

*Updated National Strategy
for the Protection of Biodiversity to 2020*

Slovak Republic

2014

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1. Introduction

Biological diversity (hereafter referred to as „biodiversity“) is the variety of all Earth's life forms and their interactions. Biodiversity includes ecosystems, habitats, plants and animals as well as micro-organisms, the variability of genes and interactions between living systems.

Biodiversity is fundamental for all of human life and activity. Goods and services provided by biodiversity through healthy ecosystems are essential for sustaining our well-being as well as economic and social growth.

Benefits such as food, clean water, flood and drought protection, fresh air, soil production and pollination of various crops are all made possible by biodiversity and ecosystems. However, the environmental impact of human activity often destroys biodiversity, resulting in a decline of ecosystems' resilience and ability to provide these benefits.

In the near future, it will be necessary to achieve a greater awareness of the economic value of ecosystems at the level of decision making bodies as well as the general public. **Unless effective measures are taken to halt the decline in biodiversity now, future changes may be irreversible.** The ethical, economic and social aspects of the loss of biodiversity and ecosystems have been the main reasons behind the set of measures and activities that have been endorsed at a global, European and national levels.

Global framework for the protection of biodiversity and its implementation in Slovakia

The real value of biodiversity was first emphasized by three UN conventions, also known as Rio Conventions - *Convention on Biological Diversity, United Nations Framework Convention on Climate Change and United Nations Convention to Combat Desertification*. These conventions were one of the most significant results of the UN's 1992 Earth Summit which took place in Rio de Janeiro, Brazil.

In 2012, the Rio+20 UN Conference on Sustainable Development took place in Rio de Janeiro, Brazil. The Conference document titled "The Future We Want" reaffirmed all international commitments for the protection of biodiversity, and urged all countries to make increased efforts in meeting these commitments.

The UN Convention on Biological Diversity (hereafter referred to as "CBD") represents the main international framework for biodiversity protection, as it includes measures for the preservation of biodiversity and the sustainable use of its components, as well as the fair and equitable sharing of benefits derived from the use of genetic resources. The CBD also informs of the necessity to protect biodiversity and biological resources on ethical grounds, out of respect for all Earth's life forms and our human responsibility to future generations.

CBD is of global significance. It has been ratified by 193 countries around the world. The Slovak Republic (hereafter referred to as "SR") has become a contracting party of the CBD on November 23rd 1994.

The **National Strategy for the Protection of Biodiversity in Slovakia**, which was adopted by the Government of the SR on April 1st 1997 by Resolution no. 231/1997 and approved by the Parliament of the SR on June 2nd 1997 was the fundamental document for the implementation of the CBD in the SR.

The National Strategy for the Protection of Biodiversity in Slovakia has established the **following principles** to provide guidance for the protection biodiversity:

- (a) biodiversity, at all levels, must be protected, preferably in-situ (at the place of occurrence),
- (b) artificially induced decrease in biodiversity must be compensated for at the highest rate possible,
- (c) landscape diversity must be preserved in order to maintain the variability of life forms at all levels,
- (d) natural resources must always be used wisely in a sustainable way
- (e) each person must be responsible for the sustainable use and the protection of biodiversity¹.

The execution of specific tasks under the National Strategy for the Protection of Biodiversity in Slovakia was specified by the **Action Plan for the Implementation of the National Strategy for the Protection of Biodiversity in Slovakia for 1998 – 2010** (hereafter referred to as "Action Plan 1998 – 2010") which was adopted by the Government of the SR on August 4th 1998 (Resolution no. 515/ 1998). The Action Plan 1998 –

¹ National Strategy for the Protection of Biodiversity in Slovakia, 1997, pp.11

2010 contained specific tasks, responsible authorities, estimate of costs associated with the implementation and possible financial resources for each activity. The evaluation of the effectiveness of the Action Plan 1998 – 2010 was carried out regularly in accordance with the Resolution of the Government of the SR no. 587 of August 12th 1997.

The implementation of the CBD at the national level is evaluated regularly in national reports. To date, SR has submitted four national reports² to the Secretariat of CBD, namely in 1998, 2001, 2006 and 2009³.

The International Treaty on Plant Genetic Resources for Food and Agriculture (hereafter referred to as "International Seed Treaty") was adopted during the 31st session of the UN November 2001 Conference for Food and Agriculture in Rome by Resolution 3/2001. The main objectives of the International Seed Treaty is "guaranteeing food security through the conservation, exchange and sustainable use of the world's plant genetic resources for food and agriculture, as well as the fair and equitable benefit sharing arising from its use⁴."

Biodiversity loss and its consequences

The loss of biodiversity is a worldwide problem, largely a consequence of human activity, which causes a decline in a number of plants and animals and a decreased resistance and production of ecosystems. As stated in the 2005 UN "Millennium Ecosystem Assessment"⁵ approximately 60% of ecosystem services on Earth have been threatened or declining. **Biodiversity has been exposed to an intensive stress. The main reasons for its decline are the loss of natural habitats, excessive and unsustainable use of natural resources, climate change, invasive alien species and pollution⁶.**

According to the latest global evaluation of the state of biodiversity, the number of animal and plant species continues to decline, the risk of their extinction rises and the loss, degradation and fragmentation of natural habitats continues⁷.

Almost 30 % of the territory of the European Union (hereafter referred to as "EU") had been affected by intense fragmentation. Only 17% of habitats and 17% of species of European importance are in a favorable condition. The condition of a significant proportion of habitats and species, especially marine species and habitats, is not known. **45% of Earth's original forests had disappeared, mostly during the course of the last century.⁸** A study titled "**The Economics of Ecosystems and Biodiversity⁹**" (hereafter referred to as "TEEB"), prepared on the initiative of the European Commission, stated that the *global annual loss of ecosystem services provided by terrestrial biodiversity accounts for up to 50 billion EUR. If this trend continues, the estimated decline in terrestrial biodiversity might represent up to 7% of the global gross domestic product by 2050.* The report included recommendations which propose ending environmentally harmful subsidies and an establishment of "markets" for each type of ecosystem service. The TEEB also proposed a framework for economic valuation of ecosystem services.

The TEEB stated that pollination by insects in the EU generates a revenue of 15 billion EUR a year for the society, while the losses caused by invasive species cost the society 12,5 billion EUR, not including additional expenses of 40 to 190 million EUR per year for management measures. Although there is a lack of detailed calculations for the SR, it is evident that the society has been disregarding the importance of biodiversity and healthy ecosystems in the past. To this day, some **are still considered to be public goods lacking any additional value, and subsequently, their significance has been underestimated.** This, in a long term **causes a loss of natural capital of the SR.** Global ecological, economic and social changes SR has been facing might become an intractable challenge for a country whose natural capital is small and natural resources have been depleted.

2 National Reports and NBSAPs <http://www.cbd.int/reports/search/?country=sk> , 22.11.2012

3 The fifth national report was submitted in 2015

4 Explanatory guide to the International Treaty on Plant Genetic Resources for Food and Agriculture (2005), 14 pp.

5 Millennium Ecosystem Assessment, 2005, Ecosystems and Human Well-being: Synthesis. Island Press, Washington DC

6 Why we are losing biodiversity, the threats to biodiversity: <http://www.cbd.int/2010/biodiversity/#tab=1> , 22.11.2012

7 Secretariat of the Convention on Biological Diversity (2010) Global Biodiversity Outlook 3. Montréal, 94 pp.

8 European Environment Agency, EU 2010 Biodiversity Baseline, 17 pp., <http://www.eea.europa.eu/publications/eu-2010-biodiversity-baseline> , 22.11.2012

9 The Economics of Ecosystems and Biodiversity (TEEB), European Communities, 2008

The loss of biodiversity and the subsequent decline in the provisioning of services and goods by natural ecosystems will require costly technological alternatives. For this reason, an investment in the preservation of our natural capital will save funds decline in the provisioning of services, which is important for the prosperity and survival of the society.

Failure to meet the target to reduce or halt biodiversity loss by 2010

Despite considerable global efforts to achieve the 2010 target of the CBD of “a significant reduction of the rate of biodiversity loss at the global, regional and national levels as a contribution to poverty alleviation and to the benefit of all life on Earth”¹⁰ was not achieved¹¹.

The evaluation of the accomplishment of the EU target to “reduce or halt biodiversity loss by 2010” has shown that despite several significant accomplishments (e.g. the establishment of a network of protected areas known as Natura 2000), **the target in the field of biodiversity was not met**¹². This has indicated that **the traditional approach to the protection of biodiversity based on an isolated protection of selected species and habitats is not effective enough to address complex issues of biodiversity loss**.

The decline in biodiversity was not halted by 2010 in SR, either. The first assessment of the state of habitats and species of European importance according to article 17 of the Council Directive 92/43/EC on the Conservation of Natural Habitats and of Wild Fauna and Flora (hereafter referred to as “Habitats Directive”) has shown that **only 16% of species and 29% of habitats in the SR were in a favorable conservation status**; other species and habitats were either in an unfavorable or unknown condition.¹³

Recent analyses on the **implementation of the Rio Conventions in the SR suggest insufficient coordination** between relevant activities and cooperation between stakeholders, absence transfer of innovation and international commitments from the national to regional and local levels, as well as the absence of management and decision-making institutions for issues covered by the Rio Conventions and insufficient support for integrated approaches at all levels of the society.

Setting a new target to be achieved by 2020 on a global and European scale

The failure to achieve the global target has led to the adoption of a new global commitment in the field of biodiversity protection to 2020. In October 2010, at the Tenth Meeting of the Conference of Parties (hereafter referred to as “COP 10”) of the CBD which took place in Nagoya, Japan, the Parties of the CBD agreed on the adoption of an updated **Strategic Plan for the Protection of Biodiversity 2011 – 2020**¹⁴, which included **five strategic targets and twenty more specific targets (the so called Aichi Targets)**.

The vision of the Strategic Plan for the Protection of Biodiversity 2011 – 2020 is “to live in harmony with nature” and to ensure the “appraisal, protection, restoration and wise use of biodiversity, whilst preserving ecosystem services, a healthy planet and providing benefits, essential for all people” by 2050.

On April 20th 2012, the European Parliament approved a biodiversity strategy titled “Our Life Insurance, Our Natural Capital: an EU Biodiversity Strategy to 2020”¹⁵ and prepared by the European Commission. In this resolution, **the parliament has expressed its concern over the failure to halt the loss of biodiversity and emphasized the importance of integrating the protection and preservation of biodiversity into the preparation, execution and financing of all other EU policies, including policies on agriculture, forestry, fishing, regional and cohesion policy, energy, industries, transport and tourism, development policy, research and innovation, in order to improve the cohesion of EU sectoral and budget policies**.

10 COP 6 Decision VI/26 Strategic Plan for the Convention on Biological Diversity, 2002

11 Secretariat of the Convention on Biological Diversity (2010) Global Biodiversity Outlook 3. Montréal, 94 pp.

12 Report by the Commission to the Council of the EU and the European Parliament: Execution of the EU Biodiversity Action Plan (2010), KOM(2010) 548 in its final amendment, 8.10.2010

13 Article 17 Report – National Summary: Slovakia, https://circabc.europa.eu/sd/d/e7d755b7-66eb-4b96-b3e1-46b1cdf6adec/SK_National_Summary.pdf, 22.11.2012

14 COP 10 Decision X/2. Strategic Plan for Biodiversity 2011 – 2020

15 Resolution of the European Parliament from April 20th 2012 on the subject of “Our Life Insurance, Our Natural Capital: an EU Biodiversity Strategy to 2020 (2011/2307(INI)), <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-20120146+0+DOC+XML+V0//SK>, 22.11.2012

Commitments to protect biodiversity also result from official documents of other related international conventions and, vice versa, the Aichi Targets have been reflected in their strategic documents.

The current position of the SR and its commitments towards the environment and sustainable development have been shaped by its membership in the EU (since 2004), as well as the fact that SR has signed and ratified or acceded to the majority of fundamental global and regional environmental conventions. These include the Convention on International Trade in Endangered Species of Wild Fauna and Flora (hereafter referred to as "CITES convention"), the Convention on the Conservation of Migratory Species of Wild Animals (hereafter referred to as "Bonn Convention"), the Convention on Wetlands of International Importance (hereafter referred to as "Ramsar Convention"), the Convention Concerning the Protection of the World Cultural and Natural Heritage (hereafter referred to as "World Heritage Convention"), the Convention on the Conservation of European Wildlife and Natural Habitats (hereafter referred to as "Bern Convention"), the Framework Convention on the Protection and Sustainable Development of the Carpathians (hereafter referred to as "Carpathian Convention"), the Convention on Co-operation for the Protection and Sustainable Use of the River Danube (hereafter "Danube River Protection Convention") and others.

