

The Fourth National Report on the
implementation of the
Convention on biological Diversity
In the Slovak Republic

March 2009
Bratislava, Slovak Republic

Contents

Introduction.....	3
Chapter 1. Overview of Biodiversity Status, Trends and Threats.....	4
Chapter 2. Current Status of National Biodiversity Strategies and Action Plans.....	25
Chapter 3. Sectoral and Cross-sectoral Integration or Mainstreaming of Biodiversity.....	41
Chapter 4. Conclusions: Progress towards the 2010 Target and Implementation of the Strategic Plan.....	56
Appendix I. Information concerning reporting Party and preparation of national report....	70
Appendix II. Further sources of information.....	71
Appendix III. Progress towards Targets of the Global Strategy for Plant Conservation An Programme of Work on Protected Areas.....	74
Appendix IV. National indicators used in the report.....	86

Introduction

The preparation and drafting of the Fourth National Report on the implementation of the Convention on Biological Diversity in the Slovak Republic was carried out under the supervision of the Ministry of the Environment of the Slovak Republic. The Slovak Environmental Agency significantly contributed to the coordination of the task and the writing of the finished text.

The report presents the results achieved in the implementation of the Convention on Biological Diversity in the Slovak Republic since the completion of the third national report in 2005 together with some data on progress in the achievement of goals and objectives since 1998, when the government adopted the first Action Plan for the Implementation of the National Biodiversity Strategy of Slovakia 1998–2010, and 2003 when the government adopted the Updated Action Plan for the Implementation of the National Biodiversity Strategy of Slovakia 2003–2010.

A number of organisations, mainly organisations falling under Ministry of the Environment but also organisations falling under other departments of government and some non-governmental organisations took part in the preparation of the fourth national report.

Unlike in the case of the third national report, funds for the report's preparation and drafting were no longer available from the Global Environment Facility because the Slovak Republic ceased to be a beneficiary of assistance from this source on acceding to the European Union.

The fourth national report is organised according to the guidelines and the handbook issued for the fourth national report by the Secretariat of the Convention on Biological Diversity, i.e. the report is divided into four chapters and four appendices providing an overview of biodiversity status, trends and threats in Slovakia, the current implementation status of tasks laid down in the national strategy for the protection of biodiversity in Slovakia and the action plan adopted for its implementation, on sectoral and cross-sectoral integration of activity relating to biodiversity and progress towards the objectives of strategic documents such as the Global Strategy for Plant Conservation, the Programme of Work on Protected Areas and the Strategic Plan for the Implementation of the Convention on Biological Diversity in the Slovak Republic". Annex IV presents information on the updated set of indicators used to monitor status and trends relating to biodiversity in the Slovak Republic adopted by government resolution.

Chapter 1 - Overview of biodiversity Status, Trends and Threats

This chapter provides overview of Slovak Republic's biodiversity status and trends, and threats to biodiversity.

1.1. Basic Data on the Slovak Republic

The Slovak Republic is situated in Central Europe and shares borders with five states: the Czech Republic, Austria, Hungary, the Ukrainian republic and Poland. The republic's longest frontier is with Hungary (631 km), its shortest with the Ukraine (96 km). The area of the Slovak Republic is 49 036 km², and its location expressed in geographical co-ordinates is between 47° 44' and 49° 37' northern latitude and between 16° 50' a 22° 34' eastern longitude. Altitude varies from 94 m above sea level (Klin near Bodrog) to 2 655 m above sea level (Gerlach peak).

The territory of the Slovak Republic is divided into 7 types of terrain according to elevation (tab.č.1)

Table 1: Relative elevation of terrain in the Slovak Republic

Type of terrain	Area in km ²	% of the area of Slovakia
Flat	10 973	22.39
Hills	9 023	18.41
Lower upland	8 483	17.31
Higher upland	10 099	20.61
Lower highlands	7 272	14.84
Higher highlands	2 333	4.74
Mountains	836	1.70
TOTAL	49 009	100.00

Source: Regional geography of the Slovak Republic

The climate of Slovakia is in the temperate zone and is subject to both oceanic and continental influences. The result of this is that summers are not particularly hot and winters are relatively mild. The long term average for summer temperatures is 20.5°C and the average for winter is 3°C. For every 100 metres of elevation above sea level the average temperature falls by 0.52°C.

The territory of Slovakia is divided into three climate regions:

The warm region has over 50 summer days (max. temperature over 25°C and the harvest of winter rye starts before 15 July. It covers the lowlands of southern and south-eastern Slovakia and low-lying basins up to elevations of 300–400 m above sea-level.

The mild region has fewer than 50 summer days per year and the harvest of winter rye starts after 15 July. Its upper limit is the 16°C July isotherm. It reaches elevations of 800 m above sea-level. It covers the lower highlands and lower mountains and the higher mountain valleys. The basic characteristic of the **cold region** is an average July temperature below 16°C. The whole area is found in high mountains more than 800 m above sea-level.

Slovakia has a dense river network mainly of a mountain character. The main European watershed between the Baltic and the Black Sea passes through Slovakia.

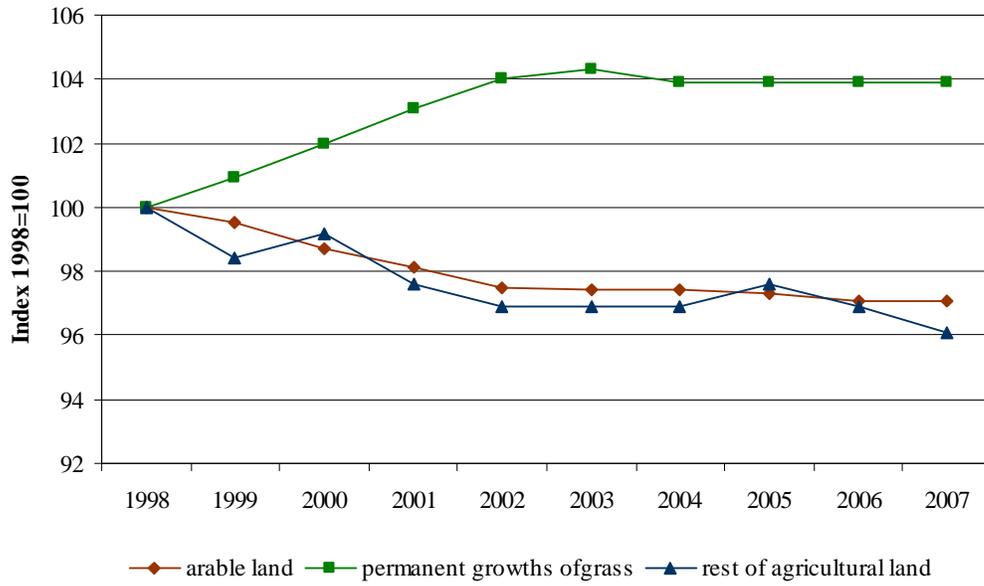
There are a wide range of land and water habitats in Slovakia. Their natural distribution has been significantly changed by the use of the country since the start of the intensive settlement and use of the territory and has undergone some change in the last decade. (table 2)

Table 2: Situation and trends in land use in Slovakia (1998–2007)

Type of land	Area ('000 hectares)			% of the total area of Slovakia		
	1998	2002	2007	1998	2002	2007
Total area of land	4 904	4 904	4 904	100.0	100.0	100.0
Agricultural land	2 444	2 438	2 429	49.8	49.7	49.5
of which:						
Arable land	1 469	1 433	1 426	30.0	29.2	29.1
Permanent growths of grass	848	882	881	17.2	18.0	18.0
Rest of agricultural land	127	123	122	2.6	2.5	2.4
Non-agricultural land	2 460	2 465	2 475	50.2	50.3	50.5
of which:						
Forest area	1 998	2 003	2 007	40.7	40.9	40.9
Water area	93	93	94	1.9	1.9	1.9
Rest of non-agricultural land	369	369	374	7.6	7.6	7.7
Total decrease of agricultural land	1 715	1 805	2 372	100.0	100.0	100.0
of which due to:						
Civil and housing construction	203	322	566	11.8	17.8	23.9
Industrial construction	23	33	563	1.3	1.8	23.7
Construction of water works	52	14	20	3.0	0.8	0.8
Other investment purposes	174	110	199	10.1	6.1	8.4
Mining	3	19	70	0.2	1.1	3.0
Forestation	912	517	410	53.2	28.6	17.3
Total increase in agricultural land	731	575	487	100.0	100.0	100.0
of which due to:						
Deforestation	298	70	211	40.8	12.2	43.3

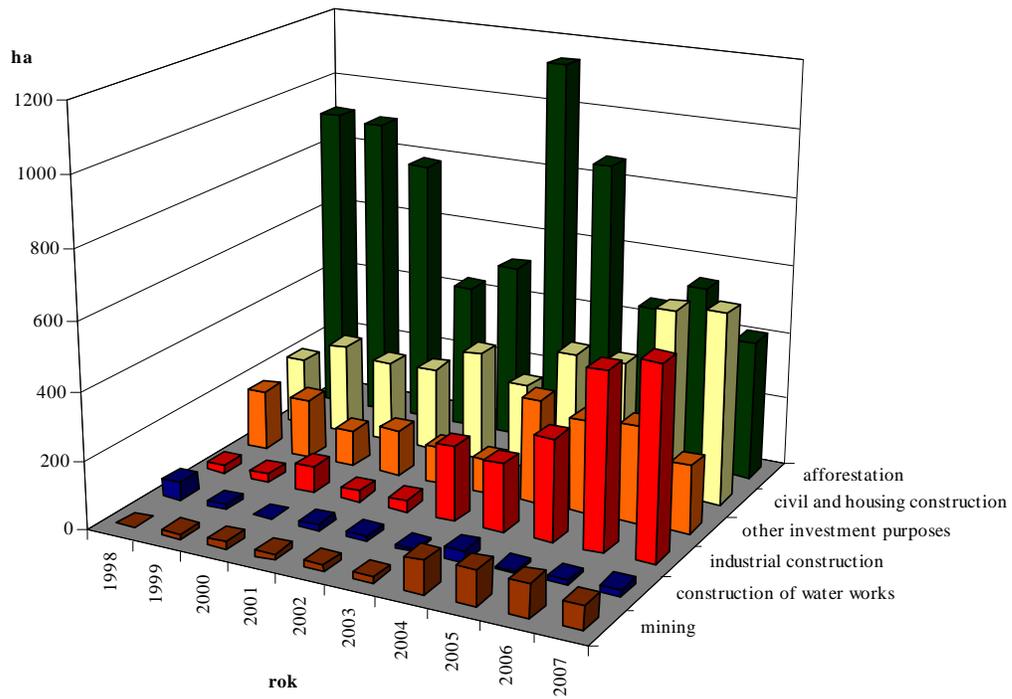
The information in table 2 and graphs 1 and 2 show that between 1998 and 2007 the area of agricultural land in Slovakia declined by around 15 000 ha. More detailed analysis shows a decline of 43 000 ha in arable land and 5 000 ha in other agricultural land, and a 33 000 ha increase in permanent growths of grass. The majority of the lost agricultural land was used for civic and residential construction, industry and other capital purposes but it is a welcome development that a significant area of agricultural land was forested and that the area of forest increased by 9 000 ha between 1998 and 2007.

Graph 1: Changes in the structure of agricultural land 1998–2007



Source: Geography, cartography and cadastre authority of the Slovak Republic (ÚGKK SR)

Graph 2:



Source: Geography, cartography and cadastre authority of the Slovak Republic (ÚGKK SR)

1.2. The Protection of Biodiversity of the Slovak Republic

In 2002 the new Act No. 543/2002 Coll. On Nature and Landscape Protection was adopted by the National Council of the Slovak Republic and become effective from 1th January 2003. Consequently, the system of legal instruments directly or indirectly related to it has been processed and updated. The new act fastened on a complete concept for the protection of nature based on the territorial system of ecological stability and the classification of the entire territory to five levels of protection and utilisation defined in previous Act No. 287/1994 Coll. On Nature and Landscape Protection which was valid from 1th January 1995 till 31th December 2002.

Besides of clearly determined territorial protection, the new Act on Nature and Landscape Protection also defines the principal rights and duties in respect of general protection of nature and landscape, of protected flora and fauna species, protected minerals and fossils and caves and nature waterfalls. It also defines sanctions for the violation of the conditions for the protection of nature and landscape and the competencies of nature protections authorities.

In connection with entrance of the Slovak Republic to the European Union, the Act. No. 543/2002 Coll. Defines coherent European Network of Protected Areas, which consists of Special areas of Conservation and Special Protection Areas and sets also conditions of management and protection of these localities.

The organization responsible for territorial, species and cave protection is the State Nature Conservancy of the Slovak Republic (SNC), established in 2006.

1.2.1. Species protection

The geographic position of Slovakia in the centre of Europe and on the boundary of the Carpathian mountain and Pannonian lowland areas allows for a rich diversity of flora and fauna. The identified biodiversity of Slovakia includes around 11 270 plant species (including Algae), more than 28 800 animal species (including Invertebrates) and more than 1 000 species of Protozoa. As a result of extensive use of natural resources, some plant and animal species are now extinct, and others have become rare or endangered. Of the total 3 124 species of higher plants, 1 135 are listed in the national Red List of Angiosperms and Gymnosperms. The share of endangered species is therefor 45 % fish species (including lampreys), 100 % amphibians species, 100 % reptiles species, 32 % birds species a 65 % mammals species.

An overview of trends and threats to the biodiversity of individual groups of flora and fauna in the Slovak Republic is given in tables 3, 4 and 5.

Tab. 3: Overview of Slovak plants classified in individual groups according to the level of danger in 1998 – 2007

Overview of Slovak plants classified in individual groups according to the level of danger in 1998

Group	Total number of taxons		Endangered (IUCN categories)						
	World estimation	Slovakia	Ex	E	Vm	V	R	I	Ed
Cyanophytes and Algae	50 000	2 989	-	-	-	-	-	-	-
Lower Fungi	80 000	1 295	-	-	-	-	-	-	-
Higher Fungi	20 000	2 469	-	20	-	46	70	-	-
Lichens	20 000	1 508	100	129	0	249	100	18	-

Bryophytes	20 000	905	30	61	0	61	195	169	-
			EX	CR	EN	VU	LR	DD	Ed
Vascular Plants	250 000	3 352	37	124	273	350	223	47	127

Overview of Slovak plants classified in individual groups according to the level of danger in 2001

Group	Total number of taxons		Endangered (IUCN categories)						
	World estimation	Slovakia	EX	CR	EN	VU	LR	DD	Ed
Cyanophytes and Algae	50 000	3 008	-	7	80	196	-	-	-
Lower Fungi	80 000	1 295	-	-	-	-	-	-	-
Higher Fungi	20 000	2 469	5	7	39	49	87	90	-
Lichens	20 000	1 508	88	140	48	169	114	14	-
Bryophytes	20 000	909	26	95	104	112	85	74	2
Vascular Plants	250 000	3 352	73	243	282	378	247	46	220

Overview of Slovak plants classified in individual groups according to the level of danger in 2002

Group	Total number of taxons		Endangered (IUCN categories)						
	World estimation	Slovakia	EX	CR	EN	VU	LR	DD	Ed
Cyanophytes and Algae	50 000	3 008	-	7	80	196	-	-	-
Lower Fungi	80 000	1 295	-	-	-	-	-	-	-
Higher Fungi	20 000	2 469	5	7	39	49	87	90	-
Lichens	20 000	1 508	88	140	48	169	114	14	-
Bryophytes	20 000	909	26	95	104	112	84	74	2
Vascular Plants	250 000	3 352	77	266	320	430	285	50	220

Overview of Slovak plants classified in individual groups according to the level of danger in 2007

Group	Total number of taxons		Endangered (IUCN categories)						
	World estimation	Slovakia	EX	CR	EN	VU	LR	DD	Ed
Cyanophytes and Algae	50 000	3 008	-	7	80	196	-	-	-
Lower Fungi	80 000	1 295	-	-	-	-	-	-	-
Higher Fungi	20 000	2 469	5	7	39	49	87	90	-
Lichens	20 000	1 508	88	140	48	169	114	14	-
Bryophytes	20 000	909	26	95	104	112	85	74	2
Vascular Plants	250 000	3 352	77	266	320	430	285	50	220

Table 3 gives a summary of each group of plants occurring in the Slovak Republic and their level of danger according to the IUCN. Since 1998 organisations under the Ministry of Environment, the Ministry of Education and the Ministry of Agriculture as well as a number of NGOs have carried out mapping that has significantly improved knowledge of the danger faced by plants in the Slovakia. Since 2002 the level of danger for each group has been practically unchanged.

Tab. 4: Overview of Slovak invertebrates classified in individual categories according to the level of danger in 2001 - 2007

Overview of Slovak invertebrates classified in individual categories according to the level of danger in 2001

Taxon	Number of Taxons		Endangered (IUCN Categories)							End. Total	End. %
	World	SR	EX	CR	EN	VU	LR	DD	NE		
Mollusca	128 000	259	3	26	10	14	7	3	-	68	19.7
Aranea	30 000	916	11	88	137	157	18	3	-	423	45.4
Ephemeroptera	2 000	112	0	8	18	18	0	0	-	41	31.1
Odonata	5 667	69	8	10	7	6	16	0	-	47	62.7
Homoptera	15 000	122	0	6	3	11	22	14	-	33	28.0
Heteroptera	30 000	801	-	14	7	6	4	-	-	31	3.9
Coleoptera	350 000	6 498	60	116	420	887	5	16	-	728	11.2
Hymenoptera	250 000	4 300	0	6	8	126	43	15	-	301	5.2
Lepidoptera	100 000	3 519	0	58	512	185	123	169	-	111	3.2
Diptera	150 000	4 635	0	0	35	8	3	1	-	198	3.3

Overview of Slovak invertebrates classified in individual categories according to the level of danger in 2004

Taxon	Number of Taxons		Endangered (IUCN Categories)							End. Total	End. %
	World	SR	EX	CR	EN	VU	LR	DD	NE		
Mollusca	128 000	277	4	10	26	14	10	4	-	68	19.7
Aranea	30 000	934	16	73	90	101	97	46	-	423	45.4
Ephemeroptera	2 000	132	-	8	17	16	-	-	-	41	31.1
Odonata	5 667	75	4	-	14	11	13	5	-	47	62.7
Homoptera	15 000	118	-	-	5	4	5	19	-	33	28.0
Heteroptera	30 000	801	-	14	7	6	4	-	-	31	3.9
Coleoptera	350 000	6 498	2	15	128	500	81	2	-	728	11.2
Hymenoptera	250 000	5 779	-	23	59	203	16	-	-	301	5.2
Lepidoptera	100 000	3 500	6	21	15	41	17	11	-	111	3.2
Diptera	150 000	5 975	-	5	10	71	19	93	-	198	3.3

Overview of Slovak invertebrates classified in individual categories according to the level of danger in 2007

Taxon	Number of Taxons		Endangered (IUCN Categories)							End. Total	End. %
	World	SR	EX	CR	EN	VU	LR	DD	NE		
Mollusca	128 000	277	2	26	22	33	45	8	135*	136	49.1
Aranea	30 000	934	16	73	90	101	97	45	-	422	45.2
Ephemeroptera	2 000	132	-	8	17	16	-	-	-	41	31.1
Odonata	5 667	75	4	-	14	11	13	5	-	47	62.7
Homoptera	15 000	118	-	6	7	10	20	10	-	53	44.9
Heteroptera	30 000	801	-	14	7	6	4	-	-	31	3.9
Coleoptera	350 000	6 498	2	15	128	490	81	2	-	718	11.1
Hymenoptera	250 000	5 779	-	23	59	203	16	-	-	301	5.2
Lepidoptera	100 000	3 500	6	21	15	41	17	11	-	111	3.2
Diptera	150 000	5 975	-	5	10	71	19	93	-	198	3.3

Table 4 gives a summary of each group of invertebrates occurring in the Slovak Republic and their level of danger according to the IUCN. Since 1998 organisations under the Ministry of Environment, the Ministry of Education and the Ministry of Agriculture as well as a number of NGOs have carried out mapping that has significantly improved knowledge of

the danger faced by invertebrates in the Slovakia. Since 2004 the danger of each group has been practically unchanged.

