and other sources in accordance with the law. Budget funds awarded to protected areas are used to fund the main activity of the manager in accordance with the act on the declaration.

The Law on Nature Protection establishes the following types of protected areas:

1) Strict Nature Reserve – area of unmodified natural features with representative natural ecosystems, intended solely for preserving the original nature;
2) Special Nature Reserve – area of unmodified or slightly modified natural features;
3) National Park – area with a large number of diverse natural ecosystems of national importance, outstanding landscape properties and cultural heritage;
4) Natural Monument – smaller unmodified or slightly modified natural spatial unit;
5) Protected Habitat – area covering one or several types of natural habitats important for the conservation of one or several populations of wildlife species and their communities;
6) Landscape of Exceptional Properties – area of recognisable appearance with important natural, biological-ecological, aesthetic or cultural-historical assets;
7) Nature Park – area of well-preserved natural assets with predominantly preserved natural ecosystems and picturesque landscapes.

The categorisation of protected areas is performed based on the Rulebook on the criteria for the valuation and procedure of categorisation of protected areas (*The Official Gazette of the Republic of Serbia",* No. 97/15). Based on their geological, biological, ecosystem and landscape

diversity, importance as habitats for species of birds and other migratory species, and/or their value and importance, protected areas are sorted under the following categories:

Category I – area of international, national, and/or exceptional importance;
Category II – area of provincial/regional, and/or great importance;
Category III – area of local importance.

Based on the properties and state of natural assets, the goals of their conservation and use in protected areas, a protection regime of I (first), II (second), and/or III (third) degree is established. A first degree protection regime (approximately 4.98% of the total protected area, i.e. 33,753 ha) – the strict protection that involves a prohibition of the use of natural resources and areas, is being implemented on a protected area or part of it with the original or slightly modified ecosystems of exceptional scientific and practical importance that enables processes of natural succession and conservation of habitats and living communities under wild conditions. A second degree protection regime (approximately 25% of the total protected area, i.e. 169,915 ha) – active protection that involves the limited and strictly controlled use of natural resources, is being implemented on a protected area or part of it with partly modified ecosystems of great scientific and practical importance and particularly valuable landscapes and geoheritage facilities. A third degree protection regime (around 66.67% of the total protected area, i.e. 454,255 ha) – active protection that involves the sustainable use of natural resources and social and economic development of part of the protected area with partly modified and/or modified ecosystems, landscapes and geoheritage facilities. The third degree protection regime area also covers uncategorised areas (approximately 3%, i.e. 20,313 ha). Protection regimes and the borders of protected areas are established by an act on the declaration of a protected area, adopted based on a protection study.

In accordance with the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention), eleven areas have been inscribed in the List of Ramsar Areas (Peštersko polje, Gornje Podunavlje, Koviljsko-Petrovaradinsi-rit, Labudovo okno, Ludaško jezero, Obedska bara, Slano Kopovo, Stari Begej-Carska bara, Zasavica, Vlasina and Đerdap), with a total surface area of 130,411 ha.

The following sites have been registered based on the Convention Concerning the Protection of the World's Cultural and Natural Heritage (of the United Nations Educational, Scientific and Cultural Organisation – UNESCO) under the MAB – Man and Biosphere Programme: Biosphere Reservation "Golija – Studenica" with a surface area of 53,804 ha (0.61% of the territory of Serbia) and the Biosphere Reservation in Serbia – "Bačko Podunavlje" with a surface area of 176,635 ha.

The area of Đerdap has been declared the first geopark in Serbia by decision of the Executive Council of UNESCO of 10 July 2020 and inscribed in the list UNESCO GLOBAL GEOPARKS. For the forthcoming period plans are to start an initiative to begin the procedure to nominate the "Stara Planina" Nature Park to be registered in the European and Global Geoparks Network as the second geopark in Serbia.

The nomination for a world natural heritage asset under the name "Ancient and intact beech forests of the Carpathians and other European regions" was submitted in 2020, including the sites with beech forests Papratski do and Ravne in the "Fruška gora" NP, Zvezda and Klisura Rače in the "Tara" NP, and Kozje stene in the "Kopaonik" NP. The tentative (preliminary) list of natural assets of Serbia contains five assets ("Đerdap" National Park, "Deliblatska Peščara" Special Nature reserve, "Tara" National Park with the Drina Canyon, "Đavolja varoš" Nature Monument, "Šar-planina" National Park).

2.1.4.2. Ecological network

The ecological network as a functional and spatially connected unit is established to conserve types of habitats of special importance for the protection, renewal and/or improvement of damaged habitats and preserve habitats of wild species of flora and fauna in accordance with the Law on Nature Protection and Decree on the ecological network (*The Official Gazette of the Republic of Serbia",* No. 102/10).

The ecological network consists of ecologically significant areas and ecological corridors. Ecological important areas are: areas of national importance that contribute to the conservation of biological diversity in the Republic of Serbia through their biogeographic coverage and representative nature, and areas of international importance that contribute to the preservation of types of habitats and species' habitats, including birds, through their biogeographic coverage and representative nature, in accordance with confirmed international agreements and generally accepted rules of international law.

The Decree on the ecological network established the ecological network of the Republic of Serbia, the composition, protection, management and funding of the network. The identified 101 ecological important areas within the ecological network cover a surface area of 1,849,202 ha or 20.93% of the territory of the Republic of Serbia.

Ecologically significant areas cover spatial areas of national and international importance containing:

1) Certain protected areas declared based on the law, with the priority goal of conserving biodiversity;
2) Areas of special conservation interest, i.e. the Emerald Network, identified based on the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention);
3) Certain areas defined based on international programmes for the identification of important bird areas (IBA), important plant areas (IPA) and prime butterfly areas (PBA);
4) Areas on the list of the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Areas) or planned for inscription on this list;
5) Certain speleological facilities;
6) Border ecologically significant areas that provide connections to the ecological networks of neighbouring countries in accordance with international regulations;
7) Certain areas of types of habitats of special conservation importance identified in accordance with the Rulebook on criteria for identifying types of habitats, vulnerable, endangered, rare types of habitats, and types of habitats under priority for conservation, as well as protection measures for the conservation of types of habitats (*The Official Gazette of the Republic of Serbia*, No. 35/10);
8) Certain habitats of wild species identified by the Rulebook on the declaration and protection of strictly protected and protected wild species of plants, animals and fungi (*The Official Gazette of the Republic of Serbia*, Nos. 5/10, 47/11, 32/16 and 98/18);
9) Other ecologically significant areas not covered by these areas that have been identified as ecologically significant in spatial plans.

The composition of the ecological network includes potential areas of the European Natura 2000 Ecological network, identified in accordance with the EU Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC) and EU Directive on the conservation of wild birds (2009/147/EC). A cartographic overview of ecologically significant areas

is provided in Annex 2 – Map of the ecological network, printed alongside this programme and representing its integral part.

The establishment and development of the Ecological network of the Republic of Serbia is unfolding in accordance with the Law on Nature Protection through the implementation of projects financed with funds from the budget of the Republic of Serbia and European Union funds, with realisation monitored through the action plan of this programme.

Natura 2000

The European ecological network Natura 2000, as a coherent network, is established within the territories of EU member states. Based on the EU Directive on the conservation of natural habitats and of wild fauna and flora, Special Areas of Conservation (SACs) are being established, preceded by a review of potential Sites of Community Importance (pSCIs) based on a proposal by new EU members. In accordance with the EU birds directive, Special Protection Areas (SPA) are identified. To better connect these areas the EC has developed a mechanism for green infrastructure and ecological corridors.

The identification of the European ecological network Natura 2000 within the territory of the Republic of Serbia is under way, entering into the composition of the Ecological network of the Republic of Serbia as ecologically significant areas of international significance in accordance with the Law on Nature Protection and Regulation on the ecological network.

The state of identification and determination of the European ecological network Natura 2000 is being continuously monitored and deliberated upon under the procedure of negotiations with the EC under Chapter 27 – Environmental protection and climate change.

The European ecological network Natura 2000 will be identified within the territory of the Republic of Serbia by the date of accession to the EU.

Emerald Network

The Emerald Network is being established based on the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention), within the territory of countries of the European region that are not EU member states. The Emerald Network covers Areas of Special Conservation Importance (ASCI). A total of 61 Emerald Areas have been identified and nominated within the territory of the Republic of Serbia, of particular importance for the protection and conservation of wild plant and animal species and their habitats, with a total surface area of 1,019,269.31 ha, representing 11.54% of the territory of Serbia, and an integral part of the Regulation on the ecological network. These areas are candidate EMERALD areas under the Bern Convention and represent potential Natura 2000 areas.

Areas of the Emerald Network have been identified based on the Bern Convention, under the EU Cards project for South-Eastern Europe implemented by the Council of Europe in cooperation with the European Environmental Agency and Topic Centre on Biological Diversity from Paris, during the period 2005-2008.

Since the Republic of Serbia was involved in the pre-accession phase of EU accession during that period, it has announced its commitment to identify and establish the European ecological network Natura 2000 within its territory as a future EU member state.

The identified Emerald Network areas within the territory of the Republic of Serbia have candidate status under the Bern Convention. In accordance with the provisions of the Bern Convention, including relevant resolutions and recommendations adopted based on this

convention, the Republic of Serbia and other convention members have the obligation of continuously updating the database with the option of identifying and proposing potential new areas, applying management guidelines, and submitting periodic reports on this to the Standing Committee of the Bern Convention through the operative system for reporting of the European Environmental Agency.

In accordance with Resolution no. 8 of this convention, the first phase of reporting by the Republic of Serbia on the distribution of reference species and types of habitats identified within the territory of the Republic of Serbia in accordance with Resolution no. 4 and 6 has been implemented in 2019.

EU member states that are members of the Bern Convention identify and establish the Natura 2000 ecological network instead of the Emerald network, if they are unable to identify and declare an Emerald network within their territory in accordance with the Bern Convention, through a separate procedure and standard database.

2.1.4.3. Protected Species

According to the Law on Nature Protection, wild species that are endangered or may become endangered, that have a particular importance from a genetic, environmental, ecosystem, scientific, healthcare, economic or other aspect, shall be protected as strictly protected wild species or protected wild species. The Rulebook on the declaration and protection of strictly protected and protected wild species of plants, animals and fungi covers 2633 wild species: the number of strictly protected species is 1784, covering 1042 animal species, with invertebrates being the most numerous. The strictly protected species include 50 mammal species, 307 bird species, 18 amphibian species and 18 reptile species, 38 species of fish and 610 invertebrates. Furthermore, under strict protection are 75 species of fungi and lichen, 641 species of plants (mosses, ferns and seed plants) and 25 species of algae. A total of 860 wild species of plants, animals and fungi have the status of protected species, with 253 species of animals (30 species of mammals, 35 species of birds, two species of reptiles, three species of amphibians, 29 species of fish and 154 species of invertebrates), 37 species of fungi and lichen and 570 species of plants. It should be noted that 10 species are present on both lists, since the same species are strictly protected within the territory of Vojvodina, and protected in central Serbia.

A special form of protection relates to species that may be endangered due to excessive and uncontrolled collection from nature. The use of certain species of mammals, birds and fish is regulated by other acts, such as the Law on Game and Hunting (*The Official Gazette of the Republic of Serbia*, Nos. 18/10 and 95/18 – other law) and Law on the Protection and Sustainable Use of Fish Stock (*The Official Gazette of the Republic of Serbia*, Nos. 128/14 and 95/18 – other law).

Among species found on the list of protected wild species (Appendix 2 of the Rulebook on the declaration and protection of strictly protected and protected wild species of plants, animals and fungi) there are a total of 97 wild species of plants, animals and fungi under controlled use and trade, found on the Regulation on placement under controlled use and trade of wild flora and fauna (*The Official Gazette of the Republic of Serbia*, No. 31/05, 45/05-corrigendum, 22/07, 38/08, 9/10, 69/11 and 95/18). These include 63 species of plants (two species of ferns and 61 seed plants), 15 species of fungi and nine species of lichen (the entire genus Usnea, a total of five, other than strictly protected species) and nine species of animals (two species of reptiles, three species of amphibians and four species of invertebrates).

In accordance with the Law on Nature Protection, permits are issued for the study of strictly protected and protected wild species for scientific research and educational purposes, with the aim of keeping record of exceptions and the method and scope of their use, as well as factors endangering protected and strictly protected wild species for determining and monitoring the state of their populations. Records on issued permits and reports after implementing scientific research activities are kept by the ministry competent for environmental protection affairs and nature protection institutes.

The table with a comparative overview of species in the Republic of Serbia that are strictly protected and protected at the national level and have a certain status of protection at the international level, and species that have the status of hunted species, as game species protected by closed hunting seasons, is provided in Annex 3, printed alongside this programme and comprising its integral part.

- Number of strictly protected wild species by group

Group of organisms	Taxon number
Fauna (total)	**1042**
Mammalia - mammals	**51**
Aves - birds	**307**
Reptilia - reptiles	**18**
Amphibia - amphibians	**18**
Pisces - fish (and lampreys)	**38** (4)
Invertebrates (total)	**610**
- Arachnida – spider-like animals	73
- Branchiopoda	4
- Chilopoda - centipedes	2
- Diplopoda - centipedes	27
- Entognatha	25
- Insecta - insects	378
- Malacostraca	35
- Bivalvia - bivalves	1
- Gastropoda - snails	60
- Annelidae – ringed worms	5
Fungi and lichen (total)	**75**
Fungi	38
Lichenes – lichens	37
Plants (total)	**642**
- Bryophyta – mosses	50 (27 species and all species in the genus Sphagnum, 24)
- Pteridophyta - ferns	22
- Spermatophyta – seed plants	569
Algae (total)	**25**
- Charophyta	15

- Rhodophyta – red algae	10
Total strictly protected taxa	**1784**

Number of protected wild species by group

Group of organisms	**Taxon number**
Fauna (total)	**253**
Mammalia - mammals	30
Aves - birds	35
Reptilia - reptiles	2
Amphibia - amphibians	3
Pisces - fish (and lampreys)	29
Invertebrates (total)	154
- **Arachnida** – spiderlike animals	4
- **Insecta -** insects	144
- **Gastropoda** - snails	3
- **Annelidae** – ringed worms	3
Fungi and lichens (total)	**37**
Fungi	26
Lichenes – lichens	11 (3 + all species in the genus Usnea, 8)
Plants (total)	**570**
Bryophyta – mosses	**10**
Pteridophyta - ferns	**8**
Spermatophyta – seed plants	**557** (512 + all species in the genus Euphrasia, 8 + all species in the genus Alchemilla, 37)
Total protected taxa	**865**

2.1.4.4. Movable protected natural documents

In addition to protected areas and protected species, protected natural assets also include movable protected natural documents, representing parts of geological and paleontological heritage, as well as biological documents of exceptional scientific, educational and cultural significance (certain fossils, minerals, crystals and mineral druses, mycological, botanical and zoological collections and individual conserved preparations of organic species).

The law prohibits the collection and/or destruction of movable natural documents, and destruction or damage to their finds.

Table 4 – Overview of movable protected natural documents

	Category of protected natural document
1.	All copies of holotypes, syntypes, and genotypes of fossils, as well as type kinds of fossils
2.	All individual minerals and/or crystals and mineral druses on the bed
3.	All holotypes and syntypes of fossils, type kinds of fossils of individual minerals and crystals
4.	Mycological, botanical, and zoological collections, as well as individual conserved preparations of organic species, their holotypes and syntypes

2.2. Geological Diversity of the Republic of Serbia

The protection of geological diversity in the use and development of spaces is achieved through the implementation of measures for the conservation of diverse elements and forms of geological materials, geological structures and processes, geochronological units, rocks and minerals of various composition and method of creation and diverse paleoecosystems changed in space under the impact of internal and external geodynamic factors during geological times, as well as geoheritage facilities under conditions of in-situ and ex-situ protection in accordance with the Law on Nature Protection.

The area covering the territory of the Republic of Serbia was built of the most diverse types of rocks created through the long history of development dating back to the oldest epoch of geological history – the Precambrian, through Palaeozoic, Mesozoic, Cenozoic, to the youngest periods – Quaternary, lasting to this day. During Cenozoic this space was geotectonically a part of the north-eastern Alpine orogen, its tectonic movement leading to the formation of new depositional units (Pannonian, Peripannonian, and Dacian basin) in the process of gravitational sinking, mainly during the Oligocene and older Miocene. On the other hand, the mountain range of Dinarides, the Serbian-Macedonian Mass and Carpatho-Balkanides were in the process of constant raising, the consequence of compression caused by the motion and collision of the Adriatic plate with the Dinar orogen, and this compression was reflected through an increased thickness of the Earth's crust in the above areas. Thus, during the Neogene, we can classify the following large tectonic units within the territory of Serbia: Dinarides, Serbian-Macedonian Mass, Vardar Zone, Carpatho-Balkanides, Pannonian and Dacian basins.

The Republic of Serbia is a country with a long tradition of geological research and protection of geological facilities. Written records of certain initial forms of protection originate from as early as the XIV century, and the first detailed geological studies were initiated by the founders of natural science in Serbia during the early 20th century, botanist Josif Pančić, academician Jovan Žujović and his followers: Jovan Cvijić, Sava Urošević, Svetolik Radovanović, Petar Pavlović, Vladimir Petković, Jelenko Mihajlović and Dimitrije Antula. In parallel with the first geological research, activities were started for the protection of geological facilities. The first proposal to protect geological sites in Serbia was an appeal by P. Pavlović from 1924 to preserve the caves in the Zlota canyon. The first preliminary list of fossils was composed in 1925, and the first collection of holotypes with 115 items was formed by P. Pavlović in 1927.

The Natural History Museum of Serbian Land (Natural History Museum in Belgrade) was established in 1895 based on an initiative of academician Jovan Žujović. Unique in Serbia, and regarding the diversity and wealth of items, results achieved in the field of science and museology, it is among the leading museums of south-east Europe. The museum collection holds approximately 1,500,000 exhibits, a significant and valuable fund of natural history and cultural

heritage of Serbia. Until 1948, the Museum was the only specialised institution for the study, protection, conservation and popularisation of nature and natural rarities.

The Institute for the Protection and Scientific Study of Natural Rarities of PR Serbia (Institute for Nature Conservation of Serbia) was established by decree of the government of FPRY in 1948. The activities of the Institute cover research and study of biodiversity and geodiversity, initiation of procedures for the protection of immovable natural assets, expert supervision over protected natural assets and implementation of protective measures, education, presentation and communication, as well as international cooperation in the field of conservation of nature and natural assets. With the establishment of the Institute for Nature Conservation of Serbia in 1948, the institutional competences were divided in the field of national natural heritage protection: the protection of immovable natural assets belongs to the Institute for Nature Conservation of Serbia, while the protection of movable natural history assets belongs to the Natural History Museum.

Certain geological, geomorphological and hydrogeological facilities of interest for the Republic of Serbia have been declared protected natural assets, mainly as natural monuments or landscapes of exceptional properties, while a large number of scientifically and educationally significant facilities of geoheritage have been noted within spatially larger protected areas (national parks, nature parks and reservations).

The unified policy of geoheritage protection in Serbia started in 1995, with the establishment of the National Council for Geoheritage. The National Programme for Environmental Protection from 2005 set up the drafting of the National Geodiversity Strategy as one of its goals. Commitment to the sustainable use of geoheritage at the international level was shown by Serbia, inter alia, through its membership in the European Association for the Conservation of the Geological Heritage (ProGEO). The valuation of geoheritage according to a single concept was adopted by this association in 1996, thus starting a unified policy of geoheritage protection, when the division of geofacilities-representatives (A-I) was also adopted, reflecting the specificities of geodiversity, i.e.: A) Paleobiological (macro and micro fauna, flora, traces, stromatolites, biochemical); B) Geomorphological (caves, volcanoes, waterfalls, fjords, cirques, karst, etc.); C) Paleoecological (former climates, global sediment geology, fossil indicators); D) Magmatic, metamorphous, and sediment petrological, textural and structural; E) Stratigraphic (sequences, stratotypes of upper edges, stratotype interval, biozones of broad meaning facilities, paleomagnetic events, etc.); F) Mineralogical; G) Structural (main tectonic or gravitational structures); H) Economic (intrusions, outpours, metallic and non-metallic beds, mines and rock quarries); and I) Other representatives (historical, for the development of geology).

Based on this division, each member state of the association is to form an inventory of geoheritage facilities. The completion of the inventory of geoheritage facilities is followed by the preparation of the list of priorities.

The inventory of geoheritage facilities of the republic of Serbia was completed in 2005, covering around 650 geological, paleontological, geomorphological, speleological and neotectonic facilities, i.e.: 130 facilities of historical-geological and stratigraphic heritage, 58 facilities of petrological heritage, 192 facilities of geomorphological heritage, 42 facilities of neotectonic activities and geophysical heritage, 80 facilities of speleological heritage, 19 facilities of hydrogeological heritage, 18 facilities of pedological and geoarchaeological heritage, 13 groups of facilities with climate specificities, and 99 facilities of ex-situ geoheritage. Additionally, the inventory of hydro-geological heritage of Serbia was also completed (2008), containing 212 facilities of hydro-geological heritage, i.e. 51 facility in the Interior Dinarides, 62 in the Vardar

Zone, 32 in the Serbian-Macedonian Mass, 39 in the Carpatho-Balkanides, 12 in the Dacian Basin and 16 in the Pannonian Basin.

2.3. Landscape Diversity of the Republic of Serbia

A landscape is a given territory where its character represents a specific connection of natural and artificial values characteristic for the given region in accordance with the Law on Nature Protection. According to the European Landscape Convention (Council of Europe, 2000), a "landscape" designates a certain area, as seen and experienced by human beings, its character the result of the action and interaction of natural and/or human factors. This definition is a reflection of the holistic conceptualisation of landscapes. Fundamental phenomena in a landscape are reflected in their unique character, arising as the result of a complex of actions and interactions, manifested through a historical legacy and contemporary dynamics of the landscape. The holistic principle defines a relationship towards landscape not limited to its cultural or natural elements: a landscape is a whole, the structural unity of all elements and their mutual relations. Seeing the landscape and its assets as elements of culture and identity is a completely new approach in spatial documents in Serbia. The Spatial Plan of the Republic of Serbia defines the strategic framework for the implementation of the contemporary concept of landscape, along with the following priorities: "Characterisation of the landscapes of Serbia" involving the identification of landscapes of various characters at the national and regional level, forming the basis for the valorisation and protection of natural and cultural landscapes, planning and management of their quality, strategic assessment and environmental impact assessment and formation of a GIS about the natural and cultural assets of a landscape, as well as pilot projects for the "Characterisation of landscape" for special priority areas (local level).

Due to the lack of research that should identify and map various types of landscape character in the territory of the Republic of Serbia, conservation of landscapes is being achieved in two ways: by forming protected areas or protecting certain (visual, structural) characteristics of landscapes. In accordance with existing regulations, a landscape of exceptional properties is a protected area with a recognisable appearance with significant natural, biological-ecological, aesthetic and cultural-historical assets, developed through time as the result of the interaction of nature, natural potential of the area, and traditional way of life of the local population. Cultural landscapes of exceptional properties have also been noted, whereby cultural and historical assets are particularly valued and noted from the aspect of nature conservation.

3. ANALYSIS OF THE EFFECTS OF THE IMPLEMENTATION OF THE PREVIOUS BIOLOGICAL DIVERSITY STRATEGY OF THE REPUBLIC OF SERBIA FOR THE PERIOD 2011-2018 AND THE ACTION PLAN (*THE OFFICIAL GAZETTE OF THE REPUBLIC OF SERBIA*, NO. 13/11)

The analysis of the effects of the implementation was conducted according to the established objectives and activities of the Biodiversity Strategy of the Republic of Serbia for the period 2011-2018 and the Action Plan.

The achieved results are briefly presented according to each of the set objectives of the stated Strategy.