According to the Environmental Performance Review for the Slovak Republic (2011) by the Organization for Economic Cooperation and Development¹⁶ (hereafter referred to as "OECD"), **the fundamental problems in the SR include insufficient financing of elementary nature protection activities such as mapping, monitoring, developing information systems and ensuring suitable management of protected areas. Communication with the public as owners and users of land has also been insufficient, resulting in the lack of public support for the management of protected areas, in particular Natura 2000 areas. The management of protected areas and its effectiveness must be assessed according to the framework prepared by the IUCN World Commission on Protected Areas, using its categories and criteria.**

The role of the Updated National Strategy for the Protection of Biodiversity to 2020

The Updated National Strategy for the Protection of Biodiversity to 2020 (hereafter referred to as "Updated National Strategy") is directly based on the Strategic Plan for the Protection of Biodiversity 2011 – 2020 of the CBD. It has been prepared for the purposes of defining national targets for the protection of biodiversity in the SR taking into consideration current state and trends in biodiversity in the SR, within the EU, and also at the global level; and to reflect national and international commitments of the SR.

The Updated National Strategy expands and updates the 1997 National Strategy for the Protection of Biodiversity in Slovakia, the fundamental document for the implementation of the CBD in the SR. Compared to the original document, **the Updated National Strategy considers emerging and recent threats and trends in the field of biodiversity protection, as well as the implementation of certain EU policies which affect biodiversity and the effects of which only began to show after the accession of the SR to the EU.** The Updated National Strategy has also been expanded to include topics such as *green infrastructure*, *ecosystem services* and *invasive alien species*; it reflects policies for the protection of biodiversity at the EU level and to a greater extent it deals with the classification of the protection of biodiversity and the management of protected areas among national priorities when planning funding instruments of EU funds.

The Updated National Strategy reflects all the strategies, plans and programs approved and currently valid in the SR that are in any way related to the protection and sustainable use of biodiversity. The targets and the implementation of these strategies are fully respected in the Updated National Strategy. In areas where the interests of biodiversity protection and other policies and sectors overlap, the mutual integration and implementation of targets must be achieved in order to cover the interests of all public policies.

The topics of climate change, environment and biodiversity protection, reduction of the proportion of energy-intensive industrial production and strengthening our focus on the so called "green economy" have been declared as priorities of the Government of the SR and have been included in all fundamental conceptual documents and strategies of respective Ministries¹⁷.

The Updated National Strategy fully respects existing approved national strategic and policy documents of individual sectors in the SR, including their requirements, objectives and measures for the protection and

16 Summaries of OECD Environmental Performance of OECD: Slovak Republic 2011, Ministry of the Environment of the Slovak Republic, 2011, 186 pp.

17 Government of the SR policy statement, May 2012, http://www.vlada.gov.sk/data/files/2008_programove-vyhlasenie-vlady.pdf

development of the society. The proposed strategy aims to create a balance between the protection of biodiversity and the country's other society-wide needs and interests while fully assessing their contribution to the society with a priority on protecting the health and life of people and their property.

2. Long-term vision and further consideration of the Updated National Strategy for the Protection of Biodiversity to 2020

In order to determine a long-term direction of biodiversity management in the SR, a vision for its protection and sustainable use by 2050 has been formulated.

Long-term vision for the protection of biodiversity in Slovakia to 2050

By 2050, the natural capital of the SR – biodiversity, ecosystem services and goods – is adequately protected, regularly evaluated, wisely used and restored as appropriate, because of its intrinsic value and for its considerable contribution to the well-being and economic prosperity of the SR. Measures and policies adopted at a national level prevent unfavorable changes which the loss of natural capital would result in.

The 1997 strategy set 24 strategic targets (see Annex 1). The Action Plan 1998 – 2010 introduced an obligation to evaluate its implementation and the achievement of its targets. Some strategic targets needed to be updated or harmonized with global and European biodiversity conservation objectives, and also in view of experience with biodiversity protection policy in the previous period.

Basis for the Updated National Strategy for the Protection of Biodiversity to 2020.

The Updated National Strategy is based on the Manifesto of Slovak Government for the period of 2012 – 2016, **which defined achieving social, economic and ecological stability as the main pillars of development** as the country's national priority, and which endorses main contemporary challenges in the field of biodiversity, including the need to restore ecosystems and step up contribution to biodiversity protection at the global level.

The Updated National Strategy is also based on the Global Strategic Plan for the Protection of Biodiversity 2011 – 2020 and the EU Biodiversity Strategy to 2020; resolutions adopted by bodies of international conventions on nature protection and international organizations which SR has been a party to, such as OECD. Further approved documents, such as sector policies and national programs and current national priorities were also taken into account during the preparation of the Updated National Strategy.

3. Evaluation of the current status of the biodiversity protection in Slovakia

Biodiversity includes plant and animal species, micro-organisms and complex ecosystems which provide a diverse environment for organisms. The geographic location of the SR in the center of Europe and on the boundary of the Carpathians and the Pannonian Basin is a prerequisite for its high biological diversity.

The richness and the state of biodiversity in the Slovak Republic

Flora and fauna

To date, over 11,270 plant species (including non-vascular plants), over 28,800 animal species (including invertebrates) and over 1,000 protozoa have been recorded in the SR.

As a result of the intensive use of natural resources, many plant and animal species have become endangered, rare or extinct. The evaluation of the set of indicators on the state and protection of biodiversity in the SR shows that there was an increase in the number of endangered fish species, while the number of endangered bird and mammal species in the Slovak territory remained unchanged in the period of 2005 - 2009¹⁸.

Currently, endangered non-vascular plants in the SR account for 16.3%. Endangered vascular plants account for 40.3% of the total number of 3,352 species (for all categories of protection), or 30.3% (in categories CR – critically endangered, EN – endangered and VU – vulnerable)¹⁹.

As far as species of European importance are concerned, the situation according to the *Report on the State of the Environment of the Slovak Republic in 2011* is as follows:

	Favourable	Unsatisfactory	Bad	Unknown	Total
Vascular plants	10%	40%	10%	40%	100%
Other plants	20%	40%	30%	10%	100%

Endangered invertebrates currently represent around 8.4% of all species (or 5.4% within the CR, EN and VU categories) in the SR. Endangered vertebrates represent 59% (or 23.5% within the CR, EN and VU categories). Within these, 70% of fish, almost 92% of reptiles, 46% of nesting birds, 69% of mammal species, almost 92% of reptiles and all species of amphibians are endangered²⁰.

Rescue programs for endangered plant and animal species are documents of considerable importance in the field of nature protection. They are developed in compliance with Act no. 543/2002 Coll. on Nature and Landscape Protection as amended (hereafter referred to as "Nature Protection Act"). Their goal is to ensure that the population of the given species remains stable, to increase their numbers, discover main pressures and reasons for its decline, eliminate negative factors and determine measures necessary to improve their status. The number of rescue programs approved and carried out from 2005 to 2012 was declining, mainly as a result of insufficient funding from the state budget. By the end of 2012, 47 rescue programs were approved and carried out, 17 for selected endangered animal species, and 30 for selected plants, including five plant species of European importance (a list of animal and selected plant species as well as the duration of the rescue program and its effectiveness are shown in Annex 2.).

Rescue programs are developed by the State Nature Conservancy of the Slovak Republic (hereafter referred to as "ŠOP SR"), usually over a five year period and they are carried out as part of projects funded by EU funds (Environmental operational program, LIFE+ financial tool), the state budget or other sources.

Habitats and ecosystems

18 Evaluation of a series of indicators of the state and protection of biodiversity for 2005 to 2009

19 Report on the State of the Environment of the Slovak Republic in 2011, Ministry of the Environment of the Slovak Republic, Slovak Environmental Agency, 2010, 200 p.

20 Report on the state of the environment of the Slovak Republic in 2011, Ministry of the Environment of the Slovak Republic, Slovak Environmental Agency of the Slovak Republic, 2012, 200 p.

More than 40% of the area of the SR is covered by forests; agricultural land covers 49.16%, water bodies 1.93% and non-agricultural and non-wooded land 9.8% of the Slovak territory. Overall 23% (1,142,151 ha) of the land of the SR are protected areas, including buffer zones of national park²¹. In addition, there are 14 Ramsar sites with a total surface area of 40,697 ha²², two cross-border World Natural Heritage sites and four protected sites are recognized as biosphere reserves (Slovenský kras, Poľana, Tatra and the East Carpathians²³) under the UNESCO Man and Biosphere Program.

The SR has a high proportion of forest ecosystems. In 2011, the forest coverage was approximately 41%²⁴. The forest condition, assessed by defoliation and the level of damage to trees, has continued to worsen during the period of 2005 to 2009 and it was considered **very unfavourable**. Up to 32% of deciduous and coniferous trees were showing defoliation from 26% to 100%. The condition of deciduous trees was a little better as they are more resistant to unfavourable environmental conditions than coniferous trees. In spite of this fact, up to 25% of deciduous trees were showing a level of defoliation of between 26 and 100 % in 2009 (compared to 14% in 2005)²⁵.

On the other hand, the proportion of trees with a level of defoliation between 26 and 100 % fell by over 3% in 2011 as compared to 2010. While the proportion of coniferous trees increased slightly in this category of defoliation; the proportion of deciduous trees decreased by more than 6%. Currently, the proportion of trees with a defoliation of over 60% is 1.7%. **Trees growing at the tree line, where ecosystems have an exceptionally important function for the entire society and where there is a threat of forest ecosystem breakdown, have been in the worst condition**²⁶.

According to the first report on the state of species and habitats of European interest (2004 to 2006), 19% of habitats and species of European interest are in a favorable conservation status, 34% are in an unsatisfactory conservation status, 18% in a bad conservation status and the conservation status of 29% is unknown. Forty-two % of forest habitats, 58% of shrub habitats and 16% of grassland habitats are in a satisfactory conservation status. Favorable conservation status was only recorded for 29% of the total number of habitats of European importance in the SR²⁷.

The assessment of the set of indicators on the state of biodiversity in the SR for 2005 – 2009 has shown that there were changes in the use of agricultural land. **The surface area of arable land, hop fields, vineyards, gardens and orchards has continued to decrease**. In 2011, the surface area of land used for agriculture increased annually by 7,737 ha, reaching 1 929 698 ha²⁸. This increase was caused in particular by an increase in the surface area of permanent meadows and pastures by 5,201 ha and the surface area of arable land by 3,987 ha. A decrease of 1,336 ha was recorded for the permanent grassy areas.

Negative impacts on biodiversity

Biodiversity can be negatively affected by both natural (natural disasters, evolution) and human-induced (pollution of the atmosphere, water and soil, inappropriate farming methods, climate change, infrastructure development, including small hydro-electric power stations; urbanization, the spread of invasive alien species, etc.) phenomena.

From the environmental point of view, the permanent removal of land from the register of agricultural land and its re-classification as land for development is a negative factor. **Arable land is mainly lost to various investment projects**, for residential, industrial and agricultural construction and for the construction of water reservoirs, roads

21 Overview of protected areas in the national network as of 31. 12. 2012, <http://www.soprs.sk/web/?cl=16>

22 http://www.ramsar.org/cda/en/ramsar-about-parties-parties/main/ramsar/1-36-123%5E23808_4000_0_

23 http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/pdf/sc_mab_BRList2010_EN.pdf

24 Report on forestry in the Slovak Republic for 2011, Ministry of Agriculture and Rural Development of the Slovak Republic, 2012, 67 p.

25 Report on the state of the environment of the Slovak Republic in 2010, Ministry of the Environment of the Slovak Republic, Slovak Environmental Agency of the Slovak Republic, 2011, 192 p.

26 Report on the state of the environment of the Slovak Republic in 2011, Ministry of the Environment of the Slovak Republic, Slovak Environmental Agency of the Slovak Republic, 2012, 200 p.

27 Article 17 Report – National Summary: Slovakia, 2008

28 Evaluation of the set of indicators on the state and protection of biodiversity for 2005 to 2009 according to the Resolution of the Government of the SR 837/2007 From October 3rd 2007

and motorways. In the SR, there is a total of 18,040 km of roads and motorways, with a density of 3.3 km per thousand inhabitants (as of 2012)²⁹.