Tab. 5: Overview of Slovak vertebrates classified in individual categories according to the level of danger in 2001 – 2007

Overview of Slovak vertebrates classified in individual categories according to the level of danger in 2001

Taxon	Number of taxons		Endangered (IUCN Categories)								
	World	SR	EX	CR	EN	VU	LR	DD	NE	Total	%
Lampreys		4	-	4	-	-	-	-	-	4	100.0
Pisces	25 000	79	6	7	8	1	22	2	-	45 ¹⁾	57.0
Amphibians	4 950	18	-	-	3	5	10	-	-	18	100.0
Reptiles	7 970	12	-	1	-	4	6	-	-	11	91.6
Birds ²⁾	9 946	219	2	7	23	19	47	4	19	121	55.3 (35.5 ³⁾)
Mammals	4 763	90	2	2	6	12	27	15	4	68	75.6

¹⁾ one species has two forms in two separate categories (EX, CR)

²⁾ only 219 breeding species – from the total number of 341 bird species in Slovakia

³⁾ % from the total number of 341 bird species in Slovakia

Overview of Slovak vertebrates classified in individual categories according to the level of danger in 2004

Taxon	Number of taxons		Endangered (IUCN Categories)								
	World	SR	EX	CR	EN	VU	LR	DD	NE	Total	%
Lampreys		4	-	4	-	-	-	-	-	4	100.0
Pisces	25 000	79	6	7	8	1	22	2	-	45 ¹⁾	57.0
Amphibians	4 950	18	-	-	3	5	10	-	-	18	100.0
Reptiles	7 970	12	-	1	-	4	6	-	-	11	91.6
Birds ²⁾	9 946	219	2	7	23	19	47	4	19	121	55.3 (35.5 ³⁾)
Mammals	4 763	90	2	2	6	12	27	15	4	68	75.6

¹⁾ one species has two forms in two separate categories (EX, CR)

²⁾ only 219 breeding species – from the total number of 341 bird species in Slovakia

³⁾ % from the total number of 341 bird species in Slovakia

Overview of Slovak vertebrates classified in individual categories according to the level of danger in 2007

Taxon	Number of taxons		Endangered (IUCN Categories)								
	World	SR	EX	CR	EN	VU	LR	DD	NE	Total	%
Lampreys		4	-	4	-	-	-	-	-	4	100.0
Pisces	25 000	79	6	7	8	1	22	2	-	45 ¹⁾	57.0
Amphibians	4 950	18	-	-	3	5	10	-	-	18	100.0
Reptiles	7 970	12	-	1	-	4	6	-	-	11	91.6
Birds ²⁾	9 946	219	2	7	23	19	47	4	19	121	55.3 (35.5 ³⁾)
Mammals	4 763	90	2	2	6	12	27	15	4	68	75.6

¹⁾ one species has two forms in two separate categories (EX, CR)

²⁾ only 219 breeding species – from the total number of 341 bird species in Slovakia

³⁾ % from the total number of 341 bird species in Slovakia

Table 5 gives a summary of each group of vertebrates occurring in the Slovak Republic and their category of threat according to the IUCN. Since 1998 organisations under the Ministry of Environment, the Ministry of Education and the Ministry of Agriculture as

well as a number of NGOs have carried out mapping that has significantly improved knowledge of the danger faced by vertebrates in the Slovakia. Since 2001 the danger level of each group has been practically unchanged.

1.2.2. Territorial protection

1.2.2.1. Territorial protection under national legislation

Levels of protection of nature and the categories of protected areas:

Territorial protection is determined by five levels of protection. The highest level is the strictest level of protection. Every category of protected area has its own level of protection and the act simultaneously defines those activities, which are prohibited in relevant level of protection.

The act defines two categories of large-scaled protected areas (national park and protected landscape area) and five categories of small-scaled protected areas (protected landscape element, protected site, nature reserve, private protected area and natural monument). The private protected area category is a new category of protected areas determined by the Act No. 543/2002 Z.z., other categories of protected areas are caves and nature waterfalls.

The first level of protection is valid in the whole territory of Slovakia.

The second level of protection is valid in the territory of the protected Landscape Area and Protected Landscape element.

The third level of protection is valid in the territory of the Protected Site and Protected Landscape Element.

The fourth level of protection is valid in the territory of the Protected Site, Nature Reserve, Natural monument and Protected Landscape Element.

The fifth level of protection is valid in the territory of the Protected Site, Nature Reserve, Natural monument and Protected Landscape Element.

National Park a larger area, usually more than 1,000 ha, predominantly with ecosystems substantially unaffected by human activities, or with unique and natural landscape structures that form national biocentres and the most significant natural heritage in which the nature protection is of higher priority than other activities. In the territory of the National park is valid **the third level of protection**.

Protected Landscape Area is a larger area, usually more than 1,000 ha, with fragmented ecosystems which are significant for conservation of biological diversity and ecological stability, with characteristic landscape features or with specific forms of historical settlements. In the territory of the Protected Landscape Area is valid **the second level of protection**.

Protected Landscape Element is a significant landscape element fulfilling a function of biocentre, a biocorridor or an interactive element, especially of local or regional interest. In the territory of the Protected Landscape Element is valid **the second, third, fourth or fifth level of protection**.

Protected Site is an area, usually up to 1,000 ha with existence of natural habitats of European interest of natural habitats of national interest in which favourable status of these natural habitats depends on human economic activities.

In the territory of the Protected Landscape Element is valid **the third, fourth or fifth level of protection**.

Nature Reserve is a locality usually up to 1,000 ha representing predominantly original or those natural habitats of European or national interest or habitats of species of European or national interest which have not been generally affected by human activities.

Nature Reserve that usually represents a national biocentre as part of the most significant natural heritage of the state may be designated as a **national nature reserve** by a generally binding regulation. In the territory of the Nature Reserve/National Natural Reserve is valid **the fourth or fifth level of protection**.

Natural monument is a point, linear or other smaller ecosystems, their components or elements, generally not exceeding 50 ha in area, of scientific, cultural, ecological, aesthetic or landscape significance.

A unique Natural monument representing an integral part of the most important natural heritage of the state may be designated as a **national natural monument**. In the territory of the Natural monument/National Natural monument is valid **the fourth or fifth level of protection**.

Private Protected Area. The landowner who owns the land which meets conditions defined by the Act No. 543/2002 Coll. as a protected site, a nature reserve, or a natural monument, and where that land has not been designated as protected, may ask to designate it based on a submitted project of protection as a private protected site, a private nature reserve or a private natural monument. In private protected area and its protective zone only that level of protection is valid which corresponds to a relevant category of a protected area and its protective zone according to the Act No. 543/2002 Coll.

Cave and Natural Waterfall are **natural monuments**. *A unique cave or natural waterfall* representing a part of the most important natural heritage of the state, may be established as a **national natural monument**.

Cave is considered to be an underground hollow void in the Earth's crust accessible by a man exceeding two meters in length or depth with dimensions of the surface opening smaller than its length or depth.

Natural Waterfall is considered to be a natural rocky formation in which water falls from the height of over three meters or flows by uninterrupted or cascaded rocky escarpment steep more than 75 degrees and water persists in the river bed all the year round.

**Tab. 6: National Parks and Protected Landscape Areas in the Slovak Republik
in 2001 – 2008**

Nationals Parks and Protected Landscape Areas (State as of 31. 12. 2001)

National Parks	Established in	Total area (ha)
1. Tatra National Park	1948	74 731
2. Pieniny National Park	1967	3 750
3. Nízke Tatry NP	1978	72 842
4. Malá Fatra NP	1988	22 630
5. Slovenský raj NP	1988	19 763
6. Muránska planina NP	1997	20 318
7. Poloniny NP	1997	29 805
Protected Landscape Areas		
1. Vihorlat PLA	1973	17 485
2. Slovenský kras PLA	1973	36 166
3. Veľká Fatra PLA	1973	60 610
4. Malé Karpaty PLA	1976	64 610
5. Východné Karpaty PLA	1977	26 833
6. Štiavnické vrchy PLA	1979	77 630
7. Horná Orava PLA	1979	70 333
8. Karpaty PLA	1979	43 519
9. Poľana PLA	1981	20 360
10. Kysuce PLA	1984	65 462
11. Ponitrie PLA	1985	37 665
12. Záhorie PLA	1988	27 522
13. Strážovské vrchy PLA	1989	30 979
14. Cerová vrchovina PLA	1989	16 280
15. Latorica PLA	1990	15 620
16. Dunajské luhy PLA	1998	12 284

Nationals Parks and Protected Landscape Areas (State as of 31. 12. 2008)

National Parks	Established in	Total area (ha)
1. Tatra National Park	1948	73 800
2. Pieniny National Park	1967	3 750
3. Nízke Tatry NP	1978	72 842
4. Malá Fatra NP	1988	22 630
5. Slovenský raj NP	1988	19 763
6. Muránska planina NP	1997	29 805
7. Poloniny NP	1997	20 318
Protected Landscape Areas		2002
1. Vihorlat PLA	2002	19 763
2. Slovenský kras PLA		
3. Veľká Fatra PLA	1973	17 485
4. Malé Karpaty PLA	1976	64 610
5. Východné Karpaty PLA	1977	25 307
6. Štiavnické vrchy PLA	1979	77 630
7. Horná Orava PLA	1979	58 738
8. Karpaty PLA	1979	44 568
9. Poľana PLA	1981	20 360
10. Kysuce PLA	1984	65 462
11. Ponitrie PLA	1985	37 665
12. Záhorie PLA	1988	27 522
13. Strážovské vrchy PLA	1989	30 979
14. Cerová vrchovina PLA	1989	16 771
15. Latorica PLA	1990	23 198
16. Dunajské luhy PLA	1998	12 284

Total number of 23 large-scaled protected areas (National Parks and Protected Landscape Areas) in the period 1998-2008 did not change. Changes were carried out only in

number of NPs and PLAs. Number of national parks increased from 7 to 9. The Slovenský kras PLA and the Veľká Fatra PLA were moved into the category National Park and therefore the number of protected landscape areas decreased from 16 to 14.

Tab. 7: Categories of Protected Areas in the Slovak Republic in 1998 – 2008
Protected areas (State as of 31. 12. 1998)

Category	Number	Protected area (ha)	Area of buffer zone (ha)
National Parks (NP)	7	243 219	238 124
Protected Landscape (PLA)	16	610 869	-
Protected Landscape Element (PLE)	0	0.0	0.0
Protected Site (PS)	175	4 841.47	2 263.24
Nature Reserve (NR)	355	14 143.28	324.86
National Nature Reserve (NNR)	229	82 121.89	3 162.25
Natural monument (NM)	217	1 411.33	232.66
National Natural monument (NNM)	45	55.31	26.62

Protected areas (State as of 31. 12. 2003)

Category	Number	Protected area (ha)	Area of buffer zone (ha)
National Parks (NP)	9	317 889.9	270 127.6
Protected Landscape (PLA)	14	515 003.5	-
Protected Landscape Element (PLE)	0	0.0	0.0
Protected Site (PS)	188	5 213.2	2 419.1
Nature Reserve (NR)	381	12 420.4	256.3
National Nature Reserve (NNR)	0	0	0.0
Natural monument (NM)	22	84 167.1	2 810.2
National Natural monument (NNM)	230	1 546.1	207.7
National Natural monument (NNM)	11	58.9	26.6

Protected areas (State as of 31. 12. 2008)

Category	Number	Protected area (ha)	Area of buffer zone (ha)
National Parks (NP)	9	317 889.90	270 127.57
Protected Landscape (PLA)	14	522 581.51	None
Protected Landscape Element (PLE)	1	2.52	0.0
Protected Site (PS)	168	5 238.88	2 419.13
Nature Reserve (NR)	384	12 947.17	243.97
National Nature Reserve (NNR)	2	51.73	0.0
Natural monument (NM)	219	84 156.24	2 401.41
National Natural monument (NNM)	225	1 600.12	206.73
National Natural monument (NNM)	11	58.94	26.62

Tab. 8: Caves and Nature Waterfalls in 2003 – 2008
Caves and Nature Waterfalls (State as of 31.decemburu 2003)

Category	Number	Area of buffer zone (ha)
NM – caves with buffer zone	0	0.0
NNM – caves without buffer zone	43	0.0
NNM - caves with buffer zone	1	15.9
NM – nature waterfalls with buffer zone	0	0.0
NNM - nature waterfalls without buffer zone	5	0.0
NNM - nature waterfalls with buffer zone	0	0.0

Caves and Nature Waterfalls (State as of 31.decemburu 2008)

Category	Number	Area of buffer zone (ha)
NM – caves with buffer zone	3	53.76
NNM – caves without buffer zone	37	0.0
NNM - caves with buffer zone	7	1 480.73
NM – nature waterfalls with buffer zone	0	0.0
NNM - nature waterfalls without buffer zone	5	0.0
NNM - nature waterfalls with buffer zone	0	0.0

There are totally 23 large-scaled protected areas (NPs and PLAs) and 1.010 small-scaled protected areas (PLEs, PSs, NRs, Private PAs, NNRs, NMs, NNMs). Total area of all protected areas in Slovakia including buffer zones is 1 219 952.43 ha, which represents 24.88 % of area of Slovakia. 944 527.00 ha from this area are protected areas and 275 425.43 ha their buffer zones.

Number of protected areas in Slovakia vary every year because of a few reasons. It is common to find out in the process of periodical reassessment, that a subject of protection within protected area disappeared because of various reasons. In case that the protected area is at the same time protected as a cultural monument, the protection according to nature protection is cancelled. If protected area becomes a component of a zone of a national park or protected landscape area, it is canceled. There are also declared new protected areas if they fulfil required criteria. If the protected area is a part of NATURA 2000 site, it is declared like protected area in one of the national categories. Apart from these reasons the data about protected areas are updated because of changing of area, land use etc.

Three national parks (Tatra NP, Poloniny NP, Slovenský kras NP) and one protected landscape area (Poľana PLA) are included in the World Network of Biosphere Reserves of the UNESCO „Man and the Biosphere“ Programme. The Tatra Biosphere Reserve (Tatra NP) is a bilateral BR (with Poland) and the Východné Karpaty Biosphere Reserve (Poloniny NP) is a trilateral BR (with Poland and Ukraine).

In 2007 a new locality the Primeval Beech Forests of the Carpathians was listed in the UNESCO World Heritage List. This locality together with the locality Caves of Aggtelek Karst and Slovak Karst are two localities of the world natural heritage in Slovakia listed in the UNESCO World Heritage List.

In 2001, 2004 and 2006 three new localities were gradually included into the List of Internationally Important Wetlands under the Ramsar Convention. There are totally 14 Ramsar Sites in Slovakia.

Also threat protected areas is monitored. Protected areas are divided into single categories. **Optimal** protected areas are those, where the subject of protection is not endangered by human activities and it is developing according to aims of protection. **Threatened** are those areas, where the subject of protection is unfavourably influenced by human activity so much, that there is necessary to realize regulative actions to avoid threat of the subject of protection. **Degraded** areas are those, where human activities or natural processes have caused changes of natural communities or destruction of ecosystem.

Tab. 9: Threats and Degradations protected areas in 2001 – 2007

2001								
Category	State as of 31.12.2001		Optimal		Threatened		Degraded	
	Number	Area (ha)	Number	Area (ha)	Number	Area (ha)	Number	Area (ha)
PS	185	9 243.31	45	5 194.08	112	3 835.28	28	213.95
NR	375	11 787.63	207	7 520.80	162	4 168.91	6	97.92
NNR	231	89 202.46	143	71 493.55	88	17 708.91	-	-
NM	230	1 740.05	105	930.69	114	774.06	11	35.30
NNM	60	85.56	54	71.33	6	14.23	-	-
Private PA	-	-	-	-	-	-	-	-
Totally	1 081.0	112 059.0	554.0	85 210.45	482.0	26 501.39	45.0	347.14
Note: Total area of Pas consists of area of Pas and buffer zone PS – 3 rd level of protection – 2 263.2476 ha								
2003								
Category	State as of 31.12.2001		Optimal		Threatened		Degraded	
	Number	Area (ha)	Number	Area (ha)	Number	Area (ha)	Number	Area (ha)
PS	188	7 632.33	55	2 563.05	111	5 009.55	22	59.73
NR	381	12 676.67	204	8410.95	169	4 109.18	8	156.54
NNR	222	86 977.29	144	67 624.07	78	19 353.22	-	-
NM	230	1 753.78	111	821.19	111	892.85	8	39.74
NNM	60	85.56	52	38.41	8	47.15	-	-
Private PA	-	-	-	-	-	-	-	-
Totally	1081.0	109 125.63	566.0	79 457.67	477.0	29 411.95	38.0	256.01
Note: Total area of Pas consists of area of Pas and buffer zone PS – 3 rd level of protection – 2 263.2476 ha								
2007								
Category	State as of 31.12.2001		Optimal		Threatened		Degraded	
	Number	Area (ha)	Number	Area (ha)	Number	Area (ha)	Number	Area (ha)
PS	170	7 620	50	3 824	103	3 786	17	58
NR	384	13 041	211	8 762	162	4 096	11	240
Private NR	2	52	2	52	-	-	-	-
NNR	219	86 522	161	74 996	58	11 562	-	-
NM	230	1 751	119	908	105	931	6	26
NNM	60	719	51	1 530	9	36	-	-
PLE	1	3	1	3	-	-	-	-
Spolu	1 066.0	109 708.0	595.0	90 075.0	437.0	20 411.0	34.0	325.0
Note: Total area of Pas consists of area of Pas and buffer zone PS – 3 rd level of protection – 2 263.2476 ha								

1.2.2.2. Territorial protection under the legislation of European Union

a. Special Areas of conservation (SACs)

In March 2004 the Government of the Slovak Republic approved the National list of Proposed Sites of Community Importance (pSCIs) (Government decree No. 239/2004). This list was sent to the European Commission in April 2004. Consecutively it was issued the Regulation of the Ministry of Environment of SR No. 3/2004-5.1 on National list of proposed Sites of Community Importance.

In 2005 the National list of proposed Sites of Community Importance was negotiated in biogeographical seminars. The European Commission agreed with inclusion of sites in the list of the European Union, but the national list seemed to be insufficient from the point of view of selected habitats/species (necessary to replenish new Special Areas of Conservation, or rather it is necessary a scientific reserve for indicated habitats/species).

In 2006 the Slovak Republic sent to the European Commission an update of the object of protection in Special Areas of Conservation.

In January 2008 the European Commission approved 381 sites in the Alpine and Panonian biogeographical region. It has begun to pass 6-year term of declaration of these sites. Currently it runs the process of declaration of Special Areas of Conservation connected with update of state of plots, ownership, stakeholders, negotiations, preparation of decrees and so on.

Special Areas of Conservation represent 11.7 % of the whole Area of Slovakia. The overlap of SACs with the national network of protected areas is 86 %.

Proposal of replenished SACs (under the conclusions of biogeographical seminars) necessary for negotiations with owner is also prepared. This proposal represents 1 % of the whole area of Slovakia.

b. Special Protection Areas (SPAs)

Transposition of the Council Directive 79/409/EEC on the conservation of wild birds (Bird Directive) in the national legislation was realised through the Order No. 24/2003 Coll. as amended by which is executed the Act No. 543/2002 Coll. on Nature and Landscape Protection.

List of Special Protection Areas was approved by the Government of the Slovak Republic and sent to the European Commission.

Slovakia as a member state of the European Union should declare such number of Special Protection Areas with such area, which ensure the maintenance of the favourable conservation status of fauna species populations of 181 endangered bird species specified in Appendix I of the Bird Directive. Similar measures must be approved also for migratory bird species not specified in Appendix I, which are regularly found in the territory of a member state.

Slovakia made a list of 249 regularly occurring bird species, which represented a basic list for selection of species and identification of Special Protection Areas. This list was divided into two separate lists under Appendix I of the Bird Directive:

- 74 species created a group of species specified in Appendix I of the Directive
- 175 d species created a group of species not specified in Appendix I of the Directive

The list of Special Protection Areas was created in cooperation of the Slovak Ornithological Society/Bird Life Slovakia and the State Nature Conservancy of the Slovak Republic within the project for the establishment of the NATURA 2000 network in Slovakia.

On basis of criteria of selection of proposed Special Protection Areas was developed a list of 38 proposed Special Protection Areas. The National list of Special Protection Areas was adopted by the Government Decree No. 363 of 9th July 2003.

21 Special Protection Areas have been declared as of 15.11.2008, 17 Special Protection Areas are necessary to be yet declared (see Tab. 10 and Tab. 11).

After declaration of single Special Protection Areas by the Order of the Ministry of Environment, there will be developed management plans for every Special Protection Area.