NATIONAL OBJECTIVES	
Strategic area	Progress
1. Biodiversity conservation	
1.1: Enable endangered species and ecological communities sustainability in their natural habitats due to genetic diversity and potential for evolutionary development. Restore biodiversity in degraded areas. Complement *in-situ* conservation measures by maintaining *ex-situ* sites and implementing *ex-situ* conservation measures.	The Rulebook on the proclamation and protection of strictly protected and protected wild species of plants, animals and fungi, with lists of these species, has been revised. Every year, an order is issued banning the collection of certain protected species of wild flora and fauna, which refers to the entire territory of Serbia, or to the areas of certain administrative districts. The condition of certain species of plants and animals, habitats and ecosystems in protected areas is regularly monitored, according to medium-term plans and annual management programmes. Within the protected areas, the status of the populations of certain endangered species was monitored and measures were taken to protect the habitats. In the forestry industry, in accordance with the principles of FSC forest certification, mandatory monitoring of rare, endangered and vulnerable species is carried out by users and/or managers of the area (through the guard service), which is more professional than scientific. The identification of habitat types was performed according to the Rulebook on criteria for selection of habitat types, on habitat types, sensitive, endangered, rare and for protection of priority habitat types and on measures for protection of their preservation. The implementation of the IPA 2016 Natura 2000 Project is underway, which, among other things, includes mapping of habitat types, species and their habitats in accordance with the EU Directive on the Conservation of Natural Habitats and Wild Fauna and Flora of the EU Wild Birds Directive. In the territory of Zasavica Special Nature Reserve (SNR), the mapping of significant habitat types was carried out, as well as the mapping and assessment of the population of internationally important species. The Agreement on Protection Measures and Sustainable Use of Seedlings (hucho hucho) in the Drina River was signed between the Republic of Serbia and the Republic of Srpska. Within the formed database on the biodiversity of inland water of Serbia - Biodiversity of aquatic ecosystems of Serbia (BAES), species that need *ex situ* protection have been identified. The establishment of a bank of aquagamet genes and cryopreservation of spermatozoa of certain fish species in laboratory and field conditions has begun, within the newly established Centre for Biodiversity Conservation and Freshwater Fisheries, which is part of the Aquarium at the Faculty of Natural Sciences in Kragujevac. Within the framework of continuous inspection and expert supervision for the needs of control of unauthorised keeping of protected species of animals in captivity by natural persons, in pet shops, kennels and at border crossings, their taking over and disposal in zoos and shelters for wild species is carried out, in accordance with with the procedure prescribed by the Rulebook on Transboundary Trade and Trade in

	Protected Species (*The Official Gazette of the Republic of Serbia*, No. 99/09 and 06/14).
1.2: Monitor, regulate and reduce the impact of processes and activities that have or are likely to have significant adverse effects on biodiversity	The Rulebook on the National List of Environmental Protection Indicators was adopted (*The Official Gazette of the Republic of Serbia,* No. 37/11). The Fire Protection Strategy for the period 2012-2017 has been developed. (*The Official Gazette of the Republic of Serbia,* No. 21/12). A proposal for a list of invasive species in the Republic of Serbia and monitoring and control measures for the purposes of drafting a bylaw on monitoring and control measures for invasive species has been prepared. In the period of 2010-2011, a database of invasive species in the area of AP Vojvodina with basic information on their biology, ecology and distribution has been drafted. The Study of Spatial Differentiation of the Environment in the Territory of AP Vojvodina has been adopted in order to identify the most endangered localities, important as a starting point for all strategic activities in space, for planning and finding compromises between certain sectoral interests. From the spatial perspective, the study analyses areas and localities of degraded environment, zones of negative influences and endangered areas. Within the Twining project for Natura 2000, pilot management plans were developed for the "Tara" Nature Park and "Obedska bara" SNR as potential Natura 2000 areas in the territory of the Republic of Serbia for the period until 2020. An eco-campaign entitled "Stop poisoning birds of prey!" was organised and conducted, in order to raise public awareness of the importance of reducing the negative effects of harmful preparations on biodiversity, which resulted in the withdrawal of the furadan toxic pesticide.
2. Protected area system	
2.1: Establish and manage a comprehensive, adequate and representative system of protected areas that includes the biological diversity of the Republic of Serbia	The Rulebook on evaluation criteria and the procedure for categorisation of protected areas has been adopted. The area of protected areas in Serbia is currently 7.63% of the country's territory. The Law on the Spatial Plan of the Republic of Serbia from 2010 to 2020, the Regional Spatial Plan of the Autonomous Province of Vojvodina by 2020, the Medium-Term Programme for the Protection of Natural Resources 2011-2020 and the annual programmes for the protection of natural resources of the Institute for Nature Protection of Serbia and the Institute for Nature Protection of AP Vojvodina envisage an increase in areas under protection. Within the UNDP/GEF project, an assessment of the effectiveness of protected area management according to the METT methodology was performed, and an assessment of the effectiveness of 19 protected areas of different categories was also carried out in 2010 (2009 data) and 2012 data from 2011.) Applying this

	methodology, progress in management efficiency was assessed, as the overall average increased from 0.6 to 0.7 in this period. Based on the Decree on the Ecological Network, 101 ecologically significant areas have been established in the total area of about 20%. Also, with the support of the UNDP, a strategic plan for the implementation of the EU Habitats and Birds Directives has been developed. Management and reporting measures are being introduced for 61 candidate Emerald areas under the Bern Convention. Within the project "Establishment of the Ecological Network in the Republic of Serbia", databases with a geographical reference for habitats and certain species have been formed.
2.2: Provide the availability of financial resources for the maintenance and expansion of the system of protected areas in the Republic of Serbia while strengthening the long-term financial sustainability of the system	Within the UNDP/GEF project entitled "Support to Sustainable Financing of Protected Areas in Serbia", a financial analysis of certain protected areas was conducted in cooperation with protected area managers, as a basis for drafting a Plan for Sustainable Financing of Protected Area Systems in Serbia. Within the same project, a comprehensive analysis of the sustainability of financing of protected area systems according to the UNDP methodology (Financial Sustainability Scorecard for National Systems of Protected Areas) was carried out in 2010 (data from 2009) and 2012 (data from 2011). Applying this methodology, it is estimated that progress has been made in the sustainability of the financing system of protected areas of the Republic of Serbia, since the situation has improved from 27.60% in 2009 to 39.56% in 2011.
3. Sustainable use of biodiversity, access and profit sharing and economic evaluation	
3.1. Develop new and strengthen existing mechanisms to ensure the sustainable use of biodiversity in the Republic of Serbia. Promote these mechanisms within the public and private sectors	The National Strategy for Sustainable Use of Natural Resources and Assets has been adopted (*The Official Gazette of the Republic of Serbia*, No. 33/12). In accordance with the Decree on the control of the use and trade of wild flora and fauna, permits are issued for the collection of protected species of plants, animals and fungi, which ensures long-term ecological sustainability of species when determining the level of collection. Sustainable use of biodiversity, access and distribution of profits and economic evaluation, has not been realised to a large extent, due to the underdeveloped system of biodiversity evaluation and ecosystem services in Serbia. This approach is still underdeveloped and not widely accepted in Serbia, and it began in 2014 with the valorisation of ecosystem services in protected areas (project entitled "Benefits of Ecosystem Services of the Đerdap National Park for the Local Community"), with the aim of adopting and adapting assessment methods in the future and in other areas and by sectors. The regional project entitled Biodiversity of the Open Regional Fund for Southeast Europe (GIZ/ORF BD) - Ecosystem Services Evaluation (ESAV) subproject, included training sessions on ecosystem services and valorisation, study visit, as well as two case studies, of which the study of ecosystem services for Bosut forests is relevant for Serbia.

3.2. Ensure that social and economic benefits from the use of genetic resources and other products and services of biological diversity remain in the Republic of Serbia	The Nagoya Protocol was signed in 2011, and the Law on the ratification of this protocol is currently in the parliamentary procedure. The state also participates in the activities of the Intergovernmental Committee for the Implementation of the Nagoya Protocol. In 2013, the International Treaty on Plant Genetic Resources for Food and Agriculture was ratified.
3.3. Increase national awareness and use of methods for economic evaluation of biodiversity for more accurate assessment and calculation of the economic benefits of biodiversity protection compared to activities that lead to biodiversity loss	The project entitled "Socio-Economic benefits of Natura 2000" was implemented, which promoted ecosystem services and assessment methods by civil society organisations, with the aim of increasing the awareness of decision makers and the business sector about the range of economic values of biodiversity and methods for assessing these values. Mechanisms for the economic evaluation of biodiversity, protected areas and ecosystem services and the integration of these values into national policies, plans, budgets and strategies in the relevant sectors have not yet been established.
4. Political, legislative, institutional and financial frameworks for biodiversity conservation	
4.1: Strengthening and expanding the policy framework for biodiversity conservation	For the environmental protection sector, only 0.4% of the gross domestic product was allocated, i.e. 0.9%, if the contribution at the local level from the industrial and private sector is also taken into account. The Environmental Protection Fund was abolished by the Law on Termination of the Law on the Environmental Protection Fund (*The Official Gazette of the Republic of Serbia*, No. 93/12), and in 2018 the Rulebook on Detailed Conditions for Allocation and Use of Green Fund Resources of the Republic of Serbia was adopted (*The Official Gazette of the Republic of Serbia*, No. 31/18). - Objective 4.1 is achieved through the issuance of nature protection conditions in the development of spatial plans of special purpose areas, regional spatial plans and other spatial planning documentation, bases and programmes, for the construction of facilities and implementation of various activities in space, as well as through issuing opinions on spatial and urban plans, forest and other bases and programmes, impact assessment studies, strategic impact assessments, legislation and strategic documents; through measures of protection, preservation and improvement of natural values during the preparation of protection studies of areas proposed for protection as well as in the process of drafting acts on their proclamation as protected areas. Measures for forest protection and prohibition of devastation and deforestation are regulated by the Law on Forests (*The Official Gazette of the Republic of Serbia*, No. 30/10, 93/12, 89/15 and 95/18 - other law).

4.2: Strengthen the legislative framework for biodiversity conservation and ensure the implementation and harmonisation of biodiversity legislation	Through the projects entitled Progres monitoring (continuously since 2003) and the Twining project "Strengthening Administrative Capacities for Protected Areas - Natura 2000" (2010-2012), an assessment of the compliance of the national legislative framework with EU legislation was performed. The Ministry in charge of agricultural affairs regularly works on the evaluation of legislative mechanisms for the preservation of agrobiodiversity in relation to the EU legislative framework. Amendments to the Law on Environmental Protection and the Law on Nature Protection were made in 2016, and amendments to the Decree on the Ecological Network are in progress.
4.3 Strengthen the institutional framework for biodiversity conservation	Activities on the functional audit of the biodiversity conservation sector have not yet started and clear institutional competences and policies have not been created.
4.4: Strengthen and expand funding for biodiversity conservation and provide incentives for biodiversity conservation within all sectors	Pursuant to the Law on Incentives in Agriculture and Rural Development, the Rulebook on Incentives for the Conservation of Animal Genetic Resources (*The Official Gazette of the Republic of Serbia*, No. 83/13, 35/15, 28/16 and 44/18 – other law) was adopted as well as the Rulebook on Incentives for Conservation of Animal Genetic Resources in Gene Banks (*The Official Gazette of the Republic of Serbia* No. 110/17) and Rulebook on Incentives for Conservation of Plant Genetic Resources (*The Official Gazette of the Republic of Serbia* , No. 85/13 and 44/18 - other law). During the preparation of the Action Plan for the implementation of the priorities of the Development Programme of AP Vojvodina 2014-2020, activities and sources and financing for projects in the field of environmental protection were listed.
5. Integration of biodiversity conservation into other sectors	
5.1: Create and implement integrated policies for the conservation and sustainable use of biological diversity at the national level	Objective 5 is mostly met in terms of the forestry and spatial planning sectors, through the implementation of nature protection conditions and data on natural values, protected areas, ecologically significant areas and habitat types (ecological network) in spatial plans and through certification of high value forests. No data were available for the mining and energy sectors. For sectoral activities (forestry, natural resources management, agriculture, water resources management, tourism and recreation, spatial planning, transport, mining, energy) in the process of issuing nature protection conditions, an assessment is made as to whether the planned works and activities can be implemented from the perspective of nature protection objectives and adopted regulations and documents. The spatial plan of the special purpose area is adopted for the area which requires a special regime of organisation, arrangement, use and protection of space due to

	natural, cultural-historical or environmental values, exploitation of mineral raw materials, use of tourist potentials, hydro potential or construction of facilities or which was regulated by the Spatial Plan of the Republic of Serbia in accordance with the Law on Planning and Construction (*The Official Gazette of the Republic of Serbia*, No. 72/09, 81/09 - correction, 64/10 - CC, 24/11, 121/12, 42/13 - CC , 50/13 - CC, 98/13 - CC, 132/14, 145/14, 83/18, 31/19, 37/19 - other law and 9/20). Approved locations and construction of mini-hydropower plants in accordance with the spatial plans of local self-government units as lower-level plans did not adequately consider the possible negative impact on habitat types of priority for protection as well as species and their habitats. In the next planning period, more detailed research on the effects of construction of mini hydropower plants and other facilities on watercourses in mountainous areas is required, taking into account the situation before and after construction, which is important for analysing the effects at the sites subject to analysis in order to prove that the real situation at the locations is a consequence of the construction and operation of mini-hydroelectric power plants. Accordingly, lower-level plans should be revised or developed with clearly defined and measurable guidelines for nature protection and biodiversity conservation, especially for the protection of strictly protected and protected species, as well as rules of regulation and construction, taking into account provisions and procedures regulated by the Law on Strategic Environmental Assessment and the Law on Environmental Impact Assessment, including the assessment of acceptability for the ecological network.
5.2: Integration of biodiversity into all relevant sectors	At the legislative level, a proposal for a national programme for the conservation and sustainable use of plant genetic resources, as well as a proposal for a national action plan for the development of organic agriculture. The Strategy of Agriculture and Rural Development of the Republic of Serbia for the period 2014-2024 (*The Official Gazette of the Republic of Serbia*, No. 85/14) was adopted, as well as the Plan for the Development of Organic Production, which is an integral part of the National Rural Development Programme from 2018 to 2020 adopted by the Conclusion of the Government (*The Official Gazette of the Republic of Serbia,* No. 60/18). In the forestry sector, "Srbijasume" and "Vojvodinašume" public companies conduct forest certification according to the requirements of the FSC standard, i.e. manage forest resources in a responsible manner, taking into account that they are managed in a way that is environmentally friendly, socially just and economically viable. In accordance with the Law on Protection and Sustainable Use of Fish Stock, medium-term and annual fisheries management programmes are being prepared, which contain basic information on the qualitative and quantitative composition and age structure of fish stock, biomass, production and fishing pressure on fish stock.

	In the area of AP Vojvodina, the users of the basic canal network of the Danube-Tisa-Danube hydro system implemented projects pertaining to maintaining the water regime of salt marsh and steppe lakes, ensuring flooding of wet meadows, ensuring flow by mowing and removing aquatic vegetation. An application has been prepared for the Europarc chapter - sustainable tourism in the "Gornje Podunavlje" Special Nature Reserve (2014).
6. Knowledge database	
6.1: Collect, review and consolidate available data and information on biodiversity to provide a basis for assessing the status, monitoring, conservation and sustainable use of biological diversity	The Clearing House Mechanism (CHM) website of the Environmental Protection Agency, as well as the National Information Sharing Mechanism (NISM) for the exchange of information on plant genetic resources has been established. Databases of aquatic ecosystems (BAES) of the Faculty of Natural Sciences in Kragujevac, electronic database on the distribution of plant species in Serbia, scientific and academic papers on flora and vegetation ("Field map-botany") have been established within the information system and internal herbarium database of the Institute for Nature Protection of Serbia, as well as the BioRas database of the Consortium of civil society organisations for mapping and monitoring of biological diversity in Serbia. The Environmental Protection Agency has created and maintains databases in accordance with the National List of Indicators, while the INISB has partially integrated the forestry, hunting and fishing sector within the National List of Indicators. The IPA 2016 project for Natura 2000 also envisages the provision of infrastructure for the establishment of a central database for Natura 2000 in accordance with the INSPIRE principles and implementation rules. The GIS system for protected areas (borders and protection modes) managed by "Vojvodinašume" public company has been developed, which is filled in with other relevant data related to biodiversity. The FAO Global Domestic Diversity Database (DAD-IS) is regularly updated. The European Network of Gene Gene Banks for Animal Genetic Resources (EUGENA) was established, which was joined by the Centres for Reproduction in Artificial Insemination from Temerin, Krnjača and Velika Plana
6.2: Establish a national programme to identify and monitor priority species, habitats and genetic components of biodiversity, as well as the causes and consequences of activities and	The development of a system for monitoring the state of agricultural genetic diversity has begun, which will be regulated by the future Law on the Management of Plant Genetic Resources for Food and Agriculture.

processes that threaten the components of biodiversity	
6.3: Support to the understanding and conservation of biological diversity in the Republic of Serbia	The priorities of research in environmental protection and climate change, including ecosystem monitoring and biodiversity protection, are given in the Strategy of Scientific and Technological Development of the Republic of Serbia for the period 2009-2014. In 2011, a new project cycle of financing national scientific research projects within the Basic Research, Technological Development and Integral Interdisciplinary Research programmes commenced. As for the international cooperation, agreements have been signed with Belarus, Germany, France, Italy, China, Slovenia, Slovakia, Portugal, Spain and Croatia within the Bilateral Cooperation Programme.
7. Capacity building	
7.1: Technical capacity building	Capacity building was carried out mainly through training, workshops and study visits with exchanges of experience of institutions dealing with biodiversity in the EU. Through the ECRAN regional project as well as the EU TAIEX mechanism, training sessions were conducted on the establishment of Natura 2000 in the Republic of Serbia and the implementation of the acceptability assessment mechanism. The Twinning light IPA project entitled "Strengthening the Capacities of Authorities Responsible for CITES and Wildlife Trade Regulations Enforcement in Serbia" was implemented, which focuses on strengthening capacity through specialised training of all supervisory bodies, for more efficient implementation of CITES conventions and national regulations in this area. A hardware network for the Serbian EIONET with Arc GIS has been established between the Environmental Protection Agency and the Faculty of Biology, University of Belgrade. The Law on Incentives in Agriculture and Rural Development provides for financial support for the conservation of genetic resources. Within the document "Chapter 27: Environment and Climate Change - Draft Action Plan for Strengthening Administrative Capacities" (original title "Chapter 27 Environment - Draft Action Plan for Administrative Capacities Development"), a proposal for capacity building was made.
7.2: Infrastructure and equipment	The equipment procured for the Serbian EIONET is largely unused.
8. Education, information and public participation	
8.1: Improve understanding of the importance of	Education, information and public participation were primarily conducted through the activities of civil society organisations, the Institute for Nature Conservation of Serbia and the Institute for Nature Conservation of |V|ojvodina Province.

biodiversity and develop the capacity to study and protect biodiversity through the inclusion of biodiversity information in curricula	Professional and popular programmes have been implemented for educators, pupils and students who promote the importance of biodiversity conservation.
8.2: Encourage public understanding, support and activities for biodiversity conservation through information	The campaign to raise public awareness of biodiversity is being conducted at a satisfactory level. Organising training on biodiversity conservation for hunters and fishermen, medicinal plant collectors, tourist organisations and other interested individuals and organisations also has a significant role in raising awareness.
8.3: Involve local people and communities in biodiversity planning, decision-making and conservation	In the process of making protection studies and before declaring an area protected, the local population is involved in order to obtain their support in activities for the protection and conservation of biodiversity.
9. International cooperation	
9.1: Ensure coherence and coordination between this strategy and other international obligations and agreements related to biodiversity	The Biodiversity Strategy for 2011-2018 was revised in line with the UN CBD Global Strategic Plan and the Aichi objectives.
9.2: Ensure continuous and effective international cooperation for the protection of biodiversity	International cooperation has been achieved through cross-border projects, projects funded by individual donors of the international community or through the IPA fund. Some of the important projects and initiatives are as follows: "Parks of the Dinaric Arc", where one of the objectives is to form a network of protected area managers in the Balkans. BioREGIO Carpathians project, within the Carpathian Convention - Integrated management of biological and landscape diversity for sustainable regional development management and ecological connectivity in the Carpathians, with the aim of establishing a balance between protection and sustainable development of the Carpathians through defining and implementing integrated management measures ("Protection of large herbivores and carnivores in the Carpathian region - joint integrated management measures "- Djerdap NP, Donji Milanovac;" Protection of large herbivores and carnivores in the Carpathian region - joint integrated management measures "- Budapest, Hungary;" Development of Red Lists of animal species in the Carpathian region "- Banska Bystrica , Slovakia). The

	BioREGIO Carpathians project is being implemented within the framework of the Carpathian Convention. An Agreement on Cooperation was signed between the signatory states for the preparation of a serial nomination for the inscription of the Dinaric Karst on the UNESCO list, as well as on the management of this joint multifaceted transnational karst area. The Republic of Serbia has nominated its part of the territory for the UNESCO cross-border biosphere reserve "Mura-Drava-Danube". The seminar entitled "Protection of Large Herbivores and Carnivores in the Carpathian Region - joint integrated management measures" organised by "Đerdap" Public Enterprice, Ministry of Natural Resources, Mining and Spatial Planning, UN Environment Programme - Interim Secretariat of the Carpathian Convention - UNEP-ISCC and the World Fund for nature protection - programme "Danube-Carpathians" - WWF-DCP ("Đerdap" NP). The initiative of the Western Balkan countries on the coordinated development and updating of national Biodiversity Strategies was launched by Serbia in 2012, and supported by the Ministries responsible for nature protection and biodiversity of the Western Balkans, as well as UNDP and UNEP. The purpose of the initiative is for countries from the region to define in their national Strategies objectives and/or activities related to regional cooperation, in order to institutionalise and strengthen regional cooperation, improve exchange of experience and open new opportunities for work and implementation of nature protection activities. A Regional Working Group on Biodiversity has been established within the Regional Working Group on the Environment of the Regional Cooperation Council. The working group represents an intergovernmental body for the coordination of regional activities, the implementation of the objectives of the South East Europe Strategy by 2020 and the creation of an environment for more efficient implementation of environmental policies of the economies in the region.
10. Climate changes	
10.1: Develop national strategies and mechanisms to understand, plan and minimise the potential impact of climate change on biodiversity	The strategic goal related to climate change has been very little achieved. The Institute for Nature Conservation of Serbia participated in the work of the National Committee for the "Man and Biosphere" Programme within the Commission of the Republic of Serbia for Cooperation with UNESCO. Within the document "First National Report of the Republic of Serbia according to the United Nations Framework Convention on Climate Change", assessments of vulnerability, including biodiversity are given, as well as a proposal of adaptation measures. Vulnerability assessment and proposed measures for adaptation to changed climatic conditions in nature protection indirectly through the sectors of agriculture, water management and forestry are given in the Second Report of the Republic of Serbia according to the United Nations Framework Convention on Climate Change
10.2: Increase the capacity of competent institutions to monitor	The Ministry in charge of environmental protection has established an Adaptation Group within the Department of Climate Change. In 2014, the National Council for Climate Change was formed, the role of which is to propose measures for

and predict the impact of climate change on biodiversity and evaluate the effectiveness of adaptation strategies and measures	adaptation to changed climate conditions, to promote the fight against climate change and the inclusion of climate change in sectoral policies.
10.3: Raising awareness among all sectors and in the public about the impact of climate change and adaptation strategies	Within the projects financed from the EU and international funds, workshops and seminars have been organised with the aim of raising awareness among all sectors.
11. Implementation of the Strategy	
11.1: Provide a variety of sources for long-term funding of the strategy. Ensure that the costs of biodiversity conservation are shared between institutions and stakeholders so that they reflect the contribution to biodiversity loss and the benefits of its protection and use	A mechanism for programme planning of the Budget Management of the Republic of Serbia at the three-year level for the implementation of the strategy has been established, as well as mechanisms for providing and using funds from other sources/donations (GEF, EU, GIZ, IUCN, etc.)
11.2: Identify appropriate mechanisms and create the necessary capacities to implement, monitor and improve the strategy	The implementation of this programme is carried out through the ministry responsible for environmental protection. The short-term objective of establishing a cross-sectoral body to oversee the implementation, monitoring and improvement of this programme was achieved through the establishment of a sectoral working group to review this programme according to the Convention's Strategic Plan for 2011-2020. Objectives and indicators for monitoring the implementation of this programme will be identified in the process of revision of this programme.

Starting from the fact that the Nature Protection Programme was prepared on the basis of the review of the Proposal of the Nature Protection Strategy of the Republic of Serbia for the period 2019-2025, in order to harmonise it with the Law on the Planning System of the Republic of Serbia, an analysis of the effects of the implementation of the Biodiversity Strategy of the Republic of Serbia for the period 2011-2018 was previously conducted with the aim to evaluate the achieved effects, effectiveness and efficiency of measures contained in the already adopted public policy document, or regulation during or after their implementation, in order to review and improve them.

Within this analysis of effects, an analysis of the harmonisation of the national objectives of the Republic of Serbia with Aichi and the EU objectives for the protection of biodiversity was carried out, which is given in Annex 6, printed with this programme, forming its integral part (hereinafter: Annex 6).

The analysis of achieving global objectives through the implementation of national objectives was carried out during the preparation of the Sixth Report on the Implementation of the UN Convention on Biological Diversity and is shown in the following table:

Assessment of the implementation of global Aichi objectives through the application of national objectives

Aichi objectives	Measure	Progress assessment	Overall progress assessment
	Measure 4.2.		
	Measure 4.1		
	Measure 4.1 Measure 3.1.		
	Measure 1.5.		
	Measure 2.3. Measure 3.1.		
	Measure 3.1.		
	Measure 2.3 Measure 3.1.		
	Measure 1.1.		
	Measure 1.1.		
	Measure 2.1. Measure 2.2.		
	Measure 1.1. Measure 4.1. Measure 3.1.		
	Measure 1.2.		
	Measure 2.2. Measure 3.1.		
	Measure 1.3.		