Changes in the use of agricultural land as a result of pronounced social and political changes have become a serious issue. At the beginning of the third millennium, the decrease in the intensity of the management of agricultural land continued. The reduction in the area of arable land, and in particular the decline in the use of permanent grasslands (meadows and pastures) associated with the reduction of livestock numbers and the low economic efficiency of farming has led to the endangerment of habitats for rare species of flora and fauna which occur on grassland habitats requiring appropriate management (mowing and/or grazing). On the contrary, after the accession to the EU and the adoption of the Common Agricultural Policy (hereafter referred to as "CAP"), we have observed an increased intensity in agricultural land use in many areas, as a result of an attempt to farm as much land as possible in order to achieve higher profit from agricultural subsidies and payments. Changes in the market of agricultural commodities and an increase in the proportion of crops farmed for biofuels (corn, rapeseed) has contributed to a significant decrease in the diversity of agricultural activity. **All these changes which took place in the SR within a relatively short period of time had a negative impact on biodiversity which could not be offset by the positive effect of the increase in organic farming.**

Another factor with a negative effect on biodiversity is the loss of high natural value agricultural areas, as, until recently, the CAP did not provide adequate tools for their protection.

The forests of the SR have lately been affected by harmful factors, such as **windstorms** and **forest fires and subsequent pest outbreak**; specifically the bark beetle outbreak in spruce forests which have led to an increase in felling, altering forest development.

In terms of the effect of infrastructure development on biodiversity, the construction of infrastructure, such as roads, motorways and small hydro-electric power stations has a major impact, causing **the fragmentation of natural habitats. Inappropriate design or location of new construction,** in particular linear structures, creates barriers to the migration of animals, causing the separation of individual populations into smaller groups, and posing a threat of local extinction. The design of these constructions often causes the death of migrating animals (road and railway transport, electricity lines). **The fragmentation of the landscape is also linked to the degradation of the gene pool of isolated populations and an increased vulnerability of ecosystems.** The exploitation of raw materials can also be a threat to biodiversity in certain cases. **Wetland habitats are mostly threatened by changes in water regime.** Despite the fact that an environmental impact assessment must be carried out for all planned construction and activities with a significant potential impact on natural environment, the results of assessments do not always prevent certain negative impacts. Annex 3 of this strategic document contains a graph showing a summary of current pressures to habitats and species of European significance – determined using the methodology for the preparation of reports according to Article 17 of the Habitats Directive.

Invasive alien species pose a major threat to the biodiversity of the SR. Since they are highly adaptable, they can outcompete native species, causing an unnatural loss of biodiversity and the disruption of interactions in ecosystems, negatively affecting the provisioning of ecosystem services and goods. To date, 126 species of invasive vascular plants have been recorded in the SR, including 28 invasive neophytes (alien taxa introduced into the territory of the SR after the discovery of the Americas, i.e. after 1492 or 1500), 19 invasive archaeophytes (alien taxa introduced into the territory of the SR before 1492 or 1500) and 79 potentially invasive species which behave in an invasive manner only in certain parts of the country, with a possibility of their expansion into other areas if the conditions were to change³⁰. The ŠOP SR has begun a systematic mapping of alien species of plants in 1997, focusing both on protected areas and non-protected land. However, due to the lack of personal and financial resources, the mapping mainly focused on protected areas over the past few years. Students' theses (bachelor's, master's, doctoral) and other scientific research are another potential important source of information on the occurrence and distribution of invasive alien species.

Lists of invasive alien species and species behaving in an invasive manner had not been published so far for all taxonomic groups (for example, lists for fish and molluscs have been presented). Alien and invasive animal species are not monitored in a comprehensive and systematic way, therefore there is not a complete database on their occurrence or abundance. The occurrence of invasive alien plants has been mainly monitored in protected areas. Information on invasive alien plant species, their list and methods for their removal are regulated by the

29 Summary of data on the road network of the SR, Slovak Road Administration, 2012, 76 pp.

30 www.sopsr.sk/publikacie/invazne/.../Zoznam_inv_rastlin.pdf

Decree of the Ministry of Environment of the Slovak Republic no. 24/2003 for the implementation the Nature Protection Act.

Commitments of the Slovak Republic in the field of protection and sustainable use of biodiversity

Global commitments

The alarming state of biodiversity has led to the adoption of a global commitment in biodiversity protection to 2020. The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the CBD³¹ (hereafter referred to as “Nagoya Protocol”) and the Strategy for Resource Mobilization³² were also adopted in the interests of global biodiversity. The **Nagoya Protocol** is a legally binding treaty which **greatly expands the general framework of the CBD for the access and shared use of benefits**. Once it enters into force, it will be of exceptional benefit for the protection of biodiversity in countries which provide genetic resources, and over which they hold sovereign rights. The Nagoya Protocol is expected to enter into force in 2014. **The Nagoya Protocol will provide more predictable conditions for the access to genetic resources, opportunities for the shared use of benefits between users and providers of genetic resources and will ensure that only legally obtained genetic resources are used.**

As part of international activities coordinated by the UN, the SR regularly prepares an assessment document “The Country Profile”³³, which gives an overview of performance indicators in the implementation of conclusions and recommendations of the UN Rio de Janeiro Conference. It is prepared and regularly updated based on the submission and delivery of respective documents from the authorities responsible for individual chapters of Agenda 21.

The SR must assess services provided by ecosystems and evaluate the possibilities of payment for these services. Although a system of payments for ecosystem services exist and is applied in certain sectors (for example, in the field of water management) in compliance with EU legislation, this question must be re-evaluated in a more comprehensive manner and further possible types of payment for ecosystem services and goods must be established (for example in the area of forestry or leisure) which could contribute to the better management of ecosystems.

Commitments at EU level

Biodiversity, in general, and ecosystem services it provides – the natural capital – is considered to be a crucial asset for the human well-being and economic prosperity of the EU. Therefore the EU has defined **biodiversity protection, valuation and appropriate restoration its vision to 2050, so as to prevent catastrophic consequences of the loss of biodiversity.**

As a contracting party to international conventions in the field of nature conservation and biodiversity, the EU acts within the limits set by the CBD, the Bern Convention, the Bonn Convention and others, and approved regulations and strategic documents in the field of the nature protection, such as the Habitats Directive, the Directive of the European Parliament and Council no. 2009/147/EC on the Conservation of Wild Birds (hereafter referred to as “Birds Directive”). These two directives create a legal framework for nature conservation in the EU which is based on two pillars: building the Natura 2000 network and the system of species protection. The Annexes to the above-mentioned directives are composed of lists of selected species of wild plants, wild animals and natural habitats which are important for the EU. The Natura 2000 network consists of two types of protected areas: protected areas declared under the Birds Directive (known as protected bird areas in Slovak national legislation) and protected areas declared under the Habitats Directive (also known as territories of European significance in Slovak national legislation.)

In May 2011, the European Commission presented a set of targets and measures to prevent the loss of biodiversity titled “Our Life Insurance, Our Natural Capital: an EU Biodiversity Strategy to 2020”³⁴.

31 COP 10 Decision X/1. Access to genetic resources and the fair and equitable sharing of benefits arising from their utilization

32 COP 10 Decision X/3. Strategy for resource mobilization in support of the achievement of Convention's three objectives

33 CSD 2009 Country Profiles, Review of progress made since UNCED - June 1992, Country: Slovakia, 2009, http://www.un.org/esa/dsd/dsd_aofw_ni_ni_pdfs/NationalReports/slovak/SlovakiaCountryProfile2009ENG.pdf

34 Our life insurance, our natural capital: EU Strategy for Biodiversity to 2020, KOM(2011) 244

This document has set a headline target for 2020 and defined a vision to 2050, introducing a new framework for EU policy in the area of biodiversity. In order to achieve the headline target, **the EU biodiversity strategy to 2020 has proposed framework targets and measures in five key areas:**

1. nature conservation and restoration
2. preservation and enhancement of ecosystems and their services
3. ensuring the sustainability of agriculture, forestry and fisheries
4. combating invasive alien species
5. addressing the worldwide biodiversity crisis

4. National strategic target to 2020

In line with the objective of the protection of biodiversity at EU level, the national strategic target of the SR has been proposed as follows:

Key target for 2020:

Halt the loss of biodiversity and the degradation of ecosystems and their services in the SR by 2020, ensure the restoration of biodiversity and ecosystems in an appropriate extent and increase our contribution to averting the loss of biodiversity at the global level.

5. Thematic areas, targets and proposed measures of the Updated National Strategy for the Protection of Biodiversity to 2020

The integration of proposed measures into relevant sectoral policies is a prerequisite for the achievement of the key target by 2020. **Agriculture, forestry, water management, aquaculture and fisheries, regional planning and construction, transport, adaptation to climate change and the energy industry are key areas for the protection of biodiversity. The task of the Ministry of Environment of the SR will be to implement the Updated National Strategy in cooperation with other ministries and to ensure the integration of targets, measures and specific tasks within all concerned sectors.**

The headline target is to be reached by the achievement of 9 partial targets in 6 thematic areas and the implementation of 34 measures. Each partial target focuses on a specified area of biodiversity protection and each of them needs to be achieved by 2020.

Thematic area A: Nature Conservation

Target A.1: *To halt the deterioration in the status of all species and habitats, especially those covered by EU legislation, and achieve a significant and measurable improvement in their condition.*

The area of nature conservation is of key importance for a thorough conservation and restoration of biodiversity, hence the need for the full implementation of the Birds Directive and the Habitats Directive, together with the Nature Protection Act, all aiming to achieve a favorable condition of all habitats and species of European and national interest. The compliance with the directives and the law is a decisive prerequisite to avert further biodiversity loss and an essential prerequisite for the restoration of biodiversity in Slovakia.

We are prepared to propose and adopt changes to the national legislation if necessary, in the view of new and emerging issues in nature conservation and also matters associated with the integration of policies for the use of resources and adaptation to climate change at EU level, or in relation to the consistent implementation of the commitments of the SR towards the EU and international conventions.

To achieve the EU target 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 as to, by 2020, 100% more habitat assessments and 50% more species assessments under the Habitats Directive show an improved conservation status; and 50% more species assessments under the Birds Directive show a secure or improved status, compared to current assessments; in the case of the SR, the conservation status of 30 habitats and 49 species must be improved, while at the same time at least maintaining (i.e. showing no decline) the conservation status of 30 habitats and 52 species; our priorities being mainly wetlands, in terms of habitats, and in terms of species, the European Ground Squirrel, the Tatra Chamois, European Bison, European Pond Turtle, selected species of butterflies and fish, among others.

In order to meet the target for birds, the conservation status of at least 64 bird species must be improved, above all those for which protected bird areas have been declared; an improvement of conservation status has been proposed for. These include, for example, the Black Stork, the Great Bustard, the Grey Partridge, Wood Grouse, birds of prey and wetland bird species. A list of species identified as priorities for management measures is given in Annex 4. Parameters such as the status of endangered species and habitats and cost effectiveness were taken into consideration when preparing the list.

The successful achievement of this target requires that we focus on scientific research, studies of population biology as well as monitoring. Within the monitoring of plants and animals, it is necessary to undertake responsibilities associated with the monitoring of the condition of species and habitats of European interest; however we must also monitor the status of species of national interest which have been included in Red Lists and subsequently update the Red Lists in accordance with the latest classification of conservation status of the IUCN.

Our efforts need to be directed to the preparation of management plans for protected areas and species, with special emphasis on defining appropriate management and long-term financing. When implementing the EU policy on nature conservation at a national level, steps must be taken to reinforce the implementation of nature

conservation, in particular through the preparation and implementation of management plans for protected species and areas.

Effective international and cross-border cooperation can make a significant contribution to the achievement of the targets of the Updated National Strategy at a global and EU levels as well as at the level of public bodies, regional and local institutions dealing with the protection of biodiversity and natural resources. A better use of the potential of cross-border, regional and international cooperation with an exchange of information, experience and good practice can significantly assist in the practical fulfilment of the objectives of biodiversity protection and restoration.

It will be necessary to update the strategy of nature protection and reform the institutions of nature conservation, taking international standards and the efficient management of protected areas, habitats and species into consideration. It will be necessary to improve the monitoring and the efficiency of financing and law enforcement. When setting priorities for the planning of EU funds in the next multi-annual financial framework (2014 – 2020), the SR must promote the protection and restoration of biodiversity; promote the concept of ecosystem services and green infrastructure among its top priorities.

The following steps need to be taken to meet the target:

- Strict implementation of the Birds Directive and the Habitats Directive, adopted resolutions and decisions of international conventions, organizations and programs; improve national legislation for the enforcement of the protection of species and habitats; link the networks of protected areas based on scientific data;
- Ensure integrated management of important areas based on an ecosystem approach, through the development and implementation of management programs and their integration into sectoral policies and strategies;
- Introduce international standards into nature conservation and effective management and financing of protected areas;
- Facilitate exchange of experience and best practices, cross-border cooperation in the management of Natura 2000 areas and other protected areas of international importance and transboundary protected areas;
- Ensure the inclusion of biodiversity protection and management of protected areas as priorities in the planning of EU funding instruments in the next multiannual financial framework.