Tab. 10: Declared Special Protection Areas of 31.12.2008

Code of SPA	Nome of SPA	Area of SPA (ha)	Effectiveness of Order of
SKCHVU002	Bukovské vrchy	40 932.42	1.2.2008
SKCHVU003	Cerová vrchovina - Porimavie	30 187.70	1.2.2008
SKCHVU004	Dolné Pohronie	229.32	1.2.2008
SKCHVU005	Dolné Považie	31 195.5	15.11.2006
SKCHVU007	Dunajské luhy	16 511.58	15.11.2008
SKCHVU008	Horná Orava	58 738.00	1.5.2005
SKCHVU009	Košická kotlina	17 354.31	1.2.2008
SKCHVU010	Kráľová	1 215.82	1.2.2008
SKCHVU012	Lehnice	2 346.85	1.9.2005
SKCHVU014	Malé Karpaty	50 633.60	1.6.2005
SKCHVU015	Medzibodrožie	33 753.70	1.2.2008
SKCHVU019	Ostrovne lúky	8 297.70	1.2.2008
SKCHVU020	Parížske močiare	376.58	1.2.2008
SKCHVU021	Poiplie	8 062.90	1.2.2008
SKCHVU022	Poľana	32 188.38	1.2.2008
SKCHVU023	Úľanská mokraď	18 173.91	15.11.2008
SKCHVU026	Sĺňava	509.27	1.2.2008
SKCHVU029	Systovské polia	1 772.94	1.5.2006
SKCHVU031	Tribeč	23 802.80	1.2.2008
SKCHVU037	Ondavská rovina	15 906.56	1.2.2008
SKCHVU038	Žitavský luh	155.40	1.2.2008

Tab. 11: Proposed Special Protection Areas of 31.12.2008

Code of SPA	Nome of SPA	Area of SPA (ha)
SKCHVU001	Boheľovské rybníky	81.45
SKCHVU006	Dubnické štrkovisko	41.40
SKCHVU011	Laborecká vrchovina	102 813.90
SKCHVU013	Malá Fatra	66 228.10
SKCHVU016	Záhorské Pomoravie	31 072.90
SKCHVU017	Muránska planina - Stolica	25 796.50
SKCHVU018	Nízke Tatry	98 168.50
SKCHVU024	Senianske rybníky	2 703.10
SKCHVU025	Slanské vrchy	60 247.40
SKCHVU027	Slovenský kras	43 921.30
SKCHVU028	Strážovské vrchy	58 673.10
SKCHVU030	Tatry	54 611.30
SKCHVU032	Trnavské rybníky	156.30
SKCHVU033	Veľká Fatra	47 445.00
SKCHVU034	Veľkoblavské rybníky	91.30
SKCHVU035	Vihorlatské vrchy	47 999.90
SKCHVU036	Volovské vrchy	121 420.70

Tab. 12: Overview of number of declared Special Protection Areas in Slovakia

<i>Category</i>	<i>Number</i>	<i>Area of SPAs (ha)</i>
as of 31.12.2005		
declared Special Protection Areas	3	111 718
as of 31.12.2006		
declared Special Protection Areas	5	144 686.89
as of 31.12.2007		
declared Special Protection Areas	5	144 686.89
as of 31.12.2008		
declared Special Protection Areas	21	392 345.69

More information about **Special Areas of Conservation** and **Special Protection Areas** are accessible on: <http://www.sopsr.sk/natura/>

1.2.2.3. Species protection under the legislation of European Union

The Slovak Republic is also bound by a number agreements that relate closely to the protection of species biodiversity: The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention), the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) and the African-Eurasian Waterbird Agreement (AEWA). Tables 13, 14 and 15 summarise the number of plant and animal species in Slovakia protected under these conventions and agreements.

Tab. 13: Plant and animal species in Slovakia protected by CITES

Taxons of wild plants in Slovakia protected by CITES

	Cyanophytes and Algae	Fungi	Lichens	Bryophytes	Vascular Plants
2001					
Taxons in appendices I and II to CITES	-	-	-	-	81
2003					
Taxons in appendices I and II to CITES	-	-	-	-	110
2005					
Taxons in appendices I and II to CITES	-	-	-	-	110
2007					
Taxons in appendices I and II to CITES	-	-	-	-	110

Taxons of wild animals in Slovakia protected by CITES

	Invertebrates	Fish	Amphibia	Reptiles	Birds	Mammals
2001						
Taxons in appendices I and II to CITES	2	-	-	-	61	6
2003						
Taxons in appendices I and II to CITES	2	-	-	-	61	6
2005						

Taxons in appendices I and II to CITES	2	-	-	-	61	6
2007						
Taxons in appendices I and II to CITES	2	5	-	-	61	5

Tab. 14: Plant and animal species in Slovakia protected by Bern Convention

Taxons of wild plants in Slovakia protected by Bern Convention

	Cyanophytes and Algae	Fungi	Lichens	Bryophytes	Vascular Plants
1998					
2001					
Taxons in appendix I to Bern	-	-	-	7	34
2003					
Taxons in appendix I to Bern	-	-	-	8	34
2005					
Taxons in appendix I to Bern	-	-	-	8	34
2007					
Taxons in appendix I to Bern	-	-	-	8	34

Taxons of wild animals in Slovakia protected by Bern Convention

	Invertebrates	Fish	Amphibia	Reptiles	Birds	Mammals
2001						
Taxons in appendices II and III to Bern	27	17	18	12	311	53
2003						
Taxons in appendices II and III to Bern	33	33	18	14	356	63
2005						
Taxons in appendices II and III to Bern	26	36	11	8	120	26
2007						
Taxons in appendices II and III to Bern	26	36	11	8	120	26

Tab. 15: Animal species in Slovakia protected by Bonn Convention and AEWA

Taxons of wild animals in Slovakia protected by Bonn Convention and AEWA

	Invertebrates	Fish	Amphibia	Reptiles	Birds	Mammals
2001						
Taxons in appendices II and III to Bonn	-	-	-	-	191	24
Taxons in the attacheement AEWA	-	-	-	-	30	-
2003						
Taxons in	-	-	-	-	191	24

appendices II and III to Bonn						
Taxons in the appendix to AEWa	-	-	-	-	30	-
2005						
Taxons in appendices II and III to Bonn	-	3	-	-	54	-
Taxons in the appendix to AEWa	-	-	-	-	122	-
2007						
Taxons in appendices II and III to Bonn	-	3	-	-	54	-
Taxons in the appendix to AEWa	-	-	-	-	122	-

1.3. Overview of threats to biodiversity in the Slovak Republic

Adverse effects on biodiversity in the Slovak Republic are the result of both natural causes (natural disasters, natural developments) and human activity (atmospheric pollution, water and ground pollution, unsuitable management procedures, global climate change, the spread of invasive species etc.)

The most significant threats to biodiversity in the Slovak Republic include:

Habitat fragmentation

One of the most serious effects of technical activity that is insensitive to biodiversity is habitat fragmentation, which is the result of the inappropriate design or placement of various types of structure, which create barriers to the migration of fauna (infrastructure) and the introduction of alien, unacceptable elements into the environment. The construction of such structures often leads to wildlife deaths (road and rail transport, electric power lines). The fragmentation of habitats leads to the decay of the genetic resources of the isolated populations and increases the vulnerability of ecosystems. In the Slovak Republic in recent years there has been a significant increase in the construction of transport infrastructure, especially the road network, with a major expansion of the motorway and trunk road network. In many cases this has led to pronounced habitat fragmentation. The impact assessment process during preparation for the construction of transport infrastructure is therefore of great importance, as is the design of complementary investments to preserve original bio-corridors (wildlife crossings, ecoducts)

Use of biological resources

While in the past one of the main problems relating to the use of ecosystems in Slovakia was excessive use of biological resources through the extensive use of land for agriculture, recent social and political changes have made reduced intensity in the use of these resources a problem. The reduced area of arable land, in particular the reduction in the use of permanent grassland (meadows and pastures) relating to reduction in the numbers of farm animals and the unprofitability of agriculture has put biotopes of rare species of flora and fauna that inhabit such areas at risk. For many species there is a risk of complete extinction.

Invasive species

Invasive species are foreign (non-indigenous) species whose introduction and dispersion threatens indigenous ecosystems, biotopes and species. In recent years several species of flora and fauna have spread and become established in Slovakia, behaving invasively and crowding out native species in plant and animal communities to create a monoculture. The intensity with which invasive species are appearing is greater than in the past due to permanent changes in the country caused by agricultural activity, forestry, the rearing of farm animals, intensive building works and transport.

Acidification

A long term problem affecting Slovakia is the pollution of all aspects of the environment through human activity. One of the processes that has a negative effect on the environment is acidification. This is a process whereby the acidity of abiotic components of the environment is increased. Pollutants, primarily sulphur dioxide and nitrogen, released into the air from stationary and mobile sources are transformed into sulphuric and nitric acid in the atmosphere and cause acid rain. This increases the acidity of the soil, the water and damages the health of organisms, forests and the technical condition of buildings. The Slovak Republic is a contracting party to a number of international conventions intended to reduce acidification and so far it has successfully carried out its duties under the various protocols.

Global climate change

The natural greenhouse effect of the atmosphere keeps the air temperature at ground level higher than it would be without this effect. Increasing concentrations of greenhouse gases in the atmosphere is increasing the greenhouse effect, leading to climate change. Over the last 100 years this process has caused a number of significant changes in Slovakia. The annual average air temperature increased by 1.1°C, annual precipitation fell by 5.6% on average and significant reductions in relative humidity and snow coverage have been observed. In recent years there have been several sharp increases in aggregate precipitation, resulting in more frequent local floods in a number of parts of the territory. On the other hand there have been relatively frequent local and widespread droughts in Slovakia with long periods of relatively warm weather. Another significant adverse effect of climate change in Slovakia is the frequent occurrence of strong gusting winds that have a disastrous effect on forests.

Industry

Industry requires intensive use of natural resources. The energy demands of Slovak industry are very high compared to other EU countries (Slovakia 42.3%, EU 27.6% of all energy consumption). Processing industries affect every part of the environment, in particular through the release of pollutants into the air, water, soil and rock, the effects of accidents, the production of industrial waste and the withdrawal of agricultural land. The most frequent atmospheric pollutants are CO, SO₂, NO_x, particulates and emissions of heavy metals. In recent years there has been a significant reduction in such pollutants.

Mineral extraction

Mineral extraction is an important factor in environmental protection. Many extraction sites damage the landscape and produce pollution. The most severe consequences of such activities include the creation of large mined out spaces underground and on the surface, the drainage of rock structures, reduction in the production from subsurface water sources, the accumulation of a large volume of contaminated waste on spoil heaps and in settling pits with subsequent contamination of subsurface and surface water and soil. In recent years the

extraction of most minerals has declined in Slovakia and the only increases have been in the extraction of natural gas, magnesite, wall stone and calcite.

Agriculture

Agriculture is a major source of environmental pollution. The main problems are agriculture's contribution to greenhouse gas emissions, waste production, the release of waste water, the use of agricultural pesticides amongst others. Agriculture, especially animal husbandry, is one of the largest producers of methane, nitrogen oxides, ammonia and the like. Agriculture pollutes water primarily with nitrates, pesticides and silage runoff. Another process is surface compaction. Its main cause, from a technological point of view, is agrotechnical operations, which have a significant impact on the condition of the soil. The contribution of agriculture to pollution in Slovakia has declined sharply in recent years as a result of a reduction in the land area given over to agricultural use, a fall in animal husbandry and decreased use of artificial fertilisers and pesticides.

Forestry

Slovakia has one of the highest levels of forestation in Europe and this level continues to rise. Timber extraction in Slovakia has been growing for many years (since 1990 it has increased by 63%) but it is still slower than the annual increase. Abiotic factors such as wood, snow, frosts and drought, anthropogenic factors such as emissions and biotic factors such as bark and timber boring insects, leaf-eating and sucking insects, rot and game species have also increased extraction of timber in recent years. Monitoring of the health of forests carried out by the state enterprise Forests of the Slovak Republic in 2007 found that up to 25.6% of trees were damaged.

Tourism

Slovakia is one of the European countries with a relatively well-developed tourist industry and the number of visitors increases every year. Tourist visits are not distributed evenly in the territory and the most popular areas – the national parks (TANAP, NAPANT, NP Malá Fatra, NP Slovenský Raj, PIENAP) – are amongst the most endangered territories as a result of activities such as mountain tourism. Another negative effect from an environmental point of view is the fact that visitors to these areas travel by car rather than railway.

Accidents and natural catastrophes

The accidents and natural catastrophes that have a negative impact on elements of the natural environment include fires, floods, accidental pollution of water, the air etc. The majority of fires in Slovakia in recent years have occurred in agriculture, residential property and the trade sector. Floods are a result of climate change and relate to the intensity of precipitation in specific areas. The main effects of floods are devastation of the environment, loss of human lives, destruction of crops and the like. In recent years, destructive floods have struck many regions of Slovakia.

Chapter 2 - Current Status of National Biodiversity Strategies and Action Plans

Under article 6(a) of the Convention on Biological Diversity, each contracting party is required to develop or adapt national strategies, action plans or programmes reflecting the measures set out in the Convention.

The strategy document for the implementation of the Convention on Biological Diversity in the Slovak Republic is the National Biodiversity Strategy of Slovakia (NBS) adopted under Government Resolution No. 231/1997 and endorsed by Parliamentary

Resolution No. 676/1997. The NBS reflects the ambition of the Slovak Republic to achieve a comprehensive and balanced implementation of the Convention on Biological Diversity as whole. It does not define definite priorities but sets 24 objectives for strengthening the protection of biodiversity and sustainable development of elements of biodiversity in Slovakia. The NBS defines 126 strategic directions for achieving these objectives (the text of the NBS can be obtained from www.enviro.gov.sk).

The NBS was developed taking into consideration existing materials on state policy on biodiversity conservation and its use, in particular the concept for state environmental policy, which adopts protection of biodiversity as one of its five priorities (adopted under Government Resolution No. 619/1993 and endorsed by Parliamentary Resolution No. 339/1993). The document also takes into consideration other international documents and recommendations.

The NBS is implemented through action plans (NBSAP) that apply to it for a given time period. The first Action Plan for the Implementation of the National Biodiversity Strategy of Slovakia for 1998–2010, developed using material and proposals from each department of government was adopted under Government Resolution No. 515/1998. Specific groups of proposals, organised according to the strategic objectives and strategic directions set out in the NBS were grouped into set tasks, taking into consideration national interests in the given area and departmental concepts, strategies and programmes already in implementation that were in accordance with the NBS.

The priorities in the national interest are set out in the NBSAP as follows:

- I. Monitoring of biodiversity status and analysis of the basic situation and relevant legislation
- II. Completion of databank of wild and domesticated organisms
- III. Indication of the status of biodiversity and biosensors
- IV. Programmes for the conservation and sustainable development of components of biodiversity
- V. Programmes for the revitalisation, restoration and preservation of components of biodiversity
- VI. Educational programmes

The first evaluation report on the implementation of the NBSAP was produced under the supervision of the Ministry of Environment in 2000. Internal and interdepartmental discussion of this evaluation report produced a number of serious criticisms relating mainly to the passive evaluation of performance in each task, and consultation with experts indicated the need to revise the NBSAP itself.

The new Updated Action Plan for the Implementation of the National Biodiversity Strategy of Slovakia for 2003–2010 was adopted under Government Resolution 1209/2002. It had fewer strategic objectives than the previous action plan, which were reduced from 24 to 21, and fewer strategic directions, which were reduced from 126 to 82. The government resolution cited above also called for an evaluation report on the implementation of the NBSAP at three-yearly intervals (2005, 2008, 2011).

In performance of this duty the Ministry of Environment submitted a report on the evaluation of the updated action plan for the implementation of the national biodiversity strategy of Slovakia for the years 2003–2010 for the years 2002 and 2003.

In 2008 a report was prepared on the evaluation of the updated action plan for the implementation of the national biodiversity strategy of Slovakia 2003–2010 covering years 2004–2006. The interdepartmental review of this report was completed in 2008, after which it was sent for consideration by the government, but it has not yet received government approval.

The evaluation of the performance of individual strategic objectives and strategic directions set out in the NBSAP for 2003–2010 covering 2003–2008 is presented in table 16.

Table 16: The evaluation of the performance of individual strategic objectives and strategic directions set out in the NBSAP for 2003–2010 covering 2003–2008

I. Conservation of biodiversity

Goals	Strategic directions	Performance of the tasks
1. Identify the status of biological diversity components	1.Strengthen institutional capacities for identification of biological diversity components	<ul style="list-style-type: none"> - reconstruction of administrative buildings and field stations - purchase of equipment for the management of protected areas - completion of the information system of the State Nature Conservancy of the Slovak Republic (ŠOP SR) - acquisition of cars and off-road vehicles for the organisational units of ŠOP SR - increased staffing and resources in offices of the Slovak Environmental Inspectorate (SIŽP) - participation of organisational units of the Ministry of Education, Ministry of Agriculture and Ministry of Economy in tasks carried out by specialised units of the Ministry of the Environment
	2.Identify gaps in knowledge about the status of biodiversity components	<ul style="list-style-type: none"> - completion of information on the species listed in annexes II and III in the habitats directive and annexes I and II of the birds directive - national inventories and monitoring of forests falling under the Ministry of Agriculture - completion of the NATURA 2000 implementation process in Slovakia - drafting of criteria for the evaluation of the favourable condition of habitats and principles for their monitoring - development of a catalogue of habitats in Slovakia
	3.Ensure regular assessments of the status of biodiversity components	<ul style="list-style-type: none"> - preparation and regular updating of national red lists of groups of plant and animal species in accordance with the applicable IUCN categories and criteria - monitoring and inventory of native and regional varieties of selected cultivated species
	4.Link species and biotopes inventories with surveys of soil, climate, and other components	<ul style="list-style-type: none"> - collection of additional information on the incidence of habitats of European significance in accordance with the requirements of the European Commission - inventory of plant species of European importance (28) and

		<p>animal species of European importance (125) occurring in Slovakia</p>
	5. Complete the Biotopes Mapping and Wetland Mapping Programmes in order to gain	<ul style="list-style-type: none"> - mapping of selected water, wetland and peatland habitats and localities in various parts of Slovakia, in some cases in cooperation with Czech and Austrian specialists. Results are stored in the central ŠOP SR database.
	6. Increase knowledge on endangered species and ecosystems, less known taxonomic groups and taxonomic groups of economic importance	<ul style="list-style-type: none"> - completion of information on the species listed in annexes II and IV in the council directive on the conservation of natural habitats and annexes I and II of the council directive on the conservation of wild birds - collection of additional information on the incidence of forest and non-forest habitats of European significance in accordance with the requirements of the European Commission - updating of GIS habitat layers and the ISTB database
2. Manage threatening processes	1. Identify threatening processes and assess their impact	<ul style="list-style-type: none"> - implementation of practical measures for the management of bats in panel buildings and their protection in forest areas - assessment of the health of forests throughout Slovakia - evaluation of the sensitivity of forest ecosystems to air pollution in permanent monitoring areas - evaluation of changes in the chemistry of soil and soil solutions in forest ecosystems at permanent monitoring sites (the BioSoil project, part of the European Forest Focus scheme) - monitoring of regularity in changes in biodiversity resulting from global changes in bioclimatic conditions, soil and emissions in Slovakia
	2. Control pollution that has an adverse impact on biodiversity	<ul style="list-style-type: none"> - implementation of geological and rehabilitation work in areas polluted by the activities of the Soviet army in Slovakia, rehabilitation work has been completed in Vlkanová and Rimavská Sobota and to some extent in Sliač (Government Resolution No. 637/2007)
	3. Prevent the introduction of invasive species and control or eradicate those alien species which may threaten ecosystems or native species	<ul style="list-style-type: none"> - development of a unified methodology for the eradication of invasive plant species - mapping and regulation of non-native and invasive plant species in