	Measure 3.1.		
	Measure 1.4. Measure 4.2.		
	Measure 4.1. Measure 4.2.		

In accordance with the Decree on the Methodology of Public Policy Management, Analysis of the Effects of Public Policies and Regulations and the Content of Individual Public Policy Documents (*The Official Gazette of the Republic of Serbia*, No. 8/19), the Nature Protection Programme sets out steps aimed at adopting optimal public policy i.e. enacting an effective regulation, identifying the desired change, its elements and their cause-and-effect relationships, eliminating the causes of existing problems in the field of planning and implementing biodiversity conservation and nature protection policy, as well as achieving objectives, measures and activities.

4. INSTITUTIONAL, LEGISLATIVE AND FINANCIAL FRAMEWORK FOR NATURE PROTECTION IN THE REPUBLIC OF SERBIA

Nature protection is one of the areas in which the state has begun to restructure the strategic, legal, institutional and economic framework, within the activities planned for implementation in the process of stabilisation and accession to the European Union.

4.1. Institutional framework for nature protection

4.1.1. Public administration institutions

The Ministry of Environmental Protection performs public administration tasks related to: basics of environmental protection; environmental protection and improvement system; national parks, inspection supervision in the field of environmental protection; nature protection; determining the conditions for environmental protection in spatial planning and construction of facilities; approval of transboundary movement of waste and protected plant and animal species, as well as other activities determined by law. The Ministry of Environmental Protection is responsible for nature protection and biodiversity conservation, sustainable use of natural resources and goods (land, forest, water and fish resources, biodiversity, geodiversity and landscapes), protection, conservation, improvement and management of protected areas and ecological network, domestic and international trade of endangered and protected species of wild flora and fauna.

Within the Ministry of Agriculture, Forestry and Water Management, certain competences related to nature protection belong to the Forest Administration, the Plant Protection Administration, the Veterinary Administration, the Rural Development Department, the National Water Directorate and the Directorate for National Reference Laboratories. The Ministry of Agriculture, Forestry and Water Management is responsible for the conservation and sustainable use of plant and animal genetic resources for food and agriculture; determining the fulfilment of conditions, risk assessment and implementation of control measures related to biosafety in limited use, introduction into production, market placement and import of genetically modified organisms. The Ministry of Trade, Tourism and Telecommunications also has certain competences; Ministry of Mining and Energy; Ministry of Health; Ministry of Education, Science and Technological

Development; The Ministry of Construction, Transport and Infrastructure as well as other ministries. The Plant Gene Bank was established by the Law on Food Safety (*The Official Gazette of the Republic of Serbia*, No. 41/09 and 17/19) within the Directorate for National Reference Laboratories of the Ministry of Agriculture, Forestry and Water Management, and among other things, it deals with preparation of protocols for the functioning of the Plant Gene Bank, storage of the National Seed Collection; development of the National Programme and System in Serbia for the Conservation of Plant Genetic Resources for Food and Agriculture. A draft National Programme for the Conservation of Plant Genetic Resources for Food and Agriculture was drafted with an Action Plan (2014-2020) with FAO support.

Within the existing laws, a number of competences in the field of environmental protection are decentralised to the provincial level or to the level of local self-government units. The competences of the Provincial Secretariat for Urban Planning and Environmental Protection include environmental protection activities in the territory of AP Vojvodina, placing natural resources under protection in accordance with the law governing nature protection, development and adoption of environmental protection programmes in the territory of AP Vojvodina, adoption of plans and programmes management of natural resources and goods, as well as control of the use and protection of natural resources and goods and performing continuous monitoring and control of the state of the environment in the territory of the province.

Local self-government units have competences related to spatial planning, environmental protection and environmental improvement, as well as communal affairs. At the local level, environmental secretariats have responsibilities related to environmental protection, including the issuance of building permits for facilities not included in the national level. Strategic environmental impact assessment of plans and programmes, environmental impact assessment of projects and integrated permits are also among the tasks entrusted to the local level.

The Environmental Protection Agency is a body within the Ministry of Environmental Protection which performs public administration tasks related to the development, harmonisation and management of the national environmental information system, development of a register of pollutants, collection and aggregation of data, their processing and preparation of reports on the state of the environment and the implementation of environmental policy, as well as cooperation with and reporting to the European Environment Agency (EEA) and the European Environment Information and Observation Network (EIONET).

The Institute for Nature Conservation of Serbia is an organisation that performs activities for the protection of nature and natural resources located in the territory of the Republic of Serbia. The Institute for Nature Protection of Serbia maintains a register of protected natural resources and an information system on nature protection (databases on protected natural assets, habitats, protected species, ecological network areas), prepares a medium-term programme for the protection of natural resources and a report on the state of nature.

The Institute for Nature Conservation of Vojvodina Province was established to perform activities for the protection of nature and natural resources that are located in whole or in part on the territory of AP Vojvodina. The Institute for Nature Conservation of Vojvodina Province keeps the provincial register of protected natural resources for the territory of the autonomous province, and submits data on changes in the register to the Institute for Nature Conservation of Serbia within 15 days from the day of recording the change, for entry in the central register.

The institutes are in charge of collecting and processing data on nature and natural values; monitoring the status and assessment of nature conservation and the degree of endangerment of geoheritage facilities, wild species and their habitats, habitat types, ecosystems, ecologically

significant areas, protected areas, ecological corridors, ecological networks and landscapes; issuing acts on conditions and measures for nature protection in the protected area.

In Serbia, in addition to the Institute for Nature Conservation of Serbia and the Provincial Institute for Nature Protection, other institutions and civil society deal with the protection of geoheritage facilities. The Institute for Nature Protection of Serbia and the Institute for Nature Conservation of Vojvodina Province carry out the protection of geoheritage facilities *in situ*, while the Museum of Natural History carries out the protection of geoheritage *ex situ*.

In addition to the ministries responsible for environmental protection, the Secretariat for Environmental Protection and Construction of Vojvodina Province, the Institute for Nature Protection of Serbia and the Institute for Nature Conservation of Vojvodina Province, entrusted powers in nature protection are given to public companies (PCs) managing Tara, Đerdap, Kopaonik, Fruška gora and Šar planina National Parks including PC "Srbijašume", PC "Vojvodinašume", PC "Vode Vojvodine" and other managers of protected areas, in accordance with the Law on Nature Protection and bylaws adopted on the basis of this law.

4.1.2. Scientific research and educational institutions

The Republic of Serbia has a long scientific research tradition in the field of natural sciences. Scientific research is conducted through the activities of universities, institutes and other organisations. There are research and educational programmes that, through various areas of scientific research, include nature protection, conservation of biodiversity, geodiversity and landscapes.

4.1.3. Civil society organisations (CSOs)

In the Republic of Serbia, there is no accurate data on registered civil society organisations (CSOs) dealing with environmental protection. According to the data of the Provincial Secretariat for Urban Planning and Environmental Protection, 228 such CSOs are registered in AP Vojvodina. Civil society organisations operating in the field of environment make up a significant share in the total number of CSOs in the Republic of Serbia and represent a significant component in the overall system of nature protection.

4.2. Legislative framework for nature protection

The legislative framework for nature protection as part of the environmental protection system has its basis in the Constitution of the Republic of Serbia, which defines the right of citizens to a healthy environment, as well as the duty of citizens to protect and improve the environment, in accordance with law and generally accepted rules of international law. international treaties. An overview of nature protection regulations is given in Annex 4 - List of laws and bylaws relevant to nature protection, which is printed with this programme and forms an integral part thereof.

4.2.1. Laws and strategies in the field of nature protection

The basic principles of nature protection and improvement are given in the Law on Environmental Protection (*The Official Gazette of the Republic of Serbia*, No. 135/04, 36/09, 36/09 - other law, 72/09 - other law, 43/11 - US, 14/16, 76/18 and 95/18 - other law). This law regulates the management (use and protection) of natural resources and means, then preventive measures and environmental protection conditions as well as remediation measures; system for issuing environmental permits and approvals; access to information and public participation in decision-making and other forms of environmental protection.

The Law on Nature Protection regulates the protection and preservation of nature, biological, geological and landscape diversity. This law also defines the obligations of managers of protected natural resources in the adoption of management plans.

In addition to the Law on Environmental Protection and the Law on Nature Protection, there are a number of other laws relevant to the field of nature protection, especially in the field of use and protection of forest, hunting, fishing and genetic resources for food and agriculture.

The strategic framework for nature protection is defined through strategic documents and decisions of the Government for EU accession, within the National Environmental Protection Programme (*The Official Gazette of the Republic of Serbia*, No. 12/10) and sectoral strategies in the field of agriculture, forestry, water management, etc.

The most important strategic documents are as follows:

The National Strategy for Approximation in the Field of Environment for the Republic of Serbia (*The Official Gazette of the Republic of Serbia,* No. 80/11) (NEAS) was adopted in order to provide a basis for accession negotiations related to Chapter 27. Guidelines are provided for the nature protection sector referring to the rationalisation of the Law on Nature Protection and the inclusion of Natura 2000 sites in the overall legal framework for protected areas. According to NEAS, the implementation of EU regulations on endangered species will be implemented through the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) together with the issue of transposition/implementation of the Animal Welfare Directive (95/88/ EC).

The National Nature Protection Programme defines the basic objectives and criteria for the implementation of environmental protection, with priority protection measures, conditions for the application of the most favourable economic, technical, technological, economic and other measures for sustainable development and environmental management, long-term and short-term measures for the prevention, mitigation and control of pollution, carriers, manner and dynamics of implementation, as well as the necessary means for implementation. During 2014, the Draft Action Plan for the implementation of the National Nature Protection Programme for the period 2015-2019 was prepared.

The National Strategy for Sustainable Use of Natural Resources and Goods (*The Official Gazette of the Republic of Serbia*, No. 33/12) was adopted in 2012 and it sets out general and specific objectives for the protection, management and improvement of protected areas, protection, management and sustainable development of biodiversity, geological diversity and landscape diversity in the Republic of Serbia. Indicators for monitoring the achievement of sustainable use of protected areas, biodiversity, geodiversity and landscape diversity were presented, and a list of indicators for monitoring the implementation of the National Strategy was proposed.

In the Spatial Plan of the Republic of Serbia from 2010 to 2020 (*The Official Gazette of the Republic of Serbia* , No. 88/10), one of the basic goals of further development of the Republic of Serbia refers to nature conservation and sustainable use of natural resources, respecting the following criteria: sustainability, quantity , usability, vulnerability, sensitivity and reproducibility. According to the SPRS, the concept of development of nature protection of the Republic of Serbia will be implemented within protected areas, protection of strictly protected and protected wild species, conservation of habitats of national and international importance and the establishment of an ecological network. Regional spatial plans, spatial plans of special purpose areas, spatial plans of local self-government units and urban plans contain the conditions of nature protection, which

are determined by the institutes for nature protection. In order to fully implement these planning documents, nature protection measures are defined as rules of regulation.

The Strategy of Agriculture and Rural Development of the Republic of Serbia for the period 2014-2024 also addressed the topic of biodiversity, which refers to genetic resources and includes plant, animal and forest genetic resources. One of the key principles stated in the Strategy refers to the responsible management of resources and their conservation for future generations, with better long-term conservation of biodiversity. In accordance with this principle, a strategic development goal has been set, which refers to sustainable resource management and environmental protection.

Until now, there was no Hunting Development Strategy in the Republic of Serbia, but it was defined through legislation and certain strategic documents as a basis for the development of the sector. The legal framework for the development of the hunting sector is the Spatial Plan of the Republic of Serbia, as well as the Law on Wildlife and Hunting. This law defines the conditions of use, management, protection and improvement of game populations and their habitats.

As one of its objectives, the Forestry Development Strategy of the Republic of Serbia (*The Official Gazette of the Republic of Serbia*, No. 59/06) sets the preservation and improvement of biodiversity in forest areas, as part of the concept of sustainable forest management.

Fire protection strategy for the period 2012-2017 (*The Official Gazette of the Republic of Serbia* No. 21/12) covers the prevention and effective extinguishing of forest fires. The special threat of forests from fire is defined in the planning documents for forest management.

The following documents were prepared: Action Plan for Wetland Conservation in the Republic of Serbia, Management Plans for Brown Bear (*Ursus arctos*), Wolf (*Canis lupus*) and Lynx (*Lynx lynx*), Action plan for the management of sturgeon species in the fishing waters of the Republic of Serbia (2005) and the Action Plan for the management of juvenile fish in the fishing waters of the Republic of Serbia (2006). Brown Bear and Lynx Population Management Plans have been prepared within the ministry responsible for environmental protection, and the Wolf Population Management Plan within the ministry responsible for forestry and hunting.

Decree on Determining the Long-Term Programme of Measures for the Implementation of the Breeding Programme in the Republic of Serbia for the period 2015-2019 (*The Official Gazette of the Republic of Serbia*, No. 76/15) in the field of livestock production in indigenous breeds proposes preservation in pure breed due to their genetic potential.

4.2.2. International agreements, conventions and agreements in the field of nature protection at the global level

The 2030 Agenda for Sustainable Development was adopted at the United Nations Summit on Sustainable Development in September 2015. This programme includes 17 new Sustainable Development Goals (SDGs), or global goals, that will guide policy and funding for the next 15 years, starting with the historic commitment to eradicate poverty.

The concept of the Sustainable Development Goals was born at the United Nations Conference on Sustainable Development, Rio + 20, held in 2012. The aim of the conference was to develop a set of universal goals that balance three dimensions of sustainable development: environmental, social and economic.

The Global Goals replace the Millennium Development Goals (MDGs), which brought together the world in September 2000 around a 15-year programme aimed at tackling poverty and its consequences.

The Republic of Serbia is a signatory to numerous international agreements related to nature protection, including the Convention for the Protection of the World Cultural and Natural Heritage, which was ratified in the Republic of Serbia in 1974 (*The Official Gazette of SFRY-International Agreements*, No. 56/74).

The Republic of Serbia became a signatory to the 1992 Declaration on Environment and Development (Rio).

The UN Convention on Biological Diversity in the Republic of Serbia has been ratified by the Law on Ratification of the Convention on Biological Diversity (*The Official Gazette of the FRY - International Agreements,* No. 11/01). This Convention recognises the sovereign right of each State Party to dispose of its resources and biodiversity, but Member States are expected to support three main objectives of the Convention:

1) Protection of biological diversity;
2) Sustainable use of biodiversity components;
3) Even distribution of profits from the use of genetic resources.

Within the framework of the UN Convention on Biological Diversity, accompanying protocols were adopted, as follows:

1) Protocol on Biosafety - Cartagena Protocol, which was accepted in the Republic of Serbia by the Law on Ratification of the Cartagena Protocol on Biological Protection to the Convention on Biological Diversity, with annexes (*The Official Gazette of Serbia and Montenegro - International Agreements*, No. 16/05);
2) Protocol on Access to Genetic Resources and Fair and Equal Distribution of Benefits Arising from Their Use - Nagoya Protocol, adopted in the Republic of Serbia by the Law on Ratification of the Nagoya Protocol on Access to Genetic Resources and Fair and Equal Distribution of Benefits Arising from Their Use by the Convention on Biological Diversity (*The Official Gazette of the Republic of Serbia - International Agreements*, No. 12/18).
3) Convention on Wetlands of International Importance Especially as Wetland Bird Habitats - The Ramsar Convention was accepted in the Republic of Serbia by the Decree on Ratification of the Convention on Wetlands of International Importance, Especially as Wetland Bird Habitats (*The Official Gazette of the SFRY*, No. 9/77).
4) Convention on International Trade in Endangered Species of Wild Fauna and Flora - CITES was adopted by the Law on Ratification of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (*The Official Gazette of the Republic of Serbia - International Agreements*, No. 11/01).
5) Convention on the Conservation of Migratory Species of Wild Animals - The Bonn Convention was accepted by the Law on Ratification of the Convention on the Conservation of Migratory Species of Wild Animals (*The Official Gazette of the Republic of Serbia - International Agreements*, No. 102/07).

Accompanying agreements of this convention are as follows: Agreement on the Protection of African-Eurasian Migratory Waterbirds (UNEP/AEWA), which was accepted by the Law on Ratification of the Agreement on Conservation of African-Eurasian Migratory Waterbirds (*The Official Gazette of the Republic of Serbia - International Agreements,* No. 13/18) and the Agreement on the Conservation of Bats in Europe (UNEP/EUROBATS), which was accepted by the Law on Ratification of the Agreement on the Conservation of Bats in Europe (*The Official Gazette of the Republic of Serbia - International Agreements*, No. 13/18).

In 2020, the Republic of Serbia became a member of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). One of the main roles of the Platform

is the global assessment of the state of biodiversity, ecosystems and services they provide to society, as well as the development of special thematic and regional assessments, strengthening the role of science and profession in decision-making at the level of global biodiversity policies.

4.2.3. International agreements, conventions and treaties at the regional level

4.2.3.1.EU Biodiversity Strategy

In 2020, the European Commission adopted a new EU Biodiversity Strategy for 2030 with an Action Plan which represents a comprehensive and long-term plan for nature conservation and stopping ecosystem degradation and their restoration.

The Biodiversity Strategy, as the main part of the EU Green Deal, is in line with the 2030 Agenda for Sustainable Development and the goals of the Paris Agreement on Climate Change, with the aim of building society's resilience to future threats such as climate change, forest fires and lack of healthy and safe food or disease epidemics, including protection of wildlife and fight against illegal trade.

This strategy represents the EU's contribution to international negotiations on a global biodiversity framework beyond 2020, with the ultimate goal of restoring, resisting and adequately protecting all the world's ecosystems by 2050.

The Strategy, among other things, includes key commitments and activities that need to be fulfilled by 2030, as follows:

1) legally protect a minimum of 30% of the EU's land area and 30% of the EU's sea area, out of which 10% of the area should be strictly protected, including all remaining EU primary and old-growth forests;

2) integrate ecological corridors, as part of identified Trans-European Nature Network to prevent genetic isolation, allow for species migration, and maintain and enhance vitality of ecosystems. In this context, investments in green and blue infrastructure and cooperation across borders among Member States should be promoted and supported through the European Territorial Cooperation;

3) effectively manage all protected areas, defining clear conservation objectives and measures, and monitoring and supervising them to ensure better implementation and monitoring of progress, improving knowledge, financing and investment as well as better integration of nature protection into the decision-making process;

4) introduce measures to address global biodiversity conservation, indicating the EU's readiness to lead by example towards the successful adoption of a long-term global framework for biodiversity in line with the UN Convention on Biological Diversity.

4.2.3.2. European Union legislation on nature protection

The backbone of the legislation in the field of nature conservation of the European Union consists of the Directive on the conservation of natural habitats and of wild flora and fauna and the Directive on the conservation of wild birds, on the basis of which the European ecological network Natura 2000 is established. In addition to the above directives, the Directive on the keeping of wild animals in zoos (99/22/EEC), Regulation 1143/14 on the prevention and

management of the introduction and spread of invasive alien species, as well as a set of EU regulations on wildlife trade implementing the CITES Convention at EU level, Regulation 511/2014 (EC) 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 Utilisation in the EU with Implementing Regulation 2015/1866 (EC) as well as Regulation EU/995/2010 and Regulation EC/2173/2005 (FLEGT) regarding the monitoring and control of trade in timber and timber products have also been implemented in the field of nature conservation.

Horizontal environmental legislation is of special importance for the implementation of legislation for nature conservation and includes a set of directives which in certain provisions define the obligation to comply with nature conservation legislation in order to conserve habitat types and species, control the trade of wild species and their derivatives and combat illegal killing, trapping and wildlife trade through sectoral cooperation and the establishment of infrastructure that facilitates access to environmental information in terms of providing public access to data exchange at national level and within cross-border cooperation, as follows: Directive 2001/42/EC (SEA) on the assessment of the effects of certain plans and programmes on the environment and the Protocol on Strategic Environmental Assessment integrally linked to the ESPO Convention, Directive 2011/92/EC (EIA) on the assessment of the effects of certain public and private projects on the environment amended by Directive 2014/52/EU including certain provisions of the ESPOO Convention, INSPIRE Directive 2007/2/EC establishing an infrastructure for spatial information in the European Community, Directive 2003/35/EC on public participation in drawing up certain plans and programmes relating to the environment, as amended by Directives 85/337/EEC and 96/61/EC on the right to legal protection, Directive 2003/4/EC on public access to environmental information, Directive 2008/99/EC on environmental crime referring to the protection of the environment through criminal law, Directive 2004/35/EC on liability for environmental damage as amended by Directives 2006/21/EC, 2009/31/EC and 2013/30/EC on the prevention and remedying of environmental damage, including Water Framework Directive 2000/60/EC. In addition, the importance of Regulation (EU) 2019/1010 of the European Parliament and of the Council of 5 June 2019 on the alignment of reporting obligations in the field of legislation related to the environment, including amendments made through thematically related directives and regulations, should be borne in mind.

It should also be noted that the acquis communautaire as a body of legal acts of the EU includes, among other things, revisions, international agreements concluded by the EU with third countries and international organisations, agreements between member states, general legal principles, acts adopted by the bodies of the European Union on the basis of authorisation and in accordance with the procedures prescribed by the constituent treaties (regulations, directives, decisions, recommendations and opinions, as well as instructions, rulebooks, declaration decisions, resolutions, strategies, action plans, measures, etc.) and case law of the Court of Justice of the European Union.

The umbrella documents in the process of EU integration in the Republic of Serbia are the National Strategy for Serbia's Accession to the EU as of 2005 and the Stabilisation and Association Agreement between the European Communities and their Member States and the Republic of Serbia on the other side ("Official Gazette of the Republic of Serbia", No. 83/08). The national programme for the adoption of the acquis communautaire is a detailed, multi-annual plan for harmonisation of domestic regulations with EU regulations. The Ministry in charge of the

environmental protection is responsible for the implementation of Chapter 27 – Environment and Climate Change.

The document “Status and plans for transposition and implementation of the acquis communautaire for Chapter 27 – Environment and Climate Change" was adopted by the Government in 2015, following the first bilateral meeting for this chapter. The purpose of this document is to provide the latest information on the plans for transposition and implementation of the Republic of Serbia in order to achieve full compliance with EU regulations. The document was developed within the Negotiating Group 27, and in consultation with AP Vojvodina, local self-government units and the civil sector, approved within the negotiating structure of the Republic of Serbia. This document shows the current understanding of the Republic of Serbia in respect of necessary investments, estimated costs related to them, and planned deadlines for their achievement. It is based on the best information currently available and follows the strategic direction defined within the National Environmental Approximation Strategy, which was adopted on 13 October 2011.

This programme and the Action Plan, which is an integral part of this programme, implement the objectives and measures of the EU Biodiversity Strategy with the planned continuation after the harmonisation of this Strategy and the Programme with the Global Strategic Plan for Biodiversity, which is in the process of developing within the framework of the UN Convention on Biological Diversity.

4.2.3.2. Council of Europe regulations on nature conservation

Backbone of the Council of Europe nature conservation legislation constitutes conventions that include resolutions and recommendations as instruments for implementing provisions of a convention in accordance with the priority obligations imposed on the parties.

Convention on the Conservation of European Wildlife and Natural Habitats – Bern Convention was adopted by the Republic of Serbia through the Law on Ratification of the Convention on the Conservation of European Wildlife and Natural Habitats ("Official Gazette of the Republic of Serbia - International Treaties", No. 102/07).

In accordance with the obligations arising from the Bern Convention, member states are obliged to take measures to promote national policies for the conservation of European wild flora, wild fauna and natural habitats, with particular attention to endangered and vulnerable species, especially endemic ones and endangered habitats. Accordingly, a Member State undertakes to implement in its planning and development policies and legislation appropriate administrative measures for the conservation of habitats of wild flora and fauna species and to ensure the special position of species of wild fauna and migratory species.

The following will in particular be prohibited for these species:

1) all forms of deliberate capture and keeping and deliberate killing;

2) deliberate damage to or destruction of breeding or resting sites;

3) deliberate disturbance of wild fauna, particularly during the period of breeding, rearing and hibernation, insofar as disturbance would be significant in relation to the objectives of this Convention;

4) deliberate destruction or taking of eggs from the wild or keeping these eggs even if empty;

5) possession of and internal trade in these animals, alive or dead, including stuffed animals and any readily recognisable part or derivative thereof, where this would contribute to the effectiveness of implementing the Bern Convention.

On 6 December 2019 in Strasbourg (France), the Standing Committee of the Bern Convention

adopted the Recommendation No. 205 (2019) with the Rome Strategic Plan 2020-2030 for the Eradication of Illegal Killing, Trapping and Trade of Wild Birds.

In accordance with Article 1, para. 2, Articles 6 and 14 of the Bern Convention, the Standing Committee instructed the Contracting Parties to implement the Rome Strategic Plan 2020-2030 in order to:

1) understand the scale, scope and motivation with regard to eradicating the illegal killing, trapping and trade of wild bird species;

2) carry out active prevention of illegal killing, trapping and trade of birds;

3) ensure that the illegal killing of birds is effectively and efficiently incorporated into national legislation;

4) ensure efficient and effective implementation of relevant laws;

5) ensure effective and appropriate justice for misdemeanours and criminal offenses in the field of illegal killing, trapping and trade of wild bird species.