Target A.2 Ensure that both general public and professions are aware of the importance of biodiversity and the steps towards its protection sustainable use

Considering the generally low awareness of the significance of biodiversity protection among the public and the serious environmental and socio-economic consequences and costs associated with its decline it is necessary to prepare and implement a biodiversity communication strategy. However, special training courses must also be organized for nature conservation and natural resource management staff, state institutions and institutions responsible for the implementation and enforcement of legislation on nature conservation, including judges and public prosecutors. Increasing awareness of biodiversity and its importance will be part of information campaigns for various age and social groups. Education and training in various fields, in particular in agriculture, forestry and related sectors will focus more on the role and significance of biodiversity. Non-governmental organizations and local communities will also play an important role in this process.

In order to ensure that environmental legislation is respected, detailed maps of protected areas, land use, aquatic ecosystems and threats to specific areas must be made available.

The European Commission has an ongoing communication campaign on the Natura 2000 network; the campaign's purpose being an improvement of the implementation of EU legislation and the support of the co-existence of nature protection, sustainable economic development and social development using a set of mutually non-contradictory principles. The SR will be a part of this initiative and will contribute with its projects and by spreading information on the opportunities for environmentally friendly economic development in areas with significant natural and cultural values.

The following steps need to be taken to meet the target:

- Develop and adopt a communication strategy on biodiversity, which will include measures for awareness raising and public participation, the expansion of levels of education, participation and awareness in various fields (including various international conventions, cooperation with key sectors, training courses for judges and public prosecutors) and ensure its implementation;
- Cooperate with the European Commission in the development and implementation of the communication campaign on the Natura 2000 network, as appropriate.

Thematic area B *Preservation and enhancement of ecosystems and their services*

Target B.3 *By 2020, ensure the preservation of ecosystems and enhancement of ecosystem services by means of green infrastructure and the restoration of at least 15% of degraded ecosystems*

The assessment of ecosystems is a tool for the valuation of various aspects of ecosystem health and their ability to provide goods and services. Adequate mapping and subsequent valuation of ecosystem services and the quantification of natural capital is the key task for the preservation and enhancement of ecosystems and their services. Therefore, a framework for the assessment and economic appreciation must be established and incorporated in strategic documents. The valuation of ecosystems and their services is essential for the harmonisation of state policies with the objective of achieving biodiversity protection and the adoption of decisions to ensure effective use of natural resources and support the prosperity of the society.

The European Commission in cooperation with EU member states and the European Environmental Agency currently work on the establishment of common methods and approaches for the mapping and assessment of ecosystems and services and goods they provide, as well as methods for their economic valuation and accounting so that relationship between ecosystem and economic sectors, the dependence of the latter on ecosystem services and goods, and their effect on ecosystems and their ability to provide goods and services can be determined. This information could eventually be used for policy- and decision making and for the management of natural resources at the local level³⁵.

In the SR, as in other countries, ecosystems and their ability to provide services has been degraded as a result of landscape fragmentation. **Therefore, measures listed under this target focus on the preservation, enhancement and restoration of degraded ecosystems and their services through the integration of the concept of green infrastructure into documents of spatial planning and economic and social development at the regional level.** Thus, ecosystems in areas **belonging to the Natura 2000 network and those outside protected areas will become better functionally linked** through different levels of so called national “spatial system of ecological stability” as an essential component of spatial planning.

Green infrastructure³⁶ is a strategically planned and managed network of natural areas, landscape used for various purposes and other non-developed areas which maintain the ecosystem value and functions and provide additional value for the human population. The network of green infrastructure also helps with the restoration and protection of naturally functioning ecosystems which provide a framework for future development. As such, it is a link between biological and human-centered interests.

The management and construction of green infrastructure will have a direct positive effect on the maintenance and preservation of ecosystem services with a secondary benefit of job creation and support for development at both local and regional levels.

The following steps need to be taken to meet the target:

- Improvement of knowledge on ecosystems and their services by mapping and assessing the state of ecosystems and their services in the SR;

³⁵ For example: EEA, 2011: An experimental framework for ecosystem capital accounting in Europe http://www.eea.europa.eu/publications/an-experimental-framework-for-ecosystem/at_download/file, 22.11.2012, or EK, 2013: An analytical framework for ecosystem assessments under Action 5 of the EU Biodiversity Strategy to 2020.

http://ec.europa.eu/environment/nature/knowledge/ecosystem_assessment/pdf/MAESWorkingPaper2013.pdf, 28.4.2013

³⁶ European Commission document Green Infrastructure -Developing European Natural Capital :

http://ec.europa.eu/environment/nature/ecosystems/docs/green_infrastructures/1_EN_ACT_part1_v5.pdf

- Development of a system of economic valuation of ecosystem goods and services and proposing a comprehensive system of payments for ecosystem services, taking existing systems and mechanisms into consideration;
- Evaluation of the costs and benefits of protected areas for the purposes of efficient management of the natural heritage, taking into account the provisioning of ecosystem services and goods;
- Development of a strategic framework for setting priorities for ecosystem restoration, development and implementation of a restoration program for wetlands and rivers as a contribution to climate change mitigation and adaptation;
- Application of the concept of green infrastructure and the so called national spatial system of ecological stability in spatial planning, land consolidation, preparation of plans for economic and social development of regions; establishment of a legal and financial mechanism to support the construction and maintenance of green infrastructure;
- Ensure the positive impact of the “Climate Change Adaptation Strategy of the SR” on biodiversity by means of ecosystem based approaches.

Thematic area C Protection of biodiversity in national policies on agriculture, forestry and fisheries

The purpose of this thematic area of the Updated National Strategy is to improve the integration of biodiversity and the concept of ecosystem services into key sectoral policies, especially through targets and measures that enhance the positive contribution of agriculture, forestry and fisheries to the protection of biodiversity and its sustainable use. EU policies, such as the CAP, Common Fisheries Policy (hereafter “CFP”), and the National Forestry Program of the Slovak Republic are the backbone for activities in these areas in the SR.

The protection and sustainable use of biodiversity has been included in the targets of the CFP and CAP, which has been reflected by a specific set of requirements and measures for the integration of biodiversity protection in these policies. The objective is to identify and apply tools for their implementation which will contribute to the strengthening of synergies and maximizing mutual benefits for both biodiversity and the above-mentioned policies.

Target C.4 By 2020, implement the measures of the Common Agricultural Policy that have positive effects on biodiversity at all cultivated areas, so as to measurably improve the condition of species and habitats

Agricultural land represents a major proportion of the territory of the SR and offers important ecosystem services in addition to major socio-economic benefits. Subsidies and financial support from the CAP represents a significant proportion of the EU budget. However, the CAP is not limited to covering food supply and rural development, but it also serves as an essential tool for biodiversity protection, climate change mitigation and maintenance of ecosystem services³⁷. The Slovak Rural Development Program should therefore focus on providing farmers with motivational tools for providing public services, improving landscape connectivity and adaptation to climate change.

Environmental measures of the CAP also include measures to support high nature value areas, organic agriculture and management of abandoned land, which require targeted maintenance of biodiversity. Many important species and valuable ecosystems/habitats are dependent on agri-environmental systems and human activity and will continue to require support from small and medium-sized farms, family farms and extensive farming, which supports the preservation and maintenance of these natural resources.

Ongoing reduction in the variety of crops and farm animal breeds has led to the erosion of the genetic information on which both human and animal nutrition depends. Therefore, it is necessary to stop and reverse this trend, and promote and support the use of traditional, region-specific agricultural varieties, along with the maintenance and development of genetic resources, for example locally-adapted breeds, varieties and cultivars.

37 Communication from the Commission: The CAP towards 2020: Meeting the food, natural resources and territorial challenges of the future. COM(2010) 672 final.

The following steps need to be taken to meet these targets:

- Implement measures with a positive effect on biodiversity, species, habitats and protected areas with the objective of maximizing the contribution of farmers to biodiversity protection at a national level;
- Support areas with a traditional mosaic pattern of farming, in particular in historically differentiated types of landscape in the SR
- Identify species and habitats dependent on a specific method of farming and subsequently propose and implement specific measures with the support of relevant EU funds in order to improve their conservation status.

Target C.5 *Implement national programs of forest management so as to achieve a measurable improvement in the condition of species and habitat dependent on a suitable forest environment and those, which are significantly affected by forestry practices, and to ensure a measurable improvement in the provisioning of ecosystem services in accordance with sustainable forestry practices as compared to the EU reference condition (2010)*

We expect that forest management plans to be adopted will take expert opinion and consultations into consideration and will propose effective measures for the conservation and restoration of protected habitats, species and associated ecosystem services.

When defining measures within forest management programs in protected areas, approaches which are most likely to bring the greatest benefit in terms of biodiversity protection and its sustainable use will be used.

It is important to ensure the implementation of the Protocol on Sustainable Forest Management of the Framework Convention on the Protection and Sustainable Development of the Carpathians. The preservation of the remnants of primeval and natural forest must be ensured in Slovakia, in compliance with the Protocol.

The most suitable way of financing the C.5 target appears to be a combination of relevant EU financial mechanisms established for biodiversity financing, funds for the implementation of the targets of Directive 2000/60/ES, i.e. the Water Framework Directive³⁸, and funds designated for the adaptation to climate change based on ecosystems approaches, and including the use of innovative forms of financing such as payments for ecosystem services or public-private partnerships for transferring benefits between producers and consumers of public goods and services provided by forests.

The following steps need to be taken to meet these targets:

- Maintain the area of primeval and natural forests, prevent further fragmentation and support the forest regeneration, while providing compensation to landowners for the loss of profit caused by differences in management, promote and support alternative uses of high nature value forests;.
- Integrate measures for biodiversity protection into forest management programs, including the integration of forest management programs and management plans for protected areas;
- Ensure the implementation of the Protocol on Sustainable Forest Management of the Carpathian Convention.

Target C.6 *Ensure adequate protection for aquatic and water dependent habitats and to achieve a good condition of aquatic ecosystems by 2020, and ensure that the development of aquaculture does not have adverse effects on aquatic species and ecosystems*

The condition of aquatic and water-dependent habitats in the SR is dependent on basin management practices and the provision of the quality and quantity of the surface and ground water. The targets of the Updated National Strategy are compatible with the targets and commitments of the Water Framework Directive,

38 Directive no. 2000/60/ES of the European Parliament and Council of October 23rd 2000 which defines the framework of action for community measures in the field of water management:

http://www.vuvh.sk/rsv2/download/02_Dokumenty/01_Dokumenty_Legislativa_EU_suvisiaca_s_RSV/2000_60_ES_SK_RSV.pdf

and the Water Plan of Slovakia³⁹. Common targets will be best achieved through coordinated efforts between respective departments so that strong links between water management and biodiversity are emphasized. **The SR must strive to limit the construction of new barriers on waterways and make existing barriers passable as soon as possible in order to improve the longitudinal connectivity of Slovak waterways.**

With respect to the protection and management of populations of wild fish, appropriate measures such as fish stocking, and protection of river stretches and habitats suitable for spawning and young fish need to be implemented. In addition, the unjustified gravel extraction from river beds, which damages the environment essential for fish reproduction, must also be prevented.

In the field of fish management and aquaculture development, it is necessary to implement practices so as to avoid the worsening of the conservation status of species and habitats which inhabit those sites and areas where fish breeding and aquaculture is being developed.

The following steps need to be taken to meet the target:

- Ensure full coordination with the implementation of the Water Framework Directive, with the objective of creating conditions for the development of aquatic habitats and the restoration of riverine ecosystems;
- Provide conditions for the support of preventive measures to limit conflicts between the interests of fisheries and activities of fish predators.

Thematic area D Fight against invasive species

Target D.7 Ensure the reduction of the negative impact of invasive species on biodiversity and ecosystems in Slovakia by 2020

Alien species are a major threat for both biodiversity and the health of ecosystems. Unless effective **measures to control the introduction and establishment of alien species and for subsequent removal of the established ones are taken on multiple levels, the threat of invasive alien species to the well-being of the society in the SR are expected to grow.** On the scale of the EU, invasive alien species cause 12.5 billion EUR worth of damage to agriculture on yearly basis⁴⁰.

All efforts must be made to prevent the introduction of new potentially invasive alien species in the country and minimize the spread of already established ones into new territories. **To ensure an efficient fighting strategy, it is crucial to continue the monitoring of all and the removal of priority invasive alien species.** A national strategy for the fight against invasive alien species, containing an early warning system emphasizing the prevention of introduction of alien invasive species, in line with the to-be-adopted common EU policy⁴¹ on the prevention, monitoring, removal and management of these species needs to be developed and approved as soon as possible.