	<p>the territories of the 24 offices of ŠOP SR.</p> <ul style="list-style-type: none"> - monitoring of invasive animal species occurring in agricultural crops - establishment of a network of permanent monitoring sites to monitor the effects of invasive plant species on native species in the Morava lowlands.
4.Prevent loss of biodiversity from land fragmentation and land abandonment	<ul style="list-style-type: none"> - development of many new plans for local territorial systems of ecological stability (MÚSES) (mainly relating to land consolidation) for municipalities by various state and non-state organisations. - development of proposals for the rehabilitation and sustainable development of grasslands
5.Strengthen control of the risk associated with the use and release of genetically modified organisms	<ul style="list-style-type: none"> - organisation of training for biological safety inspectors and employees of specialised facilities using PHARE – Twinning resources and with the assistance of foreign trainers
6.Strengthen the application of appropriate mitigation measures	<ul style="list-style-type: none"> - installation of comb-style bird guards on 22 kV electric lines in selected locations in Slovakia -performance of monitoring of animal fatalities on the poles of electric lines in selected locations in Slovakia - implementation of measures resulting from conservation programmes for protected areas - implementation of regular practical care for protected areas, SACs and SPAs - implementation of measures to prevent erosion in river basins prone to flooding – Hron, Rimava, Ipeľ, Slaná, Poprad, Dunajec, Bodrog, Hornád - monitoring of effective measures to reduce negative factors in ecosystems - rehabilitation of areas disturbed by extractive industries and ore processing in selected locations in Slovakia (in accordance with Government Resolution No. 246/1991)
7.Harmonise all concepts, plans and strategies related to water management, transportation, mining and energy by taking into account the objectives of the biodiversity conservation	<ul style="list-style-type: none"> - this function is performed in accordance with Act No. 24/2006 Z.z. on environmental impact assessments, as amended
8.Develop an effective strategy to control the trade in indigenous and protected	<ul style="list-style-type: none"> - gradual development of the reception centre for seized animals

	species	<p>at Bojnice Zoo (aviary, modification of garage, purchase of a special vehicle to transport seized animals)</p> <ul style="list-style-type: none"> - launch of a website and publication of material on CITES - registration of the domain (www.cites.sk)
3. Strengthen in-situ conservation of biodiversity	1. Provide for state nature conservation built upon the concept of the European Ecological Network	<ul style="list-style-type: none"> - review of levels of protection in the national protected areas network - review of the protected areas network in terms of what is protected and overlapping with NATURA 2000 areas
	3. Pass a new legal instruments with regard to the protected areas network in order to achieve representative coverage of all types of habitats and establish an efficient ecological network for nature conservation	<ul style="list-style-type: none"> - drafting of the national list of proposed special areas of conservation (382 pSCIs), approved by the government in 2004. In I/2008, the European Commission approved 381 pSCIs and the 6-year period for declaration of the areas began. - drafting of the national list of proposed special protected areas (38 pSPAs). This was approved by the government in 2003. In XI/2008 a decree of the Ministry of the Environment declared 21 SPAs in Slovakia.
	4. Provide for proper protection of representative areas that are prerequisite to the preservation of typical forms of biological diversity and abiotic environment	<ul style="list-style-type: none"> - monitoring and protection of plant and animal species of European importance (guarding and inspection of the nests of birds of prey, monitoring of bird and fish populations, protection of the great bustard, monitoring of selected plant species and their habitats) - analysis of selected PAs in terms natural values, functions and management measures - performance of a survey of water management and ecology for works on the River Morava and its catchment area to restore natural conditions (cooperation with Austria) - a proposal for legislative protection of populations of the species <i>Sorbus domestica</i> L. a <i>Morus nigra</i> L., which are threatened by genetic erosion drafted by the Slovak University of Agriculture (SPU) in Nitra
	5. Introduce a national ecosystem restoration programme	<ul style="list-style-type: none"> - proposal for water management in the catchment areas of the Rivers Poprad, Dunajec and Bodva - revitalisation carried out in the Čičovské mŕtve rameno nature reserve, the River Muránka and

		wetland habitats in the Záhorie region
	6.Create conditions to maintain viable populations of species in natural surroundings	<ul style="list-style-type: none"> - preparation of programmes for the conservation of selected critically endangered plant and animal species and species of European importance - preparation of a study for the reconstruction and making passable of existing weirs and steps representing barriers to wildlife migration on the River Ipeľ (in cooperation with Hungary) - creation of conditions for the natural migration of wildlife in the construction of the motorway network in Slovakia (bioducts, aqueducts)
	7.Promote the implementation of species conservation programmes	<ul style="list-style-type: none"> - implementation of measures to save critically endangered species of flora and fauna based on approved conservation programmes - monitoring of selected bodies of water and their use for fishing - practical management of locations with protected plant species or habitats of national or European importance - performance of tasks under the Ramsar Convention - management of mountain meadows - conservation and management of floodplain forests - implementation of optimal management and improvement of habitats of hoofed game in the game preserves of the state enterprise Lesy s.p.
	8.Complete regulatory provisions for the protection and recovery of threatened species and populations	- uskutočnené transfery a reštitúcie vybraných druhov živočíchov (korytnačka močiarna, orol kráľovský, syseľ pasienkový, zubor hrivnatý)
	12.Effectively prevent any violation of legal norms or destructive action threatening biodiversity	<ul style="list-style-type: none"> - translocation and reintroduction of certain animal species (European pond terrapin, Eastern imperial eagle, European souslik, European bison) - ensuring unique identification of selected animal species in captivity and in the wild (golden eagle, peregrine falcon, saker falcon, European pond terrapin, white tailed eagle, European souslik, European bison) - ensuring the guarding and checking of selected species of birds of prey (golden eagle, peregrine falcon, saker falcon)

		<ul style="list-style-type: none"> - manufacture and installation of nest frames for selected species of birds of prey and owls - publication of Slovak and English texts of Act No. 543/2002 Z.z. on nature and landscape conservation and its implementing decrees
4. Strengthen conservation of genetic diversity	1.Improve inventories to assess the genetic diversity of domesticated and non-domesticated species in order to maximise the conservation and economic use of genetic recourses	<ul style="list-style-type: none"> - development of a program to process data on genetic resources as part of the national programme for the conservation of plant genetic resources for food and agriculture (the Gene Bank of the Slovak Republic) - In 2006–2007 the programme Sustainable Forest Agriculture and the task Conservation of Genetic Resources and the Biodiversity of Forest Timber were carried out. - gradual development and updating of the national information system on the distribution of domesticated genetic resources on the level of naturally spread species and varieties - measurement of genetic diversity in endangered species of forest timber using DNA markers (<i>Pinus mugo</i>, <i>Pinus sylvestris</i>) - measurement of genetic and species diversity of fish parasites in ecosystems of importance for nature and landscape conservation
	2.Gather valuable genotypes of old cultivars, landraces and ecotypes within natural populations and subsequently evaluate, document and multiply them for long-term storage	<ul style="list-style-type: none"> - continuous addition of IPGRI classifiers to the database of the national programme for the conservation of plant genetic resources (poppy, chickpea, lupin, medicinal plants) - evaluation, documentation and multiplication of selected plant species in the botanical gardens in Bratislava, Košice and Blatnica - systematic monitoring, research and collection of old cultivars and landraces of cultured and useful plant species at SPU Nitra (so far 7 collections of genetic resources have been assessed) - study, evaluation and registration of native populations of fruit trees (plum, cherry, mulberry, rowan, vine) at SPU Nitra
	4.Establish special long-term repositories for valuable genotypes of vegetatively propagated species	<ul style="list-style-type: none"> - securing of staff and material resources necessary to maintain a stock of native plant genetic resources and important regional cultivars of seed species in the Gene Bank in the Research Institute of Plant Production (VÚRV)

		<p>Piešťany</p> <ul style="list-style-type: none"> - construction of the central clone archive at Ostrá Lúka was stopped due to disputes over ownership, the function of regional clone archives is performed by the multiclonal seed sets of Lesy SR š.p. - establishment of a clone repository to gather, multiply and plant out genotypes from old cultivars and landraces of fruit trees, ornamental trees and vines in 13 locations in Slovakia
5. Strengthen ex-situ protection capabilities on national level	1. Develop a comprehensive program for ex-situ protection of genetic resources	<ul style="list-style-type: none"> - construction of a nursery for large falcons and eagles at Bojnice zoo and Košice zoo - construction of breeding facilities for selected types of mammals (European bison, European mink, European souslik) at Bojnice zoo and Košice zoo - revision of the national programme to conserve the genetic resources of cultured plants in Slovakia - development and updating of a database of collections of herbs and data on herbs at the Institute of Botany of the Slovak Academy of Sciences (SAV) in cooperation with the Slovak National Museum (SNM), the SAV Institute of Zoology, Comenius University in Bratislava and Šafárik University in Košice - inventories of collections made as part of the EU fifth framework programme "BioCASE"
	2. Improve the existing network of ex-situ facilities and adopt legislation in respect of their status	<ul style="list-style-type: none"> - construction of a network of breeding facilities (14) and rehabilitation facilities (2) to treat wounded or immobile animals - building of a gene bank for forest wood (seeds, cultures, pollen) in cooperation with the National Forest Centre (NLC) Zvolen and LESY SR, š.p. - the building of a herbarium to document the diversity of flora in Slovakia at the SAV Institute of Botany, the Natural History Faculty of Comenius University Bratislava and SPU Nitra - technical renovation of the arboretum at Ryknčice based on a project by SPU Nitra.
	3. Identify priorities for filling in the gaps in collections	<ul style="list-style-type: none"> - this task was carried out in the genetic resource reserves of the botanical gardens, arboretums and gene banks as part of research

		projects under the VEGA and APVV grant agencies
	4.Establish a collection of micro-organism cultures screened in Slovakia, together with those genetically engineered in laboratories	- tasks in this strategic direction were not carried out because funds were not allocated
	5.Develop low-cost conservation techniques, including in-vitro methods and cryo-preservation, particularly for non-traditional seed and vegetatively propagated plants	- the national programme to conserve the genetic resources of cultured plants in Slovakia addressed the conservation of plant genetic resources in certain collections (hops, potatoes, small fruits etc.) in in-vitro conditions in the centres implementing the national programme (VÚRV Piešťany, VÚZ Veľká Lomnica, VÚOOD Bojnica)
	6.Provide for duplication of crop collections and important accessions where needed	- tasks in this strategic direction were not carried out because funds were not allocated
	7.Improve the database and the relevant documentation	- continuous entry of biochemical data on genetic resources into the descriptive databases of the national programme to conserve the genetic resources of cultured plants in Slovakia
6. Building a comprehensive system for the monitoring of changes in biodiversity on all levels	1.Set-up a comprehensive programme for monitoring of biodiversity	- A proposal for a project to monitor forest ecosystems in parts of Slovakia included in the NATURA 2000 network was developed under Government Resolution No. 239/2004 - As part of the project for the subordinate monitoring system for flora and fauna (ČMS Biota), 19 species of higher plants of national and European significance were monitored at 170 permanent monitoring sites - As part of the ČMS Biota project, monitoring of selected animal species (European otter, European pond terrapin, white stork, European souslik, alpine marmot, Tatra chamois, selected species of birds of prey and bat) at 600 permanent monitoring sites - development of a national network and strengthening of the national node as part of Slovakia's participation in the GBIF - an information centre was built for the subordinate monitoring system for forests (ČMS Lesy) addition and updating of data banks and methodology banks, level 1 and 2 monitoring in the Forest Focus scheme.
	2.Introduce new monitoring methods for better understanding of ecosystem changes	- monitoring of the natural environment in selected caves in Slovakia

		<ul style="list-style-type: none"> - hydrological and hydrogeochemical monitoring in the Gombasecká Cave and Domica Cave - hydrographic monitoring in the Demänovská Cave, the Ochtinská Aragonite Cave and the Brestovska Cave - monitoring of selected Slovak caves that are not open to the public (Prepadlé, Liskovská, Ponická, Ľadová jaskyňa) - monitoring of climatic changes, natural and anthropogenic factors in selected high mountain ecosystems - monitoring of the biology of endangered species of peat habitats - active biomonitoring for pollutants in regions of Slovakia heavily affected by emissions - development of methods for monitoring the effects of GMO on ecosystems - development of a reference laboratory for monitoring and analysing genetically modified organisms and products from them at the SAV Institute of Molecular Biology
	3.Promote utilisation of biodiversity indication in monitoring	<ul style="list-style-type: none"> - monitoring of vegetation in wetlands and river ecosystems with regard to water management activities undertaken in Slovakia - monitoring of the effects of environmental pollution on parasites in the basin of the River Tisa - monitoring of the condition of lichens as an indicator of environmental pollution
	4.Facilitate the establishment of linkages between different monitoring systems	<ul style="list-style-type: none"> - continuation and expansion of monitoring of ground vegetation in forests as part of the UN/ECE ICP Forests programme - completion of information on the species listed in annexes I, II and IV in the habitats directive and annexes I, II and III of the birds directive into the ISTB. - preparation of documentation for the implementation of the Water Framework Directive for all protected areas in which water habitats are protected - identification of protected areas in Slovakia where there is a conflict of interests between conservation of nature and landscape and mineral extraction

II. Sustainable Use

Goals	Strategic directions	Performance of the tasks
7. Ensure ecologically sustainable forestry	1.Complete national criteria and indicators of sustainable forest management and ensure their application	- design of criteria and indicators for the sustainable management of Slovak forests
	2.Increase the share of natural regeneration in annually regenerated areas	- task incorporated into the preparation and implementation of forest management plans of each forest management units in Slovakia
	5.Promote less intensive forest management and technological discipline in order to provide for the most important renewable resources	- task incorporated into the strategic goals of the national forestry programme
	6.Promote ecosystem approach in forestry planning processes	- task incorporated into the strategic goals of the national forestry programme
	7.Provide for permanent monitoring of the state and development of forests, including the assessment of changes and impacts on the development of forest ecosystems	- task incorporated into the strategic goals of the national forestry programme
8. Gradually replace inappropriate agricultural practices with ecologically sustainable agricultural and pastoral management	4.Promote the use of biomass as a secondary renewable source of energy	- task incorporated into international research projects in the sixth framework programme carried out by SPU Nitra and STU Bratislava
	5.Promote the establishment of a national market in certified bio-products	- in 2002 the Ministry of Agriculture adopted a proposal to introduce certification and a national certification system for forests in Slovakia - at present certification of forests being carried out in accordance with the PEFC and FSC certification systems
9. Complement biodiversity conservation by introducing sustainable hunting and fishing management practices	4.Maintain balanced game populations by taking into account the carrying capacity of ecosystems	- development of a method for counting animals over a large area - development of principles for the sustainable management of game to ensure population stability and habitat improvements
11. Promote ecologically sound and sustainable tourism concepts	2.Develop and introduce a national concept of ecologically sound small and medium scale tourism businesses	- development of regional strategies for tourism in Slovakia for the needs of self-government authorities and institutions working in tourism in Slovakia
	3.Introduce soft forms of tourism that are in harmony with biodiversity protection in protected areas	- mapping of overlaps between tourism centres and NATURA 2000 areas to assist centres in planning their development.
	4.Strengthen regulatory measures (seasonal restrictions, entrance fees, transport infrastructure, etc.) to keep the number of visitors in balance with carrying capacity of the area	- proposal of restricted locations in protected areas with level 2 to 5 protection for the performance of certain activities (prohibited or requiring consent) – other than national natural monuments and national nature reserves
12. Increase safety in biotechnologies and promote Access to	1.Initiate the elaboration of national biotechnology transfer programmes including transfer of technologies to	- the activities of the institute of biodiversity conservation and biosafety established at SPU Nitra

biotechnologies and/or benefits resulting from them	developing countries	include issues of biosafety
	2.Develop appropriate administrative rules to promote access to the results of biotechnologies	- publication of the text The Act on GMO and its Implementing Regulations with Interpretation financed by a PHARE – Twinning project
	3.Introduce basic standards for testing, importing, exporting and commercial use of living genetically modified organisms	- development of a methodology to evaluate GMO risk (first edition 2003, second edition 2007)
	4.Designate authorities for biosafety control including the establishment of an early warning system	- implementation of the Seveso II Directive on major accident hazards into Slovak law, the competent authority is the Slovak Environmental Inspectorate (SIŽP) - provision of professional training and retraining for employees of the biological safety inspectorate and employees of the Ministry of the Environment financed by PHARE – Twinning projects and UNEP GEF
	5.Elaborate detailed procedures and measures for risk assessment concerning the release of genetically modified organisms	- development of a methodology for control in GMO laboratories by the SIŽP, which was distributed to the users of genetic technologies and GMO

III. General Measures for Conservation and Sustainable Use

Goals	Strategic directions	Performance of the tasks
15. Encourage cooperation between all stakeholders to prevent duplication of activities and to provide for more effective conservation of biodiversity and sustainable use of biological resources zdrojov	1.Provide for active participation of the private sector by including non-governmental organisations, in national, regional or local planning processes	- development of a draft directive of the minister of the environment on financing for the management of the national network of protected areas, special protection areas and protected fauna - performance of tasks for the implementation of Directive of the Minister of the Environment No. 6/2004 – 5.1 on the provision of financial contributions - development of a methodology for the assessment of applications for financial contributions
	4.Develop a mechanism for the co-operation of all interested groups and structures involved in the conservation of biodiversity and the sustainable use of biological resources	- partial satisfaction of the claims for financial contributions from the Environmental Fund or EU Funds for the owners and administrators of land in small protected areas, in order to increase their interest in effective management of such areas
16.Develop a widely applicable system of incentives for the conservation of biodiversity and sustainable use of its components	3.Estimate values of ecosystem services in monetary terms	- the issue was addressed in a project on research, classification and application of the function of forests in the landscape carried out by the National Forest Centre in Zvolen
	4.Incorporate consideration of economic values of biological resources and ecosystem services into planning processes on all levels	- a number of university departments and departments of the Slovak Academy of Sciences have worked on this issue

17. Incorporate strong biodiversity considerations into land-use planning	1.Ensure that biodiversity becomes a fundamental and limiting factor within all land-use planning processes	- mainstreaming of territorial systems of ecological stability (ÚSES) is promoted through financial contributions from the Environmental Fund
	3.Introduce binding environmental regulations into the landscape planning processes which take into account ecological stability, carrying capacity and vulnerability of ecosystems	- the grant agencies VEGA and APVV support research projects on some aspects of this issue - an amendment of Act No. 50/1976 Z.z. on land-use planning and the building code incorporates optimal spatial arrangement and the functional use of space into surveys and analyses - a landscape typology of Slovakia is being prepared in order to define the different landscape types in Slovakia
	5.Apply and make use of traditional and historical landscape structures in biodiversity conservation and landscape modelling	- a prestigious catalogue of habitats in Slovakia has been produced under the supervision of the Daphne NGO
18. Encourage research aimed at the conservation and sustainable use of biodiversity	1.Develop a long-term comprehensive national biodiversity research program	- tasks in this strategic direction were not carried out because funds were not allocated
	2.Improve existing methods for biodiversity research	- evaluation of the resistance of the genetic resources of selected agricultural crops (wheat, barley, oats) to fungal and viral infections carried out by state tasks and grants to the Research Institute of Plant Production (VÚRV) Piešťany - biodiversity is studied at the molecular level in a number of national and international projects (INTRABIODIV, VEGA, APVV)
	3.Introduce new techniques for biodiversity assessment	- Projects of the Ministry of Education and the grant agencies VEGA and APVT at SPU Nitra studied the development and application of molecular techniques for the analysis of biodiversity
	4.Strengthen ecosystem and microbiological research	- Projects of the Ministry of Education and the grant agencies VEGA and APVT at the SAV Institute of Molecular Biology and Institute of Botany studied the biodiversity of microorganisms using molecular biology methods
	5.Strengthen population biology research in all its aspects	- Projects of the Ministry of Education and the grant agencies VEGA and APVT studied the population ecology of endangered species
	9.Support participation in international biodiversity relevant research programmes	- evaluation of the resistance of the genetic resources of selected agricultural crops (wheat, barley, oats) to fungal and viral infections

		carried out by state tasks and grants to the Plant Production Research Institute (VÚRV) Piešťany
19. Promote building of national human and institutional capacities for the conservation and sustainable use of biodiversity	1.Strengthen the capacity of the institutions involved in biodiversity research, monitoring and management, in particular those engaged in in-situ conservation, research and monitoring	- Expansion of the collections and electronic documentation relating to the development and condition of the natural environment including the establishment of a national database of collections relating to biodiversity in Slovakia at the Slovak National Museum in Bratislava - performance of work to connect databases of museum biological collections with other projects of national and European importance
	4.Strengthen the capacity of biodiversity-oriented non-governmental, non-profit organisations	- development of small grant programmes for NGO projects relating to biodiversity (green projects)
	6.Maintain and enhance the capacity of institutions to scientifically describe, classify and store collected specimens, as well as strengthen their ability to effectively disseminate data and information	- implementation of a graphical database of plant genetic resources in the FENOTYPDATA system - increase in staff in order to protect flora ex-situ (Borová Hora, Mlyňany, Banská Štiavnica) with funding from the Ministry of Education.
20. Promote all forms of education and awareness on the conservation of biodiversity and sustainable use of its components	2.Develop effective communication and information sharing among educational institutions and individuals involved in biodiversity education	- The project Živá príroda (Living Nature) carried out by the Slovak Environmental Agency Banská Bystrica in cooperation with the Field Studies Council was aimed at elementary and secondary schools - The BISEL project studied water ecosystems - publication of magazines, periodicals and conference proceedings on nature conservation, information materials, press conferences and television appearances through the specialised organisations operated by the Ministry of the Environment and the Ministry of Education
	3.Develop new specific biodiversity training programmes for different sectors and administrative levels	- educational activity carried out by the specialised nature conservation school in Varín - internal training for professionals employed by the Ministry of the Environment - specialised training for working in high places - training and voluntary nature protection activity - specialised communication training for employees of the Ministry of the Environment - specialised training for