Pursuant to the obligation to eradicate the illegal killing, trapping and trade of wild bird species, the Government, by Conclusion 05 No. 353-5408/2019-3 of 18 July 2019, accepted Recommendation No. 164 (2013) of the Standing Committee of the Council of Europe Convention on the Conservation of European Wildlife and Natural Habitats with the Tunisian Action Plan for the period 2013-2020 in order to combat illegal killing, trapping and trade in wild bird species. Action plan of this Programme determines the obligation to implement Recommendation No. 205 (2019) with the Rome Strategic Plan 2020-2030 for the Eradication of Illegal Killing, Trapping and Trade of Wild Birds.

The Protocol on the Action and Cooperation of Bodies and Organisations was prepared aimed at improving cooperation at the national and international levels in order to more adequately and efficiently implement commitments based on accepted international treaties to eradicate illegal killing, trapping and trade in wildlife and provide protection to endangered specimens. The Protocol should be revised in accordance with Recommendation No. 205 (2019) with the Rome Strategic Plan 2020-2030 for the Eradication of Illegal Killing, Trapping and Trade of Wild Birds in cooperation with the competent bodies and organisations.

European Landscape Convention was ratified by the Republic of Serbia through the Law on Ratification of the European Landscape Convention ("Official Gazette of the Republic of Serbia - International Treaties", No. 4/11) with the obligation to integrate landscaping into spatial (regional) and urban planning policies, cultural, agricultural, social, economic and environmental policies, as well as in all other policies that may have a direct or indirect impact on the landscape. Within this Convention, in 2015, the Republic of Serbia, together with 194 other UNESCO member states, adopted a new mechanism of international cooperation in the field of geological heritage - UNESCO Global Geoparks, which is part of the UNESCO International Geoscience and Geoparks Programme.

Framework Convention on the Protection and Sustainable Development of the Carpathians - Carpathian Convention was adopted by the Republic of Serbia through the Law on Ratification of the Framework Convention on the Protection and Sustainable Development of the Carpathians (*The Official Gazette of the Republic of Serbia - International Treaties*, No. 102/07).

4.3. Financial framework for nature protection

Financing of environmental protection, including nature protection in the Republic of Serbia is realised with the funds of the Budget of the Republic of Serbia which are allocated through the Ministry responsible for environmental protection and the Environmental Protection

Agency, institutions and earmarked funds as well as budgets of local self-government units and funds provided through numerous bilateral and multilateral agreements and donations. Most of the funds are provided from EU pre-accession funds in the process of EU integration.

Through the programme budget, funds are determined for each budget year with a projection of resource planning for the next two years.

Financing of protected areas is realised through performing activities entrusted to public companies for management of national parks and subsidies from budget funds, fees from the use of protected areas, use of natural resources, revenues from tourism, donations and other sources. The average share of financing of protected areas from the state budget is around 25%.

The Ministry in charge of environmental protection also finances projects in the field of nature conservation for the establishment of an ecological network, monitoring the status of certain wild flora and fauna, development of individual management plans for protection of endangered species, preparation of red books and red lists of threatened plant and animal species, etc.

The Government of the Autonomous Province of Vojvodina allocates certain funds from its budget to the Secretariat for Urban Planning and Environmental Protection of Vojvodina Province and the Institute for Nature Conservation of Vojvodina Province.

The Ministry of Education, Science and Technological Development, through a competition, finances the development of basic, technological and integral projects from various scientific fields, and thus research related to the field of nature protection. According to the data by the mentioned Ministry regarding financing national projects dealing with research related to biodiversity for the period 2011-2014, about 8.5 million euros (close to a billion dinars) were allocated.

The Ministry of Agriculture, Forestry and Water Management prepared the IPARD II programme of the Republic of Serbia, for the programme period 2014-2020, which was adopted by the European Commission and allocated 175 million euros for its implementation. The IPARD programme supports the development of the agricultural sector, and as regards the agri-environmental measures for this period, only organic production has been accredited.

In addition to EU IPA funds, the Republic of Serbia provides funds to support projects in the field of environmental protection and through donations, loans, international assistance and funds from instruments, programmes and funds of the UN and international organisations, such as the Global Environment Facility (GEF), the World Bank, the European Bank for Reconstruction and Development, the United States Agency for International Development (USAID), the German Organisation for Technical Cooperation (GIZ) and others. The Republic of Serbia has a full participation in the Seventh Framework Programme for Research and Technological Development (FP7), as well as in the new cycle Horizon 2020 – the EU Framework Programme for Research and Innovation.

5. OVERVIEW AND SUMMARY OF THE REQUIREMENTS OF THE CONVENTION ON BIOLOGICAL DIVERSITY RELATED TO HARMONISATION OF NATIONAL OBJECTIVES WITH AICHI BIODIVERSITY TARGETS AND OTHER INTERNATIONAL DOCUMENTS

5.1. UN Convention on Biological Diversity

National biodiversity strategies with action plans, according to Article 6 of the Convention on Biological Diversity, are the basic instrument for implementation of the Convention at the national level.

Obligations of the contracting parties are defined in Article 6 of the Convention, which states that each Contracting Party shall, in accordance with its conditions and capabilities:

1) Develop (or adapt the existing) national strategies, plans or programmes for the conservation and sustainable use of biological diversity which shall reflect the measures set out in this Convention;

2) Integrate, as far as possible and as appropriate, the principles of conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies.

Contracting parties to the Convention on Biological Diversity, at the tenth meeting held in 2010 in Nagoya, Japan, adopted the Strategic Plan for Biodiversity 2011-2020, with the aim of encouraging expanded action in support of biodiversity conservation over the next decade in all countries and with all stakeholders. The Strategic Plan consists of a common vision, mission, strategic goals and 20 targets, collectively called "Aichi Targets". The Aichi Targets are listed in Annex 5 - Aichi Biodiversity Targets, which is printed with this programme and forms an integral part of it.

Guidelines for implementation of the Strategic Plan for Biodiversity 2011-2020 contain the following:

• Contracting parties to this Convention shall adopt their Biodiversity Strategies with action plans, or update the existing ones, in accordance with the Strategic Plan for Biodiversity 2011-2020;

• Contracting parties to this Convention shall use the Strategic Plan for Biodiversity 2011-2020 and Aichi targets as a flexible framework in the process of integrating these into national goals and revising the existing strategies. National goals are developed taking into account national priorities and capacities, but also the contribution to collective efforts to achieve global Aichi targets for biodiversity conservation;

• Contracting parties to this Convention shall adopt updated National Biodiversity Strategies and Action Plans (NBSAPs) as policy instruments and for integrating the principles of biodiversity conservation into national development, financial management processes and planning processes;

• Monitoring and reviewing the implementation of the Strategy and Action Plans (NBSAPs) and national goals shall be performed using established indicators.

In the process of revision of the Biodiversity Strategy of the Republic of Serbia for the period 2011-2018, as a previous strategic document, an analysis was performed on the compliance of national goals with Aichi and EU biodiversity targets, which are listed in Annex 6.

5.2. 2030 Agenda for Sustainable Development

The 2030 Agenda for Sustainable Development contains 17 global sustainable development goals, two of which are directly aimed at nature conservation (Goal 14 - Conserve and sustainably use the oceans, seas and marine resources for sustainable development and 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 in line with the Aichi targets of the Convention on Biological Diversity, i.e. the achievement of globally adopted Aichi targets directly contributes to the Agenda for Sustainable Development.

6. ENDANGERMENT OF NATURE IN THE REPUBLIC OF SERBIA

6.1. Causes that lead to endangerment of nature in Serbia - models "problem tree" and "objective tree"

Causes that lead to endangerment of nature (biodiversity and geodiversity) in the Republic of Serbia, review of human activities that trigger these causes, as well as consequences arising from endangerment, are defined by a participatory approach, based on the model "problem tree" combined with "objective tree". The problem tree is a graphical representation of the main problem with all its subproblems, causes and effects in Annex 7 – Problem Tree, which is printed with this programme and forms an integral part of it (hereinafter: Annex 7).

Taking into account that environmental and human factors interact in a dynamic and often unpredictable way, in the planning phase it is important to recognise and define the magnitude of the impact of different factors on biological and geological diversity, as well as the interactions between these factors and the way they relate to, or depend on variations in local conditions. The used "problem tree" model enabled the analysis of the causes that lead to endangerment of biodiversity and geodiversity, as well as the effects that arise from the action of various factors, which enabled the collection and analysis of information and prioritisation.

In the process of preparation of the Nature Protection Programme, the Nature Protection Strategy of the Republic of Serbia was revised using the participatory method (PCM Guidelines, 2004) "Problem Tree", shown in Annex 7.

The applied methodology is based on key theoretical concepts of strategic management in the public sector, new public management, tools and techniques for drafting strategic documents in the public sector that have been validated in practice.

In the analysed model, the objective tree represents the “mirror reflection” of the problem tree. The objectives to be achieved in biodiversity protection have been obtained by redefining the problem into desired, improved conditions.

The process of defining the problem tree went through several steps:

Step 1: Considering and defining a priority problem, i.e. identifying a “known” problem or “high-level” objective based on a preliminary analysis of existing information and initial consultations with process participants.
Step 2: From the identified problems, an individual initial problem was selected - Threat to nature
Step 3: Troubleshooting problems related to the initial problem.
Step 4: Establishing a hierarchy of causes and effects:

1) Problems that directly caused the initial problem were placed below and
2) Problems that were a direct effect of the initial problem were put above

Step 5: All other problems were arranged according to the same principle "what causes what?" Two or more causes that in combination produced an impact, were placed at the same level of the diagram.
Step 6: Cause-and-effect problems were linked so that they clearly showed the key links.

Step 7: Reviewing the diagram in order to confirm its validity and completeness and adding problems that were not previously mentioned to the appropriate place in the diagram.
Step 8: Diagram representation for further comments/information.

The obtained problem tree presents a summary picture of the existing situation. This analysis of the problem was leading for all subsequent analyses and decisions on priorities in the process of preparation of the Nature Protection Programme.

The problem tree model presented in this chapter is provided in Annex 7.

Based on the set problem tree, the objectives for each programme area were revised. For each programme area, in relation to the identified problem, the objective was defined in a way that the observed negative situation of problem analysis was formulated in a positively desired state.

Based on the established objectives and in accordance with the concepts of strategic performance management in the public sector, the working group defined the following for each programme area and all specific objectives within the area:

1) Indicators,
2) Baseline value as a description of the current state, and
3) Target values as values to be pursued for 2019 and 2024.

The process of translating the programme directions into plans included translating objectives into activities that would enable the creation of capacities for service delivery, by allocating limited resources according to established priorities.

6.2. Problems that directly cause threat to nature in the Republic of Serbia

6.2.1. Biodiversity reduction

Biodiversity reduction in the Republic of Serbia occurs as a consequence of disappearance, degradation and fragmentation of habitats, reduction of wildlife populations, endangerment of genetic diversity of indigenous populations of plant and animal species, introduction of invasive and allochthonous species and GMOs, climate change and natural disasters and human impacts.

Conversion of natural or semi-natural habitats for the needs of production sectors, housing needs, infrastructure development and commercial use, which results in habitat extinction, fragmentation and degradation, is the most important individual factor responsible for endangering species in the Republic of Serbia. Land use change includes draining wetlands, deforestation, expanding residential or commercial facilities outside construction zones; development of tourist centres, turning meadows and pastures into fields, etc.

In the Republic of Serbia, the rate of habitat conversion is linked to the development of technology, as well as the expansion and improvement of transport infrastructure. Conversion of natural or semi-natural habitats especially refers to steppes, salt marshes and certain wetland habitats. Unfortunately, there is no systematic monitoring of these phenomena, so it is difficult to assess the extent to which habitats have changed or disappeared.

Decline in wildlife populations is due to human activities leading to the overuse of certain plant or animal species. Hunting, fishing and gathering from nature, legal and illegal, can be the causes of endangerment or extinction of certain species and reduction of genetic variability of certain species. Many wild animals, especially mammals, birds and fish, are hunted for their fur, feathers, food, sports or trophies. Individuals of many species of wild animals are taken from the wild for sale as pets for zoos and biomedical research. Uncontrolled hunting and fishing pose a threat to many species, especially large mammals and birds.

Excessive exploitation has a negative impact on many plant and animal species that are collected for various purposes. Collection of wild species for commercial purposes is regulated in order to prevent excessive and uncontrolled exploitation of these species.

Endangered genetic diversity of wild plant and animal species, as well as cultivated plants, bred and domesticated animals and their wild relatives represents another danger for the conservation of biodiversity in the Republic of Serbia. Extremely negative socio-economic changes in rural areas, production systems with large investments and one-way selection in domestic livestock lead to a reduction in genetic variability. For example, the introduction of new methods of selection, crossbreeding and giving preference to uniformity in poultry farming for the use of meat and egg production has led to reduction in genetic diversity in domestic poultry breeds.

Introduction – allochthonous invasive species and GMOs can have a significant impact on indigenous species and ecosystems. Allochthonous invasive species are more competitive than indigenous species in competing for resources, altering the nutrient cycle, and disrupting natural ecosystems (e.g., invasion and spread of many introduced grass species are associated with increased frequency, intensity, and size of fires).

Allochthonous invasive species can also have negative economic effects, especially in the agricultural sector as well as in the fisheries, forestry and hunting sectors. Economic effects include reduced yields and products on the market, suppression of indigenous pollinators by allochthonous species as well as the cost of control and/or eradication of allochthonous species. A particular problem is certain allochthonous invasive species introduced for the needs of breeding houses and pet stores, which in nature can form populations that suppress indigenous species, for example red-eared slider (Trachemys scripta elegans) in aquaristics, water cabbage/lettuce (Piscia stratiotes) in thermal aquatic ecosystems, etc.

Natural disasters have a negative impact that cannot be predicted, but the effects can be mitigated through action at the level of prevention. Floods, among other things, can lead to changes in the flow regime in natural watercourses. Modification of natural flows of rivers and streams and their floodplains and wetlands has been recognised as a major factor contributing to the loss of biodiversity and ecological function in aquatic ecosystems, including floodplains.

According to the data from the Spatial Plan of the Republic of Serbia, potential floodplains in the Republic of Serbia cover an area of 1.6 million ha. Conservation of floodplains along riverbeds, as natural reservoirs that enable storage of large amounts of water from which water is gradually and safely released into river flows, as well as into groundwater, have a preventive effect and mitigate the effect of floods. They represent natural retentions which, unlike expensive hydrotechnical and other measures, provide their "services" for prevention of high waters free of charge. Protected areas in Serbia that reduce the effects of floods are e.g. Special Nature Reserves "Gornje Podunavlje", "Obedska Bara", "Koviljsko - Petrovaradinski Rit", "Karadjordjevo" and "Zasavica".

Due to outbreak of fires in many forests, there have been changes in the composition of species. Raising coniferous plants and overgrowing of clearings due to the extinction of livestock and traditional mowing, increase the risk of fire. In some cases, such forests are more susceptible to insect damage, disease and fire. Construction of forest roads affects the increase of sedimentation in streams, fragments and degrades habitats and thus affects the movement of wild animals and the invasion of allochthonous plant species.

Poisoning of wild animals due to unprofessional use of permitted chemical preparations in agriculture and forestry, as well as illegal use of prohibited active substances is another problem that leads to a decrease in the populations of wild species.

6.2.2. Ineffective protected area management system

The Republic of Serbia is working on improving the nature conservation system and strives to develop better spatial coverage and sustainable financing of the protected area system. It has been noticed that the protected area management system is not effective enough, due to inadequate financing system, insufficiently developed capacities of managers and other relevant institutions, underdeveloped monitoring system, as well as shortcomings in the system of processing violations related to area protection regulations.

Financing of protected areas is provided from: the budget of the Republic of Serbia, AP Vojvodina, or local self-government units; fees for the use of the protected area, income generated in the performance of activities and management of the protected area; funds provided for the implementation of programmes, plans and projects in the field of nature conservation; donations, gifts and aid; other sources in accordance with the law. In accordance with the Law on National Parks, earmarked transfers for local self-government units have been defined for financing infrastructure projects in national parks. The share of financing of protected areas from state sources is on average 25% of the total budget of the managers. One of the problems is inadequate planning and disposal of funds for the implementation of management plans and programmes.

Insufficient capacities of managers in respect of professional competence of human resources often lead to a lag in progress in meeting the objectives for which an area has been granted protection status. Insufficient quality management programmes contribute to the lack of active measures for the protection of habitats and species and their field monitoring.

Lack of an appropriate monitoring system has been recognised as another limitation for the efficient management of protected areas in the Republic of Serbia and of the ecological network. Monitoring the condition of the populations of most species, habitats and areas located in the territory of protected areas has not been systematically resolved, mostly due to the lack of adequate funding, but also the capacity of managers.

6.2.3. Disadvantages of the Ecological Network of the Republic of Serbia

In accordance with the amendments to the Law on Nature Protection of 2016, it is defined to establish the ecological network as a functionally and spatially connected unit in order to conserve habitat types of special importance for protection, restoration and/or improvement of disturbed habitats and conservation of habitats of wild flora and fauna species. The ecological network, in respect of these changes, consists of: ecologically important areas and ecological corridors. Ecologically important areas, in respect of coherence, are:

1) Areas of national importance which, with their biogeographical representation, contribute to the conservation of biological diversity in the Republic of Serbia;

2) Areas of international importance which, with their biogeographical representation, contribute to the conservation of habitat types and habitats of the species, including birds, in accordance with ratified international treaties and generally accepted rules of international law.

The Regulation on Ecological Network has established an ecological network covering 101 ecologically significant areas and ecological corridors of international importance. The Regulation, among other things, defines protection measures, management, financing and monitoring. The ecological network has not yet been functionally established, due to incomplete mapping of habitat types and habitats of reference species due to lack of capacity for field research and collection of new scientific data.

Accordingly, it is necessary to amend the Decree on Ecological Network in accordance with the amendments to the Law on Nature Protection, to continue collection of scientific data on habitat types, species and their habitats, develop manuals for determining ecologically important areas of international and national importance, establish a list of certain (reference) species of national and international importance and revise the list of habitat types in order to adequately map habitats and species in identified ecologically significant areas.

Amendments to the Regulation on Ecological Network need to improve the way of management in order to establish more adequate management and implementation of protection measures, especially in areas that overlap with protected areas. Spatial planning as a mechanism for implementing the established concept of the ecological network is of special importance for integrating the development of the ecological network in all areas of development, planning and use of space. It is also necessary to establish an appropriate assessment procedure for the ecological network in accordance with the law.

6.2.4. Unsustainable use of biodiversity, access and sharing of benefits and economic evaluation

Research and evaluation of ecosystem services in Serbia are not sufficiently developed and are performed sporadically. Problems that cause unsustainable use of biodiversity, access and sharing of benefits and economic evaluation primarily stem from the lack of mechanisms for sustainable use of biodiversity, inadequate system of access and sharing of benefits from genetic resources and lack of systems for evaluation of ecosystem services.

Due to the obvious lack of mechanisms for sustainable use of biodiversity, contribution of ecosystem services as an added value is not fully integrated into the price of most products, and areas of importance for these services (e.g. many protected areas, forest reserves, low-intensity agricultural areas, wetlands and other areas of developed biodiversity) are undervalued and often managed in a way that undermines or degrades the provision of these services.

It is estimated that the system for access to genetic resources, fair and equitable sharing of benefits arising from their utilisation has not yet been properly established in the territory of the Republic of Serbia. Pursuant to the provisions of the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation to the Convention on Biological Diversity, each state has a sovereign right over its natural resources and undertakes to regulate access to national genetic resources by issuing permits (previously with reasoned consent). Also, users and suppliers of genetic resources must reach an agreement (mutually agreed contractual terms) on the conditions of access and sharing of benefits arising from the origin of these resources.

In addition to all of the above, Serbia has not yet established and appropriately implemented methodologies for evaluating ecosystem services, which would include knowledge and understanding of tools and techniques for economic evaluation of biodiversity components in accordance with assumed obligations under the international treaties and EU nature conservation legislation in which the Republic of Serbia participates in their adoption as a contracting party and as a candidate country for EU membership. Also, we should keep in mind the results of individual projects for the preparation of studies on the evaluation of ecosystem services in protected areas and parts of the ecological network (SNR "Koviljsko-Petrovaradisnki Rit", Bosutske Šume, etc.), and preparation of guidelines for users and owners of natural resources. Biodiversity is the foundation on which all ecosystem services are based and provides an "auxiliary system" without which no other service would be possible. Many other sectors, especially agriculture, forestry, fishing, water, hydropower and recreation and tourism, rely heavily on ecosystem services and

contribute significantly to GDP and employment, and are important for the country in economic terms as well.

6.2.5. Insufficiently built capacities for managing the biodiversity conservation system

In the Republic of Serbia, in institutions at all levels, there is a need to strengthen and improve the capacity to manage the system for biodiversity conservation, which is a consequence of the existence of public policies that do not encourage sustainable use of resources. Many biodiversity threatening factors stem from the constant and growing need for resources or the need to repurpose natural habitats for production purposes.

Insufficient number of professionally trained personnel and lack of equipment have conditioned the existence of insufficiently developed institutions for biodiversity conservation.

An inadequate system of financing biodiversity conservation has been identified as another obstacle to the existence of appropriate capacities for biodiversity conservation.

It is necessary to strengthen and improve capacities in the field of nature protection and biodiversity conservation, including basic principles, research methodologies and writing and developing projects; use of GIS tools for biodiversity conservation and protected area management; planning the recovery of endangered species, involving local communities in the planning and management of protected areas, creating and implementing sustainable development projects and land use strategies while conserving biodiversity, creating and implementing strategies for adaptation to climate change, etc.

6.2.6. Insufficient integration of biodiversity into other sectors

Activities of all other economic sectors in some way and at some level affect biodiversity. Processes and activities of other sectors that have an adverse impact on biodiversity can lead to a reduction in biodiversity, which in turn has a negative impact on human well-being and lowers the utilisation of available ecosystem services.

Biodiversity conservation is dealt with by the environmental protection sector and, as a rule, other sectors are insufficiently informed about the importance of biodiversity conservation. Integration of the principles of biodiversity conservation into other sectors is of key importance for achieving a favourable condition of biodiversity, and also contributes to the sustainable development of the country, especially its less developed parts.

Existing mechanisms for biodiversity conservation and inclusion of biodiversity goals in other sectors are applied through nature conservation conditions, the Law on Strategic Environmental Assessment ("Official Gazette of the Republic of Serbia", No. 135/04 and 88/10) and the Law on Environmental Impact Assessment ("Official Gazette of the Republic of Serbia", No. 135/04 and 36/09). For sectoral activities, in the process of issuing nature conservation conditions, an assessment is made as to whether the planned works and activities can be realised from the point of view of nature conservation objectives and adopted regulations and documents. The decision on the conditions of nature conservation is issued by the competent Institute for Nature Conservation (Republic or Provincial).

According to the Law on Nature Protection, the project holder who uses natural resources, performs construction and other works, activities and interventions in nature, is obliged to act in accordance with nature conservation measures, which are defined in plans, bases and programmes and in accordance with project-technical documentation, in a way that endangering and damaging nature are avoided, or reduced to a minimum.

The Law on Nature Protection introduced a new instrument in nature protection in Serbia - appropriate assessment. As a legacy of European legislation, it is the basic instrument for

sustainable use and protection of the European ecological network Natura 2000. Appropriate assessment as an instrument from the EU Habitats Directive has been transposed into the regulations of the Republic of Serbia, as an appropriate assessment for ecological network including ecologically important areas of international and national significance. The process of drafting the Regulation on the Appropriate Assessment, amendments to the Law on Strategic Environmental Assessment and amendments to the Law on Environmental Impact Assessment is in progress for the purpose of harmonising with European legislation in order to legally define a new control mechanism in nature protection in Serbia.

6.2.7. Inadequate management of knowledge and information on biodiversity

To manage knowledge and information on biodiversity, it is necessary to have a clearly defined information system with a database/databases, integrated into one functional unit. However, the Republic of Serbia has not yet established a national biodiversity information system and lacks a legal basis for its establishment. Another problem associated with inadequate management of knowledge and information on biodiversity is that existing data are not organised and are not sufficient for all protection activities being carried out.

Law on National Spatial Data Infrastructure ("Official Gazette of the Republic of Serbia", No. 27/18) transposed the INSPIRE Directive. This law regulates the establishment and maintenance of the national spatial data infrastructure in the Republic of Serbia (hereinafter: NSDI). In addition to the transposed INSPIRE Directive, the Regulation on implementing rules for metadata of national spatial data infrastructure ("Official Gazette of the Republic of Serbia", No. 54/19) and the Regulation on monitoring and reporting of activities of national spatial data infrastructure ("Official Gazette of the Republic of Serbia", No. 91/20) were adopted to transpose into national legislation INSPIRE implementing rules for metadata and monitoring and reporting. By the end of 2021, it is planned to draft three more bylaws in accordance with the INSPIRE implementing rules which prescribe rules for interoperability, network services and access to geospatial data and services, including access and exchange between public authorities. In this regard, it can be said that the legal framework and the institutional framework for the functioning of the NSDI have been satisfactorily developed, which should ensure the interoperability of existing databases of different institutions and define the mechanism for managing databases and the entire system, and thus an integral national information system for biodiversity (INISB).