Once relevant EU legislation has been adopted, its transposition and subsequent implementation must be carried out as quickly as possible. In addition, we need to pay special **attention to the trade with common and endangered species, and to the introduction of strict regulation measures such as the monitoring of the import of exotic and alien species,** and to ensure the full implementation of the Council Directive 1999/22/EC on the keeping of wild animals in zoos.

The following steps need to be taken to meet these targets:

³⁹ Water Plan of Slovakia

[https://lt.justice.gov.sk/\(S\(2asj2h554fwq2v55hwjlbaw45\)\)/Attachment/Vodny%20Plan%20SR_doc.pdf?instEID=191&attEID=18833&docEID=97866&matEID=2226&langEID=1&tStamp=20091214134730310](https://lt.justice.gov.sk/(S(2asj2h554fwq2v55hwjlbaw45))/Attachment/Vodny%20Plan%20SR_doc.pdf?instEID=191&attEID=18833&docEID=97866&matEID=2226&langEID=1&tStamp=20091214134730310)

⁴⁰ Shine, C., Kettunen, M., ten Brink, P., Genovesi, P. & Gollasch, S. 2009. Technical support to EU strategy on invasive species (IAS) – Recommendations on policy options to control the negative impacts of IAS on biodiversity in Europe and the EU. Final report for the European Commission. Institute for European Environmental Policy (IEEP), Brussels, Belgium. 32 pp.

⁴¹ Adopted in 2014 (Regulation (EU) 1143/2014)

- Adopt a strategy for invasive species in the SR and implement measures for the prevention, control and removal of invasive alien species;
- Establish a viable mechanism for the financing of the elimination of invasive alien species and define priorities;
- Establish a commission for introduced alien species to determine conditions and regulations for their import and handling;
- Modify the management regime for invasive alien species as a part of the amendment to the Nature Protection Act;
- Identify and monitor newly-introduced invasive alien species, identified their entry points and their routes of spread into and within the territory of the SR.

Thematic area E. *Reduction of pressures on biodiversity and the rational use of genetic resources*

Target E.8 *Reduce the intensity of negative factors affecting biodiversity; finalize, for this purpose, an effective legal framework and tools ensuring compliance with relevant legislation, and ensure fair and equitable sharing of benefits arising from the utilization of genetic resources*

As a party to the CBD, the SR is committed to meeting international targets in the field of biodiversity, which require the adoption of effective measures at a national level, mainly for the reason of current unsustainable consumption patterns. As a part of this Strategy, targeted efforts must be focused on the reduction of pressures on biodiversity in order to make our economy more environmentally friendly, in compliance with the guiding principles of the so-called “green economy”. The national and foreign trade policies also need to consider the protection of biodiversity, which needs to be incorporated into trade contracts, support programs of the SR and other documents in compliance with EU policy.

The climate change has a severe negative effect on biodiversity. On the other hand, the decline in biodiversity may contribute to climate change if it is associated with an increased release of greenhouse gasses from living systems into the atmosphere or if there is a reduction in carbon sequestration during the degradation of natural ecosystems. **The protection of biodiversity and its rational use is therefore an urgent question from the perspective of lessening the consequences of climate change and carbon sequestration. Therefore, adaptive strategies cannot be based solely on technical measures but they also need to include ecosystem-based approaches.**

When preparing new legislation and policies, potential negative impacts on biodiversity need to be assessed and prevented, and policy and law contradictions and incoherence must be avoided. We need to pay special attention to the integration of national and EU policies, including the re-evaluation of strategies and supporting mechanisms for those policies, which have been shown to have harmful effects on biodiversity. For example, a number of studies have shown that the support for the use of renewable energy sources in inappropriate locations can have negative effects on biodiversity.⁴²

A special commitment, adopted at COP 10 of the CBD, was the Nagoya Protocol, which will serve as a framework for international policies in the area of biodiversity in the following period. **The Nagoya Protocol is to offer a transparent legal framework for the effective implementation of 1 of 3 main targets of the CBD – the fair and equitable sharing of benefits arising from the use of genetic resources. The Nagoya Protocol gives the providers and user of these resources greater legal security.**

Relevant legislation for the implementation of the Nagoya Protocol is under preparation at EU level. Subsequently, the SR will need to accede to the Protocol, too.

The following steps need to be taken to meet the target:

- Provide improved instruments for biodiversity protection, increasing the coherence of policies and support for measures and mechanisms having a positive effect on biodiversity and reforming or removing measures and mechanisms with a negative effect on biodiversity in all sectors;

- Support the adoption of legislation on the access to benefit sharing, with respect to genetic resources, at EU level and adopt this legislation at the national level; and accede to the Nagoya Protocol.

Thematic area F *Improvement of the cooperation and synergies between the environmental and other sector policies on measures aimed at reducing the ecological footprint in terms of international cooperation, and increasing support for education, training and research in this field*

Target F.9 *Engage a wide range of stakeholders and establish or re-establish partnerships to support the implementation of the national strategy for biodiversity; promote education, training, research and participation*

The protection of biodiversity can only be successful if it is integrated into strategies, planning and decision-making processes of all relevant sectors. Meeting this target requires the commitment of a wide range of stakeholders and for these stakeholders to accept their full share of responsibility for the achievement of targets in both the protection of biodiversity and the restoration of ecosystems.

For this purpose, the re-establishment of fundamental partnerships to support the implementation of the Updated National Strategy is needed. The implementation of the Strategy requires an active involvement of all sectors of the society, in particular local governments, communities and various associations, public societies, scientific institutions, universities and non-governmental organization in planning, consultation and decision-making processes.

The support for a joint approach to nature conservation within the Natura 2000 network and international conventions within the EU is a significant step towards the meeting of the targets of the Strategy. Joint implementation of commitments arising from international conventions and their common enforcement helps obtaining mutual support. **However, this requires strengthening the capacities and resources of professional organizations relevant sectors.**

Activities of the Slovak Commission for the Convention on Biological Diversity need to be re-established and the ministerial platform for the cooperation with the business sector need to be established, so that all key sectors and associated businesses (*agriculture, mining industry, finance, food industry, forestry and tourism*) are involved, and in order to use their experience and best practices for the preparation of a new action plan for the implementation of this Strategy. It is also essential to engage academia, non-governmental organizations and local governments for this collaboration to be successful.

The abovementioned cooperation requires an improvement in the cooperation and an enhancement of synergies between international conventions in the field of biodiversity or those that may affect biodiversity: the CBD, the UN Framework Convention on Climate Change and the UN Convention on the Fight against Desertification, the CITES Convention, the Bonn Convention, the Ramsar Convention, the European Landscape Convention, the Carpathian Convention, the Convention Concerning the Protection of World Cultural and Natural Heritage and the Danube River Protection Convention.

Despite the significant improvement in the biodiversity knowledge base, insufficient knowledge of the complexity of biodiversity and interactions between its components with the environment, of the importance of biodiversity for present and future generations as well as the lack of consideration of latest scientific data and information in policy- and decision-making remain the main reasons for our inability to reverse the continuing trend in biodiversity loss and ecosystem degradation. Therefore, the importance of science and research in the implementation of any strategy, particularly in economically and socially important sectors such as agriculture and forestry, has been emphasized. It is thus essential to invest more in research, specifically on biodiversity, its significance for all aspects of human activity as well as on innovative approaches, new and improved management and development strategies. The need for multi-disciplinary and cross-border approaches towards research has been emphasized, which inevitably links together certain fields of study such as ecology, genetics, epidemiology, climatology, economics, social anthropology and modelling theory. Available scientific data on biodiversity must be shared and made widely available, along with the best examples of how to stop the decline in biodiversity, restore biodiversity, and information on innovations and development respecting biodiversity.

It is essential to harmonize the existing national set of indicators with the standardized European Biodiversity Indicators (SEBI - Streamlining European Biodiversity Indicators). These indicators will also use information and data from international sources such as the Shared Environmental Information System, the Global Monitoring for Environment and Security, the European Forest Data Centre and LUCAS – Land Use Cover Area Frame Survey. The website of the Biodiversity Information System for Europe – BISE will be the main platform for sharing this data and information.

Key information from various fields of research, including the mapping and assessment of ecosystem services in the SR must be completed, thus improving our understanding of the links between biodiversity and climate change, and, for example, on the role of soil biodiversity for providing key ecosystem services such as the sequestration of carbon and food supply.

The SR is interested to participate in the activities of the new Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), focusing on the regional assessment which could strengthen the relationship and improve communication between science and policy at state and EU level.

The following steps need to be taken to meet the target:

- Ensure the integration of biodiversity protection into policies, strategies, planning and decision-making processes in various sectors;
- Ensure better coordination between institutions which are responsible for the implementation of international conventions; re-establish the inter-ministerial commission for the CBD and strengthen capacities in this area;
- Provide capacities for a continuous and long-term mapping and monitoring of components of biodiversity;
- Ensure the participation of academia to improve our knowledge on biodiversity, its values, role, status and trends, and consequences of its loss and damage;
- Ensure the involvement of the private sector in the protection and financing of biodiversity protection.

6. Financing of biodiversity protection

A successful achievement of all targets and measures of the Updated National Strategy will depend on the availability of sufficient funding. The Action Plan for the Updated National Strategy will quantify expected costs and financial resources required for the implementation of the Updated National Strategy. Experience from previous years has shown that it is not possible to rely solely on public funding (national budget and EU funds). Therefore, during the implementation of the Updated National Strategy, it is necessary to strengthen the efficiency of the use of available public resources, but also to develop new, innovative forms of biodiversity financing.

With respect to public funding, the objective is to use finances in an efficient and multifunctional way to implement measures that will bring multiple benefits for several sectors through the integration of biodiversity into other sectoral policies. With respect to private resources for biodiversity financing, it is necessary to facilitate **the use of private sources of funding, in particular from voluntary instruments such as the initiative Business and Biodiversity as well as from innovative mechanisms of biodiversity financing through public-private partnerships or using new instruments to compensate for the loss of biodiversity, such as the so-called “habitat banks”.**

Furthermore, we need to make use of various new instruments which have been tested successfully worldwide, such as an appropriate valuation of ecosystem services (in areas where payments have not been introduced, yet) and the assessment of economic benefits of protected areas. **For this purpose, it is necessary to map and assess the provisioning of ecosystem services and goods provided by the natural capital of the SR.** The set of already implemented economic tools should be expanded by the following ones: the introduction of entrance fees to protected areas, for nature- guide services in protected areas, the participation of the private sector in the financing of nature conservation (conservation programs), the involvement of local businesses in supporting nature conservation, introduction of eco-labels for protected areas and the introduction of special types of fees which would be used exclusively for biodiversity and nature protection.

The revision of the network of protected areas, in line with international standards and commitments and finalizing the process of the zoning of protected areas, with the objective to develop a single national and international system of protected areas respecting current conditions and the interest of a sustainable development of regions, including national parks and the Natura 2000 network, a process which has been long-planned in the SR, may also lead to a more efficient use of available resources.

The following steps (subject to the availability of resources) need to be taken:

- Assessment and valuation of ecosystem services and the valuation of economic benefits and costs of protected areas;
- Revision of the network of the protected areas with the objective of accommodating the scale and level of protection to the financial resources of the country;
- Ensure sufficient funds for the development of forest management programs as well as for the owners and users of forest land who implement these programs;
- Reduce the ecological footprint of the industry through an adequate protection and rational use of natural resources with the objective to reduce our dependency on imported raw materials;
- With regard to climate change policy: gradual introduction of so-called low carbon economy with an emphasis on biodiversity, given that approaches climate change mitigation and adaptation, based on ecosystems, can offer cost-effective alternatives to technological solutions and provide multiple benefits beyond biodiversity protection.
- Develop a mechanism for an efficient use of finances from payments and fines for damages to natural resources and biodiversity, so as they are used for the protection of biodiversity and restoration of ecosystems;
- Better and more efficient allocation and use of existing resources for biodiversity protection, and a support for biodiversity from the state budget and EU funds, and better coordination and maximization of benefits arising from the implementation of this strategy;
- Increase the variety and volume of funding sources (including innovative financial instruments).

Resource mobilization for the financing of biodiversity at the global level

The CBD has defined, inter alia, a framework (financial mechanism) for the provision financial resources to developing countries to cover part of their costs associated with the implementation of the CBD. Developing countries share the greatest burden of responsibility for the preservation of natural diversity and yet, at the same time, suffer the greatest shortage of funds for its protection.

As an EU member state, the SR is committed to contribute to resource mobilization for the protection of biodiversity and the enhancement of ecosystem services and to meet the commitments it has adopted as a party to the CBD⁴³. These commitments will be mainly met through a more targeted and more efficient use of foreign development aid in priority countries. The SR will focus mainly on solving biodiversity-related issues in a way that brings multiple benefits and thus addresses other objectives of development aid, such as the eradication of poverty and local problems of health and environment.