		<p>employees of the Ministry of the Environment on NATURA 2000</p> <ul style="list-style-type: none"> - internal training for professionals employed by ŠOP SR (botany, zoology, forestry, dendrology) - training for employees of customs offices on EU regulations relating to trade in endangered species of flora and fauna - seminars for specialists and non-specialists on the topics of biotechnology and biosafety - specialised training on biodiversity issues for hunters and foresters (Leonardo da Vinci TFMA Programme, PROSILVA Slovakia) - preparation for the establishment of the specialised education facility the national clone repository
	4.Promote training in ecologically sound management for private land-users	<ul style="list-style-type: none"> - training for private owners of forests on the ecological management of forests through seminars organised by the forest conservation service and the centre for the control of forest reproductive material - training of smallholders in alternative ways of managing meadows and pastures by the institute of biodiversity conservation and biosafety at SPU Nitra
	5.Promote the use of new techniques and technologies in education including distant studies	<ul style="list-style-type: none"> - a lifelong learning programme for selected sections of the public on environmental issues and biodiversity conservation provided by the institute of biodiversity conservation and biosafety at SPU Nitra
	6.Develop and maintain information and education centres and interpretative trails	<ul style="list-style-type: none"> - construction of an IS for NATURA 2000 - construction of an IS for the OP Nature and landscape conservation (13) - review of the network of educational trails and educational sites, maintenance and renovation of the network - plans for education and information centres in forest parks and arboretums (the forest open air museum at Čierny Balog) - construction of a permanent exhibition on the miracle of nature – the biodiversity of the Earth at the SNM Natural History Museum in Bratislava - construction of a centre for extracurricular education and

		advice on biodiversity conservation at the SNM Natural History Museum in Bratislava
	7.Promote the education of ethical aspects of conservation and the sustainable use of biodiversity and include biological diversity issues into the curriculum in all forms of education, from kindergarten through primary and secondary schools to universities	- preparation and publication of promotional materials on laws relating to nature and landscape conservation for secondary and elementary schools (a brochure on national laws and EU regulations relating to the CITES Convention, promotional material on genetically modified organisms and biosafety in Slovakia and genetically modified organisms and food)
21. Strengthen biodiversity principles within the Environmental Impact Assessment procedures	1.Ensure active involvement of the public in the EIA procedures	- preparation of a manual on strategic environmental impact assessment with regard to the habitats directive, financed by a PHARE Twinning project
22. Establish a biodiversity relevant national clearing-house mechanism	4.Adopt appropriate regulations to ensure Access to information	- design of a dynamic model of information flows as one of the basic instruments for the clearing house mechanism - building and regular updating of the website of the centre for ČMS Lesy
	6.Fill the gaps in biodiversity databases, establish a national flora data bank and a national data bank of micro-organisms	- building of a national database of flora, vegetation and habitats in Slovakia at the SAV Institute of Botany
	7.Promote the application of new Technologies in data management	- use of new technology to manage data on species conserved in botanical gardens and arboretums (the FLOREX database)
23. Strengthen the support of financial mechanisms for the conservation and sustainable use of biodiversity at the national level	3.Promote the establishment of community-based development and biodiversity funds	- tasks in this strategic direction were not carried out because funds were not allocated

IV. International Co-operation

Goals	Strategic directions	Performance of the tasks
24. Co-operation in implementing the Convention both at the regional and international levels	1.Promote technical and scientific co-operation with other Parties of the Convention	- The Slovak Republic participates in activities under the International Treaty on Plant Genetic Resources for Food and Agriculture - The Slovak Republic participates in work in the FAO commission for genetic resources; its annual contribution is EUR 6 000 - The Slovak Republic is working in Phase VIII of the ECPGR (the European Cooperative Programme for Plant Genetic Resources) - The Slovak Republic participates in international activities on the implementation of the Convention on Biological Diversity relating to genetic resources in forestry

		(EUFORGEN through Biodiversity International); its annual contribution is USD 5 500. - The Greenbelt (Green Belt) initiative involves cooperation with Germany and Austria to eliminate the iron curtain.
	2.Participate actively in all regional initiatives related to the conservation of biodiversity and sustainable use of its components, particularly in implementing the Pan-European Landscape and Biological Diversity Strategy	- performance of tasks under resolutions of the Ministerial Conference on the Protection of Forests in Europe
	4.Strengthen linkages between measures for implementing the Convention and other relevant conventions operating in different countries	- tasks carried out as part of Slovakia's participation in the European programme for forest genetic resources EUFORGEN - performance of applied research to study the impact of global climate change on forests in Slovakia
	5.Promote co-operation with ex-situ conservation facilities in different countries	- cooperation between the Gene Bank of the Slovak Republic and the Gene Bank of the Czech Republic including storage of each other's safety collections - cooperation between the Gene Bank of the Slovak Republic and gene banks in Hungary, Poland, Germany, Ukraine and Russia - cooperation in forestry through membership of the European programme for forest genetic resources EUFORGEN (forestry section)

The information in table 16 shows that the NBS and its implementation through the NBSAP in Slovakia cover all the measures and conditions recommended in the Convention on Biological Diversity. Nearly all the tasks set out in the 24 (later 21) strategic goals and the 126 (later 82) strategic directions for the 1998–2010 period (2003–2010 period) have been completed and only a few of them have not been carried out, mainly because of lack of funds or staff in the bodies participating in the implementation of the NBSAP.

There is adequate incorporation of biodiversity issues into the strategies and programmes of other departments of government that deal with environmental issues, particularly in the areas of agriculture, economy, transport, posts and telecommunications, but also in education and culture.

The tasks set out in the NBSAP for Slovakia are financed from three main sources;

1. the state budget (the main source) – in accordance with the general laws of the Slovak Republic, through the budgetary chapters of each department of government and their specialised departmental organisations. The Ministry of the Environment and the Ministry of Agriculture have concluded an agreement on “cross compliance”, i.e. the payment of subsidies to agricultural production to achieve environmental objectives relating to NATURA 2000 (the habitats directive and birds directive) and the water framework directive in Slovakia.

2. from the Environmental Fund (supplementary source) – established to provide state aid for environmental management in the Slovak Republic under the Ministry of the Environment.
3. from various EU funds and programmes and funding provided by countries EU associate countries (Norway, Switzerland, Germany, the Netherlands). It should be mentioned here that after its accession to the EU in 2004, Slovakia, as an OECD member state, was excluded from the list of beneficiaries from the Global Environment Facility, which is intended for developing countries, and strongly feels the lack of this funding.

Non-governmental organisations operating in Slovakia and participating in the implementation of the NBSAP (Daphne, CERI, REC) obtain some funding from other sources in Slovakia and the EU.

In recent years Slovakia has also become a donor of financing to developing countries (Kenya, Serbia, Afghanistan).

The main problems that have arisen in the implementation of the Convention on Biological Diversity at the national level and the implementation of tasks under the NBSAP were low levels of cooperation and coordination at all levels of activity, inconsistency in different national, regional and local strategies and planning documents on issues relating to the conservation and sustainable use of biodiversity. Slovakia also lacks a fully functional “clearing house”.

Chapter 3 - Sectoral and Cross-sectoral Integration or Mainstreaming of Biodiversity

Under article 6(b) of the Convention on Biological Diversity, each Contracting Party shall integrate the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies. It is clear that the objectives of the Convention on Biological Diversity and the goals and objectives the biodiversity strategy cannot be achieved without cooperation of key partners and sectors that influence the conservation and sustainable use of biological resources.

Responsibility for the coordination of the implementation of the Convention on Biological Diversity in Slovakia is assigned primarily to the Ministry of Environment and to some extent to other authorities at the national, regional and local level.

Other departments of state, scientific and aid institutions and non-governmental organisations also participate in the implementation of the Convention on Biological Diversity, however. The private sector also plays an important role in implementation.

A national secretariat of the Convention on Biological Diversity was established in the Ministry of the Environment in 1994 to carry out administration and coordination activity. It was an independent unit in the Nature and Landscape Conservation Division. The unit was cancelled in 2001 and the national secretariat of the Convention on Biological Diversity was closed down. The function of the national focal point (NFP) was performed by a single employee of the Nature and Landscape Conservation Division.

In November 2004 another three national focal points were appointed for the Convention on Biological Diversity.

- The NFP for the clearing-house mechanism is the Slovak University of Agriculture in Nitra
- The NFP for invasive species is the State Nature Conservancy
- the NFP for the Global Taxonomy Initiative is the SAV Institute of Botany

There is no designated NFP for other areas of the Convention on Biological Diversity but the NFP for policy on access to genetic resources and the NFP for the Cartagena Protocol are operational.

An analysis of the main participants in the implementation of the Convention in Slovakia is given below:

1. Under the Ministry of the Environment

1.1.1. The main stakeholders in the implementation of the Convention falling under the Ministry of the Environment:

Regional and Local Environmental Offices
The Slovak Environmental Inspectorate
The State Nature Conservancy of the Slovak Republic
Bojnice Zoo
The Slovak Environmental Agency

1.1.2. National documents, strategies and action plans relating to the Convention on Biological Diversity within the competence of the Ministry of the Environment:

1.2.1. The National Biodiversity Strategy of Slovakia (NBS – see Chapter 2)

1.2.2. The National Biodiversity Strategy Action Plan of Slovakia for 1998–2010 (NBSAP) – See Chapter 2

1.2.3. The National Biodiversity Strategy Action Plan of Slovakia for 2003-2010 (NBSAP) – See Chapter 2

1.2.4. the European Landscape Convention – Implementation in the Slovak Republic

The Slovak Republic signed the European Landscape Convention (ELC) in 2005 and it came into force in December 2005 (Government Resolution No. 2001/2005 of March 2005).

In Slovakia, the main instruments for implementation of the European Landscape Convention are Act No. 543/2002 Z.z. on the protection of nature and landscape, as amended, Act No. 50/1976 Zb. on land-use planning and the building code and Act No. 49/2002 Z.z. on the protection of monuments and historic sites. Slovakia therefore provides a basic level of support for planning and the protection of landscape and defines the powers of the local administration. Slovakia thus satisfies the requirements of the Convention on Biological Diversity to secure protection, management and planning for the landscape.

The implementation programme of the ELC is concentrated in four main pillars:

1. Institutional support – the goal is to develop the required legislation establishing the principles of landscape planning
2. Promotion – the goal is to develop and implement an information campaign, public relations work, cooperation with the media and training for professionals
3. Cooperation – the goal is to secure cooperation at the national and international levels
4. Specialised support – the objective is to identify types of landscape, characteristic landscape features, important elements of the landscape and the goals for landscape quality

The most important pillar for the conservation and sustainable use of biological diversity is pillar 3, which includes cooperation between stakeholders in the management, planning and sustainable development of the landscape (nature conservation, conservation of biological and landscape diversity, conservation of world cultural and natural heritage etc.).

The Ministry of the Environment is the authority with overall responsibility for the coordination and management of undertakings and cooperation with interested departments of

government. The executive unit for the ELC under the Ministry of the Environment is the ministry's specialised organisation, the Slovak Environmental Agency.

Financing for the performance of tasks for the implementation of the ELC in Slovakia should be drawn from the state budget, the budgetary chapters of the interested departments of government, European Union funds and other non-budgetary sources.

1.2.5. The framework convention on the protection and sustainable development of the Carpathians – the Carpathian Convention (CC)

The Carpathian Convention was adopted in May 2003 and signed by all the states in the Carpathian region (the Czech Republic, Hungary, Poland, Romania, the Slovak Republic, Serbia and Montenegro, Ukraine). It came into force in January 2006.

The goal of the CC is cooperation between the contracting parties and the sustainable development of the Carpathians with the aim of improving quality of life, strengthening local economies and communities and protecting the natural and cultural heritage.

The member states have undertaken to implement an integrated strategy and take necessary measures in a range of areas. The CC comprises 24 articles, of which article 4 relates to the conservation and the sustainable use of biological and landscape diversity. In the CC, the contracting parties undertake not only to conserve but also to restore biological and landscape diversity, to take appropriate measures to ensure a high level of protection and sustainable use of natural and semi-natural habitats, their continuity and connectivity and species of flora and fauna being characteristic of the Carpathians, in particular the protection of endangered species, endemic species and large carnivores. Another highlighted undertaking is to restore degraded habitats and support the development and implementation of relevant management plans.

An important undertaking is the implementation of policies aiming at the prevention of the introduction of alien invasive species and the release of genetically modified organisms threatening ecosystems, habitats or species, and the implementation of policies for their control or eradication.

The parties have undertaken to develop and promote compatible monitoring systems, coordinated regional inventories of species and habitats, coordinated scientific research and their networking.

The CC includes a commitment to cooperation in developing of an ecological network in the Carpathians as a constituent part of the Pan-European Ecological Network, in establishing and supporting a Carpathian Network of Protected Areas as well to the enhancement of conservation and sustainable management in areas outside of protected areas.

The contracting parties have undertaken to adopt appropriate measures to integrate the objectives of conservation and sustainable use of biological and landscape diversity into policies on sectors such as mountain agriculture, mountain forestry, river basin management, tourism, transport, energy, industry and mining.

Financing for the CC is provided by the contracting parties to the CC individually, contributions from resources available under other programmes and agreements, and contributions from states that are not contracting parties and from governmental, inter-governmental and non-governmental organisations and resources.

1.2.6. Programme for Village Renewal (PVR) – revision for 2008–2013

The guiding principle of the Programme for Village Renewal is the renewal of the intellectual, material and natural environment. A guiding principle of this process is the preservation of the identity of villages, landscape and rural culture.

The PVR was brought to life in Slovakia in 1991 with the adoption of Government Resolution No. 395/2001, which assigned the Ministry of the Environment and the Ministry

of Agriculture the task of developing methodological guidelines for the procedure to be followed by state administration authorities and self-government authorities in the PVR, in particular with regard to its content and procedures. The resolution also required other departments of government to take the objectives of the programme into consideration when allocating resources from their state funds. In 1997 the Revised Programme for Village Renewal was adopted by government resolution and put into full operation. The PVR is overseen by the Ministry of the Environment in cooperation with the Ministry of Agriculture. The government approved the continuation of PVR with unchanged financing and responsibility after 1999 in Government Resolution No. 486/1999.

The PVR defines priority areas in accordance with the government manifesto for 2006–2010, some of which relate to policy on the conservation and sustainable use of biodiversity, in particular:

Priority 6: Renewal of native species and habitats

Type of activity: Restoration and planting of native species of trees, including fruit trees, the planting of avenues of trees, forest parks, the conservation and restoration of diverse greenery, training in the cultivation of native trees

Priority 10: Development of environmental concepts

Type of activity: Preparation of plans and studies for landscape ecology and landscape, development of local ecological stability systems, general plans for green space, studies for the renewal of public spaces

Priority 11: Renewal of fish ponds and small bodies of water

Type of activity: Renewal of fish ponds, small lakes and reservoirs

Priority 13: Countryside management

Type of activity: Revitalisation of water courses and the planting or reconstruction of bank vegetation, the renewal of wetlands, measures to retain water in the countryside, the establishment and management of habitats and biocorridors, management of meadows and pastures (cutting, traditional pasture) in order to preserve the original character of the countryside

The PVR is financed from the state budget of Slovakia, the budgetary chapters of the interested departments of government and directly from government funds allocated to the PVR.

1.2.7. The Revised Programme for Wetland Management in Slovakia (PWMS) 2008–2014

The Action Plan 2008–2011 for the Revised Programme for Wetland Management in Slovakia (APPWMS)

The Programme for Wetland Management in Slovakia is the basic strategic document for the implementation of the undertakings of the Slovak Republic under the Convention on Wetlands of International Importance (the Ramsar Convention), to which the Slovak Republic acceded in 1990 (by succession from 1993).

PWMS and the AP PWMS are based on Government Resolution No. 200/2003 of March 2003 and international documents (the EU water framework directive 2000/60/EC, the habitats directive 92/43/EEC, the birds directive 79/409/EEC, the Convention on Biological Diversity). The PWMS focuses on the priorities and goals set down for the periods between the meetings of the Conference of the Contracting Parties (2008 – 2011 – 2014).

The Programme for Wetland Management in Slovakia 2008–2014 was adopted under Government Resolution No. 848/2007 in October 2007 and follows four strategic goals:

Strategic goal no. 1: The sustainable use of wetlands

Strategic goal no. 2: Management of wetlands of international importance

Strategic goal no. 3: Development of international cooperation

Strategic goal no. 4: Training for staff participating in the implementation of the Ramsar Convention

Specific tasks under the PWMS will be elaborated in action plans for two periods: 2008–2011 and 2011–2014 and will be updated in accordance with the Resolutions and Recommendations adopted by the meetings of the Conference of the Contracting Parties to the Ramsar Convention and other relevant documents.

The Action Plan for the Programme for Wetland Management in Slovakia 2008–2011 was adopted under Government Resolution No. 848/2007 and contains 51 tasks for the implementation of the above strategic goals. Several of these relate to the conservation and sustainable use of biodiversity, in particular:

Strategic goal no. 1: The sustainable use of wetlands

Task 1.2: To develop, review, amend and implement national and supranational strategies, legal instruments, institutions and practices and where necessary to propose amendments to regulations affecting the conservation and sustainable use of wetlands

Strategic goal no. 3: Development of international cooperation

Task 3.2: To ensure effective coordination with other international and regional multilateral environmental conventions and agencies, to share specialist experience and information and to harmonise management and reporting systems with various conventions and neighbouring countries.

The performance of tasks under the AP PWMS is financed from the state budget, the budgetary chapters of the interested departments of government, European Union funds and other non-budgetary sources.

1.2.8. Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)

The Slovak Republic signed the Bern Convention in 1994 and it entered into force in January 1997 (Notice of the Minister of Foreign Affairs No. 93/1998).

The aim of the Bern Convention is to conserve wild flora and fauna (populations, species, subspecies, varieties and forms) and their natural habitats, especially those species and habitats whose conservation requires the cooperation of several states. Particular emphasis is given to endangered and vulnerable species, including endangered and vulnerable migratory species. In Slovakia there are 39 of the strictly protected flora species listed in appendix I, 121 of the strictly protected fauna species listed in appendix II and 61 of the protected fauna species listed in appendix III.

The main activities that Slovakia performs under the Bern Convention include:

- the adoption of legislation and administrative measures for the species set out in the appendices (development of conservation programmes, action plans – see chapter 1)
- transcription of new additions to the text of the Bern Convention and other additional matter after every meeting of the Commission of the contracting parties.
- the granting of exceptions from the provisions of article 4 (protection of habitats), article 6 (special protection of the wild fauna species specified in appendix II) and article 7 (protection of the wild fauna species specified in appendix III)

- the establishment of conditions for the implementation of the European strategy on invasive alien species
- active participation in meetings of the Standing Committee
- preparation of national reports for the Bern Convention (so far three national reports have been prepared: The Second Annual National Report for 2002–2004, the Fourth Annual National Report for 2001–2004 and the Second Annual National Report for 2005–2006).

1.2.9. Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)

The Slovak Republic signed the Bonn Convention in 1994 and it entered into force in March 1995 (Notice of the Minister of Foreign Affairs No. 91/1998).

The aim of the Bonn Convention is to conserve the migratory species of bird specified in annexes I and II of the Bonn Convention.

In Slovakia there are 13 endangered migratory species from appendix I and 40 migratory species that have an unfavourable conservation status from appendix II. Within the scope of the Bonn Convention, Slovakia assesses the impact of various activities on migratory species, assess collisions between migratory bird species and electric power lines and takes measures for the conservation of the species listed in appendix I. Special attention is given to certain endangered and vulnerable species such as the great bustard, the golden eagle, the imperial eagle, the peregrine falcon and the saker falcon. A report is prepared on the implementation of the Bonn Convention in Slovakia at regular three-yearly intervals.

1.2.10. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES / Washington Convention)

The aim of CITES / the Washington Convention is to place global trade in endangered species of fauna and flora under the collective control of all the states in the world in order to protect them against complete extinction caused by their over-exploitation. Endangered species of flora and fauna are listed by their degree of endangerment in 3 appendices (I, II and III).

CITES came into force in Czechoslovakia on 16 December 1992. The Slovak Republic became a party by succession on 1 January 1993. The Ministry of the Environment is the executive body for CITES in the Slovak Republic and a specialised office – the CITES executive – operates within the State Nature Conservancy, a specialised organisation belonging to the Ministry of the Environment. This office organises and coordinates activities relating to the enforcement of the convention in Slovakia. Staff from the Slovak Environmental Inspectorate act as the control authority for CITES.