In the context of the above, the national monitoring system for biodiversity is not adequately developed, which makes it impossible to monitor changes and react in a timely manner, in order to avoid further reduction or endangerment of biodiversity.

Different institutions and organisations dealing with biodiversity protection have their own databases, which are not interconnected and compatible.

6.2.8. Low level of public awareness of the biodiversity importance

The general public in Serbia is not sufficiently informed of the biodiversity importance. This is primarily because there is not enough information on biodiversity and because the topic is not defined in an appropriate way and to the extent necessary in the official curricula and education programmes in the biodiversity segment. The weak connection between the competent institutions and the media is especially emphasized. Campaigns to raise public awareness and understanding of biodiversity are mainly geographically limited and sporadic, and low public participation in biodiversity conservation is evident. Given that the conservation of biodiversity is in the interest of all residents of the Republic of Serbia, it is important to raise awareness of the public and local

communities to support biodiversity conservation in cooperation with civil society organisations and experts.

6.2.9. Inadequate mechanisms for fulfilling international obligations for biodiversity conservation

The Republic of Serbia is a signatory to relevant international treaties and agreements of importance for the conservation of biological diversity. According to each of them, there are defined rights and obligations. There is an evident lack of capacity in Serbia for the appropriate and effective implementation of international obligations and cooperation with other international institutions for the protection of biodiversity. As a result, there are often delays in fulfilling obligations, or untimely implementation of provisions from international treaties and conventions.

6.2.10. Negative impact of climate change

As regards climate change, there is currently weak interaction in the Republic of Serbia between networks of researchers, policy makers and stakeholders dealing with climate change and those dealing with biodiversity, while the potential for their more direct cooperation is great. There is no systematic monitoring of the impact of climate change on biodiversity, nor is there a sufficient number of models for their projections, and the low public awareness of the impact of climate change on biodiversity is especially emphasized.

6.2.11. Reduction of geodiversity

The geodiversity of Serbia, as a basic component of nature and the environment, is exposed to various anthropogenic pressures that lead to its permanent degradation. The most significant anthropogenic activities that affect the change or lead to the disappearance of geodiversity segments are: mining (especially surface), infrastructure construction, construction of industrial plants, energy, urban planning, forestry, agriculture and unsustainable utilisation of cave jewellery, minerals, rock fragments, removal of "souvenirs" and mechanical damage in protected and tourist areas.

Considering that geoheritage objects are natural assets, which are partly protected in accordance with the law, it is necessary to establish the protection of geological objects that are also part of natural habitats and habitats of species and landscapes, in order to conserve biodiversity.

6.2.12. Incomplete implementation of the Nature Protection Programme

The Nature Protection Programme is an umbrella document for nature protection and harmonisation with international treaties and documents of other sectors. In order to improve nature protection, an assessment of progress in the implementation of the 2011 Biodiversity Strategy was carried out. Despite the underdeveloped system of monitoring the implementation of the Biodiversity Strategy, in the period from 2011 to 2014, certain measures were undertaken to implement activities in achieving the goals set in the Strategy by state institutions, civil society organisations and other organisations. The problem is in the insufficient capacities for the implementation of this programme, as a consequence of the lack of continuous financing and insufficiently defined way of monitoring the implementation of this programme. Based on the assessment of progress in the implementation of the 2011 Strategy in relation to the set goals, it was determined that the largest number of measures was applied in the implementation of activities related to meeting the strategic goals of conservation of biodiversity and protected areas. The

envisaged activities have been started or are being implemented, except for the activities related to the implementation of the national analysis of sensitivity to climate change using existing geographically explicit models for the evaluation of sensitivity of terrestrial and freshwater ecosystems to climate change.

7. PROGRAMME OBJECTIVES FOR THE NATURE PROTECTION AND BIODIVERSITY CONSERVATION SYSTEM IN THE REPUBLIC OF SERBIA

The Nature Protection Programme includes a General objective and three Special objectives as well as an Action Plan for the implementation of the Nature Protection Programme with defined measures and activities, indicators, responsible institutions, participants relevant to the implementation of activities, duration, sources of finance.

Vision

Protected and preserved nature provides permanent core values and potential for further development; the Republic of Serbia will be a country with raised awareness on the importance of natural resources conservation, enabling through wise and sustainable use multiple directions of development. By encouraging sustainable development, which includes clearly defined ecological principles at the national, regional and local levels, through education and participation of the public as well as interdepartmental cooperation, awareness on the need for nature protection and biodiversity conservationand physical planning at the political, economical and social levels, will be raised.

General objective 1: Improving the nature protection and biodiversity conservationsystem

Special objectives:

1.1. Reducing negative effects on biodiversity
1.2. Improving the protected areas, ecological network and species management system
1.3. Improving the public policy for the nature protection and biodiversity conservationand public participation in decision-making processes

Special objective 1.1. Reducing negative effects on biodiversity

With its rich natural and cultural heritage, the Republic of Serbia is one of the important centres of biological and geological diversity in Europe, since in a small area almost all climate zones, types of soil and biome in Europe are found.

The causes leading to decrease in biodiversity are habitat disappearance, fragmentation and degradation, illegal hunting, illegal fishing and illegal collecting and gathering flora and fauna, illegal and inadequate cutting down trees, inadequate conservation of genetic diversity of native flora and fauna species, introducing invasive and allochthones species and genetically modified organisms.

For biodiversity conservation in Serbia it is necessary to establish mechanisms for economic valuation of biodiversity, areas and ecosystem services, and integrate these values in the national policies, plans, budgets and strategies in relevant sectors. Currently, in Serbia, there is a

developed compensation system when the use of natural resources is in question, including fees for use of resources in protected areas, established pursuant to different legal acts.

Climate change and biodiversity are interconnected. Conservation of natural ecosystems and restoration of degraded ecosystems (including their genetic diversity and diversity of species) is essential for achieving overall goals of the Convention on Biological Diversity as well as the UN Framework Convention on Climate Change, since the ecosystems have a key role in the global carbon cycle and adapting to climate change, providing at the same time a wide range of ecosystem services essential for human wellbeing and development. Thus, the biodiversity conservation can contribute to a large extent to the mitigation of negative effects of climate change.

A functional Biodiversity Information System is a pre-condition for efficient nature conservation. At the national level, it is necessary to introduce organised collecting of biodiversity data as well as a monitoring system in order to determine the status and follow status trends when biodiversity at the national level is in question. It is necessary to network certain databases, found in public and scientific institutions, and assign access rights.

For this objective, the following measures are defined:

1.1.1: Establishing a monitoring system of the effects of climate change on biodiversity and impact of biodiversity on mitigation of effects of climate change

1.1.2: Establishing an Integrated National Information System for Biodiversity with database (INISB) in accordance with INSPIRE principles and implementation rules

1.1.3: Combatting illegal wildlife killing, capture and trade

1.1.4: Improved monitoring of effects of pollution on environment when biodiversity is in question

1.1.5: Improved monitoring of, and eradication of invasive species

Special objective 1.2: Improving the protected areas, ecological network and species management system

So far, the analysis of status concerning the implementation of activities for the establishment and management of protected areas has shown a number of issues, primarily related to the insufficient surface area under protection; lack of data on habitat species and types found within the protected areas; insufficient protection of priority habitat species and types; insufficient awareness and involvement of the public in terms of reconciling the requirements, regarding the needs for the use of space and resources in the protected area, with biodiversity conservation; insufficient involvement of scientific & research institutions and civil society organisations, in terms of providing data and/or inclusion in joint projects of importance for the conservation.

The recognised issues in the system of protected areas management relate, beside unfavourable financial situation, to insufficient manager capacity. For the efficient functioning of a protected area, it is necessary to improve the finance system, introduce permanent monitoring and reporting, establish functional networks of the protected area managers.

An ecological network as a functional and spatially connected wholeness shall be established for the conservation of habitat types of special importance for protection, restoration and/or improvement of damaged habitats and conservation of wild flora and fauna habitats. The ecological network in the Republic of Serbia shall be established pursuant to the Law on Nature Protection and the Decree on the Ecological Network.

For establishing an efficient ecological network in the Republic of Serbia it is necessary to improve regulations, revise the list of habitat types, determine criteria for the establishment and create a list of certain (reference) species of national and international importance protected through the ecological network.

When the protection of landscape diversity is in question, it shall be provided with defined principles of protection, in form of an issued Decision on requirements and conditions of nature conservation. In accordance with the Law on Environmental Protection, the landscape identification includes defining of landscape types as the basis for landscape protection, managing and planning, while the application of the European Landscape Convention implies the assessment and determining target landscape quality, on the basis of which protection measures and guidelines directing sustainable landscape spatial development, are determined. The Landscape Atlas has not yet been developed, which is the reason why the landscape diversity conservation and improvement have not yet been incorporated into the legislation.

Geodiversity of the Republic of Serbia, as the nature and environment base component, is exposed to various anthropogenic pressures leading to its permanent degradation. Bearing in mind that the set of geodiversity elements is an integral part of natural habitats, ecosystems and landscapes, their damaging or permanent destruction is a factor indirectly contributing to the loss of biodiversity and landscape diversity.

The destruction of geodiversity objects could be prevented primarily by meaningful planning through sustainable development and continuous emphasis on the geodiversity significance. Besides, certain concrete protection measures when some objects are in question are most certainly necessary.

The responsibility of all competent authorities, institutions and organisations in the system of the Republic of Serbia as well as the civil society are crucial for the implementation of this Programme. Establishing adequate mechanisms at all government levels shall provide all resources (financial, institutional, technical and technological, etc.) necessary for the implementation of the Nature Protection Programme. It is particularly important to establish a monitoring system when the implementation of the Nature Protection Programme is in question, while the Ministry responsible for the environmental protection tasks should promote measures and determine mechanisms for monitoring the achievement of objectives and realisation of measures and activities pursuant to determined indicators under the Action Plan.

For this objective, the following measures have been defined:

1.2.1:Increasing the surface of protected areas and maximising manager effectiveness

1.2.2:Establishing and developing a functional ecological network of the Republic of Serbia

1.2.3:Establishing and developing a natural area of special geological significance in the Republic of Serbia

1.2.4:Identifying, valuating and protecting different landscape types in the territory of the Republic of Serbia

1.2.5:Improving the protection status and species management.

Special objective 1.3: Improving the public policy for the nature protection and biodiversity conservationand public participation in decision-making processes

Article 5 of the Convention on Biological Diversity stipulates that each Contracting Party shall, as far as possible and as appropriate, cooperate with other Contracting Parties, directly or,

where appropriate, through competent international organisations, in respect of areas beyond national jurisdiction and on other matters of mutual interest, for the conservation and sustainable use of biological diversity.

In order to fulfil obligations and provide successful biodiversity conservation, particularly when sustainable use of biodiversity is in question, it is necessary to improve international and regional cooperation.

Favourable biodiversity conservation status implies the existence of an efficient biodiversity conservation system. In order to enhance the biodiversity conservation system in Serbia, it is necessary to improve the public policy framework as well as the institutional and financial framework.

One of the objectives of the Nature Protection Programme relates to the integration of biological diversity conservation in other sectors, particularly the ones directly using and managing natural resources: agriculture, forestry, hunting, fishing, use of plant and animal life, mining, electricity generation and tourism, through introducing biodiversity conservation principles into their policies, plans, programmes and production systems.

Article 13(a) of the Convention on Biological Diversity stipulates in the part relating to the public education and awareness that the Contracting Parties shall promote and encourage understanding of the importance of, and the measures required for, the conservation of biological diversity, as well as its propagation through media, and the inclusion of these topics in educational programmes. One of the strategic Aichi biodiversity targets relates to the enhanced implementation of the Nature Protection Programme through participatory planning, knowledge management and capacity building.

Public information and communication are essential in supporting measures and strategies related to biodiversity. All stakeholders should be involved in searching for opportunities for biodiversity conservation, which is the reason why an operational framework for education, information and inclusion of the public should be established.

For this objective, the following measures have been defined:

1.3.1: Improving international cooperation at the global level

1.3.2: Improving international cooperation at the regional level

1.3.3: Integration of the nature protection and biodiversity conservation into other sectors

1.3.4: Improving the existing and introducing new indicators for monitoring the impact of activities of other sectors for the nature and biodiversity conservation.

8. MONITORING THE IMPLEMENTATION OF THE NATURE PROTECTION PROGRAMME

8.1. Monitoring and evaluation indicators

In order to monitor progress in the implementation of the objectives of the Nature Protection Programme and Action Plan, indicators for certain activities for quality evaluation to enable progress in the fulfilment of the General and Special Programme objectives and adequate manner of its presentation, shall be defined.

The Action Plan determines indicators to be monitored periodically and on the basis of which, over time, fulfilment of the planned activities and achievement of Special objectives of the Nature Protection Programme shall be monitored, while the indicators of the effect of realisation are determined in the Rulebook on the National List of Indicators of Environmental Protection

(*Official Gazette of the Republic of Serbia,* No. 37/2011).

The Progress Report in the implementation of the Nature Protection Programme, based on the determined indicators, shall be prepared by the Ministry of Environmental Protection and the Environmental Protection Agency. For systematic collection of indicator data, which so far have not been collected at the level of the Republic of Serbia, additional capacity and fund provision as well as continuous cooperation between competent institutions is necessary.

In addition, it is necessary to establish a biodiversity monitoring system and improve collection and exchange of data on the nature conservation status and harmonise the data collection and processing methodology with methodologies applied by the Environmental Protection Agency.

8.2. Capacity and communication development for the implementation of the Nature Protection Programme

The Action Plan for the implementation of the Nature Protection Programme foresees priority activities for strengthening institutional capacity, know-how and skills for effective and efficient management and financial sustainability of the nature conservation system, with the aim of providing conditions for the implementation of the global biological diversity conservation policy targets and sustainable use of components of biodiversity, improvement of the Republic of Serbia legislation in accordance with accepted international agreements, and biodiversity monitoring in the environmental impact assessment.

In order to improve public awareness, understanding and support to nature conservation, thematic communication programmes as well as communication programmes for the management of protected areas and ecological network at the national, regional and local levels, are foreseen.

It is of particular importance to establish adequate communication with the stakeholders through seminars, consultations, public campaigns, mass media and electronic questionnaires intended for public information and participation.

Public information should be easily accessible bearing in mind continuous informing on established objectives and activities for the implementation of this programme and the implementation results.

8.3. Information system

With the aim of efficient planning and implementation of the nature conservation policy, it is necessary to establish and constantly maintain a unique information system within the unique information system in the environmental field in accordance with INSPIRE principles and implementation rules. It should contain all data relevant for the nature and biodiversity conservation.

8.4. Clearing-House Mechanism - CHM

Within the Convention on Biological Diversity, the so-called Clearing-House Mechanism with the role of improving professional and scientific cooperation has been established. In the Republic of Serbia, at the end of 2011 and at the beginning of 2012, CHM – web portal for information on biodiversity found in the European Environment Agency, was established and can be accessed at: http://www.biodiverzitet-chm.rs.

The portal on biological diversity of the Republic of Serbia is part of the global network for exchange of information established under the Convention on Biological Diversity. Its purpose is to directly offer or provide links for information on biological diversity. CHM portal participates in the implementation of the Convention on Biological Diversity and two Protocols in the Republic

of Serbia for the improvement of scientific and professional cooperation of institutions and organisations: Cartagena and Nagoya Protocols.

8.5. Integrating nature conservation measures into sectors (sector mechanisms, documents and regulations)

In order to enable effective and efficient implementation of the Nature Protection Programme, it is necessary to establish cooperation at all government levels, particularly bearing in mind cooperation with relevant sectors in development of sectoral strategies, plans and programmes adopted in accordance with special laws, which can have, when implemented, both positive or negative impact on nature, particularly in the fields of agriculture, forestry and water management, mining and energy, spatial planning, construction, transport and infrastructure, trade, tourism and telecommunications.

The managers of protected areas and ecological network are an important nature conservation entity implementing nature conservation in protected areas and ecological network areas they manage. Accordingly, the managers adopt management plans and programmes in which objectives and activities of this Nature Protection Programme are introduced as contribution to joint achievement of goals.

The relevant sectors responsible for the use of land and natural resources can have an impact on nature. The nature conservation mechanisms in performing business activities related to the use of natural resources are obliged to include in their plans and programmes conditions for nature conservation, and particularly in spatial and urban plans, as well as basis, plans and programmes of natural resources management at the national, regional and local levels.

Within this meaning, it is necessary to improve the mechanisms for introducing conditions for nature conservation and guidelines for sustainable use of components of biodiversity and sustainable use of land in planning in the fields of agriculture, forestry, hunting, fishing, energy, mining, transport, construction and infrastructure.

Furthermore, integrating nature protection and biodiversity conservationin the field of spatial and urban planning in the procedure of developing spatial plans of higher and lower order as well as regulation plans in accordance with regulations on planning and construction and special laws with clearly defined rules of physical planning and construction in terms of fulfilling location requirements and requirements for the issuance of the license for construction of structures, which could have negative impact due to their activities on conservation of wild flora and fauna and natural habitats of national and international importance by applying special technical and technological solutions enabling unhindered and safe wild animal communication.

Acceptability assessment shall be performed for strategies, plans, programmes, projects and activities which could have significant negative impact on the objectives concerning conservation and ecological network of the Republic of Serbia, including Natura 2000 protected areas.

Additionally, significant mechanisms are strategic impact assessment and environmental impact assessment, and acceptability assessment, in compliance with obligations under accepted international agreements and EU legislation.

8.6. Mobilising resources at the national level

Bearing in mind financial resources data and analysis of the current mechanisms for financing nature conservation from different sources, improvement of structural logs and contribution to overall financing are necessary.

In accordance with decisions of the 12th meeting of the Conference of the Parties to the Convention on Biological Diversity for the fulfilment of goals related to mobilising resources, it is necessary to introduce national funds for all sources in order to reduce the difference between identified needs and available resources at the national level, in order to achieve global strategic goals and Aichi targets for the period 2011–2020. As a Party to the Convention we should achieve this goal through the improvement of the current monitoring and reporting mechanisms, particularly as regards the establishment of clearly set communication structure and the manner of collecting and processing data among legal persons with the aim of more successful implementation of the Nature Protection Programme and more effective financing from the European Union funds and programmes as well as national funding, and fulfilment of the obligation of reporting according to international agreements in the nature conservation field.

Improving funding includes continuous development of innovative financing mechanisms for nature and biological diversity conservation.

9. NATURE PROTECTION PROGRAMME FINANCING

Funds for the implementation of the Nature Protection Programme shall be provided under the Law on the Budget of the Republic of Serbia 2021 (*Official Gazette of the Republic of Serbia*, Nos. 149/20 and 40/21) within Chapter 25, Section 25.0 – Ministry of Environmental Protection.

In the years to come (2022 and 2023), the funds shall be planned within limits in chapter of the Ministry responsible for nature conservation and chapter of the Environmental Protection Agency for tasks related to the environmental protection information system management and reporting, defined by the Ministry of Finance and in compliance with budget capabilities of the Republic of Serbia.

Part of the funds for the implementation of activities foreseen under the Action Plan for the implementation of the Nature Protection Programme are sought from donations, particularly bearing in mind that the Programme is developed in accordance with the global Strategic Plan for the period 2011–2020 of the UN Convention on Biological Diversity, for whose implementation funds are provided from the Global Environment Fund (GEF) as well as the funds for European integration and/or Instrument for Pre-accession Assistance (IPA).

10. COOPERATION WITH STAKEHOLDERS IN THE NATURE PROTECTION PROGRAMME DRAFTING PROCEDURE

In drafting the Nature Protection Programme, cooperation with competent institutions and organisations, including active cooperation with the civil society organisations and participation of the public, were established.

In order to improve the nature protection and biodiversity conservation planning framework and policies, thematic workshops and consultations for understanding and support to the implementation of the Strategic Plan of the UN Convention on Biological Diversity for the

period 2011–2020 in the Republic of Serbia, and Aichi targets for the protection of biodiversity and sustainable use of components of biodiversity, were held.

The Nature Protection Programme was developed pursuant to the Law on the Planning System of the Republic of Serbia.

In the period before the adoption of this Law, Draft Strategy for Nature Conservation of the Republic of Serbia for the period 2019–2025, pursuant to Article 112 of the Law on Environmental Protection, and in accordance with the Report on the Nature Conservation Status of the Institute for Nature Conservation of Serbia and Provincial Institute for Nature Conservation, was developed.

Drafting of the Strategy for Nature Conservation of the Republic of Serbia commenced within the Project: Planning Biological Diversity Conservation at the National Level as Support to the Implementation of the Strategy Plan of the UN Convention on Biological Diversity for the period 2011–2020 in the Republic of Serbia, financed by the Global Environment Fund (GEF) in cooperation with UNDP. With this document, revision of the first Strategy for Nature Conservation of the Republic of Serbia for the period 2011–2018 with Action Plan was performed.

Draft Strategy for Nature Conservation of the Republic of Serbia for the period 2019–2025 with Action Plan was subject to public inspection in the period from 14 to 24 November 2016 with the aim of obtaining the opinion of professional and wider public, upon which the document was harmonised with the submitted comments in accordance with the law.

After the establishment of a special Ministry of Environmental Protection, the procedure for the adoption of Draft Strategy for Nature Conservation of the Republic of Serbia for the period 2019–2025 was repeated, and the document was available to the public on the Ministry's website as of 12 October 2018.

However, after the adoption of the Law on the Planning System of the Republic of Serbia, and in the process of optimisation of the environmental protection strategic framework, it has been established that it is necessary to adopt an umbrella strategy for environmental protection and to replace the Draft Strategy for Nature Conservation with Draft Nature Protection Programme of the Republic of Serbia.

In accordance with the mentioned obligations, the Ministry of Environmental Protection established a Working Group for developing a Draft Nature Protection Programme (Decision No.: 119-01-81/19-01 of 28 May 2019). The Members of the Working Group are representatives of relevant institutions competent for tasks in the fields of environment, agriculture, forestry, water management, education, science, construction, transport and infrastructure, tourism, Public Policy Secretariat, Environmental Protection Agency, Provincial Secretariat for Urban Planning and Environmental Protection, Institute for Nature Conservation of Serbia, Provincial Institute for Nature Conservation as well as representatives of the civil society.

In accordance with Article 9 paragraphs 3 and 4 of the Law on Strategic Environmental Impact Assessment (*Official Gazette of the Republic of Serbia*, Nos. 135/04 and 88/10), Decision on Non-elaboration of the Strategic Environmental Impact Assessment for the Nature Protection Programme was issued (*Official Gazette of the Republic of Serbia*, No. 93/19).

11. AC

TION PLAN FOR THE IMPL

EMENTATION OF THE NATURE PROTECTION PROGRAMME

Action Plan for the implementation of the Nature Protection Programme, which is printed with this Programme and is its integral part, includes measures, activities, persons in charge and participants, implementation deadlines and available funding amounts for the implementation of this Programme.

Financing of activities will be performed from the Budget of the Republic of Serbia: Chapter 25 – Ministry of Environmental Protection, including the Environmental Protection Agency.