43 <http://www.cbd.int/doc/decisions/cop-11/cop-11-dec-04-en.pdf>, <http://www.cbd.int/doc/decisions/cop-11/cop-11-dec-05-en.pdf>, <http://www.cbd.int/doc/decisions/cop-10/cop-10-dec-03-en.pdf>, <http://www.cbd.int/doc/decisions/cop-10/cop-10-dec-24-en.pdf>, <http://www.cbd.int/doc/decisions/cop-10/cop-10-dec-25-en.pdf>, <http://www.cbd.int/doc/decisions/cop-10/cop-10-dec-26-en.pdf>

7. Conclusion

The Updated National Strategy is a key document in the area of biodiversity protection in the SR. After it has been adopted by the Government of the SR, this document will be followed by an Action Plan for its implementation, where measures will be specified, together with funding and responsible institutions, to meet the targets of the Strategy.

The first evaluation of the Action Plan, in terms of its success and implementation of measures will be carried out by 2016. The crucial factor for achieving our objectives by 2020 and meeting the targets of each thematic area will be the implementation of proposed measures and cooperation with respective ministries and stakeholders.

Institutional and structural changes will need to take place to ensure effective communication, participation and cooperation and interim evaluation of the progress in the implementation of the Updated National Strategy for the Protection of Biodiversity to 2020 in the SR.

Annexes

Annex 1: Overview of the targets of the National Strategy for the Protection of Biodiversity (1997)

Target no. 1: Identification of the condition of elements of biodiversity

Target no. 2: Control of processes which have a negative impact on biodiversity

Target no 3: Reinforcing the protection of biodiversity *in-situ*

Target no. 4: Reinforcing the protection of genetic diversity

Target no 5: Reinforcing national capacities for *ex-situ* protection

Target no. 6: Building a complex monitoring system to follow changes in biodiversity at all levels

Target no 7: Ensuring ecologically sustainable forestry

Target no. 8: Gradual replacement of inappropriate farming practices with ecological and sustainable farming

Target no. 9: Support for the protection of biodiversity by introducing sustainable practices in hunting and fishing

Target no. 10: Ensure that the long-term viability of species and populations is maintained when hunting game and gathering berries.

Target no. 11: Support for the concept of an ecologically friendly and sustainable tourist industry

Target no. 12: Increase the safety of biotechnologies and support for access to them and / or to the benefits arising from their application

Target no. 13: Change of policy in order to achieve a link between the attempt to preserve biodiversity and the use of natural resources

Target no. 14. Preparation of suitable legislative tools to support the implementation of the CBD

Target no. 15: Support for cooperation between all interested parties in order to prevent the duplication of activities and bring about opportunities to protect biodiversity more efficiently and to use biological resources in a sustainable manner

Target no. 16: To develop a widely applicable system which simulates measures for protecting biodiversity and its sustainable use

Target no. 17: Ensure that the principles of preserving biodiversity are taken into account when planning the use of the landscape

Target no. 18: Supporting research focused on protecting biodiversity and its sustainable use

Target no. 19: Support for building up human and institutional capacities for protecting biodiversity and its sustainable use

Target no. 20: Support for all forms of education and growth in awareness of the importance of preserving biodiversity and the sustainable use of its elements

Target no. 21: Reinforcement the application of principles of the protection of biodiversity in the process of assessing impact

Target no. 22: Establishment of a country-wide mechanism: "clearing-house" related to biodiversity

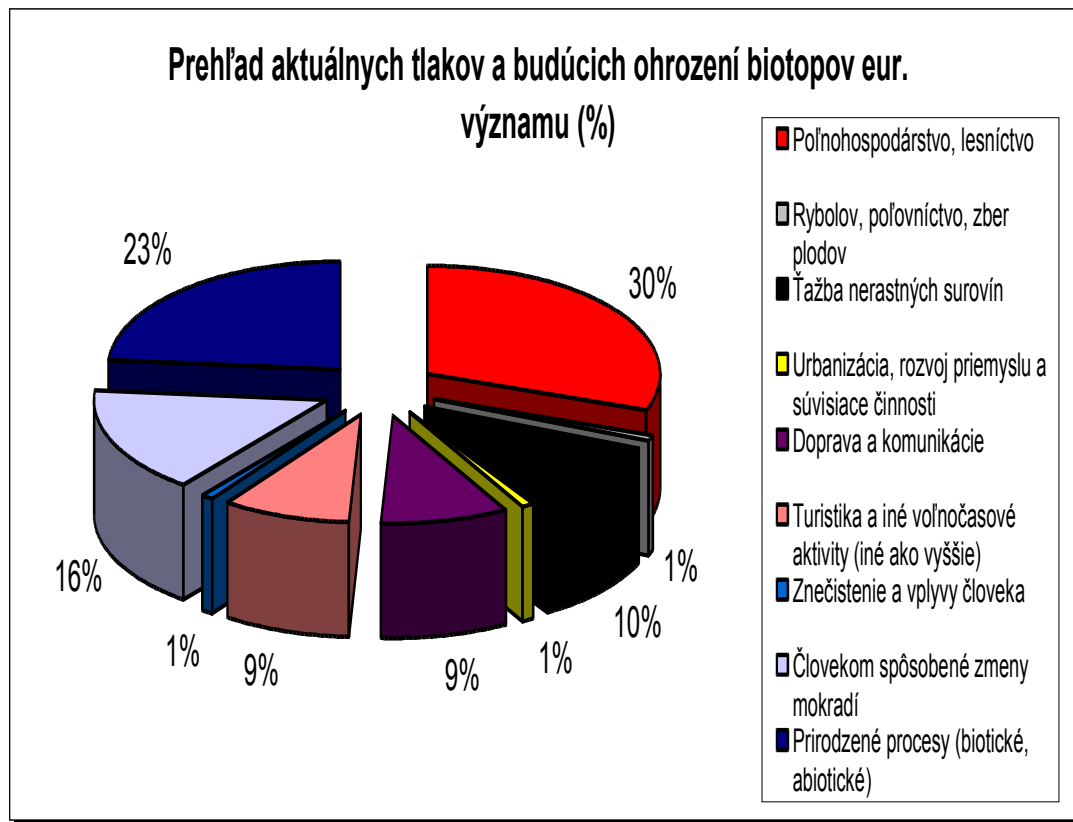
Target no. 23: At a national level, to reinforce the financial mechanisms for protecting biodiversity as well as its sustainable use

Target no. 24: Cooperation in the implementation of the CBD at regional and international levels.

Annex 2: Overview of selected rescue programs (RP) for species in the SR

Species	Period of implementation	Efficiency of the RP*
Great bustard (<i>Otis tarda</i>)	2001-2005	partially positive
Eastern imperial eagle (<i>Aquila heliaca</i>)	2001-2005	positive
European pond turtle (<i>Emys orbicularis</i>)	2002-2006	partially positive
European otter (<i>Lutra lutra</i>)	2002-2006	partially positive
Tatra chamois (<i>Rupicapra rupicapra tatrica</i>)	2002-2006	positive
Corncrake (<i>Crex crex</i>)	2002-2006	partially positive
Golden eagle (<i>Aquila chrysaetos</i>)	2004-2008	positive
Lesser spotted eagle (<i>Aquila pomarina</i>)	2004-2008	positive
Peregrine falcon (<i>Falco peregrinus</i>)	2004-2008	positive
Saker falcon (<i>Falco cherrug</i>)	2004-2008	positive
Alpine marmot (<i>Marmota marmota</i>)	2004-2008	positive
Apollo butterfly (<i>Parnassius apollo</i>)	2005-2009	positive
European mudminnow (<i>Umbra krameri</i>)	2005-2009	positive
European bison (<i>Bison bonasus</i>)	2007-2011	positive
European beaver (<i>Castor fiber</i>)	2009-2013	positive
European mink (<i>Mustela lutreola</i>)	2009-2013	neutral
Large blue butterfly (Maculinea)	2009-2013	positive
Sand saffron (<i>Colchicum arenarium</i>)	2001-2005, 2009-2013	positive
<i>Ferula sadleriana</i>	2001-2005	positive
Fen orchid (<i>Liparis loeselii</i>)	2001-2005, 2009-2013	positive
Small pasque flower (<i>Pulsatilla pratensis</i> subsp. <i>hungarica</i>)	2005-2009	positive
<i>Tephrosia longifolia</i> subsp. <i>moravica</i>	2009-2013	positive

Annex 3: Overview of current pressures and future endangered habitats and species of European importance (Legend items from the top: 1) Agriculture and forestry; 2) Fishing, hunting, fruit gathering; 3) Exploitation of minerals; 4) Urbanization, development of industry and related activities; 5) Transport and roads; 6) Hiking and other leisure activities; 7) Pollution; 8) Anthropogenic changes to wetlands; 9) Natural processes (biotic, abiotic).)



Annex 4: List of species and habitats of European significance identified as priorities for carrying out conservation measures

Activities for habits and species are proposed in two basic categories:

1. Maintaining management (MM) for species in favourable conditions where efforts must be made to maintain the favourable conditions
2. Target maintenance (TM) or species in unfavourable conditions whose conditions must be improved.

Meeting the target in terms of figures means for Slovakia that by 2020 (compared to the situation today), there will be an improvement in at least 30 assessments for habitats and 49 assessments for species of European significance. The assessment distinguishes 3 categories of conservation status for species and habitats: FV – favourable status; U1 – unfavourable status – insufficient; U2 – unfavourable status – bad; and XX – unknown state for species or habitats with insufficient data for the assessment.

Group	Code	Species/ habitat		Alpine habitat (2007)	Pannonian habitat (2007)	Target 2020	
		Scientific name	English name			Alpine	Pannonian
Low-growing plants	4066	<i>Asplenium adnigrum</i>	Ladder spleenwort	FV	U1	MM	TM
	1386	<i>Buxbaumia viridis</i>	Green shield-moss	X		TM	
	1381	<i>Dicranum viride</i>	Dicranum moss	X		TM	
	1393	<i>Drepanocladus vernicosus</i>	Slender green feather-moss	X		TM	
	1413	<i>Lycopodium</i> spp.	Club moss	FV	U1	MM	
	1379	<i>Mannia triandra</i>	<i>Mannia triandra</i>	X		TM	
	1428	<i>Marsilea quadrifolia</i>	Four-leaf clover		U2		TM
	4119	<i>Ochrya eatreensis</i>	<i>Ochrya eatreensis</i>	X		TM	
	1394	<i>Scapania massaloni</i>	<i>Scapania massaloni</i>	X		TM	
	1988	<i>Tortella rigens</i>	Tortella moss	X		TM	
High-growing plants	4109	<i>Aconitum firmum</i> ssp. <i>moravicum</i>	Moravian monkshood	U1		TM	
	4068	<i>Adenophora lilifolia</i>	Ladybell	X	FV		MM
	1614	<i>Apium repens</i>	Creeping marshwort		U2		TM
	5109	<i>Artemisia eriantha</i>	White g�n�pi	FV		MM	

4070	<i>Campanula serrata</i>	<i>Campanula serrata</i>	FV		MM	
4081	<i>Cirsiumbrachycephalum</i>	<i>Cirsiumbrachycephalum</i>		U1		TM
4090	<i>Cochleariatatrae</i>	Tatra scurvy-grass	FV		MM	
2285	<i>Colchicum arenarium</i>	Sand saffron		U2		TM
4091	<i>Crambetataria</i>	Tatarican colewort		FV		MM
4107	<i>Cyclamen fatrense</i>	Fatra cyclamen	FV		MM	
2159	<i>Daphne arbuscula</i>	Shrubby daphne	FV		MM	
4075	<i>Dianthus lumnitzeri</i>	Wild pink	U1	U2	TM	TM
2074	<i>Dianthus nitidus</i>	Carpathian glossy pink	U1		TM	
1689	<i>Dracocephalum austriacum</i>	<i>Dracocephalum austriacum</i>	U2	U1	TM	TM
4067	<i>Echiumrussicum</i>	Red-flowered viper's bugloss	U2	U2	TM	TM
1898	<i>Eleochariscarniolica</i>	<i>Eleochariscarniolica</i>	U2		TM	
2170	<i>Ferula sadleriana</i>	<i>Ferula sadleriana</i>	U1		TM	
1866	<i>Galanthusnivalis</i>	snowdrop	FV	FV	MM	MM
4096	<i>Gladiolus palustris</i>	Marsh gladiolus / sword lily		U2		TM
4104	<i>Himantoglossum adriaticum</i>	Adriatic lizard orchid	U2	U2	TM	TM
2327	<i>Himantoglossum caprinum</i>	Lizard orchid	U2	U2	TM	TM
4097	<i>Iris aphyllasp. hungarica</i>	Hungarian stool iris	U1	U1	TM	TM
4098	<i>Iris humilisssp. arenaria</i>	Sand iris		U2		TM
1758	<i>Ligulariasibirica</i>	<i>Ligulariasibirica</i>	U1		TM	
1725	<i>Linderniaproculum bens</i>	Creeping slitwort		X		TM