The law has been amended multiple times since 1992 and at present issues relating to CITES in Slovakia are governed by the following laws:

Act No. 15/2005 Z.z. on the protection of wild animals and wild plants, the regulation of trade in such species and the amendment of certain acts, as amended, in force since 1.4.2005.

Decree of the Ministry of the Environment No. 110/2005 Z.z. laying down implementing regulations for the act on the protection of wild animals and wild plants, the regulation of trade in such species and the amendment of certain acts, as amended, in force since 1.4.2005.

1.2.11. Environmental Impact Assessment (EIA)

Environmental impact assessment has been carried out in the Slovak Republic since 1994 when Act No. 127/1994 Z.z. on environmental impact assessment entered into force. In order to bring Slovak legislation into line with EU law, Act No. 391/2000 Z.z. on the

amendment of Act No. 127/1994 Z.z. was passed in 2000 and since February 2006 the area has been governed by Act No. 24/2006 Z.z. on environmental impact assessment and the amendment of certain acts. The act set out the procedure for environmental impact assessment, the assessment of policy documents and the assessment of the impact of buildings, facilities and other activities on the environment. Decree of the Minister of the Environment No. 113/2006 Z.z. on the act sets out particulars of professional competence in relation to environmental impact assessment. The act is fully compatible with EU law and international agreements by which Slovakia is bound (including the Convention on Biological Diversity). The phrase “environmental impact” means any direct or indirect impact on the environment including impacts on health, flora, fauna, biodiversity, soil conditions, climate, air quality, water quality, the landscape, natural localities, material property, cultural heritage and the interactions between these aspects of the environment.

Assessment involves:

- the environmental impact assessment process for policy documents
- the environmental impact assessment process for buildings, equipment and other activities
- the environmental impact assessment process for policy documents and proposed cross-border activities
- the competence of state administration authorities with regard to environmental impact assessment

Environmental impact assessment processes are divided into two groups according to the gravity of the potential negative impacts:

1. activities for which assessment is compulsory
2. activities for which the competent authority may determine that assessment is necessary

The stages of the assessment process are mutually dependent and are open to all interested parties, including the general public, from the very beginning.

In Slovakia, all costs relating to the assessment process are borne by the party that proposes the activity.

1.2.12. Concept for the reform and rationalisation of environmental monitoring

Environmental monitoring in Slovakia is based on a monitoring system covering the territory of the Slovak Republic that is designed to assess the overall condition of the environment in Slovakia as a whole using information on the status and trends in each of its component parts.

The Concept of Environmental Monitoring for the territory of the Slovak Republic and the Concept of an Integrated Environmental Information System (the Concept) were adopted under Government Resolution No. 449/1992 in May 1992. Implementation of the environmental monitoring system and the integrated environmental information system for the territory of the Slovak Republic was governed by Government Resolution no. 620/1993 of September 1993. A plan for subordinate monitoring systems (ČMS) was developed on the basis of these resolutions, which described the target system. ČMS centres were established as centres for methodology and coordination to direct monitoring activities. A Monitoring Coordination Council was also established.

The Concept for the Expansion of the Environmental Monitoring and Information System was adopted under Government Resolution No. 7/2000 in January 2000. The system was completed in 2004 and is regularly updated.

The Concept defined environmental monitoring as monitoring in the following areas: air quality, meteorology and climatology, water, flora and fauna, geological factors, waste, radioactivity, contaminants in food and animal feed, soil quality, forests.

Environmental monitoring in Slovakia takes place on three overlapping levels:

- environmental monitoring at the national level
- environmental monitoring at the regional level
- environmental monitoring at the local (single purpose) level

The basic components of the system for environmental monitoring at the national level are the subordinate monitoring systems. These are fully operated by their set operators. The Ministry of the Environment performs coordination and methodology activities.

The following subordinate monitoring systems (ČMS) currently operate in Slovakia:

- ČMS for air quality (ČMS Kvalita ovzdušia), operated by the Slovak Hydro-Meteorological Office (SHMÚ)
- ČMS for meteorology and climatology (ČMS Meteorológia a klimatológia), operated by SHMÚ
- ČMS for water quality (ČMS Voda) operated by SHMÚ
- ČMS for radioactivity (ČMS Rádioaktivita) operated by SHMÚ
- ČMS for Waste (ČMS Odpady) operated by the Centre for Waste Management and Environmental Management of the Slovak Environmental Agency (SAŽP COHEM)
- ČMS for flora and fauna (ČMS Biota) operated by ŠOP SR
- ČMS for soil quality (ČMS Pôda) operated by the Soil Science and Conservation Research Institute (VUPOP)
- ČMS for forests (ČMS Lesy) operated by the National Forest Centre (NLC)
- ČMS for contaminants in food and animal feed (ČMS Cudzorodé látky v potravinách a krmivách) operated by the Food Research Institute (VÚP)

Financing for environmental monitoring in Slovakia is drawn from the state budget, the budgetary chapters of the interested departments of government, European Union funds and other non-budgetary sources.

2. Organisations falling under the Ministry of Agriculture of the Slovak Republic

2.1. The main stakeholders in the implementation of the Convention on Biological Diversity falling under the Ministry of Agriculture:

Regional and local forest offices
Lesy SR š.p. (forest management)
The National Forest Centre
Lesy TANAP, Tatranská Lomnica
Plant Production Research Institute
Animal Production Research Centre
Grassland and Mountain Agriculture Research Institute
Soil Science and Conservation Research Institute
State Veterinary and Food Institute
Plemenárske služby Slovenskej republiky, š.p. (breeding services)
Food Research Institute
Central Agricultural Control and Testing Institute
Rural Development Agency
Slovak Academy of Agricultural Sciences

2.2. National documents, strategies and action plans related to implementation of the Convention within the competence of the Ministry of Agriculture

2.2.1. National Forest Programme of the Slovak Republic (NFPSR)

The National Forest Programme of the Slovak Republic was approved by the Slovak Government in 2007 (Resolution of the Government No. 549/2007). The National Council of the Slovak Republic discussed and took note of the Forest Programme the same year. In 2008, the National Forest Programme of the Slovak Republic was further developed in the form of an indicative action plan for the 2009 – 2011 period. In The course of elaboration of this NFPSR, the following forest policy documents at national and international levels have been taken into account. EU Forest Strategy, EU Forest Action Plan,, Agriculture Development Policy for 2007 – 2013 – Part Forestry, as well as other international commitments of Slovakia (MCPFE resolutions), forest-related global processes (UNFF) and international conventions among them Convention on Biological Diversity (CBD).

Sustainable forest management is the basic principle of the NFPSR. It assumes development of an economic system on satisfying the societal requirements for nature-protective and other ecological and social functions of forests functions of forests and forestry services.

As regards the structure, the National Forest Programme of the Slovak Republic consists of strategic objectives and priorities, of which the following relate to the protection and sustainable use of biodiversity:

Strategic Objective 1: Support of ecological forest management

Priority 1: To support nature friendly forest management

- the objective of nature-friendly management is creation of a functionally integrated, ecologically stable and economically profitable forest economic system

Priority 2: To support the development and use of environmentally friendly technologies

- compliance of ecological principles so that forest stands are not damaged

Priority 3: To support conservation, improvement and enhancement of biodiversity

- conservation, protection and reasonable enhancement of biological diversity in forests are a basis of sustainable forest management accelerated action at Community and Member State level is required to restore habitats and natural ecosystems. Protection of biodiversity is ensured primarily in the forests with prevailing ecological and social functions, i.e. in the protection forests, special-purpose forests and in protected territories. It is necessary to maintain biological sources of forests, their genetic and ecosystem diversity, to maintain all components of forest ecosystems in proportion contributing to conservation, protection and enhancement of biodiversity.

Financial resources to fulfil the objectives and priorities of the National Forest Programme are expected to be provided from the national budget of the Slovak Republic and from the European Union resources. The basis for financial security of the National Forest Programme is provided from the financial framework established by the Council Regulation (EC) No. 1698/2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and the co-financing of the measures of the Rural Development Programme from the national budget of the Slovak Republic.

2.2.2. National Strategic Plan of Rural Development of the Slovak Republic for the 2007 – 2013 programming period

The National Strategic Plan of Rural Development of the Slovak Republic has been worked out in accordance with the Council Regulation (EC) No. 1698/2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD). It introduces the EAFRD priorities and the national priorities, taking into consideration the EC strategic guidelines for the 2007 – 2013 programming period in relation to the Lisbon and Gothenburg strategies.

The strategic and legislative frameworks of the National Strategic Plan of Rural Development are defined in particular by the National Sustainable Development Strategy approved by the Slovak Government Resolution No. 978/2001, by the Action Plan of Sustainable Development for the 2005 – 2010 period approved by the Slovak Government Resolution 574/2005 and especially by the National Strategy of Biodiversity Conservation in Slovakia and the Updated Action Plan for Implementation of the National Strategy of Biodiversity Conservation in Slovakia for the 2003 – 2010 period.

The National Strategic Plan of Rural Development lays down a global objective – to achieve a multi-functional agriculture, food processing, forestry and sustainable rural development, defining the area from the point of view of specified priorities. The attention is focused on the following activities:

- a. Improving the quality of the environment and of the landscape through introduction of proper agricultural and forest management techniques
- b. Increasing the competitiveness of the agri-food and forestry sectors through increasing effectiveness and quality of production, while maintaining the sustainable development principles and principles of ecological rural management
- c. Improving the quality of life in rural areas and diversification of rural management with creation of new job opportunities, education and revival and development of municipalities, contributing so to reduction of regional disparities in Slovakia

The following axes, priorities and objectives in the National Strategic Plan of Rural Development are important from the point of view of conservation and sustainable use of biodiversity:

Axis 1: Increasing the competitiveness of agriculture and forest management sectors

Objective: To increase the competitiveness of agri-food and forestry sectors

Priority: Support of modernisation, innovation and effectiveness in agri-food and forestry sectors

Axis 2: Improving the quality of the environment and of the landscape

Objective of axis 1: To create multi-functional agricultural and forestry systems with favourable impacts on the environment, nature and landscape scenery

Priority 1: Preserving the biodiversity in rural areas and preserving agricultural and forest management systems with high added value

Objective of priority 1: Introduction of proper agricultural and forest management techniques for preservation of biodiversity and rural landscape

Halting the reduction of valuable biotopes of wild fauna and flora, especially on NATURA 2000 territories, is an important part of priority 1. The attention is focused on ecological agriculture as it favourably affects the components of the environment and landscape diversity and maintains agriculture in mountain areas and other disadvantaged regions, preserving so the original landscape specificities and traditional farming management in the Slovak rural areas.

The objectives and priorities of the National Strategic Plan of Rural Development are financially secured both from the national budget and EAFRD resources in accordance with Article 70 of the Council Regulation (EC) No. 1698/2005 and Annex 1 to this Regulation, in relation to the Financial Perspective 2007 - 2013.

2.2.3. National Programme for Protection of Genetic Resources of Plants for Alimentation and Agriculture for 2005 - 2009

The National Programme for Protection of Genetic Resources of Plants is being implemented in accordance with the Act 215/2001 on protection of genetic resources of plants for alimentation and agriculture and according to the implementing Regulation of the Ministry

of Agriculture 283/2006 implementing the Act on protection of genetic resources of plants for alimentation and agriculture.

The tasks and activities of this Programme, which are being implemented, take into account and respect the tasks and objectives resulted from national and international documents which are binding for Slovakia.

The strategic and fundamental objectives of the National Programme for Protection of Genetic Resources of Plants are determined by the National Strategy of Biodiversity Conservation in Slovakia and are focused in particular on protection of domestic gene pool. A special attention is paid to protection of the threatened gene pool.

The Programme is implemented and approved by the Ministry of Agriculture of the Slovak Republic and the Programme's tasks are implemented by professional organisations. In accordance with the Act a complex system for protection of genetic resources of plants in Slovakia is being created and requirements to found professional workplaces of archives are laid down. It defines relationships within international cooperation, position of the gene bank and an information system of plant genetic resources.

Implementation of a number of activities specified by the National Programme for Protection of Genetic Resources of Plants is determined also by the National Strategy of Biodiversity Conservation and by the Updated Action Plan for Implementation of the National Strategy of Biodiversity Conservation in Slovakia for the 2003 – 2010 period. Of 24 strategic objectives of the Updated Action Plan there are 9 objectives directly related to genetic resources and these objectives are reflected in the National Programme for Protection of Genetic Resources of Plants:

Objective 1: Identification of biological diversity components at the level of utility plant species or cultural plant species

Objective 2: Controlling the processes adversely affecting biological diversity

Objective 3: Strengthening the biodiversity protection in-situ

Objective 4: Strengthening the protection of genetic diversity

Objective 5: Strengthening the national capacities for ex-situ protection

Objective 18: Support of research focused on protection and sustainable use of agri-diversity

Objective 20: Support of all forms of education and awareness raising as regards the importance of protection and sustainable use of biodiversity components

Objective 22: Establishing a nation-wide clearing-house mechanism for biodiversity

Objective 24: Cooperation in implementation of the Convention and of the Agreement at global, regional (European) and national levels

The tasks of the National Programme are planned pursuant to the Act for five-year period with contracting in each year. The tasks will be updated regularly in five-year intervals with approval by the Ministry of Agriculture of the Slovak Republic.

Financial resources for the protection of genetic resources and for activities of the Gene Bank are provided by the Ministry of Agriculture of the Slovak Republic (for contributory organisations working within the agriculture sector) or these activities are funded from other sources (other organisations out of this sector).

3. Sector of the Ministry of Economy of the Slovak Republic

3.1. Major stakeholders in implementation of the Convention falling under the Ministry of Economy

Slovak Tourism Agency (SACR)

Slovak Agency for Investment and Trade Development (SARIO)

Slovak Innovation and Energy Agency (SIEA)

3.2. National documents, strategies and action plans related to implementation of the Convention on Biological Diversity within the competence of the Ministry of Economy

3.2.1. National Sustainable Development Strategy of the Slovak Republic (NSSD)

The National Sustainable Development Strategy of the Slovak Republic was approved by the Slovak Government in 2001 (Resolution of the Government 978/2001). The National Council of the Slovak Republic approved the strategy by its Resolution 1989/2002 in 2002.

The Resolution of the Government, adopting the National Sustainable Development Strategy, includes concrete tasks for particular sectoral Ministries to work out targets, priorities and objectives of the Strategy in sectoral policies, strategies and programmes in the 2002 – 2005 period. In 2005, an Action Plan of Sustainable Development for the 2005 – 2010 period was worked out and approved by the Government Resolution 574/2005. The Action Plan is determined by the National Sustainable Development Strategy but takes into consideration other strategic documents, e.g. the Lisbon Strategy, EU Sustainable Development Strategy, National Development Plan of the Slovak Republic, UN Johannesburg Declaration and others.

The Action Plan of Sustainable Development for 2005 – 2010 includes 14 priority areas. Of them, the following priority areas, sub-areas and objectives are important from the point of view of protection and sustainable use of biodiversity:

Priority area 1: Implementation of principles and objectives of sustainable development in long-term economic and social strategies in Slovakia

Objective of priority 1: Incorporation of basic principles and objectives of sustainable development in long-term strategic documents (including sustainable development objectives in agriculture) with a focus on evaluation of long-term effects of these documents.

Sub-area 1.1: To build a functional integrated sustainable forest management, assuring ecological landscape stability and strengthening the economic and social regional and rural development

Sub-area 1.2.: Harmonising the EU post-accession phase with the requirements for environmentally sound development

Priority area 10: Protection and rational use of nature and landscape

Objective of priority 10: Assuring the protection and rational use of nature and landscape as one of the fundamental objectives of sustainable development in long-term strategic documents of the Ministries of the Environment, Agriculture and Economy

Sub-area 10.2.: Elaborating programmes for management of national parks, protected landscape areas, protected bird areas and sites of European importance (NATURA 200)

Sub-area 10.3.: Protection and rational use of soil in landscape

Priority area 13: Creation and evaluation of a database of basic indicators of sustainable development and monitoring of transition of the Slovak economy to sustainable development

Objective of priority 13: Development of a reliable set of indicators to evaluate sustainable development, including evaluation of transition of the economy to sustainable development

Financial resources to implement the tasks of the Action Plan are expected to be provided from the national budget, budget lines of the sectoral ministries concerned, EU resources and other extra-budgetary sources.

3.2.2. State Tourism Policy of the Slovak Republic (ŠPCR)

The State Tourism Policy has been developed in accordance with the Programme Declaration of the Slovak Government for the 2006 – 2010 period and in relation to the New

Strategy of Tourism Development till 2013 which was adopted by the Slovak Government in May 2007.

The basic framework for meeting the objectives of tourism policy in Slovakia is defined by the principles, instruments and responsible stakeholders of which the following ones relate to the protection and sustainable use of biodiversity:

Principle 1: Tourism is an instrument for increasing the competitiveness, structural changes of economy and sustainable development with an objective to increase the share of incomes from the active tourism in GDP from the current 2.7 % to 4 % in 2013 and to increase the number of nights spent

Instrument: Support of sustainable development of tourism and support of environmentally friendly forms of tourism

Responsible stakeholders: Ministry of Economy, Ministry of Agriculture, Ministry of the Environment, regional self-governments, municipalities

Principle 3: Tourism is a tool of regional development and business development

Instrument: Accelerating the zoning of protected sites with the aim to achieve a permanent harmony between tourism and nature protection and to create transparent conditions for tourism development in protected sites

Responsible stakeholders: Ministry of the Environment in cooperation with the Ministry of Economy and the Ministry of Agriculture

The tourism development has been subsidised by the state after 1989 only to minimal extent. The major part of development plans has been financially secured from the European structural funds or from private resources. It is obvious that resources invested in the tourism bring profit and that is why the funding is currently provided directly from the national budget or from funds, where the state is involved financially. Co-funding is planned by the state administration, regional and local self-governments and entrepreneurs.

4. The sector of the Ministry of Education of the Slovak Republic

4.1. Major stakeholders in implementation of the Convention falling under the Ministry of Education

Slovak Academy of Sciences (Institute for Botany, Forest Ecology Institute, Zoology Institute, Landscape Ecology Institute, Institute for Genetics and Biotechnology, Institute for Parasitology, Arboretum Mlyňany, Institute for Virology)

Universities (Comenius University Bratislava, Botanical Garden of the Comenius University in Bratislava, Technical University in Zvolen, Arboretum Borová Hora of the Technical University Zvolen, Pavol Jozef Šafárik University in Košice, Botanical Garden of the Pavol Jozef Šafárik University in Košice, Slovak Agriculture University in Nitra, Institute for Biodiversity and Biological Safety at the Slovak Agriculture University in Nitra, Constantine the Philosopher University in Nitra)

Sectoral professional organisations (Ministry of the Environment – State Nature Protection Agency, Ministry of Agriculture – Research Institute for Grass Vegetation and Mountain Agriculture in Banská Bystrica, Animal Production Research Centre in Nitra)

Non-governmental organisations (Landscape 21, Biosféra)

4.2. National documents, strategies and action plans related to implementation of the Convention within the competence of the Ministry of Education

4.2.1. Slovak Platform for Biodiversity (Bioplatform)

The Slovak Platform for Biodiversity constitutes a network of scientists and policy makers who are active in various areas related to biodiversity, supporting the European Platform for Biodiversity Research Strategy - EPBRS) and working to halt the loss of biodiversity and implement the National Strategy of Biodiversity Conservation. Membership of the Platform includes 16 organisations from the Slovak Academy of Sciences, universities, sectoral professional and research institutes and non-governmental organisations.

Specific objectives of Bioplatform include:

- To provide assistance to the EPBRS in accelerating activities and increasing importance of the European research of biodiversity and monitoring through records and through the network of scientists and policy makers from 32 countries which contribute to the 5th EU
- To carry out a gap analysis of the European research of biodiversity, identify areas requiring special attention
- To arrange documents of the EPBRS (e.g. databases, lists, catalogues, recommendations) on the Bioplatform web page and make them available for the scientists, other involved persons and the public

Priorities of the Bioplatform are:

- To know and alleviate interactions between biodiversity and climate changes
- To increase taxonomic capacities in long-term research and to considerably increase the effort for a comprehensive inventory of important taxonomic groups
- To identify and mitigate degradation and loss habitats and species
- To quantify the gene diversity of species of economic and nature protection importance
- To specify and monitor the quality of habitats, including minimal territories for survival, appropriate protection status and an effective system

5. Sector of the Ministry of Health of the Slovak Republic

5.1. Major stakeholders in implementation of the Convention falling under the Ministry of Health

Public Health Office of the Slovak Republic

Health Information Office of the Ministry of Health of the Slovak Republic MZ SR

5.2. National documents, strategies and action plans related to implementation of the Convention within the competence the Ministry of Health

5.2.1. National Environmental Health Action Plan of the Slovak Republic III (NEHAP III) for the 2006 – 2010 period

The National Environmental Health Action Plan of the Slovak Republic III (NEHAP III) for the 2006 – 2010 period (NEHAP III) was elaborated based on the Government Resolutions 978/2001 (October 2001) and 1224/2004 (December 2004). The NEHAP III was adopted by the Government Resolution 10/2006 in January 2006.