Action plan for the implementation of the Nature Protection Programme

/*- PE document:	Nature Protection Programme
Action Plan:	Action Plan for the Implementation of the Nature Protection Programme
Coordination and reporting	Ministry of Environmental Protection (MEP)
PE umbrella document:	NEPP

General objective 1: Improvement of the nature protection system and biodiversity conservation						
Institution responsible for the monitoring and control of implementation: Ministry of Environmental Protection						
Indicator (i) at the level of the general objective (impact indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in the last year of AP	Last year of AP validity
The share of the ecological network in the Republic of Serbia	(%)	INCS central database	20,93	2018	23	2023
The share of the protected territory of the Republic of Serbia, plus the area which is in the procedure, in relation to the total territory	(%)	INCS central database	8.82	2018	11,0	2023
The share of conifer species without defoliation	(%)	FI	70	2018	73	2023
The share of deciduous species without defoliation	(%)	FI	82	2018	85	2023

Specific objective 1.1: Reduced negative effects on biodiversity							
Institution responsible for the monitoring and control of implementation: Ministry of Environmental Protection							
Indicator(s) at the level of the specific objective (outcome indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
The share of species and habitats in the favourable conservation status in relation to the reference list	%	INCS central database	20	2018	23	25	27

Populations of large carnivores	number	MAFWM - Forest Directorate MEP	Wolf 1554 Bear 120 Beaver 46 Lynx 21	2016	Wolf 1570 Bear 122 Beaver 47 Lynx 22	Wolf 1580 Bear 127 Beaver 48 Lynx 23	Wolf 1600 Bear 130 Beaver 50 Lynx 25
Populations of woodland bird species Populations of meadow bird species	Summary trend %	INCS central database BPSSS	106.4 95	2013	106.6 95	107 95	107.4 96

Measure 1.1.1: Monitoring of the impact of climate change on biodiversity and impact of biodiversity on mitigating effects of climate change							
Institution responsible for the monitoring and control of implementation: MEP							
Implementation period: 2021-2023				Type of measure: informative and educational (IE)			
Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
Damage to forest ecosystems caused by human Damage to forest ecosystems caused by insects Damage to forest ecosystems caused by natural disasters	cubic meters	SORS, EPA	24685 16506 74495	2018	24000 16000 73495	23685 15506 72495	23000 15000 70000
The share of conifer species with severe damage The share of deciduous species with severe damage	(%)	FI	4 2.6	2018	3,9 2.5	3.8 2.4	3.7 2.3

Source of funding the measure	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
		In 2021	In 2022	In 2023
Budget revenues 01	P 0404, PA 0010, P 0405 - PA0004 P 0405 - PA4010	150	315	315
		100,000 30,000	80,000	80,000

Activity:	Authority conducting the activity	Authorities-partners in conducting the activity	Time limit for the completion of the activity	Source of funding	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
						2021	2022	2023
1.1.1.1 Defining methodologies and indicators, the number of species, habitats and ecosystems in which the impact of climate change on biodiversity is monitored	EPA	MEP, INCS, PINC, RHMI, SRO, PA	Q4 2023					
1.1.1.2 Development of specific measures for the protection of species and habitats sensitive to climate change in relevant planning documents and implementation of measures for the adaptation and mitigation of the effects of climate change on natural ecosystems and wild flora and fauna at the national, regional and local levels	MEP	MEP, INCS, PINC, RHMI, SRO, PA	Q4 2023					
1.1.1.3 Preparing and publishing media publications and scientific papers and preparing and conducting campaigns for the purpose of raising public awareness of the impact of climate change on biodiversity	MEP	EPA, INCS, PSUPEP, PINC, RHMI, SRO, PA, CSO	Q4 2023					

Measure 1.1.2: Establishment of an Integrated National Information System for Biodiversity with a database (INISB) in accordance with the INSPIRE principles and implementation rules*[2]							
Authority responsible for the implementation (coordination of the implementation) of the measure: MEP							
Implementation period: 2021-2023				Type of measure: PGS (provision of goods and services)			
Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
Number of established biodiversity indicators	number	EPA	50	2019	52	54	55

Source of funding the measure	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
		In 2021	In 2022	In 2023
Budget revenues;	P 0405-PA 0001 P 0404-PA 0010	3,000 150	15,000 270	15,000 270

Activity:	Authority conducting the activity	Authorities-partners in conducting the activity	Time limit for the completion of the activity	Source of funding	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
						2021	2022	2023
1.1.2.1 Assignment of INISB-related responsibilities per institutions for the purpose of establishing and functioning of the INISB	MEP	EPA, INCS, PINC, SRO, PA, CSO, RGA	Q4 2021					
1.1.2.2 Development of the INISB platform	MEP	EPA, INCS, RGA	Q4 2023					
1.1.2.3 Linking individual databases of relevant institutions and organisations for the	EPA	INCS, RGA, PINC, SRO, PA, CSO	Q3 2023					

[2] This implies that measure 1.1.2, together with all the activities, will be harmonised with the Law on NSDI and its specified by-laws

purpose of establishing the INSB								
1.1.2.4 Procurement of INISB equipment	MEP		Q3 2023					
1.1.2.5. Preparation and conducting training courses for the use of the INISB	MEP		Q4 2023					
1.1.2.6 Development of a national biodiversity monitoring plan within the INISB	MEP	INCS, PINC, SRO, PA, CSO, RGA	Q4 2023					

Measure 1.1.3: Combating illegal killing, trapping and trade of wild species							
Institution responsible for the monitoring and control of implementation: MEP							
Implementation period: 2021-2023			Type of measure: IE				
Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
Recorded cases of illegal killing, trapping and trade of wild species	number of animals	MEP BPSSS	180	2018	160	140	120
Adequately cared for wildlife specimens	(number of animals)	MEP ZOO	272	2017	250	240	230

Source of funding the measure	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
		In 2021	In 2022	In 2023
Budget revenues	P 0405-PA 0001	6070	8,000	10,000
EU financial assistance				

Activity:	Authority conducting the activity	Authorities-partners in conducting the activity	Time limit for the completion of the activity	Source of funding	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
						2021	2022	2023

1.1.3.1 Training of competent authorities in the implementation of the CITES Convention and other international regulations	MEP	MF - Customs Administration, MOI, RPPO, Judicial Academy	Q4 2023					
1.1.3.2 Training scientific and professional organisations in the implementation of the CITES Convention and other international regulations	MEP	SRO	Q4 2023					
1.1.3.3 Development of risk analysis procedures in transboundary trade in wild species	MEP	MF - Customs Administration	Q4 2023					
1.1.3.4 Development of tools for the control of the implementation of the CITES Convention and other international regulations	MEP	SRO and laboratories	Q4 2023					
1.1.3.5 Creating materials for operational activities of control of transboundary trade in wild species	MEP	MF - Customs Administration, MOI	Q4 2023					
1.1.3.6 Implementation of Council of Europe Recommendation No. 205 (2019) with the Rome Strategic Plan for the period 2020-2030 for the purpose of eliminating illegal killing, trapping and trade of wild bird species through	MEP	MAFWM, MTTT, MCTI, MF - Customs Administration, MOI, RPPO, Judiciary, MPALSG,	Q4 2023					

cooperation and actions of competent authorities and organisations.		PAC, PINC,						

Measure 1.1.4: Improved monitoring of the impact of environmental pollution on biodiversity							
Institution responsible for the monitoring and control of implementation: EPA							
Implementation period: 2021-2023				Type of measure: IE			
Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
Increasing the number of indicators of the impact of environmental pollution on biodiversity	(number)	EPA	5	2018	6	7	9

Source of funding the measure	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
		In 2021	In 2022	In 2023
Budget revenues 01	P 0404-PA 0010	100	200	200
EU financial assistance				

Activity:	Authority conducting the activity	Authorities-partners in conducting the activity	Time limit for the completion of the activity	Source of funding	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
						2021	2022	2023
1.1.4.1 Defining (revision) of the methodology and indicators, the number of species, habitats and ecosystems in which the impact of environmental	EPA	INCS, PINC, RHMI, SRO, PA, CSO	2023					

pollution on biodiversity is monitored								
1.1.4.2 Development of guidelines for improved reporting on the state of natural values			2023					
1.1.4.3 Development of specific measures for the recovery of devastated habitats			2023					

Measure 1.1.5: Improved monitoring and removal of invasive species							
Institution responsible for the monitoring and control of implementation: MEP							
Implementation period: 2021-2023			Type of measure: PGS (provision of goods and services)				
Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
Number of invasive insect species in relation to the initial value in 2018 (species indicator)	(%)	Alciphron database	100	2018	98	97	96
Gradations of Gypsy Moths in Serbian forests	0-Gradation 1- Latency	PE Srbijašume	Gradation	2018	Gradation	Latency	Latency

Source of funding the measure	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
		In 2021	In 2022	In 2023
Budget revenues				

Activity:	Authority conducting the activity	Authorities-partners in conducting the activity	Time limit for the completion of the activity	Source of funding	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
						2021	2022	2023
1.1.5.1 Amendments to the Law on Nature Protection	MEP		Q4 2021					

related to the proclamation, control and removal of allochthonous invasive species								
1.1.5.2 Drafting a by-law on the basis of the Law on Nature Protection for the proclamation, control and removal of allochthonous invasive species	MEP		Q4 2023					
1.1.5.3 Determining indicators for monitoring invasive species	EPA	SRO	Q4 2022					

Specific objective 1.2: Improved system for managing protected areas, ecological network and species							
Institution responsible for the monitoring and control of implementation: MEP							
Indicator(s) at the level of the specific objective (outcome indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
The territory of the ecological network in relation to the total territory of the Republic of Serbia	(%)	EPA, INCS	20	2018	21	22	23

Measure 1.2.1: Enlarging the territory of protected areas and management effectiveness							
Institution responsible for the monitoring and control of implementation: MEP							
Implementation period: 2021-2023				Type of measure: I (incentive)			
Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target values in 2021	Target value in 2022	Target value in 2023
The share of the protected area territory in relation to the total territory of the Republic of Serbia	(%)	INDC central database	7.56	2018	8.0	8.3	9.0

Source of funding the measure	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
		In 2021	In 2022	In 2023
Budget revenues	P 0405-PA 0002	264,000	350,000	400,000

Activity:	Authority conducting the activity	Authorities-partners in conducting the activity	Time limit for the completion of the activity	Source of funding	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
						2021	2022	2023
1.2.1.1 Proclamation of new and the revision of existing protected areas	MEP	INCS, PINC, LSU	2023					
1.2.1.2 Improvement of the system of financing protected areas	MEP		Q4 2021					
1.2.1.3 Strengthening the capacity of protected areas management (training of management, beneficiaries and owners of land and resources within the ecological network)	MEP	ALA	Q4 2023					
1.2.1.4 Improvement of professional supervision in protected areas	INCS, (in cooperation with PINC)	ALA	Q4 2021					
1.2.1.5 Improvement and/or revision of the nature conservation legal framework	MEP		Q4 2021					
1.2.1.6 Improvement of standards for the drafting of documents on protected area	MEP	INCS	Q4 2023					

management by making amendments to the Regulation on the ecological network, proclamation act and nature conservation conditions								
1.2.1.7 Analysis of the work of the established Councils of beneficiaries of protected areas for the purpose of establishing Councils in other protected areas	MEP	NPM	Q3 2021					

Measure 1.2.2 : Establishment and development of a functional ecological network of the Republic of Serbia							
Authority responsible for the implementation (coordination of the implementation) of the measure: MEP							
Implementation period: 2021-2023			Type of measure: IMO (institutional management organisational)				
Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
The share of the territory of ecologically significant areas of international and national importance in relation to the territory of the Republic of Serbia	%	INCS, PINC	20.93	2018	20.93	21.5	22

Source of funding the measure	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
		In 2021	In 2022	In 2023
Budget revenues;	P 0405-PA 0003,	23,332.5	28,249	28,249
Implementation of the EU funded project "EU for Serbia - Continued support to the implementation of Chapter 27 in the area of nature protection (NATURA 2000)"		187,500		

Activity:	Authority conducting the activity	Authorities-partners in conducting the activity	Time limit for the completion of the activity	Source of funding	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
						2021	2022	2023
1.2.2.1 Establishment of a reference list for ecological network species and habitats and enlarging the territory of the ecological network in GIS	MEP	PAC, EPA, PINC	Q4 2022			*	*	
1.2.2.2 Development of 2 pilot plans for managing parts of the ecological network	MEP	PAC, PINC	Q4 2022					
1.2.2.3 Establishment and development of eligibility assessment of the ecological network and integration of this procedure in the process of strategic assessment and environmental impact assessment	MEP		Q4 2021					
1.2.2.4 Identification of European Natura 2000 network in the Republic of Serbia	MEP	PAC, PINC	Q4 2022					
1.2.2.5 Establishment of the ecological network of the Republic of Serbia	MEP	PAC, PINC	Q4 2023					

Measure 1.2.3 : Establishment and development of the areas of special geological importance in the Republic of Serbia							
Authority responsible for the implementation (coordination of the implementation) of the measure: MEP							
Implementation period: 2021-2023			Type of measure: IMO				
Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023

Number of established geoparks	number	MEP	0	2019	1	1	1

Source of funding the measure	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
		In 2021	In 2022	In 2023
Budget revenues				

Activity:	Authority conducting the activity	Authorities-partners in conducting the activity	Time limit for the completion of the activity	Source of funding	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
						2021	2022	2023
1.2.3.1 Building institutional and administrative capacities for the conservation of geoheritage facilities and geoparks	MEP	INCS, PINC, GM and LSU	Q4 2023					
1.2.3.2 Establishment of a technical and expert geoparks council	MEP	GM and LSU	Q4 2023					
1.2.3.3 Innovating the inventory of geoheritage facilities	MEP	INCS, PINC, NSM, GI, GF, FGM, GZS						
1.2.3.4 Establishment of a national geoparks council/committee	MEP	MTTT, MCI, INCS, PINC, GM and LSU	Q4 2023					
1.2.3.5 Development of criteria for the evaluation of geoheritage facilities	MEP	INCS, PINC, NSM, GI, GF, FGM, GZS						

Measure 1.2.4: Identification, evaluation and protection of different types of landscapes on the territory of the Republic of Serbia	
Institution responsible for the monitoring and control of implementation: MEP	
Implementation period: 2021-2023	Type of measure: I

Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
The share of categorised landscapes in the total area of the Republic of Serbia	(%)	Project report and results	1	2018	1.3	1.6	2.0

Source of funding the measure	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
		In 2021	In 2022	In 2023
Budget revenues				
EU financial assistance				

Activity:	Authority conducting the activity	Authorities-partners in conducting the activity	Time limit for the completion of the activity	Source of funding	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
						2021	2022	2023
1.2.4.1 Development of a national landscape spatial database (on landscape values)	MEP	INCS and PINCB, MCI, FF, FGM, IPCMS, LSU	Q4 2022					
1.2.4.2 Improvement and/or revision of the legislative framework for landscape typology	MEP	MCI, IPCMS, INCS and PINCB	Q4 2023					

1.2.4.3 Establishment of a methodology for character identification and landscape assessment (landscape condition assessment) on the territory of the Republic of Serbia	MEP	MCI, IPCMS, INCS and PINCB	Q4 2023					

Measure 1.2.5: Improvement of the protection status and species management							
Authority responsible for the implementation (coordination of the implementation) of the measure: MEP							
Implementation period: 2021-2023			Type of measure: I				
Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
The share of the topic of biodiversity and nature conservation in scientific papers in relation to the total number of published scientific papers in international journals that are on the SCI list	(%)	MESTD	3	2018	3,.1	3.2	3.3
Winter census of birds	Summary trend %	BPSSS	102.1	2017	110	115	120
Number of adopted selected species management plans	Number	MEP	0	2019	2	3	4

Source of funding the measure	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
		In 2021	In 2022	In 2023
Budget revenues; EU financial assistance	P 0405-PA 4001 P 0405-PA 0003	5.000 1,667.5	1,500 1,751	1,700 1,751

Activity:	Authority conducting the activity	Authorities-partners in conducting the activity	Time limit for the completion of the activity	Source of funding	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
						2021	2022	2023

1.2.5.1 Adoption of bear, lynx and wolf management plans	MEP	MAFWM - Forest Directorate	Q3 2021					
1.2.5.2 Revision of the list of protected and strictly protected species	MEP		Q4 2022					
1.2.5.3 Creation of Red Lists and Books	INCS	PINC, SRO	Q4 2022					
1.2.5.4 Improvement of the monitoring and conservation of habitats of migratory bird species and other species with improved nature protection conditions	INCS	PINC, ALA	Q4 2023					

Specific objective1.3: Improved public policy for nature protection and biodiversity conservation and public participation in decision making							
Institution responsible for the monitoring and control of implementation:							
Indicator(s) at the level of the specific objective (outcome indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
Participation of the Republic of Serbia in the process of drafting and adopting biodiversity-related documents at the global and regional level at member conferences (UNCBD and accompanying protocols, CITES, CMS and accompanying agreements, Ramsar, Bern, Carpathian Convention and Landscape Convention)	(number)	MEP MFA	90	2018	95	97	100

Number of agreements signed at the regional and bilateral level	number	MEP MFA	5	2019	7	10	12

Measure 1.3.1: Improving international cooperation at the global level							
Institution responsible for the monitoring and control of implementation: MEP							
Implementation period: 2021-2023				Type of measure: I			
Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
The share of the implementation of relevant global objectives concerning biodiversity conservation in the Republic of Serbia, in relation to the total number of global objectives of the UN Convention on Biological Diversity and other global international biodiversity agreements (CITES, CMS and AEWA, Ramsar Convention)	%	Reports	90	2019	91	92	95

Source of funding the measure	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
		In 2021	In 2022	In 2023
Budget revenues;	P 0404 -PA 0004	2,750	2,857	2,881

Activity:		Authorities-partners in	Time limit for the	Source of funding	Reference of the	Total estimated financial resources in thousand of dinars

	Authority conducting the activity	conducting the activity	completion of the activity		programme budget	2021	2022	2023
1.3.1.1 Harmonisation of policies, strategic documents and regulations at the national level for the purpose of implementing the UN Convention on Biological Diversity and the Global Strategic Plan.	MEP							
1.3.1.2 Harmonisation of national regulations and implementation of global international environmental agreements in the field of biodiversity								
1.3.1.3 Implementation of global international projects and joining initiatives	MEP							
1.3.1.4 Raising public awareness and increasing public participation in the harmonisation of nature protection and biodiversity conservationpolicies and regulations								

Measure 1.3.2: Improvement of international cooperation at the regional level	
Institution responsible for the monitoring and control of implementation: MEP	
Implementation period: 2021-2023	Type of measure: I

Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
The share of transposed EU legislation in the national nature protection legislation	%	MEP	80	2018	82	83	85

Source of funding the measure	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
		In 2021	In 2022	In 2023
Budget revenues;	P 0404 -PA 0004	3,756	3,756	3,804

Activity:	Authority conducting the activity	Authorities-partners in conducting the activity	Time limit for the completion of the activity	Source of funding	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
						2021	2022	2023
1.3.2.1 Harmonisation of sectoral policies and relevant strategic national-level documents and regulations with EU policies, strategies and legislation including the Habitats and Birds Directives.	MEP							
1.3.2.2 Harmonisation of intersectoral environmental regulations with EU	MEP	MOI, MoJ						

regulations of horizontal environmental legislation and EU Habitats and Birds Directives and other EU nature protection regulations								
1.3.2.3 Harmonisation of nature protection regulations with international agreements and accompanying resolutions and recommendations of the Council of Europe	MEP							
1.3.2.4 Participation in the work of the Regional Biodiversity Task Force of South-East Europe in coordination with the IUCN Regional Office for ECARO	MEP							
1.3.2.5 Monitoring the implementation of projects at the regional and bilateral level	MEP							
1.3.2.6 Participation of stakeholders and local communities in the implementation of projects for the execution of international obligations concerning nature protection and biodiversity conservation	MEP							

Measure 1.3.3: Integration of nature protection and biodiversity conservation into other sectors
Institution responsible for the monitoring and control of implementation: MEP

Implementation period: 2021-2023				Type of measure: I			
Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
Population trend of selected autochthonous varieties and breeds	number	MAFWM	598	2018	620	630	640
Number of sectoral strategies, plans and programmes with integrated nature protection and biodiversity conservation segments	number	line ministries	10	2019	12	14	15

Source of funding the measure	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
		In 2021	In 2022	In 2023
Budget revenues;				

Activity:	Authority conducting the activity	Authorities-partners in conducting the activity	Time limit for the completion of the activity	Source of funding	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
						2021	2022	2023
1.3.3.1 Integration of nature and biodiversity protection into the relevant sectoral legislation, policies and standards in the relevant fields at all levels (transport, construction, energy, tourism, etc.)								

1.3.3.2 Development of guidelines for the application of principles and examples of best practice in terms of nature protection and biodiversity conservation for all relevant sectors								
1.3.3.3 Promotion of the application of traditional knowledge of and practice in the improvement of the cultivation and preservation of autochthonous varieties and breeds	MAFWM							

Measure 1.3.4: Improvement of the existing and introduction of new indicators for monitoring the impact of activities of other sectors on nature and biodiversity conservation							
Authority responsible for the implementation (coordination of the implementation) of the measure: EPA							
Implementation period: 2021-2023			Type of measure: IE				
Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
Number of developed indicators	(number)	EPA	10	2018	12	13	15

Source of funding the measure	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
		In 2021	In 2022	In 2023
Budget revenues; EU financial assistance	P 0404-PA 0010	100 1,400	215	215

Activity:	Authority conducting the activity	Authorities -partners in conducting the activity	Time limit for the completion of the activity	Source of funding	Reference of the programme budget	Total estimated financial resources in thousand of dinars		
						2021	2022	2023
1.3.4.1 Amendments to the national list of indicators for monitoring the impact	EPA		Q4 2023					

of the forestry sector on nature and biodiversity								
1.3.4.2 Amendments to the national list of indicators for monitoring the impact of the hunting sector on nature and biodiversity	EPA		Q4 2023					
1.3.4.3 Amendments to the national list of indicators for monitoring the impact of the fisheries sector on nature and biodiversity	EPA		Q4 2023					
1.3.4.4 Amendments to the national list of indicators for monitoring the impact of the spatial planning and infrastructure sector on nature and biodiversity	EPA		Q4 2023					
1.3.4.5 Amendments to the national list of indicators for monitoring the impact of the agricultural sector on nature and biodiversity	EPA		Q4 2023					
1.3.4.6 Amendments to the national list of indicators for monitoring the impact	EPA		Q4 2023					

of the energy sector on nature and biodiversity								
1.3.4.7 Amendments to the national list of indicators for monitoring the impact of the tourism sector on nature and biodiversity	EPA		Q4 2023					
1.3.4.8 Amendments to the national list of indicators for monitoring the impact of the water management sector on nature and biodiversity	EPA		Q4 2023					

12. FINAL PART

The Programme shall be published on the Government's website, on the e-Government portal and on the website of the Ministry of Environmental Protection.

The Programme shall be published in the “Official Gazette of the Republic of Serbia”.

05 Number: 353-3892/2021-1
Belgrade, 20 May 2021

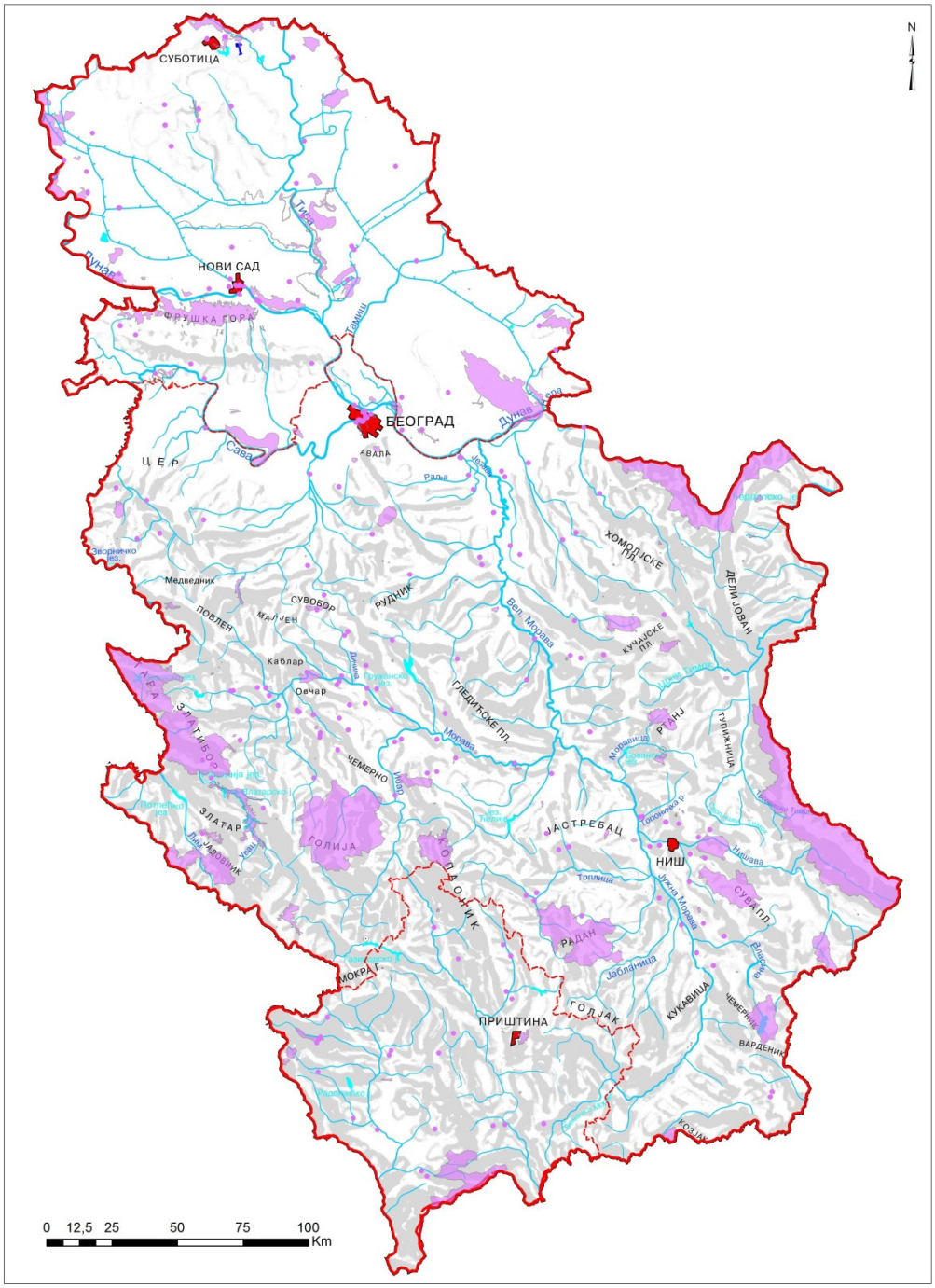
G O V E R N M E N T

PRIME MINISTER

Ana Brnabić, sgd.