	1903	<i>Liparisloeselii</i>	Fen orchid	U2	U2	TM	TM
	2203	<i>Onosmatornensis</i>	<i>Onosmatornensis</i>	U1	U1	TM	TM
	1477	<i>Pulsatilla patens</i>	Eastern pasque flower	U1	FV	TM	MM
	4110	<i>Pulsatillapratensis</i> ssp. <i>hungarica</i>	Small Hungarian pasque flower		U2		TM
	4087	<i>Serratulalycopifolia</i>	<i>Serratulalycopifolia</i>	U2		TM	
	4088	<i>Tephroserislongifoliassp. moravica</i>	<i>Tephroserislongifoliassp. moravica</i>	U1		TM	
	2120	<i>Thlaspijankae</i>	Slovak penny-cress	U1	U1	TM	TM
	4116	<i>Tozziacarpatica</i>	Carpathian tozzia	FV		MM	
Molluscs	1026	<i>Helix pomatia</i>	Burgundy snail	FV	FV	MM	MM
	4063	<i>Sadlerianapannonica</i>	Freshwater snail	U2	U2	TM	TM
	1032	<i>Unio crassus</i>	Thick shelled river mussel	FV	U2	MM	TM
	1014	<i>Vertigo angustior</i>	Narrow-mouthed whorl snail	FV	U1	MM	
	1013	<i>Vertigo geyeri</i>	Geyer's whorl snail	X		TM	
	1016	<i>Vertigo moulinsiana</i>	Desmoulins's whorl snail	U1	X	TM	
Arthropods	1920	<i>Borosschneideri</i>	Borosschneideri beetle	X		TM	
	1078	<i>Callimorphaquadripunctaria</i>	Jersey tiger moth	FV	FV	MM	MM
	1088	<i>Cerambyxcerdo</i>	Great capricorn beetle	X	X	TM	TM
	1070	<i>Coenonympha hero</i>	Scarce heath butterfly	FV		MM	
	4030	<i>Coliasmyrmidone</i>	Danube clouded yellow butterfly	U2	U2	TM	
	4032	<i>Dioszeghyanaschmidtii</i>	<i>Dioszeghyanaschmidtii</i>		FV		MM
	4018	<i>Duvaliushungari</i>	<i>Duvaliushungari</i>	FV	FV	MM	MM

Fish		<i>cus</i>	<i>cus</i>				
	1074	<i>Eriogastercatax</i>	<i>Eriogastercatax</i>	FV	FV	MM	MM
	1052	<i>Hypodryasmatur na</i>	<i>Hypodryasmatur na</i>	U1	FV		MM
	1083	<i>Lucanuscervus</i>	Stag beetle	FV	FV	MM	MM
	1060	<i>Lycaenadispar</i>	Large copper butterfly	FV	FV	MM	MM
	1058	<i>Maculineaarion</i>	Large blue butterfly	U1	U2	TM	TM
	1061	<i>Maculineanausit hous</i>	Dusky large blue butterfly	U2	U1	TM	TM
	1059	<i>Maculineateleius</i>	Scarce large blue butterfly	FV	FV	MM	MM
	1084	<i>Osmodermaere mita</i>	Russian leather beetle	X	X	TM	TM
	1057	<i>Parnassiusapoll o</i>	Parnassius Apollo butterfly	U1		TM	
	1056	<i>Parnassiusmne mosyne</i>	Clouded Apollo butterfly	FV	FV	MM	MM
	1087	<i>Rosaliaalpina</i>	Rosalia longicorn	FV	FV	MM	MM
	1053	<i>Zerynthiapolyxe na</i>	Southern festoon	FV	FV	MM	MM
	1130	<i>Aspius</i>	Asp	FV	FV	MM	MM
	5085	<i>Barbus</i>	Barbel	U1	FV	TM	MM
	1138	<i>Barbusmeridion alis</i>	Southern barbel	X	X	TM	
	1163	<i>Cottusgobio</i>	European bullhead	X	U1	TM	
	4123	<i>Eudontomyzond anfordi</i>	Carpathian lamprey	X	X	TM	
	2484	<i>Eudontomyzon mariae</i>	Ukrainian brook lamprey	X	X	TM	
	1105	<i>Hucho</i>	Danube salmon	X	X	TM	
	1096	<i>Lampetraplaneri</i>	European brook lamprey	X		TM	
	1134	<i>Rhodeussericeu samarus</i>	European bitternling	FV	FV	MM	MM

	1109	<i>Thymallus</i>	Grayling	U1		TM	
	2011	<i>Umbra krameri</i>	Mudminnow		X		TM
Amphibians	1188	<i>Bombina</i>	Fire-bellied toad	U2	U1	TM	
	1193	<i>Bombina variegata</i>	Yellow-bellied toad	U1	X		TM
	1213	<i>Rana temporaria</i>	Common frog	FV	U1	MM	
Reptiles	1166	<i>Triturus cristatus</i>	Northern crested newt	U2		TM	
	1993	<i>Triturus dobrogicus</i>	Danube crested newt	U2		TM	
	1220	<i>Emys orbicularis</i>	European pond turtle		U2		TM
	1261	<i>Lacerta agilis</i>	Sand lizard	FV	FV	MM	MM
	1256	<i>Podarcismuralis</i>	Common wall lizard	FV	FV	MM	MM
Mammals	2647	<i>Bison bonasus</i>	European bison	U2		TM	
	1352	<i>Canis lupus</i>	Grey wolf	FV	U1	MM	
	1337	<i>Castor fiber</i>	European beaver	FV	FV	MM	MM
Habitats	4003	<i>Marmota m. latirostris</i>	Alpine marmot	U2		TM	
	4004	<i>Microtus oeconomus mehelyi</i>	Root vole		U2		TM
	2612	<i>Microtus tatricus</i>	Tatra pine vole	U2		TM	
	1312	<i>Nyctalus noctula</i>	Common noctule bat	U2	U2	TM	TM
	1309	<i>Pipistrellus</i>	Common pipistrelle bat	X	X	TM	TM
	4006	<i>Rupicapra r. tatrica</i>	Tatra chamois	U2		TM	
	1335	<i>Spermophilus citellus</i>	European ground squirrel	U2	U2	TM	TM
	1354	<i>Ursus arctos</i>	Brown bear	FV		MM	
	1340	<i>Inland salt meadows</i>	Inland salt meadows	U2	U2	TM	TM
	1530	<i>Pannonic salt steppes and salt</i>	Pannonic salt steppes and salt		U2		TM

	<i>marshes</i>	marshes				
2340	<i>Pannonic inland dunes</i>	Pannonic inland dunes		U1		TM
4030	<i>European dry heaths</i>	European dry heaths	FV	FV	MM	MM
4060	<i>Alpine and Boreal heaths</i>	Alpine and Boreal heaths	FV		MM	
4070	<i>Bushes with Pinusmugo and Rhododendron hirsutum</i>	Bushes with Pinusmugo and Rhododendron hirsutum	FV		MM	
5130	<i>Juniperuscommunis formations on heaths/calcar. grassl.</i>	Juniperuscommunis formations on heaths/calcar. grassl.	FV	U1	MM	
6120	<i>Alpine rivers & herbaceous veg. along their banks</i>	Alpine rivers & herbaceous veg. along their banks		U2		TM
6190	<i>RupicolousPann. grassl. Stipo-Festucetaliapallentis</i>	RupicolousPann. grassl. Stipo-Festucetaliapallentis	FV	FV	MM	MM
6210	<i>Seminatural dry grassl. & scrubland facies on calc. sub</i>	Seminatural dry grassl. & scrubland facies on calc. sub	U1	X	TM	TM
6240	<i>Sub-continental steppic grasslands</i>	Sub-continental steppic grasslands	U1	U1	TM	TM
6250	<i>Pannonic loess steppic grasslands</i>	Pannonic loess steppic grasslands	X	U1	TM	TM
6260	<i>Pannonic sand steppes</i>	Pannonic sand steppes		U2		TM
6410	<i>Molinia meadows on calc./peaty/clavey-silt-ladean soils</i>	Molinia meadows on calc./peaty/clavey-silt-ladean soils	U1	U1	TM	TM
6440	<i>Alluvial meadows of river valleys of the Cnidiondubii</i>	Alluvial meadows of river valleys of the Cnidiondubii		U1		TM

6510	<i>Lowland hay meadows (Alopecurus pratensis, Sanguisorba)</i>	Lowland hay meadows (Alopecurus pratensis, Sanguisorba)	FV	U1	MM	TM
7110	<i>Active raised bogs</i>	Active raised bogs	U1		TM	
7120	<i>Degraded raised bogs capable of natural regeneration</i>	Degraded raised bogs capable of natural regeneration	U1		TM	
7140	<i>Transition mires and quaking bogs</i>	Transition mires and quaking bogs	U1	U1	TM	TM
7210	<i>Calc. fens with Cladium mariscus & Caricion davallianae</i>	Calc. fens with Cladium mariscus & Caricion davallianae	U1		TM	
7220	<i>Petrifying springs with tufa formation (Cratoneurion)</i>	Petrifying springs with tufa formation (Cratoneurion)	U1		TM	
7230	<i>Alkaline fens</i>	Alkaline fens	U1	U1	TM	TM
8110	<i>Siliceous scree of the montane to snow levels</i>	Siliceous scree of the montane to snow levels	FV		MM	
8120	<i>Calcareous & calcshist screes of montane to alpine lev.</i>	Calcareous & calcshist screes of montane to alpine lev.	FV		MM	
8150	<i>Medio-European upland siliceous screes</i>	Medio-European upland siliceous screes	FV	FV	MM	MM
8160	<i>Medio-European calcareous scree of hill & montane level</i>	Medio-European calcareous scree of hill & montane level	FV	FV	MM	MM
8210	<i>Calcareous rocky slopes with chasmophytic vegetation</i>	Calcareous rocky slopes with chasmophytic vegetation	FV	FV	MM	MM
8220	<i>Siliceous rocky slopes with chasmophytic vegetation</i>	Siliceous rocky slopes with chasmophytic vegetation	FV	FV	MM	MM

9110	<i>Luzulo-Fagetum beech forests</i>	Luzulo-Fagetum beech forests	FV	U1	MM	
9130	<i>Asperulo-Fagetum beech forests</i>	Asperulo-Fagetum beech forests	FV	FV	MM	MM
9140	<i>Medio-Europ. subalp. beech woods Acer & Rumex arifolius</i>	Medio-Europ. subalp. beech woods Acer & Rumex arifolius	FV		MM	
9150	<i>Medio-Europ. limestone beech forests Cephalanthero-Fagi</i>	Medio-Europ. limestone beech forests Cephalanthero-Fagi	FV	FV	MM	
9170	<i>Galio-Carpinetum oak-hornbeam forests</i>	Galio-Carpinetum oak-hornbeam forests	U2		TM	
9180	<i>Tilio-Acerion forest of slopes, screes and ravines</i>	Tilio-Acerion forest of slopes, screes and ravines	U1	U1	TM	
91E0	<i>Alluvial forests with Alnus glutinosa & F. excelsior</i>	Alluvial forests with Alnus glutinosa & F. excelsior	U1	U2		TM
91F0	<i>Riparian mixed forest of Quercus robur, Ulmus laevis.</i>	Riparian mixed forest of Quercus robur, Ulmus laevis.	FV	U2	MM	TM
91G0	<i>Pannonic woods with Q. petraea & Carpinus betulus</i>	Pannonic woods with Q. petraea & Carpinus betulus	FV	U1	MM	
91H0	<i>Pannonian woods with Quercus pubescens</i>	Pannonian woods with Quercus pubescens	U1	FV		MM
91I0	<i>Euro-Siberian steppic woods with Quercus spp.</i>	Euro-Siberian steppic woods with Quercus spp.	FV	U2	MM	TM
91M0	<i>Pannonian-Balkanic turkey oak-sessile oak forests</i>	Pannonian-Balkanic turkey oak-sessile oak forests	U1	U1		TM
91N0	<i>Pann. inland sand dune</i>	Pann. inland sand dune		U2		TM

	<i>thicket Junipero-Populetum albae</i>	thicket Junipero-Populetum albae				
91Q0	<i>Western Carpathian calcicolous Pinus sylvestris forests</i>	Western Carpathian calcicolous Pinus sylvestris forests	FV		MM	
9410	<i>Acidophilous Piceta forests of montane to alpine levels</i>	Acidophilous Piceta forests of montane to alpine levels	U1		TM	
9420	<i>Alpine Larix decidua and/or Pinus cembra forests</i>	Alpine Larix decidua and/or Pinus cembra forests	FV		MM	

Source: ŠOP SR

The assessment of the situation of birds is based on information prepared for the report in compliance with article 12 of the Birds Directive for 2008 to 2012

As in the case of habitats and species, these activities are divided into two basic categories:

1. Maintaining management (MM) for species in favourable conditions where efforts must be made to maintain the favourable conditions
2. Target management (TM) or species in unfavourable conditions whose conditions must be improved.