The NEHAP III has been worked out based on the revision of the NEHAP II approved by the Government Resolution 815/2000 and in the light of the conclusions of the Fourth Ministerial Conference on environmental health held in Budapest in 2004.

The NEHAP III is an important instrument to strengthen the process leading to improvement of environmental health and enforcement of sustainable development principles through activities focused on improvement of public health.

The NEHAP III consists of a set of actions and activities in the area of environmental health which should lead to meeting the basic objective, i.e. to minimise environmental health

risks so that the environment does not damage or threaten the public health, including the health of children.

The NEHAP III defines priority areas and regional priority areas and activities. Some of them integrate also the issues of protection and sustainable use of biodiversity. From the biodiversity point of view there are following priority and regional areas and activities:

Priority area 1: National Action Plan for Environmental Health of Children – 4 regional priority objectives

Regional priority objective II

Activity 10: To minimise adverse impacts related to construction of transport infrastructure on the environment and human health

Activity 11: To implement the Plan of Reconstruction and Building of Educational Routes and Educational Sites by 2010

Regional priority objective III

Activity 20: To establish a National Strategy for Invasive Species and an Action Plan and to remove the invasive species affecting human health from protected sites

Regional priority objective IV

Activity 26: To continue in monitoring xenobiotic substances in food and feedstuff

Activity 27: To ensure the monitoring of dioxin levels in food and feedstuff

Priority area 2 Human biomonitoring

Activity 31: Survey of major sources of environmental pollution (Classification of the territory according to burdening level), identification of health risks from the polluted environment, especially in industrial areas burdened according to the environmental regionalisation of the burdened territories in Slovakia

Activity 33: To build an information system on environmental burdens

Priority area 3: Environmental health information system

Activity 36: Building an information system consisting of environmental health indicators and its implementation on the national level in accordance with international cooperation in the framework of ENHIS

Activity 37: Collection of data on monitored indicators reflecting the current problems on the national level, availability of data for monitoring, compatibility and more detailed analysis. To build an information system on environmental burdens.

Activity 38: Elaborating comprehensive reports assessing indicators in accordance with the recommendations of WHO in Slovakia

The NEHAP III activities will be financially secured from the national budget, budget chapters of the sectors concerned, EU resources and other extra-budgetary resources.

6. Sector of the Ministry of Culture of the Slovak Republic

6.1. Major stakeholders in implementation of the Convention falling under the Ministry of Culture

Slovak National Museum Bratislava

Monument Office of the Slovak Republic

6.2. National documents, strategies and action plans related to implementation of the Convention within the competence of the Ministry of Culture

6.2.1. Convention Concerning the Protection of World Cultural and Natural Heritage – implementation in Slovakia

The Convention Concerning the Protection of World Cultural and Natural Heritage entered into force for Slovakia in February 1991 (in the former Czechoslovakia – Notification of the Federal Ministry of Foreign Affairs 159/1991), three months after deposition of the instrument on adoption of the Convention by Czechoslovakia in November 1990 at the Depository, the UNESCO Secretary-General. By the split of Czechoslovakia the Convention was implemented by the Czechoslovak Coordination Committee for the protection of world cultural and natural heritage and in 1993 a Slovak Committee for the protection of world cultural and natural heritage was established for this purposes. At present, six Slovak objects are included in the list of world cultural and natural heritage (Banská Štiavnica and surrounding technical monuments, Spiš Castle and surrounding monuments, Cultural Architecture Reserve Vlkolínec, Historic centre of the town of Bardejov and the Jewish suburb, the caves of the Slovak Karst and Aggtelek Karst, Carpathian primeval forests).

The management of cultural heritage monuments is within the responsibility of the Monument Office of the Slovak Republic and the management of natural heritage monuments is assured by the Ministry of the Environment and Ministry of Agriculture and their agencies (State Nature Protection Agency and the state enterprise Forests of the Slovak Republic).

6.2.2. Slovak National Museum (SNM) – sharing in the implementation of the tasks of the Updated Action Plan for Implementation of the National Strategy of Biodiversity Conservation in Slovakia

The Slovak National Museum, working under responsibility of the Ministry of Culture of the Slovak Republic, plays a crucial role in nature protection and sustainable use of biodiversity and in fulfilling the tasks of the Action Plan for Implementation of the National Strategy of Biodiversity Conservation through meeting the strategic objective 19, strategic orientation 1:

Strategic objective 19: Support of creation of human and institutional capacities for conservation and sustainable use of biodiversity

Strategic orientation 1: To strengthen the current capacity of institutions involved in management, research and monitoring of biodiversity, especially those institutions working in the conditions in-situ

The SNM takes part in implementing the outputs from the monitoring of selected components of biodiversity with a focus on development of collections of the SNM, use of field monitoring and material for building a permanent representative exposition presenting the biodiversity accompanied by other forms of work (exhibitions, presentation programmes, competitions, etc.)

The SNM has also taken part in building an electronic documentation of nature development as a tool to alleviate the access to information on the SNM's collections. The museum cooperates with other institutions (Institute for Botany, Fauna Database of Slovakia) to link the database of biological collections with other projects of national or European importance.

Chapter 4 – Conclusions: Progress towards the 2010 Target and Implementation of the Strategic Plan

This chapter deals with an analysis how activities on national level in Slovakia contribute to the fulfilment of the objectives adopted by the Conference of the Parties in 2010

and to the fulfilment of the objectives defined by the Strategic Plan for the Protection of Biological Diversity.

The analysis is focused on the monitoring of adopted national strategic objectives, strategic orientations and concrete tasks of the National Strategy of Biodiversity Conservation in Slovakia and in the Updated Action Plan for Implementation of the National Strategy of Biodiversity Conservation in Slovakia and other relevant sectoral and non-sectoral strategies and action plans, in relation to the global objectives mentioned in the two documents.

The analysis is based on the results introduced in the previous chapters of the Fourth National Report and provides information on:

- a. Specified national objectives or adopted global objectives
- b. Incorporation of objectives into relevant sectoral or cross-sectoral strategies, plans and programmes
- c. Contribution of national strategies, plans and programmes to 2010 global objectives
- d. Indicators used to assess the development
- e. Obstacles in the analysis process

To provide a better Picture of the analysis outputs the following summarising tables 17 and 18 are presented:

Table 17: Survey of global and national objectives and indicators in relation to objectives of the year 2010

Global goals and targets	National goals and targets (Action Plan of the Biodiversity Strategy) See chapter 2	Relevant indicators (Government Resolution 837/2008) See Annex IV	Assessment of development 1998 - 2008	Remarks
Protect the components of biodiversity				
Goal 1: Promote the conservation of the biological diversity of ecosystems, habitats and biomes				
Target 1.1: At least 10% of each of the world's ecological regions effectively conserved Target 1.2: Areas of particular importance to biodiversity protected	Goal 3: Strengthen in-situ conservation of biodiversity Target: 1, 3, 4, 5 Goal 15: Encourage cooperation between all stakeholders to prevent duplication of activities and to provide for more effective conservation of biodiversity and sustainable use of biological resources Target: 1, 4, 6	A 1.1 Status and changes in size and/or distribution of se group of species A 1.1.4. Survey of protected sites of Slovakia	Improvement of status	There are 23 large-area protected sites in Slovakia (national parks, protected landscape areas) and 1010 small-area protected sites (national natural reserve, national reserve, natural monument, national natural monument, protected sites, and protected cultural monument). Total area of protected sites, including protective zones, is 1,219,952.43 hectares, which is 24.88 % of the Slovak territory, of which protected sites cover 944,527.00 hectares and protective zones 275,425.43 hectares. Moreover, there are NATURA 2000 territories in Slovakia (sites of European importance and

				protected bird sites). The sites of European importance (382) cover 573,690 hectares which is 11.7 % of the Slovak territory and their overlapping with the national network is 86.00 %. Protected bird sites (38) cover 1,236,545 hectares, which is 25.2 % of the Slovak territory and their overlapping with the national network is 55.15 %. Total area of NATURA 2000 sites is 29.00 % of the Slovak territory.
Goal 2: Promote the conservation of species diversity				
Target 2.1: Restore, maintain, or reduce the decline of populations of species of selected taxonomic groups Target 2.2: Status of threatened species improved	Goal 1: Identify the status of biological diversity components Target: 2, 3,4, 5, 6 Goal 2: Manage threatening processes Target: 6, 8, Goal 3: Strengthen in-situ conservation of biodiversity Target: 4, 6, 7,8, 12 Goal 5: Strengthen ex-situ protection capabilities on national level Target: 1, 2, 3, Goal 6: Building a comprehensive system for the monitoring of changes in biodiversity on all levels Target: 1, 2, 3, 4 Goal 9: Complement biodiversity conservation by introducing sustainable hunting and fishing management practices Target: 4 Goal 22: Establish a biodiversity relevant national clearing-house mechanism	A 1.1 Status and changes in size and/or distribution of selected group of species A 1.1.1. Status and trends in development of abundance of selected species of vascular plants, hornworts, lichens and alga A 1.1.2. Status and trends in development of abundance of selected species of reptiles, amphibians and invertebrates A 1.1.3. Status and trends in development of abundance of selected species of mammals, birds and fish A 1.1.5. Keeping records on appearance of critically endangered, endangered and rare animal species A 1.1.6. Keeping records on appearance of rare and endangered plant species A 1.2. Endangered	Improvement of status	More than 12,618 plant species and more than 28,800 animal species and more than 1,000 protozoans have been described so far in Slovakia. Of the total number 3,352 higher plants, there are 1,135 species included in the Red List of Slovakia. Of the total number of 422 wild vertebrates there are 267 included in the Red List of Slovakia.

	Target: 4, 5, 6	<p>species</p> <p>A 1.2.1. Red list of plants</p> <p>A 1.2.2. Red list of animals</p> <p>A 1.3. Species of European importance</p> <p>A 1.3.1. Status and trends in development of abundance of selected species of plants of European importance</p> <p>A 1.3.2. Status and trends in development of abundance of species of animals of European importance</p> <p>A 2.1. Water and wetland ecosystems</p> <p>A 2.1.1. Changes in abundance of selected plant species connected to water and wetland biotopes</p> <p>A 2.1.2. Number of plant species connected to water and wetland biotopes and included in the red lists</p> <p>A 2.2. Grass and xerotherm ecosystems</p> <p>A 2.2.1. Changes in abundance of selected plant species connected to grass and xerotherm biotopes</p> <p>A 2.1.2. Number of plant species connected to grass and xerotherm biotopes and included in the red lists</p>		
Goal 3: Promote the conservation of genetic diversity				
Target 3.1: Genetic diversity of crops, livestock, and of harvested species of trees, fish and	Goal 2: Manage threatening processes Target: 4 Goal 4: Strengthen	A 2.5. Agricultural ecosystems A 2.5.4. Abundance of farm animals A 2.5.13. Genetic	Improvement of status	- National Programme for Protection of Genetic Resources of Plants for Food and Agriculture for 2005 – 2009

wildlife and other valuable species conserved, and associated indigenous and local knowledge maintained	conservation of genetic diversity Target: 1, 2, 4 Goal 5: Strengthen ex-situ protection capabilities on national level Target: 1, 2, 3, 5, 6, 7 Goal 18: Encourage research aimed at the conservation and sustainable use of biodiversity Target: 2, 3, 4, 5, 9 Goal 20: Promote all forms of education and awareness on the conservation of biodiversity and sustainable use of its components Target: 3, 4, 5, 7 Goal 24: Co-operation in implementing the Convention both at the regional and international levels Target: 1, 4, 5	diversity of farm animals A 2.5.14. Size of areas where agri-environmental techniques are applied		- National Forestry Programme (2007) - National Strategic Plan of Rural Development for the 2007 – 2013 programming period - Programme Village Renewal – update for 2008 - 2013
---	--	--	--	---

Promote sustainable use

Goal 4: Promote sustainable use and consumption

Target 4.1: Biodiversity- based products derived from sources that are sustainably managed, and Production areas managed consistent with the conservation of biodiversity Target 4.2: Unsustainable consumption, of biological resources, or that impacts upon biodiversity, reduced	Goal 4: Strengthen conservation of genetic diversity Target: 1, 2, 4 Goal 5: Strengthen ex-situ protection capabilities on national level Target: 1, 2, 3, 5, 6, 7 Goal 8: Gradually replace inappropriate agricultural practices with ecologically sustainable agricultural and pastoral management Target: 4, 5 Goal 20: Promote all forms of education and awareness on the conservation of biodiversity and sustainable use of its components Target:	A 2.5. Agricultural ecosystems A 2.5.14. Size of areas where agri-environmental techniques are applied	Minor changes	- National Programme for Protection of Genetic Resources of Plants for Food and Agriculture for 2005 – 2009 - National Forestry Programme (2007) - National Strategic Plan of Rural Development for the 2007 – 2013 programming period - Programme Village Renewal – update for 2008 - 2013
---	--	---	---------------	--

	3, 4, 7 Goal 24: Co-operation in implementing the Convention both at the regional and international levels Target: 1, 5			
Address threats to biodiversity				
Goal 5: Pressures from habitat loss, land use change and degradation, and unsustainable water use, reduced				
Target 5.1: Rate of loss and degradation of natural habitats decreased	Goal 1: Identify the status of biological diversity components Target: 2, 3,4, 5, 6 Goal 2: Manage threatening processes Target: 1, 2, 6, 8, Goal 3: Strengthen in-situ conservation of biodiversity Smer: 4, 5, 6 Goal 7: Ensure ecologically sustainable forestry Target: 2, 5, 6 Goal 17: Incorporate strong biodiversity considerations into land-use planning Target: 3, 5 Goal 20: Promote all forms of education and awareness on the conservation of biodiversity and sustainable use of its components Target: 3, 4	A 2.1. Water and wetland ecosystems A 2.1.1. Changes in abundance of selected plant species connected to water and wetland biotopes A 2.1.2. Number of plant species connected to water and wetland biotopes and included in the red lists A 2.2. Grass and xerotherm ecosystems A 2.2.1. Changes in abundance of selected plant species connected to grass and xerotherm biotopes A 2.1.2. Number of plant species connected to grass and xerotherm biotopes and included in the red lists B 1.1.Transport infrastructure B 1.1.1. Landscape fragmentation caused by transport infrastructure B 2.2. Water quality B 2.2.15. Water system fragmentation	Minor changes	
Goal 6: Control threats from invasive alien species				
Target 6.1: Pathways for major potential alien invasive species controlled Target 6.2:	Goal 2: Manage threatening processes Target: 3 Goal 3: Strengthen in-situ conservation	A 1.4. Allochtonous and invasive plant species A 1.4.1. Number of allochtonous species of organisms	Is improving	- Elaborated list of known invasive plant species in Slovakia includes 616 taxons, out of that 529 neophytes, 19 archaeophytes, 29

Management plans in place for major alien species that threaten ecosystems, habitats or species	of biodiversity Target: 4 Goal 6: Building a comprehensive system for the monitoring of changes in biodiversity on all levels Target: 1, 4	A 1.4.2. Distribution of known invasive species – deterioration of situation		original and 39 unclassified invasive plant species
Goal 7: Address challenges to biodiversity from climate change, and pollution				
Target 7.1: Maintain and enhance resilience of the components of biodiversity to adapt to climate Target 7.2: Reduce pollution and its impacts on biodiversity	Goal 2: Manage threatening processes Target: 1, 2 Goal 3: Strengthen in-situ conservation of biodiversity Target: 4, 5, 6 Goal 6: Building a comprehensive system for the monitoring of changes in biodiversity on all levels Target: 3, 4	B 2.1. Soil quality B 2.1.1. Soil reaction B 2.1.2. Soil contamination B 2.2. Water quality B 2.2.1. – B 2.2.15 B 2.3. Air quality B 2.3.1. – B 2.2.13 B 3.1. Trend in global average air temperature B 3.2. Consequences of climate changes for biota B 3.3 Consequence of climate change for hydrological conditions	Is deteriorating	- Policy to update and rationalise the environmental monitoring (NEHAP III)
Maintain goods and services from biodiversity to support human well-being				
Goal 8: Maintain capacity of ecosystems to deliver goods and services and support livelihoods				
Target 8.1: Capacity of ecosystems to deliver goods and services maintained Target 8.2: Biological resources that support sustainable livelihoods, local food security and health care, especially of poor people maintained	Goal 4: Strengthen conservation of genetic diversity Target: 1, 2, 4 Goal 5: Strengthen ex-situ protection capabilities on national level Target: 1, 5 Goal 8: Gradually replace inappropriate agricultural practices with ecologically sustainable agricultural and pastoral management Target: 4, 5 Goal 12: Increase safety in biotechnologies and promote Access to biotechnologies and/or benefits resulting from them	A 2.5. Agricultural ecosystems A 2.5.1. Arable land per capita A 2.5.2. Changes in land structure A 2.5.4. Abundance of farm animals A 2.5.13. Genetic diversity of farm animals A 2.5.14. Size of areas where agri-environmental techniques are applied C 1.1. Economic indicators C 1.1.1. Total expenditures for the environment from the national budget, including EU resources C 1.2. International cooperation	Is deteriorating	- In the 1998 – 2007 period, Slovakia lost 15,000 hectares of agricultural soil, of which the major loss is due to industrial production, infrastructure and housing. On the other hand, there is however growth of forest lands by ca 9,000 hectares.