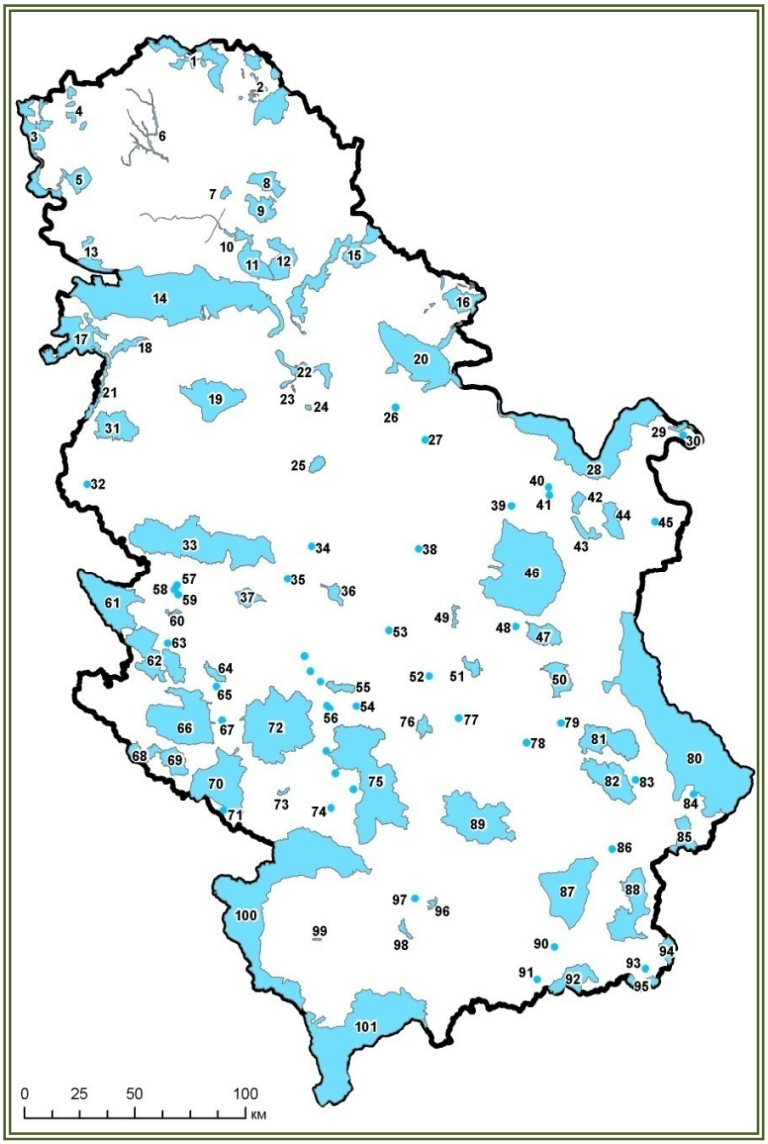
Annex 1

Map of protected areas



Annex 2

Map of the ecological network



Annex 3

Comparative overview of strictly protected and protected species at the national level, with the international-level protection status

Group of organisms / Protection status	Mammalia	Aves	Reptilia	Amphibia	Pisces	Invertebrata	Total	Fungi	Lichen	Total	Briophyta	Pteridophyta	Gymnosperma Angiosperma	Total	Charophyta	Rhodophyta	Total
Order	4	17	2	2	8	27	60	7	8	15	12	5	39	56	1	4	5
Family	15	57	6	6	10	95	189	17	14	31	15	9	76	100	2	5	7
Species	50	307	18	18	30	609	1032	38	37	75	47	22	558	627	15	10	25
*	1						1										
**	1				1		2										
***		1					1										
1-I												1	11	12			
1-II	36	247	14	12	2	13	324										
1-II reservation	2						2										
1-III	9	57	4	6	18	1	95										
2-I		13					13										
2-II		178			5		183										
3-I		5	1		1		7										
3-II		48			5	1	54						40	40			
3-III		7					7										
4-II	22		4	5	17	17	65					4	20	24			
4-IV	41		14	12	2	22	91					8	22	30			
4-V				1	8	2	11										
5-I		117					117										
5-I-1		10					10										
5-II-2		35					35										
5-III-2		12					12										
Res.6	20		4	6	17		47					3	16	19			
Res.6 - new		5			3	17	25					1	9	10			

Table 1- Comparative overview of strictly protected species with the international-level protection status

Group of organisms / Protection status	Mammalia	Aves	Reptilia	Amphibia	Pisces	Invertebrata	Total	Fungi	Lichen	Total	Briophyta	Pteridophyta	Gymnosperma Angiosperma	Total
Order	6	9	2	1	8	14	40	5	1	6	3	4	34	41
Family	14	12	2	1	10	40	79	9	1	10	6	7	62	75
Species	30	35	2	3	34	154	258	26	11	37	10	8	541	559
****	1						1							
*****	1						1							
******	1						1							
*******		1					1							
********			2	3		4	9	15	3	18		1	62	63
1-I													4	4
1-II	2		1			3	6							
1-II reservation		1	1	3			5							
1-III	16	25			19		60							
2-II		14			1		15							
3-I		4					4							
3-II		1			1		2						20	20
3-III		4					4							
4-II	2		1		11	4	18						1	1
4-IV	2		2	1		4	9						2	2
4-V	3			2	10	1	16					1	5	6
5-II-1		12					12							
5-II-2		16					16							
5-III-1		4					4							
5-III-2		5					5							
H/F	14				24		38							
Res.6	3		1		9		13						2	2
Res.6 - new					1	2	3						1	1

Table 2 - Comparative overview of protected species with international-level protection status

Legend:
* - The species is strictly protected on the territory of Vojvodina, except in the hunting area of Deliblato Sands and Vršac Mountains, where it is protected as a protected wild species
** - The species is strictly protected only on the territory of Vojvodina
*** - The species is strictly protected only in the areas 500 m above sea level
**** - The species is protected as a protected wild species, except in parts of the territory of Vojvodina, where it is protected as a strictly protected wild species
***** - The species is protected as a protected wild species, except in the territory of Vojvodina, where it is protected as a strictly protected wild species
****** - The species is protected as a protected wild species, except in the territory of Vojvodina, where it is not protected
******* - The species is protected in the areas up to 500 m above sea level
******** - The species is commercial and is subject to the provisions of the Regulation on bringing under control the use and trade in wild flora and fauna
****** - All species of the genus *Usnea spp*. are commercial, with the exception of *Usnea longissima* and *U. scabrata*, which are protected as strictly protected species
1-I,II,III, reservation - The Law on Ratification of the Convention on the Conservation of European Wildlife and Natural Habitats - "Official Gazette of the RS - International Treaties" No. 102/2007 (Bern Convention - Appendix I - Strictly Protected Flora Species; Appendix II - Strictly Protected Wild Fauna Species; Appendix III - Protected Fauna Species, reservation – the species for which the Republic of Serbia expresses reservations in relation to the text of the Convention)
2-I,II – The Law on Ratification of the Convention on the Conservation on Migratory Species of Wild Animals - "Official Gazette of the RS - International Treaties" No. 102/2007 (Bonn Convention - Appendix I - Threatened migratory species; Appendix II - Migratory Species to be the Subject of Agreements, reservation - the species for which the Republic of Serbia expresses reservations in relation to the text of the Convention)
3-I,II,III – The Law on Ratification of the Convention on International Trade in Endangered Species of Wild Fauna and Flora - "Official Gazette of the RS - International Treaties" No. 11/2001 (CITES Convention - Appendix I - Species that is threatened with extinction, and is affected or may be affected by trade; Appendix II - Species that are not necessarily now threatened with extinction, but that may become unless trade in such species is not subject to strict regulations and the species that must be subject to regulation in order to establish the effective control of trade in individual species referred to in this Annex; Annex III - Species identified by either Party as being subject to the regulation within their jurisdiction to prevent or restrict exploitation, as well as the species whose trade may be controlled only in cooperation with other Parties)
4-I,II,IV,V – The Directive on the Conservation of Natural Habitats and Wild Fauna and Flora - Council Directive - 92/43/EEC (Habitats Directive - Annex II - Animal and plant species of Community interest whose conservation requires the designation of special areas of conservation; Annex IV - Fauna and flora of Community interest in need of strict protection, Annex V - Animal and plant species of Community interest whose taking in the wild and exploitation may be subject to management measures)
5-I,II/1,II/2,,III/1,III/2,III/3 – The Wild Birds Directive - Council Directive 79/409/EEC (Birds Directive - Annex I - Species with special conservation measures; Annex II/1 - Species that may be hunted in accordance with national legislation, in the areas covered by the Directive; Annex II/2 - Species that may be hunted in accordance with national legislation, in thee Member States in respect to which this is stated; Annex III/1 - Species that can be sold, kept, transported and offered for sale, if it was killed or trapped in accordance with the law, or if it was obtained in some other lawful manner; Annex III/2 - Species that may be sold, held, transported and offered for sale, if it has been killed or trapped in accordance with the law, or if it was obtained in any other lawful manner for which the Member States may prescribe certain restrictions on their territory; Annex III/3 – Species that may be sold, held, transported and offered for sale, if it has been killed or trapped in accordance with the law, or if it was obtained in some other lawful way, for which the Commission will conduct a study on its biological status).
H - Hunting species whose status and protection regime are regulated by regulations in the field of hunting
F - Fishing species whose status and protection regime are regulated by regulations in the field of fisheries
Res.6 – Resolution 6 of the Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats, 1998 (Bern Convention - species requiring specific habitat conservation measures)
Res.6 - new - Revised Annex 1 to Resolution 6 (1998) of the Standing Committee of the Bern Convention, 2011 (new species requiring specific habitat conservation measures)

Group of organisms Protection status	Mammals (Mammalia)		Birds (Aves)					
Order	Carnivores (Carnivora)		Shorebirds (Charadiformes)	Waterbirds (Pelecaniformes)	Birds of prey (Falconifirormes)	Herons, storks and ibises (Ciconiformes)	Songbirds (Paseriformes)	
Family	Dogs (Canidae)	Cats (Felidae)	Sandpipers (Scolopacidae)	Coromorants (Phalacrocoracidae)	Eagles and hawks (Accipitridae)	Herons (Ardeidae)	Crows (Corvidae)	
Species	Wolf (Canis lupus)[i]	Wildcat (Felis silvestris)[ii]	Eurasian woodcock (Scolopax rusticola)[iii]	Large cormorant (Phalacrocorax carbo)[iiii]	Northern goshawk (Accipiter gentilis)[iiii]	Grey heron (Ardea cinerea)[iiii]	Hooded crow (Corvus cornix)[iiii]	Eurasian magpie (Pica pica)[iiii]
1-I								
1-II								
1-II reservation	+	+						
1-III			+					
2-II			+					
3-I								
3-II								
3-III								
4-II	+							
4-IV	+	+						
4-V								
5-II-1			+					
5-II-2								
5-III-1								
5-III-2			+					
H/F	+	+	+	+	+	+	+	+
Res.6	+							
Res.6 - new								

Table 3. - Comparative overview of species that have the hunting species status, i.e. they are protected wildlife species subject to hunting bans.

Legend:

[I] - The species is protected wildlife species subject to hunting bans, except in parts of the territory of the Autonomous Province of Vojvodina where it is strictly protected wildlife species;

[II] - The species is protected wildlife species subject to hunting bans, except in the territory of the Autonomous Province of Vojvodina where it is strictly protected wildlife species;

[III] - The species is protected wildlife species subject to hunting bans in the areas up to 500 m above sea level;

[IV] - The species that a hunting area user may hunt exclusively for the purpose of preventing damage in the hunting areas of a registered pond and in hunting areas, in accordance with the annual hunting area management plan.

Annex 4

List of laws and by-laws on nature protection:

The Constitution of the Republic of Serbia

Laws:

1. The Law on the Planning System of the Republic of Serbia ("Official Gazette of the RS", No. 30/18);
2. The Law on Spatial Plan of the Republic of Serbia for the period 2010-2020 ("Official Gazette of the RS", No. 88/10);
3. The Law on Environmental Protection ("Official Gazette of the RS", Nos. 135/04, 36/09, 36/09 – other law, 72/09 – other law, 43/11 - CC, 14/16, 76/18 and 95/18 – other law);
4. The Law on Nature Protection ("Official Gazette of the RS", Nos. 36/09, 88/10, 91/10-corrigendum, 14/16 and 95/18-other law);
5. The Law on National Parks ("Official Gazette of the RS", Nos. 84/15 and 95/18 – other law);
6. The Law on Strategic Environmental Impact Assessment ("Official Gazette of the RS", Nos. 135/04 and 88/10);
7. The Law on Environmental Impact Assessment ("Official Gazette of the RS", Nos. 135/04 and 36/09);
8. The Law on the National Spatial Data Infrastructure ("Official Gazette of the RS", No. 27/18);
9. The Law on Protection and Sustainable Use of Fish Stocks ("Official Gazette of the RS", Nos. 128/14 and 95/18 – other law);
10. Law on Fees for Usage of Public Goods ("Official Gazette of the RS", Nos. 95/18 and 49/19);
11. The Food Safety Law ("Official Gazette of the RS", Nos. 41/09 and 17/19);
12. The Law on Agriculture and Rural Development ("Official Gazette of the RS", Nos. 41/09, 10/13 – other law and 101/16);
13. The Law on Animal Husbandry ("Official Gazette of the RS", Nos. 41/09, 93/12 and 14/16);
14. The Law on Protection of Plant Breeders' Rights ("Official Gazette of the RS", Nos. 41/09 and 88/11);
15. The Law on Genetically Modified Organisms ("Official Gazette of the RS", No. 41/09);
16. The Law on Animal Welfare ("Official Gazette of the RS", No. 41/09);
17. The Law on Forests ("Official Gazette of the RS", Nos. 30/2010, 93/12, 89/15 and 95/18 – other law);
18. The Law on Game and Hunting ("Official Gazette of the RS", Nos. 18/10 and 95/18 – other law);
19. The Law on Tourism ("Official Gazette of the RS", No. 17/19);
20. The Law on Mining and Geological Research ("Official Gazette of the RS", Nos. 101/15 and 95/18 – other law);
21. The Law on Planning and Construction ("Official Gazette of the RS", Nos. 72/09, 81/09 - corrigendum, 64/10 - CC, 24/11, 121/12, 42/13 - CC, 50/13 - CC, 98/13 - CC, 132/14, 145/14, 83/18, 31/19, 37/19 – other law and 9/20).

International treaties:

1. The Law on Ratification of the Convention on Biological Diversity ("Official Journal of the FRY – International Treaties", No. 11/01);
2. The Law on Ratification of the Convention on International Trade in Endangered Species of Wild Fauna and Flora ("Official Gazette of the RS – International Treaties", No. 11/01) (CITES Convention);
3. The Law on Ratification of the Cartagena Protocol on Biosafety to the Convention on Biological Diversity, with annexes ("Official Journal of Serbia and Montenegro – International Treaties", No. 16/05);
4. The Law on Ratification of the Convention on the Conservation of European Wildlife and Natural Habitats ("Official Gazette of the RS – International Treaties", No. 102/07) (Bern Convention);
5. The Law on Ratification of the Convention on the Conservation of Migratory Species of Wild Animals ("Official Gazette of the RS – International Treaties", No. 102/07) (Bonn Convention);
6. The Law on Ratification of the Framework Convention on the Protection and Sustainable Development of the Carpathians ("Official Gazette of the RS – International Treaties", No. 102/07);
7. The Law on Ratification of the European Landscape Convention (,"Official Gazette of the RS – International Treaties", No. 4/11);
8. The Law on 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 of the RS – International Treaties", No. 12/18);
9. The Law on Ratification of the International Treaty on Plant Genetic Resources for Food and Agriculture ("Official Gazette of the RS – International Treaties", No. 1/13);
10. The Law on Ratification of the Agreement on the Conservation of Populations of European Bats ("Official Gazette of the RS – International Treaties" No. 13/18);
11. The Law on Ratification of the Agreement on the Conservation of African-Eurasian Migratory Waterbirds ("Official Gazette of the RS – International Treaties", No. 13/18);
12. The Law on Ratification of the Agreement between the Government of the Republic of Serbia and the Government of the Republic of Croatia on Cooperation in the Field of Environmental Protection and Nature Conservation ("Official Gazette of the RS – International Treaties", No. 13/18).

By-laws:

1. Decree on control of the use and trade in wild flora and fauna ("Official Gazette of the RS", Nos. 31/05, 45/05 - corrigendum, 22/07, 38/08, 9/10, 69/11 and 95/18 – other law);
2. Decree on ecological network ("Official Gazette of the RS", No. 102/10);
3. Regulation on the content and manner of keeping the register of protected natural resources ("Official Gazette of the RS", No. 81/10);

4. Decree on the methodology of public policy management, public and regulatory impact assessment, and content of individual public policy documents ("Official Gazette of the RS", No. 8/19);
5. Decree on implementation rules for national spatial data infrastructure metadata ("Official Gazette of the RS", No. 54/19);
6. Decree on monitoring and reporting of activities of the national spatial data infrastructure ("Official Gazette of the RS", No. 91/20);
7. Decree on determining the programme of development and improvement of animal husbandry in the Republic of Serbia in the period 2008-2012 ("Official Gazette of the RS", No. 99/07);
8. Regulation on evaluation criteria and procedure for the categorization of protected areas ("Official Gazette of the RS", No. 97/15);
9. Regulation on the appearance of the nature protection sign, procedure and conditions for its use ("Official Gazette of the RS", No. 84/09);
10. Regulation on the form of the protected area guard official identification card ("Official Gazette of the RS", No. 84/09);
11. Regulation on the conditions that must be met by the manager of the protected area ("Official Gazette of the RS", No. 85/09);
12. Regulation on transboundary movement and trade in protected species ("Official Gazette of the RS", Nos. 99/09 and 6/14);
13. Regulation on declaration and protection of protected and strictly protected species of plants, animals and fungi ("Official Gazette of the RS", Nos. 5/10, 47/11,32/16 and 98/16);
14. Regulation on criteria for selection of habitat types, on habitat types, sensitive, endangered, rare and on protection of priority habitat types, and on protection measures for their preservation ("Official Gazette of the RS", No. 35/10);
15. Regulation on the compensation price list for determining the amount of compensation for damage caused by illegal activity in relation to protected and strictly protected wild species ("Official Gazette of the RS", No. 37/10);
16. Regulation on the manner, tools and equipment used for commercial fishing, as well as on the manner, tools, equipment and means for recreational fishing ("Official Gazette of the RS", Nos. 9/17 and 34/18);
17. Regulation on the content of the daily, multi-day and annual permit for recreational fishing and daily, multi-day and annual permit for recreational fishing in the protected area ("Official Gazette of the RS", No. 15/15);
18. Regulation on the method for fishing area marking ("Official Gazette of the RS", No. 16/16);
19. Regulation on the content of the annual license for commercial fishing ("Official Gazette of the RS", No. 56/15);
20. Regulation on the method of determining and on the compensation amount for the damage to the fish stock ("Official Gazette of the RS", Nos. 84/09 and 86/11);
21. Ordinance on measures for preservation and protection of fish stock ("Official Gazette of the RS", Nos. 56/15 and 94/18);
22. Regulation on the conditions and procedure for issuing and revoking licenses for a fisheries officers, the manner of keeping the register of issued licenses, and the content and manner of keeping the register of commercial fishermen ("Official Gazette of the RS", Nos. 2/16 and 112/17);

23. Regulation on conditions, programme and method of undertaking of the professional exam for fisheries officers and professional exam for fishermen ("Official Gazette of the RS", Nos. 60/15 and 96/16);
24. Regulation on the categorization of fishing waters ("Official Gazette of the RS", No. 10/12);
25. Regulation on the conditions and manner of organising the fish guard service and the form of keeping records of daily activities of the fish guard service ("Official Gazette of the RS", No. 3/16);
26. Regulation on the official clothes of the fish guard, the appearance of the fish guard badge and the form of the fish guard identification card ("Official Gazette of the RS", Nos. 39/16 and 38/17);
27. Regulation on the List of genetic reserves of domestic animals, the manner of preserving the genetic reserves of domestic animals, as well as on the List of autochthonous breeds of domestic animals and endangered autochthonous breeds ("Official Gazette of the RS", No. 33/17);
28. Regulation on conditions regarding the breeding and trade of autochthonous breeds of domestic animals as well as the content and manner for keeping the Register of breeders of autochthonous breeds of domestic animals ("Official Gazette of the RS", Nos. 58/16 and 16/18);
29. Regulation on restricted use of genetically modified organisms ("Official Journal of the FRY", No. 62/02 and "Official Gazette of the RS", No. 69/12 – other rulebook);
30. Regulation on the content and data of the register of genetically modified organisms and products produced from genetically modified organisms ("Official Journal of the FRY", No. 66/02);
31. Regulation on the placing on the market of genetically modified organisms and products produced from genetically modified organisms ("Official Journal of the FRY", No. 62/02 and "Official Gazette of the RS", No. 29/09);
32. Regulation on the introduction into production of genetically modified organisms and products produced from genetically modified organisms ("Official Gazette of the RS", No. 62/02);
33. Regulation on incentives for the conservation of plant genetic resource ("Official Gazette of the RS", Nos. 85/13 and 44/18 – other law);
34. Regulation on incentives for the conservation of animal genetic resources in gene bank ("Official Gazette of the RS", No. 110/17);
35. Regulation on incentives for the conservation of animal genetic resources ("Official Gazette of the RS", Nos. 83/13, 35/15, 28/16 and 44/18 – other law).

Annex 5

Aichi biodiversity targets

Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

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 minimise 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.

Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use

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 prioritised, 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 minimised, so as to maintain their integrity and functioning.

Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

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 minimising genetic erosion and safeguarding their genetic diversity.

Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services

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 Utilisation is in force and operational, consistent with national legislation.

Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building

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 Mobilisation, 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 6

Harmonisation of the national targets of the Republic of Serbia with global Aichi and EU biodiversity targets

NATIONAL TARGETS OF THE REPUBLIC OF SERBIA (Specific objectives, measures and activities under the Nature Protection Programme 2021-2023)	AICHI TARGETS OF THE GLOBAL STRATEGIC PLAN FOR BIODIVERSITY 2011-2020	EU BIODIVERSITY TARGETS
General objective 1: Improvement of the nature protection system and biodiversity conservation		
Specific objective 1.1: Reduced negative effects on biodiversity	Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services	EU target 1: Fully implement the Birds and Habitats Directives
Measure 1.1.1: Monitoring of the impact of climate change on biodiversity and impact of biodiversity on mitigating effects of climate change	Aichi target 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 Aichi target 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.	EU target 2: Ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15% of degraded ecosystems. EU target 6: Step-up action to tackle the global biodiversity crisis
Measure implementation activities:		
1.1.1.1 Defining methodologies and indicators, the number of species, habitats and ecosystems in which the impact of climate change on biodiversity is monitored		

1.1.1.2 Development of specific measures for the protection of species and habitats sensitive to climate change in relevant planning documents and implementation of measures for the adaptation and mitigation of the effects of climate change on natural ecosystems and wild flora and fauna at the national, regional and local levels	Aichi target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimised, so as to maintain their integrity and functioning.	
1.1.1.3 Preparing and publishing media publications and scientific papers and preparing and conducting campaigns for the purpose of raising public awareness of the impact of climate change on biodiversity		
Measure 1.1.4: Improved monitoring of the impact of environmental pollution on biodiversity	Aichi target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.	EU target 3: Increase the contribution of agriculture and forestry to biodiversity
Measure implementation activities:		
1.1.4.1 Defining (revision) of the methodology and indicators, the number of species, habitats and ecosystems in which the impact of environmental pollution on biodiversity is monitored		
1.1.4.2 Development of guidelines for improved reporting on the state of natural values	Aichi target 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.	EU target 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.