Levels of prioritization: the highest priority is given to those species for which a protected bird area (high priority) has been declared; species which have been provisionally evaluated as in a bad condition but are not species for which protected bird areas have been declared are medium priorities (medium priority) and low priority is given to all other bird species, which does not mean, however, that these species will have no management.

For Slovakia, meeting the target for bird species will require an improvement in the condition of at least 61 birds species by 2020 (compared to the current conditions) by active target management, or for the condition of 38 species to be maintained by maintaining management.

Code	Species (birds)		Season	Assessment of the state - proposal	Management	Priority
			B- nesting W-winter			
[A667 1	<i>Ciconiaciconia</i>	White stork	B	U1	TM	High
[A030 1	<i>Ciconianigra</i>	Black stork	B	FV	MM	High
A614	<i>Limosalimosa</i>	Black-tailed godwit	B	U2	TM	High
A249	<i>Ripariariparia</i>	Sand martin	B	U1	TM	High
[A617 1	<i>Ixobrychusminutus</i>	Little bittern	B	U1	TM	High
[A610 1	<i>Nycticoraxnycticorax</i>	Night heron	B	FV	MM	High
[A688 1	<i>Botaurusstellaris</i>	Great bittern	B	U1	TM	High
A176	<i>Larusmelanocephalus</i>	Mediterranean gull	B	FV	MM	High
A182	<i>Laruscanus</i>	Common gull	B	U1	TM	High
A239	<i>Dendrocoposleucotos</i>	White-backed woodpecker	B	FV	MM	High
A236	<i>Dryocopusmartius</i>	Black woodpecker	B	FV	MM	High
A429	<i>Dendrocoposyriacus</i>	Syrian woodpecker	B	FV	MM	High
A238	<i>Dendrocoposmedius</i>	Middle spotted woodpecker	B	FV	MM	High
A241	<i>Picoidestridactylus</i>	Three-toed woodpecker	B	FV	MM	High
A129	<i>Otis tarda</i>	Great bustard	B	U2	TM	High
A080	<i>Circaetusgallicus</i>	Short-toed snake eagle	B	U2	TM	High
A074	<i>Milvusmilvus</i>	Red kite	B	U2	TM	High
A073	<i>Milvusmigrans</i>	Black kite	B	U2	TM	High
A067	<i>Bucephalaclangula</i>	Common goldeneye	W	FV	MM	High
A210	<i>Streptopeliaturturtur</i>	Turtle dove	B	FV	MM	High
[A058 1	<i>Nettarufina</i>	Red-crested pochard	B	FV	MM	High
A043	<i>Anseranser</i>	Greylag goose	B	U1	TM	Medium
A043	<i>Anseranser</i>	Greylag goose	W	U2	TM	Medium
A039	<i>Anserfabalis</i>	Bean goose	W	U2	TM	Medium
A160	<i>Numeniusarquata</i>	Eurasian curlew	B	U2	TM	Medium
[A060 1	<i>Aythyaeryroca</i>	Ferruginous duck	B	U1	TM	High
A059	<i>Aythyaferina</i>	Common pochard	B	FV	MM	High
A059	<i>Aythyaferina</i>	Common pochard	W	U1	TM	High
A061	<i>Aythyafuligula</i>	Tufted duck	B	FV	MM	High
A061	<i>Aythyafuligula</i>	Tufted duck	W	FV	MM	High
A119	<i>Porzanaporzana</i>	Spotted crane	B	U1	TM	High
A120	<i>Porzanaparva</i>	Spotted crane	B	U1	TM	High
A122	<i>Crex crex</i>	Corncrake	B	FV	MM	High
A644	<i>Perdixperdix</i>	Grey partridge	B	U1	TM	Medium
A104	<i>Bonasa bonasia</i>	Hazel grouse	B	U1	TM	High
A619	<i>Accipiter gentilis</i>	Northern goshawk	B	U2	TM	Medium
A053	<i>Anas platyrhynchos</i>	Mallard	B	FV	MM	High

A053	<i>Anasplatyrhynchos</i>	Mallard	W	U1	TM	High
A055	<i>Anasquerquedula</i>	Garganey	B	U1	TM	High
A051	<i>Anasstrepera</i>	Gadwall	B	FV	MM	High
A162	<i>Tringatotanus</i>	Common redshank	B	U2	TM	High
A081	<i>Circus aeruginosus</i>	Western marsh harrier	B	FV	MM	High
A084	<i>Circus pygargus</i>	Montagu's harrier	B	U2	TM	High
A393	<i>Phalacrocoraxpygmeus</i>	Pigmy cormorant	B	U1	TM	High
A231	<i>Coraciasgarrulus</i>	European roller	B	U2	TM	High
A233	<i>Jynxstorquilla</i>	Eurasian wryneck	B	U1	TM	High
A223	<i>Aegoliusfunereus</i>	Boreal owl	B	FV	MM	High
A217	<i>Glaucidiumpasserinum</i>	Eurasian pygmy owl	B	U1	TM	High
A255	<i>Anthuscampestris</i>	Tawny pipit	B	U2	TM	High
A251	<i>Hirundorustica</i>	Barn swallow	B	U1	TM	Medium
A224	<i>Caprimulguseuropaeus</i>	European nightjar	B	FV	MM	High
[A607 1	<i>Platalealeucorodia</i>	Eurasian spoonbill	B	X	TM	High
A319	<i>Muscicapastriata</i>	Spotted flycatcher	B	FV	MM	High
A321	<i>Ficedulaalbicollis</i>	Collared flycatcher	B	FV	MM	High
A320	<i>Ficedulaparva</i>	Red-breasted flycatcher	B	FV	MM	High
A087	<i>Buteobuteo</i>	Common buzzard	B	U1	TM	Medium
A075	<i>Haliaeetusalbicilla</i>	White-tailed eagle	B	FV	MM	High
A404	<i>Aquila heliaca</i>	Eastern imperial eagle	B	U2	TM	High
A089	<i>Aquila pomarina</i>	Lesser spotted eagle	B	U2	TM	High
A091	<i>Aquila chrysaetos</i>	Golden eagle	B	FV	MM	High
A307	<i>Sylvia nisoria</i>	Barred warbler	B	FV	MM	High
A244	<i>Galeridacristata</i>	Crested lark	B	U2	TM	High
A213	<i>Tyto alba</i>	Barn owl	B	U2	TM	Medium
A654	<i>Mergus merganser</i>	Common goosander	W	U2	TM	Medium
A113	<i>Coturnixcoturnix</i>	Common quail	B	FV	MM	High
A276	<i>Saxicolatorquatus</i>	European stonechat	B	FV	MM	High
A196	<i>Chlidoniashybrida</i>	Whiskered tern	B	X	TM	High
A197	<i>Chlidoniasniger</i>	Black tern	B	U2	TM	High
A193	<i>Sterna hirundo</i>	Common tern	B	FV	MM	High
A229	<i>Alcedoatthis</i>	Common kingfisher	B	U1	TM	High
A280	<i>Monticolasaxatilis</i>	Common rock thrush	B	U2	TM	High
A277	<i>Oenantheoenanthe</i>	Northern wheatear	B	U2	TM	Medium
A609	<i>Lusciniasveciacyanicula</i>	Bluethroat	B	U1	TM	High
A612	<i>Lusciniasvecicasvecica</i>	Bluethroat	B	FV	MM	High
A097	<i>Falco vespertinus</i>	Red-footed falcon	B	U2	TM	High
A099	<i>Falco subbuteo</i>	Eurasian hobby	B	U1	TM	Medium

A096	<i>Falco tinnunculus</i>	Common kestrel	B	U1	TM	Medium
A511	<i>Falco cherrug</i>	Saker falcon	B	U2	TM	High
[A103 1	<i>Falco peregrinus</i>	Peregrine falcon	B	FV	MM	High
A220	<i>Strixuralensis</i>	Ural owl	B	FV	MM	High
A338	<i>Laniuscollurio</i>	Red-backed shrike	B	U1	TM	High
A339	<i>Lanius minor</i>	Lesser grey shrike	B	U2	TM	High
A653	<i>Laniusexcubitor</i>	Great grey shrike	B	U1	TM	High
A378	<i>Emberizacia</i>	Rock bunting	B	U2	TM	Medium
[A132 1	<i>Recurvirostraavosetta</i>	Pied avocet	B	X	TM	High
A246	<i>Lullulaarborea</i>	Woodlark	B	U1	TM	High
A659	<i>Tetraourogallus</i>	Capercaillie	B	U1	TM	High
A409	<i>Tetraotetrix</i>	Black grouse	B	U1	TM	High
A293	<i>Acrocephalusmelanopog</i>	Moustached warbler	B	FV	MM	High
A072	<i>Pernisapivorus</i>	European honey buzzard / pern	B	U2	TM	High
A230	<i>Meropsapiaster</i>	European bee-eater	B	FV	MM	High
A027	<i>Casmerodiusalbus</i>	Great egret	B	FV	MM	High
[A634 1	<i>Ardeapurpurea</i>	Purple heron	B	U1	TM	High
A026	<i>Egrettaarzetta</i>	Little egret	B	X	TM	High
A215	<i>Bubo bubo</i>	Eagle owl	B	FV	MM	High
A214	<i>Otusscops</i>	Scops owl	B	X	TM	High
A234	<i>Picuscanus</i>	Grey-headed woodpecker	B	FV	MM	High
A274	<i>Phoenicurusphoenicurus</i>	Redstart	B	U1	TM	High
N/A	<i>Mergusalbellus</i>	smew	W	N/A	MM	High

Source: SOP SR

Glossary

Archaeophytes – non-original plant species brought into the present-day territory by the end of the Middle Ages.

Biodiversity – the variety of all forms of life including habitats, ecosystems, plant and animal species, micro-organisms and their gene information.

Habitat – the place where an organism naturally occurs

Ecosystem – the basic unit of the functional whole of the Earth biosphere; the system of plants and animals which are linked together by all the physical and chemical parts of their immediate environment and which together create an independent unit. The transfer and circulation of mass, energy and information take place in the ecosystem.

Ecosystem services - benefits and uses offered by ecosystems, for example water, food, wood, soil creature, the purification of the atmosphere and water, pollination.

Degradation of habitats – a biological, chemical or physical process which leads to the loss of the productive potential of the environment.

Fragmentation of habitats – the state or process of fragmentation of a territory (original habitats) leading to a decrease in original habitats and an increase in their isolation from each other.

Invasive species – non-native species of organisms which spread spontaneously and displace endemic species from their natural habitats and lower biological diversity.

Neophytes – non-native plant species brought to our territory in the modern age.

Favourable state of habitats – the state of a habitat from the point of view of nature conservation according to the directive on habitats when:

- its natural spreading zone and the area which it covers in this zone are stable or growing,
- the specific structure and function which are essential for its long-term preservation exist and will probably continue to exist in the foreseeable future,
- the state of its typical species is favourable in terms of conservation.

Degraded ecosystem – a devalued ecosystem

Abbreviations and symbols

MDVaRR SR – Ministry of Transport, Construction and Regional Development of the Slovak Republic

MF SR – Ministry of Finance of the Slovak Republic

MPaRV SR – Ministry of Agriculture and Regional Development of the Slovak Republic

MO SR – Ministry of Defense of the Slovak Republic

MZVaEZ SR – Ministry of Foreign and European Affairs of the Slovak Republic

MŠVVaŠ SR – Ministry of Education, Science, Research and Sport of the Slovak Republic

MS SR – Ministry of Justice of the Slovak Republic

MH SR – Ministry of the Economy of the Slovak Republic

MV SR – Ministry of the Interior of the Slovak Republic

MPSVaR SR – Ministry of Labor, Social Affairs and the Family of the Slovak Republic

MŽP SR – Ministry of the Environment of the Slovak Republic

ZMOS – Association of Towns and Municipalities of Slovakia