1.1.4.3 Development of specific measures for the recovery of devastated habitats	Aichi target 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. and/or Aichi target 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.	EU target 1: 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: (i) 100% more habitat assessments and 50% more species assessments under the Habitats Directive show an improved conservation status; and (ii) 50% more species assessments under the Birds Directive show a secure or improved status. EU target 6: Step-up action to tackle the global biodiversity crisis
Measure 1.1.5: Improved monitoring and removal of invasive species Measure implementation activities: 1.1.5.1 Amendments to the Law on Nature Protection related to the proclamation, control and removal of allochthonous invasive species 1.1.5.2 Drafting a by-law on the basis of the Law on Nature Protection for the proclamation, control and removal of allochthonous invasive species 1.1.5.3 Determining indicators for monitoring invasive species	Aichi target 9: By 2020, invasive alien species and pathways are identified and prioritised, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.	EU target 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.
Measure 1.1.2: Establishment of an Integrated National Information System for Biodiversity with a database (INISB) in accordance with the	Aichi target 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	Horizontal issues. Reliance on the biodiversity knowledge base

INSPIRE principles and implementation rules	improved, widely shared and transferred, and applied.	
Measure implementation activities:		
1.1.2.1 Assignment of INISB-related responsibilities per institutions for the purpose of establishing and functioning of the INISB		
1.1.2.2 Development of the INISB platform		
1.1.2.3 Linking individual databases that make up the integrated national system		
1.1.2.4 Procurement of INISB equipment		
1.1.2.5 Preparation and conducting training courses for the use of the INISB		
1.1.2.6 Development of a national biodiversity monitoring plan within the INISB	Aichi target 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.	Horizontal issues. Reliance on the biodiversity knowledge base
Measure 1.1.3: Combating illegal killing, trapping and trade of wild species	Aichi target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status,	EU target 1: To halt the deterioration in the status of all species and habitats covered by EU nature legislation and achieve a significant

Measure implementation activities: 1.1.3.1 Training of competent authorities in the implementation of the CITES Convention and other international regulations 1.1.3.2 Training scientific and professional organisations in the implementation of the CITES Convention and other international regulations 1.1.3.3 Development of risk analysis procedures in transboundary trade in wild species 1.1.3.4 Development of tools for the control of the implementation of the CITES Convention and other international regulations 1.1.3.5 Creating materials for operational activities of control of transboundary trade in wild species 1.1.3.6 Implementation of Council of Europe Recommendation No. 205 (2019) with the Rome Strategic Plan for the period 2020-2030 for the purpose of eliminating illegal killing, trapping and trade of wild bird species through cooperation and actions of competent authorities and organisations	particularly of those most in decline, has been improved and sustained.	and measurable improvement in their status so that, by 2020, compared to current assessments: (i) 100% more habitat assessments and 50% more species assessments under the Habitats Directive show an improved conservation status; and (ii) 50% more species assessments under the Birds Directive show a secure or improved status.
Specific objective 1.2: Improved system for managing protected areas, ecological network and species	Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity	EU target1: Fully implement the Birds and Habitats Directives EU target 6: Step-up action to tackle the global biodiversity crisis

Measure 1.2.1: Enlarging the territory of protected areas and management effectiveness	Aichi target11: 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 seascape	
Measure implementation activities:		
1.2.1.1 Proclamation of new and the revision of existing protected areas		
1.2.1.2 Improvement of the system of financing protected areas		
1.2.1.3 Strengthening the capacity of protected areas management (training of management, beneficiaries and owners of land and resources within the ecological network)		
1.2.1.4 Improvement of professional supervision in protected areas		
1.2.1.5 Improvement and/or revision of the nature conservation legal framework	Aichi target 17: 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.	
1.2.1.6 Improvement of standards for the drafting of documents on protected area management by making amendments to the Regulation on the ecological network, proclamation act and nature conservation conditions	Aichi target 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	

1.2.1.7 Analysis of the work of the established Councils of beneficiaries of protected areas for the purpose of establishing Councils in other protected areas	Aichi target 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 Aichi target 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.	
Measure 1.2.2 : Establishment and development of a functional ecological network of the Republic of Serbia	Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity	EU target 1: Fully implement the Birds and Habitats Directives
Measure implementation activities:	Aichi target 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	EU target 1: 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: (i) 100% more habitat assessments and 50% more species assessments under the Habitats Directive show an improved conservation status; and (ii) 50% more species assessments under the Birds Directive show a secure or improved status.
1.2.2.1 Establishment of a reference list for ecological network species and habitats and enlarging the territory of the ecological network in GIS		
1.2.2.2 Development of 2 pilot plans for managing parts of the ecological network		
1.2.2.3 Establishment and development of eligibility assessment of the ecological network and integration of this procedure in the process of strategic assessment and environmental impact assessment		

1.2.2.4 Identification of European Natura 2000 network in the Republic of Serbia		
1.2.2.5 Establishment of the ecological network of the Republic of Serbia		
Measure 1.2.3 : Establishment and development of the areas of special geological importance in the Republic of Serbia	Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use	EU target 1: Fully implement the Birds and Habitats Directives
Measure implementation activities:	Aichi target 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. Aichi target 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	EU target 1: 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: (i) 100% more habitat assessments and 50% more species assessments under the Habitats Directive show an improved conservation status; and (ii) 50% more species assessments under the Birds Directive show a secure or improved status.
1.2.3.1 Building institutional and administrative capacities for the conservation of geoheritage facilities and geoparks		
1.2.3.2 Establishment of a technical and expert geoparks council		
1.2.3.3 Innovating the inventory of geoheritage facilities		
1.2.3.4 Establishment of a national geoparks council/committee		
1.2.3.5 Development of criteria for the evaluation of geoheritage facilities		
Measure 1.2.4: Identification, evaluation and protection of different types of landscapes on the territory of the Republic of Serbia	Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity	EU target 1: Fully implement the Birds and Habitats Directives
Measure implementation activities:	Aichi target 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	EU target 1: 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
1.2.4.1 Development of a national landscape spatial database (on landscape values)		

1.2.4.2 Improvement and/or revision of the legislative framework for landscape typology 1.2.4.3 Establishment of a methodology for character identification and landscape assessment (landscape condition assessment) on the territory of the Republic of Serbia	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.	current assessments: (i) 100% more habitat assessments and 50% more species assessments under the Habitats Directive show an improved conservation status; and (ii) 50% more species assessments under the Birds Directive show a secure or improved status.
Measure 1.2.5: Improvement of the protection status and species management	Aichi target 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.	EU target 1: 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: (i) 100% more habitat assessments and 50% more species assessments under the Habitats Directive show an improved conservation status; and (ii) 50% more species assessments under the Birds Directive show a secure or improved status.
Measure implementation activities: 1.2.5.1 Adoption of bear, lynx and wolf management plans 1.2.5.2 Revision of the list of protected and strictly protected species	Aichi target 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.	EU target 1: 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: (i) 100% more habitat assessments and 50% more species assessments under the Habitats Directive show an improved conservation status; and (ii) 50% more species assessments under the Birds Directive show a secure or improved status.
1.2.5.3 Creation of Red Lists and Books	Aichi target 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.	
1.2.5.4 Improvement of the monitoring and conservation of habitats of migratory bird species and other species with improved nature protection conditions	Aichi target 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.	

Specific objective1.3: Improved public policy for nature protection and biodiversity conservation and public participation in decision making	Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building	
Measure 1.3.1: Improving international cooperation at the global level	Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building	EU target 1: Fully implement the Birds and Habitats Directives <u>Horizontal issues</u>
Measure implementation activities:	Aichi target 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. Aichi target 17: 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.	
1.3.1.1 Harmonisation of policies, strategic documents and regulations at the national level for the purpose of implementing the UN Convention on Biological Diversity and the Global Strategic Plan. 1.3.1.2 Harmonisation of national regulations and implementation of global international environmental agreements in the field of biodiversity		
1.3.1.3 Implementation of global international projects and joining initiatives		
1.3.1.4 Raising public awareness and increasing public participation in the harmonisation of nature protection and biodiversity conservationpolicies and regulations	Aichi target 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.	
Measure 1.3.2: Improvement of	Strategic Goal A: Address the underlying causes of biodiversity	

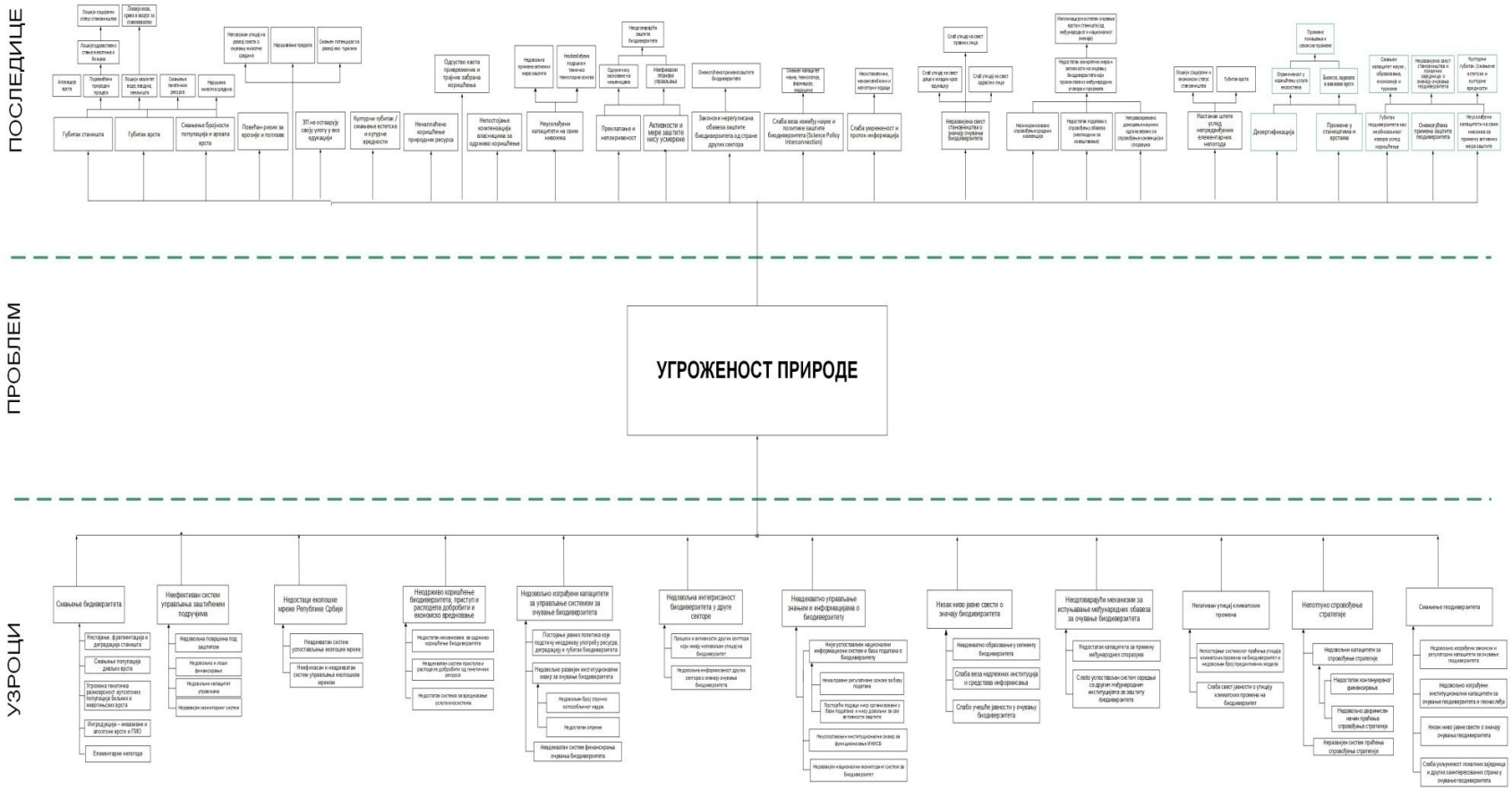
international cooperation at the regional level	loss by mainstreaming biodiversity across government and society	
Measure implementation activities:	Aichi target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.	EU target 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.
1.3.2.1 Harmonisation of sectoral policies and relevant strategic national-level documents and regulations with EU policies, strategies and legislation including the Habitats and Birds Directives.		
1.3.2.2 Harmonisation of intersectoral environmental regulations with EU regulations of the horizontal environmental legislation and EU Habitats and Birds Directives and other EU nature protection regulations		
1.3.2.3 Harmonisation of nature protection regulations with international agreements and accompanying resolutions and recommendations of the Council of Europe		
1.3.2.4 Participation in the work of the Regional Biodiversity Task Force of South-East Europe in coordination with the IUCN Regional Office for ECARO		
1.3.2.5 Monitoring the implementation of projects at the regional and bilateral level		
1.3.2.6 Participation of stakeholders and local communities in the	Aichi target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have	

implementation of projects for the execution of international obligations concerning nature protection and biodiversity conservation	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.	
Measure 1.3.3: Integration of nature protection and biodiversity conservation into other sectors	Aichi target 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 minimising genetic erosion and safeguarding their genetic diversity.	EU target 3: Increase the contribution of agriculture and forestry to biodiversity
Measure implementation activities: 1.3.3.1 Integration of nature and biodiversity protection into the relevant sectoral legislation, policies and standards in the relevant fields at all levels (transport, construction, energy, tourism, etc.)	Aichi target 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	EУ target 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.
1.3.3.2 Development of guidelines for the application of principles and examples of best practice in terms of nature protection and biodiversity conservation for all relevant sectors 1.3.3.3 Promotion of the application of traditional knowledge of and practice in the improvement of the cultivation and preservation of autochthonous varieties and breeds	Aichi target 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. Aichi target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable	EU target 6: By 2020, the EU has stepped up its contribution to averting global biodiversity loss; Regulate access to genetic resources and the fair and equitable sharing of benefits arising from their utilisation

	production and consumption and have kept the impacts of use of natural resources well within safe ecological limits. Aichi target 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	
Measure 1.3.4: Improvement of the existing and introduction of new indicators for monitoring the impact of activities of other sectors on nature and biodiversity conservation	Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use	EU target 3: Increase the contribution of agriculture and forestry to biodiversity
Measure implementation activities:	Aichi target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity	EU target 3: Increase the contribution of agriculture and forestry to biodiversity
1.3.4.1 Amendments to the national list of indicators for monitoring the impact of the forestry sector on nature and biodiversity		
1.3.4.2 Amendments to the national list of indicators for monitoring the impact of the hunting sector on nature and biodiversity		
1.3.4.3 Amendments to the national list of indicators for monitoring the impact of the fisheries sector on nature and biodiversity		
1.3.4.4 Amendments to the national list of indicators for monitoring the impact of the spatial planning and infrastructure sector on nature and biodiversity		
1.3.4.5 Amendments to the national list of indicators for monitoring the impact of the		

agricultural sector on nature and biodiversity		
1.3.4.6 Amendments to the national list of indicators for monitoring the impact of the energy sector on nature and biodiversity		
1.3.4.7 Amendments to the national list of indicators for monitoring the impact of the tourism sector on nature and biodiversity		
1.3.4.8 Amendments to the national list of indicators for monitoring the impact of the water management sector on nature and biodiversity		

Problem tree



Translation of the Problem tree:

ПОСЛЕДИЦЕ - EFFECTS

Лошији социјални статус становништва - Lower social status of the population
Лошија вода, храна и ваздух за становништво - Poorer quality of water, food and air for the population
Лошије здравствено стање животиња и биљака - Poorer health of animals and condition of plants
Алокација врста – Allocation of species
Поремећени природни процеси - Disturbed natural processes
Лошији квалитет воде, ваздуха, земљишта - Poorer quality of water, air, soil
Смањење генетичких ресурса - Reduction of genetic resources
Нарушена животна средина – Environmental disturbance
Неповољан утицај на развој свести о очувању животне средине – Unfavourable effect on the development of environmental awareness
Нарушавање предела - Landscape disturbance
Смањен потенцијал за развој еко туризма - Reduced potential for the development of eco-tourism
Одсуство квота привремених и трајних забрана коришћења - Absence of quotas of temporary and permanent bans on use
Недовољна примена активних мера заштите - Insufficient application of active protection measures
Необезбеђена подршка и техничко технолошка основа – Absence of support and technical and technological basis
Неодговарајућа заштита биодиверзитета - Inadequate biodiversity protection
Одлуке нису засноване на чињеницама - Decisions are not based on facts
Неефикасни планови управљања – Inefficient management plans
Онемогућена примена заштите биодиверзитета – Disabled biodiversity protection
Смањен капацитет науке, технологије, фармације, медицине - Reduced scientific, technological, pharmacological and medical capacities
Несистематични, некомпатибилни и непотпуни подаци - Unsystematic, incompatible and incomplete data
Слаб утицај на свест правних лица - Weak influence on the awareness of legal entities
Слаб утицај на свест деце и младих кроз едукацију - Weak influence on the awareness of children and youth through education
Слаб утицај на свест одраслих особа - Weak influence on the awareness of the adults
Импликације на степен очувања врста и станишта (од међународног и националног значаја) - Implications of the degree of species and habitats conservation (of international and national importance)
Недостатак конкретних мера и активности на очувању биодиверзитета који произилазе из међународних уговора и пројеката - Lack of specific biodiversity conservation measures and activities resulting from international agreements and projects
Лошији социјални и економски статус становништва - Lower social and economic status of the population
Губитак врста - Loss of species
Промене понашања и сезонске промене - Behavioral and seasonal changes
Ограниченост у коришћењу услуга екосистема - Limitations in the use of ecosystem services
Болести, паразити и инвазивне врсте - Diseases, parasites and invasive species
Смањен капацитет науке, образовања, економије и туризма - Reduced scientific, educational, economic and tourism capacities

Културни губитак/смањење естетске и културне вредности - Cultural loss/reduced aesthetic and cultural values
Неразвијена свест становништва и локалних заједница о значају очувања геодиверзитета - Undeveloped awareness of the population and local communities about the importance of conserving geodiversity
Губитак станишта – Loss of habitats
Губитак врста - Loss of species
Смањење бројности популације и ареала, врста - Decrease in species population and range
Повећан ризик за ерозије и поплаве - Increased risk of erosion and flooding
ЗП не остварују своју улогу у еко едукацији – PAs do not do their role in eco-education
Културни губитак/смањење естетске и културне вредности - Cultural loss/reduced aesthetic and cultural values
Ненаплаћено коришћење природних ресурса - Uncharged use of natural resources
Непостојање компензација власницима за одрживо коришћење – Absence of compensation paid by owners for sustainable use
Неусклађени капацитети на свим нивоима - Uncoordinated capacities at all levels
Преклапање и непокривеност - Overlap and non-coverage
Активности и мере заштите нису усмерене - Activities and protection measures are not targeted
Законски нерегулисана обавеза заштите биодиверзитета од стране других сектора - Legally unregulated obligation of other sectors to protect biodiversity
Слаба веза између науке и политике заштите биодиверзитета (Science Policy Interconnection) - Poor science policy interconnection in terms of biodiversity protection
Слаба умреженост и проток информација - Poor networking and information flow
Неразвијена свест становништва о значају очувања биодиверзитета - Undeveloped awareness of the population about the importance of biodiversity conservation
Несинхронизовано спровођење сродних конвенција - Unsynchronised implementation of related conventions
Недостатак података о спровођењу обавеза (неопходних за извештавање) - Lack of data on the execution of obligations (necessary for reporting)
Неправовремено доношење кључних одлука везано за спровођење конвенција и споразума - Untimely adoption of key decisions on the implementation of conventions and agreements
Настанак штете услед непредвиђених елементарних непогода - Damage caused by unforeseen natural disasters
Дезертификација - Desertification
Промене у стаништима и врстама - Changes in habitats and species
Губитак геодиверзитета као необновљивог извора услед коришћења - Loss of geodiversity as a non-renewable resource due to utilisation
Онемогућена примена заштите геодивезитета – Disabled protection of geodiversity
Неусклађени капацитети на свим нивоима за примену активних мера заштите - Uncoordinated capacities at all levels for the application of active protection measures

ПРОБЛЕМ - PROBLEM
УГРОЖЕНОСТ ПРИРОДЕ - ENDANGERED NATURE

УЗРОЦИ - CAUSES
Смањење биодиверзитета – Reduced biodiversity
Нестајање, фрагментација и деградација станишта - Disappearance, fragmentation and degradation of habitats
Смањење популација дивљих врста - Declining populations of wild species
Угрожена генетичка разноврсност аутохтоних популација биљних и животињских врста - Endangered genetic diversity of native populations of plant and animal species
Интродукција – инвазивне и алохтоне врсте и ГМО - Introduction of invasive and non-native species and GMOs
Елементарне непогоде - Natural disasters

Неефективан систем управљања заштићених подручјима - Ineffective protected area management system
Недовољна површина под заштитом - Insufficient protected area
Недовољно и лоше финансирање - Insufficient and poor funding
Недовољни капацитет управљача - Insufficient management capacity
Неразвијен мониторинг систем - Undeveloped monitoring system

Недостаци еколошке мреже Републике Србије - Disadvantages of the ecological network of the Republic of Serbia
Неадекватан систем успостављања еколошке мреже - Inadequate system of establishment of the ecological network
Неефикасан и неадекватан систем упраављања еколошком мрежом - Inefficient and inadequate ecological network management system

Неодрживо коришћење биодиверзитета, приступ и расподела добробити и економско вредновање - Unsustainable use of biodiversity, access and distribution of benefits and economic evaluation
Недостатак механизама за одрживо коришћење биодиверзитета - Lack of mechanisms for the sustainable use of biodiversity
Неадекватан систем приступа и расподеле добробити од генетичких ресурса - Inadequate system of access and distribution of benefits from genetic resources
Недостатак система за вредновање услуга екосистема - Lack of ecosystem service evaluation system

Недовољно изграђени капацитети за управљање системом за очување биодиверзитета - Insufficiently built capacities for biodiversity conservation management system
Постојање јавних политика које подстичу неодрживу употребу ресурса, деградацију и губитак биодиверзитета - Existence of public policies that encourage the unsustainable use of resources, degradation and loss of biodiversity
Недовољно развијен институционални оквир за очување биодивезитета - Insufficiently developed institutional framework for biodiversity conservation
Недовољна број стручно оспособљеног кадра - Insufficient number of professionally trained staff
Недостатак опреме - Lack of equipment
Неадекватан систем финансирања очувања биодиверзитета - Inadequate financing system for biodiversity conservation

Недовољна интегрисаност биодиверзитета у друге секторе - Insufficient integration of biodiversity into other sectors
Процеси и активности других сектора који имају неповољан утицај на биодиверзитет - Processes and activities of other sectors that have an unfavourable effect on biodiversity
Недовољна информисаност других сектора о значају очувања биодиверзитета - Insufficient awareness of other sectors of the importance of biodiversity conservation

Неадекватно управљање знањем и информацијама о биодиверзитету - Inadequate management of knowledge of and information on biodiversity
Није успостављен национални информациони систем и база података о биодиверзитету – Absence of establisghed national biodiversity information system and database
Нема правне регулативне основе за базу података – Absence of a legal regulatory basis for the establishment of a database
Постојећи подаци нису организовани у бази података и нису довољни за све активности заштите - Existing data are not organised in the form of a database and are not sufficient for all the performance of all protection activities
Неуспостављен институционални оквир за функционисање ИНИСБ – Absence of an institutional framework for the functioning of the INISB
Неразвијен национални мониторинг систем за биодиверзитет - Undeveloped national biodiversity monitoring system

Низак ниво јавне свести о значају биодиверзитета - Low level of public awareness of the importance of biodiversity
Неадекватно образовање у сегменту биодиверзитета - Inadequate education in the field of biodiversity
Слаба веза надлежних институција и средстава информисања – Poor interconnection between competent institutions and the media
Слабо учешће јавности у очувању биодиверзитета – Small public engagement in biodiversity conservation

Неодговарајући механизми за испуњавање међународних обавеза за очување биодиверзитета - Inadequate mechanisms for fulfilling international biodiversity conservation obligations
Недостатак капацитета за примену међународних споразума - Lack of capacities for the implementation of international agreements
Слабо успостављен систем сарадње са другим међународним институцијама за заштиту биодиверзитета - Poorly established system of cooperation on biodiversity protection with other international institutions

Негативан утицај климатских промена – Negative effect of climate change
Непостојање системског праћења утицаја климатских промена на биодиверзитет и недовољан број предиктивних модела - Lack of systematic monitoring of the impact of climate change on biodiversity and insufficient number of predictive models
Слаба свест јавности о утицају климатских промена на биодиверзитет - Low level of public awareness of the impact of climate change on biodiversity

Непотпуно спровођење стратегије - Incomplete strategy implementation
Недовољни капацитети за спровођење стратегије - Insufficient capacities for strategy implementation

Недостатак континуираног финансирања - Lack of continuous funding
Недовољно дефинисан начин праћења спровођења стратегије - Insufficiently defined manner of monitoring strategy implementation
Неразвијен систем праћења спровођења стратегије - Underdeveloped strategy implementation monitoring system

Смањење геодиверзитета – Reduced geodiversity
Недовољно изграђени законски и регулаторни капацитети за очување геодиверзитета - Insufficiently built legal and regulatory capacities for geodiversity conservation
Недовољно изграђени институционални капацитети за очување геодиверзитета и геонаслеђа - Insufficiently built institutional capacities for geodiversity and geoheritage conservation
Низак ниво јавне свести о значају очувања геодиверзитета - Low level of public awareness of the importance of conserving geodiversity
Слаба укљученост локалних заједница и других заинтересованих страна у очување геодиверзитета - Poor involvement of local communities and other stakeholders in conserving geodiversity