	Target: 1, 2, 3, 4, 5 Goal 20: Promote all forms of education and awareness on the conservation of biodiversity and sustainable use of its components Target: 4 Goal 24: Co-operation in implementing the Convention both at the regional and interantional levels Target: 1, 2, 4, 5	C 1.2.2. Bilateral assistance and cooperation in environmental protection C 1.2.3. Multilateral assistance		
Protect traditional knowledge, innovations and practices				
Goal 9: Maintain socio-cultural diversity of indigenous and local communities				
Target 9.1: Protect traditional knowledge, innovations and practices Target 9.2: Protect the rights of indigenous and local communities over their traditional knowledgw, innovations and practices, including their rights to benefit-sharing	Goal 4: Strengthen conservation of genetic diversity Target: 1, 2, 4 Goal 5: Strengthen ex-situ protection capabilities on national level Target: 1, 2, 5, 6 Goal 7: Ensure ecologically sustainable forestry Target: 2, 5, 6 Goal 8: Gradually replace inappropriate agricultural practices with ecologically sustainable agricultural and pastoral management Target: 4, 5 Goal 17: Incorporate strong biodiversity considerations into land-use planning Target: 3, 5 Goal 18: Encourage research aimed at the conservation and sustainable use of biodiversity Target: 2, 3, 4, 5, 9 Goal 20: Promote all forms of education and awareness on the conservation of biodiversity and sustainable use of its components Target: 3, 4, 5, 6, 7	A 2.5. Agricultural ecosystems A 2.5.1. Arable land per capita A 2.5.2. Changes in land structure A 2.5.13. Genetic diversity of farm animals A 2.5.14. Size of areas where agri-environmental techniques are applied B 1.2. Settlement B 1.2.1. Settlement density by regions B 1.2.2 Share of urban and rural population	Improvement of status	- National Programme for Protection of Genetic Resources of Plants for Food and Agriculture for 2005 – 2009 - National Forestry Programme (2007) - National Strategic Plan of Rural Development for the 2007 – 2013 programming period - Programme Village Renewal – update for 2008 - 2013

Ensure the fair and equitable sharing of benefits arising out of the use of genetic resources				
Goal 10: Ensure the fair and equitable sharing of benefits arising out of the use of genetic resources				
Target 10.1: All Access to genetic resources is in line with the Convention on Biological Diversity and its relevant provisions Target 10.2: Benefits arising from the commercial and other utilization of genetic resources shared in a fair and equitable way with the countries providing such resources in line with the Convention on Biological Diversity and its relevant provisions	Goal 4: Strengthen conservation of genetic diversity Target: 1, 2, 4 Goal 5: Strengthen ex-situ protection capabilities on national level Target: 1, 2, 5, 6 Goal 7: Ensure ecologically sustainable forestry Target: 2, 5, 6 Goal 8: Gradually replace inappropriate agricultural practices with ecologically sustainable agricultural and pastoral management Target: 4, 5 Goal 18: Encourage research aimed at the conservation and sustainable use of biodiversity Target: 2, 3, 4, 5, 9 Goal 20: Promote all forms of education and awareness on the conservation of biodiversity and sustainable use of its components Target: 3, 4, 5, 6, 7	C 1.1. Economic indicators C 1.1.1. Total expenditures for the environment from the national budget, including EU resources C 1.1.2. Share of expenditure of the Ministry of the Environment in total expenditure for the environment C 1.1.3. Financial resources provided from the Environmental Fund C 1.2.4. Incomes from the Environmental Fund C 1.2. International cooperation C 1.2.2. Bilateral assistance and cooperation in environmental protection C 1.2.3. Multilateral assistance	Insufficient data	
Ensure provision of adequate resources				
Goal 11: Parties have improved financial, human, scientific, technical and technological capacity to implement the Convention				
Target 11.1: New and additional financial resources are transferred to developing country Parties, to allow for the effective implementation of their commitments under the Convention, in accordance with Article 20 Target 11.2: Technology is transferred to developing country Parties, to allow for	Goal 24: Co-operation in implementing the Convention both at the regional and international levels Target: 1, 2, 4, 5	C 1.2. International cooperation C 1.2.1 International conventions in environmental management and protection C 1.2.2. Bilateral assistance and cooperation in environmental protection C 1.2.3. Multilateral assistance	Minor changes	

the effective implementation of their commitments under the Convention, in accordance with its Article 20, paragraph 4				
--	--	--	--	--

Table 18: Survey of plans and objectives of the Convention Strategic Plan and their implementation in Slovakia

Strategic goals and targets	
Goal 1: The convention is fulfilling its leadership role in international biodiversity issues	
1.1 The Convention is setting the global biodiversity agenda	Slovakia acceded to the Convention in 2004 as its 79th Party and fulfils all commitments at international level which relate to protection and sustainable development of biodiversity
1.2 The Convention is promoting cooperation between all relevant international instruments and processes to enhance policy coherence	
1.3 Other international processes are actively supporting implementation of the Convention, in a manner consistent with their respective frameworks	
1.4 The Cartagena Protocol on Biosafety is widely implemented	Slovakia ratified the Protocol in 2003. Its text was one of bases for preparation and approval of the Act on GMO in 2002. Binding nature of the Protocol for the EU member states is given by the EC Regulation 1946/2003/EC
1.5 Biodiversity concerns are being integrated into relevant sectoral or cross-sectoral plans, programmes and policies at the regional and global levels	Slovakia transferred new commitments in this area by accession to the EU in 2004 and contributes to preparation of various EU programmes and plans (SEBI 2010, NATURA 2000)
1.6 Parties are collaborating at the regional and subregional levels to implement the Convention	
Goal 2: Parties have improved financial, human, scientific, technical and technological capacity to implementation the Convention	
2.1 All Parties have adequate capacity for implementation of priority actions in national biodiversity strategies and action plans	Slovakia worked out the National Strategy of Biodiversity Conservation in Slovakia in 1997 and the Updated Action Plan for implementation of the strategy in 1998. From the point of view of capacities for implementation of required actions Slovakia has sufficient technical and scientific capacities involved in international biodiversity programmes. However, lack of financial resources is a serious problem due to definition of other different state priorities in economic and social development of Slovakia.
2.2 Developing country Parties, in particular the least developed and the small Island developing States amongst them, and other Parties with economies in transition, have sufficient resources available to implement the three objectives of the Convention	Irrelevant objective after accession to the EU
2.3 Developing country Parties in particular the least developed and small Island developing States amongst them, and other Parties with economies in transition, have increased resources and technology transfer available to implement the Cartagena Protocol on Biodiversity	Three UNEP-GEF projects were carried out to implement the Cartagena Protocol. At present, all legislative and administrative measures to implement the Cartagena Protocol are completed.
2.4 All Parties have adequate capacity to implement the Cartagena Protocol on Biodiversity	The Department for Biological Safety of the Ministry of the Environment is an executive contact point for the Cartagena Protocol with necessary capacities.

<p>2.5 Technical and scientific cooperation is making a significant contribution to building capacity</p>	<p>Ministry of the Environment is responsible for implementation of the Convention. In order to carry out administrative and coordinating activities related to the Convention a National Secretariat of the Convention was established in 1994 which has become a national contact point for the Convention. The Ministry of the Environment by its decision established a Slovak Commission for the Convention in 1995 as a cross-sectoral advisory body, responsible for efficient implementation of the Convention in Slovakia (after 2007 the Commission works with new membership). These agencies coordinate the scientific and technical cooperation among particular bodies implementing the Convention in Slovakia.</p>
<p>Goal 3: National biodiversity strategies and action plans and the integration of biodiversity concerns into relevant sectors serve as an effective framework for the implementation of the objectives of the Convention</p>	
<p>3.1 Every Party effective national strategies, plans and programmes in place to provide a national framework for implementing the three objectives of the Convention and to set clear national priorities</p>	<p>In 1997, the Government approved a National Strategy of Biodiversity Conservation in Slovakia laying down 24 strategic objectives and 126 strategic orientations to strengthen protection and sustainable development of biodiversity in Slovakia. The National Biodiversity Strategy is being implemented through an Action Plan approved by the Government in 1998. In 2002, the Government adopted an Updated Action Plan for implementation of the National Biodiversity Strategy which reduced the number of strategic objectives from 24 to 21 and the number of strategic orientations from 126 to 82. Implementation of the Action Plan is assessed each three years (2005, 2008, 2011)</p>
<p>3.2 Every Party to the Cartagena Protocol on Biosafety has a regulatory framework in place and functioning to implement the Protocol</p>	<p>The Cartagena Protocol provisions are included in the Act 151/2002 on the use of genetic technologies and genetically modified organisms. Slovakia implements also the Regulation of the European Parliament and of the Council of 15 July 2003 No. 1946/2003 on transboundary movements of genetically modified organisms</p>
<p>3.3 Biodiversity concerns are being integrated into relevant national sectoral and cross-sectoral plans, programmes and policies</p>	<p>Tasks related to implementation of the National Biodiversity Strategy are divided among a number of agencies of the Ministry of the Environment and agencies of other sectors and are also dealt with by non-governmental organisations and public sector. Problematic areas are agriculture, forests and forest management, water bodies and wetlands, urban development, climate change, economic development and financial issues, regional and local development, research and education and public awareness</p>
<p>3.4 The priorities in national biodiversity strategies and action plans are being actively implemented, as a means to achieve national implementation of the Convention, and as a significant contribution towards the global biodiversity agenda</p>	<p>The National Biodiversity Strategy clearly defines 6 priorities of state interest 1. Biodiversity monitoring and analysis of starting situation and related legal instruments</p>

	<p>2. Completing a database of wild organisms and cultural utility organisms</p> <p>3. Indication of status and development of biodiversity and bio-sensors</p> <p>4. Programmes for preservation and permanent protection of biodiversity</p> <p>5. Programmes for revitalisation and conservation of biodiversity components</p> <p>6. Educational programmes</p> <p>These priorities are more concretised in the Updated Action Plan for National Biodiversity Strategy (see chapter 2)</p>
<p>Goal 4: There is a better understanding of the importance of biodiversity and of the Convention, and this has led to broader engagement across society in implementation</p>	
<p>4.1 All Parties are implementing a communication, education, and public awareness strategy and promoting public participation in support of the Convention</p>	<p>Slovakia supports all forms of education and raising the awareness on importance of conservation and sustainable use of biodiversity, i.e. one of the Convention priorities. A number of projects focused on environmental education in primary and secondary schools are implemented, several specialised educational facilities for nature and landscape protection, information and advisory centres have been created. Permanent representative expositions, educational tourist. Regular seminars both for specialists and non-specialists, seminars for foresters and farmers on ecological management of agricultural and forest lands and alternative pasture management are being organised focused on biodiversity, biotechnologies, biological safety. Support is given to a programme of lifetime education for target population groups, various publicity materials and journals are being published, the public is informed on biodiversity issues through media, radio or TV.</p>
<p>4.2 Every Party to the Cartagena Protocol on Biosafety is promoting and facilitating public awareness, education and participation in support of the Protocol</p>	<p>The Department of Biological Safety of the Ministry of the Environment each year organises 2 to 4 events for both specialists and non-specialists. Six information publications were published in 2006 - 2008</p>
<p>4.3 Indigenous and local communities are effectively involved in implementation and in the processes of the Convention, at national, regional and international levels</p>	<p>In Slovakia local and indigenous communities are involved in the process of the Convention implementation through a number of projects, e.g. the Project of Village Renewal, Framework Convention on protection and sustainable use of Carpathians, European Landscape Convention, National Strategic Rural Development, National Programme of protection of genetic resources for food and agriculture, National Sustainable Development Strategy. The Slovak Technical University in Nitra has a specialised facility – the Institute for protection of biodiversity and biological safety assuring effective involvement of indigenous communities in the process of implementation of the Action Plan for the National Biodiversity Strategy</p>
<p>4.4 Key actors and stakeholders, including the private sector,</p>	<p>Along with the state sectoral facilities</p>

<p>are engaged in partnership to implement the Convention and are integrating biodiversity concerns into their relevant sectoral and cross-sectoral plans, programmes and policies</p>	<p>Slovakia fully involves a number of non-governmental organisations (Daphne, REC Slovakia, Sosna, SOS/Birdlife Slovakia, CERI). Involvement of the private sector has been minimal so far. The private sector is usually involved in very specified issues (commercially provided recultivation services on sites polluted by oil substances) or in fulfilling the tasks resulted from environmental impact assessment process (EIA)</p>
--	--

Conclusions

1. Implementation of the Convention in Slovakia started in 1997 through elaboration of a National Strategy of Biodiversity Conservation in Slovakia. In 1998, the first Action Plan for implementation of the National Biodiversity Strategy was adopted, updated in 2002.

Fulfilment of strategic objectives, strategic orientations and tasks of this Action Plan undoubtedly contributed to the protection and sustainable use of biodiversity in Slovakia. The following have been implemented in the framework of the Action Plan:

- Detailed identification of conditions of biological diversity in Slovakia has been carried out and regular monitoring of some of its components has been assured
- Methodologies for controlling the processes adversely affecting biological diversity in Slovakia have been worked out
- Application of appropriate mitigation, renewal and remedial measures to protect biodiversity of species and biotopes has been strengthened
- A number of legislative instruments have been developed in order to strengthen the protection of biodiversity in-situ and ex-situ
- Protection of genetic diversity has been strengthened and a National Programme for protection of genetic resources of fauna and flora has been worked out
- National criteria and indicators of ecological and sustainable farming in agricultural and forest biotopes and of sustainable tourism have been worked out
- Cooperation among almost all stakeholders involved in the protection and sustainable use of biodiversity has been initiated, though some gaps in this area still exist
- Effective communication among particular groups of the society and increasing public awareness have been partly initiated in the area of biodiversity protection
- International cooperation with neighbouring countries in the form of bilateral or trilateral agreements has been developed

Taking into account the knowledge and experience gained, it is possible to expect that in the future the cooperation among stakeholders involved at international, national, regional and local levels will be even more effective and efficient.

2. Implementation of the Convention on Biological Diversity in Slovakia has been so far successful due to the responsible approach of all stakeholders in implementation processes. This concerns the Slovak Government, ministries, scientific and research institutes, universities and the Slovak Academy of Sciences and partly also due to the private sector.

Comprehensive information on successes and failures in implementation of the targets and objectives of the National Biodiversity Strategy and other sectoral and cross-sectoral documents worked out in relation to the protection of biodiversity and to the objectives of the Convention on Biological Diversity is provided in particular chapters of this presented report, including tables providing summarised information.

3. For a better implementation of the Convention on Biological Diversity in Slovakia in the future it will be necessary to meet the priorities, objectives and targets specified in strategies, programmes and action plans of various stakeholders involved in Slovakia.

The current relevant documents in Slovakia include especially:

- Updated Action Plan for Implementation of the National Strategy of Biodiversity Conservation in Slovakia for the 2003 – 2010 period
- European Landscape Convention – implementation in Slovakia
- Framework Convention on the Protection and Sustainable Use of Carpathians – Carpathian Convention
- Programme of Village Renewal – update for 2008 – 2013
- Updated Programme of Wetland Management in Slovakia for 2008 – 2014
- National Forestry Programme for the 2009 – 2011 period
- Agriculture Development Policy for 2007 – 2013
- National Strategic Plan of Rural Development for the programming period 2007 – 2013
- National Programme for Protection of Genetic Resources of Plants for Food and Agriculture for 2005 – 2009
- Action Plan for the National Sustainable Development Strategy for 2005 – 2010
- State Tourism Policy for 2006 – 2010
- New Strategy for Tourism Development till 2013
- National Environmental Health Action Plan III for 2006 – 2010
- Other documents relevant for Slovakia (Bern Convention, Bonn Convention, CITES/Washington Convention, UNESCO Convention concerning the Protection of World Cultural and Natural Heritage)

Of course, for the future successful implementation of the objectives and targets of the Convention on Biological Diversity it will be necessary to strengthen adequately the personal and financial capacities of stakeholders involved despite the fact that currently Slovakia prefers the economic and social reforms and the issues related to biodiversity and the environment are at a lower level of interest.

Appendix I. Information concerning reporting Party and preparation of national report

A. Reporting Party

Contracting Party	The Slovak Republic
NATIONAL FOCAL POINT	
Full name of the institution	Ministry of Environment of the Slovak Republic
Name and the title of contact officer	RNDr. Ladislav Ambróš
Mailing address	Námestie Ľudovíta Štúra č. 1 812 35 Bratislava Slovensko
Telephone	1/ +421 2 5956 2242 2/ +421 48 4374 110
Fax	1/ +421 2 59562207 2/ +421 48 4230 409
E-mail	ambros.ladislav@enviro.gov.sk
CONTACT OFFICER FOR NATIONAL REPORT (IF DIFFERENT FROM ABOVE)	
Full name of the institution	1/Ministry of Environment of the Slovak Republic 2/ Slovak Environmental Agency
Name and title of contact officer	1/ RNDr. Ladislav Ambróš 2/ Doc. Ing. Stanislav Štofko, CSc.
Mailing address	1/ Námestie Ľudovíta Štúra č. 1 812 35 Bratislava Slovak Republic 2/ Tajovského 28 975 90 Banská Bystrica Slovak Republic
Telephone	1/ 00421 2 5956 2111 2/ 00421 48 4374 110

Fax	1/ +421 2 59562207 2/ +421 48 4230 409
E-mail	1/ ambros.ladislav@enviro.gov.sk 2/ stanislav.stofko@sazp.sk
SUBMISSION	
Signature of officer responsible for submitting national report	Viliam Turský Minister of the Environment of the Slovak Republic
Date of submission	June 2009

Appendix II. Further sources of information

1. National Strategy of Biodiversity Conservation in Slovakia
http://www.sopsr.sk/cinnost/medzin_spol/narod_strat_biodiv.pdf
http://www.enviro.gov.sk/servlets/page/868?c_id=2329
2. Action Plan for Implementation of the National Strategy of Biodiversity Convention
http://www.sopsr.sk/cinnost/medzin_spol/akcny_plan_biodiverzita.pdf
http://www.enviro.gov.sk/servlets/page/868?c_id=2329
3. Updated Action Plan for Implementation of the National Strategy of Biodiversity Conservation in Slovakia for 2003 – 2010
http://www.sopsr.sk/cinnost/medzin_spol/akcny_plan_biodiverzita.pdf
http://www.enviro.gov.sk/servlets/page/868?c_id=2329
4. European Landscape Convention
http://www.enviro.gov.sk/servlets/page/868?c_id=2053
<http://www.sopsr.sk/index.php?page=cinnost&sci=6b>
5. Framework Convention on the Protection and Sustainable Development of Carpathians – Carpathian Convention
http://enviroportal.sk/pdf/dohovory/kyjev2205_2003.pdf
http://www.enviro.gov.sk/servlets/page/868?c_id=2952
<http://www.carpathianconvention.org/index.htm>
<http://www.sopsr.sk/index.php?page=cinnost&sci=6 karpatsky>
6. Programme for Village Renewal – update for 2008 – 2013
<http://eia.enviroportal.sk/detail/program-obnovy-dediny-aktualizacia-na-roky-2008-2013>
<http://www.enviro.gov.sk/servlets/files/16739>
7. Updated Wetland Management Programme for 2008 – 2014
http://www.enviro.gov.sk/servlets/page/868?c_id=5130&o_id=6271
<http://www.ramsar.org>

8. Convention on the Protection of European Wildlife and Natural Habitats (Bern Convention)
<http://enviroportal.sk/dohovory/dohovory-detail.php?dokument=174>
9. Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)
<http://enviroportal.sk/dohovory/dohovory-detail.php?dokument=115>
10. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES/Washington Convention)
<http://enviroportal.sk/dohovory/dohovory-detail.php?dokument=114>
<http://www.cites.sk>
<http://www.cites.org>
11. Environmental Impact Assessment
<http://www.zbierka.sk/zz/predpisy/default.aspx?PredpisID=12885&FileName=94-z127&Rocnik=1994>
12. Concept for Update and Rationalisation of Environmental Monitoring
<http://enviroportal.sk/ism/legislativa.php>
13. National Forestry Programme of Slovakia
http://www.nlcsk.sk/nlc_sk/ustavy/lvu/vyskum/olspe/koncepcne_prace_pre_mpsr/narodny_lesnický_program_sr.aspx
14. Rural Development Programme for 2007 – 2013
<http://www.land.gov.sk>
15. National Programme for Protection of Genetic Resources of Plants for Food and Agriculture for 2005 – 2009
<http://www.biotechno.sk/index.php?id=58#248>
16. National Sustainable Development Strategy of Slovakia
<http://www.tur.vlada.gov.sk/data/files/950.pdf>
17. State Tourism Policy
<http://www.economy.gov.sk/statna-politika-cestovneho-ruchu-slovenskej-republiky-6283/127968s>
18. Slovak Platform for Biodiversity
<http://uke.sav.sk/bioplatform/index.htm>
19. National Environmental Health Action Plan III for 2006 – 2010
<http://www.health.gov.sk/redsys/rsi.nsf/0/57D1649C20949915C125739300383669?OpenDocument>
20. Convention Concerning the Protection of World Cultural and Natural Heritage – implementation in Slovakia
<http://enviroportal.sk/dohovory/dohovory-detail.php?dokument=154>

21. Updated Action Plan for Implementation of the National Strategy of Biodiversity Conservation for 2003 – 2010 in the sector of the Ministry of Culture
http://www.sopsr.sk/cinnost/medzin_spol/akcny_plan_biodiverzita.pdf
22. Convention on Biological Diversity
<http://www.cbd.int/convention/>
23. Cartagena Protocol on Biological Safety to the Convention on Biological Diversity
http://www.enviro.gov.sk/servlets/page/868?c_id=2220
<http://www.cbd.int/biosafety/>
24. Man and Biosphere Programme (MAB)
<http://www.sopsr.sk/index.php?page=cinnost&sci=6bd>
<http://www.unesco.org/mab/>
25. Global Strategy for Plant Conservation
<http://www.cbd.int/gscp>
26. Programme of Work on Protected Areas
<http://www.cbd.int/protected/pow.shtml>
27. 2010 Biodiversity Target
<http://www.cbd.int/2010-target>
28. NATURA 2000
<http://www.sopsr.sk/natura>
29. State of the Environment Reports
<http://www.sazp.sk/slovak/periodika/sprava/index.html>
30. National Report on Status and Conservation of Biological Diversity in Slovakia
http://www.sopsr.sk/cinnost/medzin_spol/CBDns/First-NR-en.pdf
31. The Second National Report on the implementation of the Convention on Biological Conservation of Biological Diversity
http://www.sopsr.sk/cinnost/medzin_spol/CBDns/Second-NR-en.pdf
32. The Third National Report on the implementation of the Convention on Biological Diversity in the Slovak Republic
http://www.sopsr.sk/cinnost/medzin_spol/CBDns/Second-NR-en.pdf
33. Slovak national Biosafety Clearing-House web-site
<http://www.gmo.sk>

Appendix III. Progress towards Targets of the Global Strategy for Plant Conservation an Programme of Work on Protected Areas

Targets Global Strategy for Plant Conservation:

Target 1: A widely accessible working list of know plant species, as a step towards a complete world flora

The Slovak Republic has worked out a comprehensive list of representatives of the Slovak flora recorded so far¹. Plants are categorised in 5 groups:

1. cyanophytes and alga
2. mushrooms
3. lichens
4. hornworts
5. ferns and spermatophytes

The list includes also information on threat to individual species according to an older version of IUCN categories (Ex, E, V, R, I).

The Red List of Plants of Slovakia² has been worked out for mushrooms, ferns and spermatophytes. Particular species are categorised according to the currently valid categorisation of threat pursuant to IUCN (EX, CR, EN, VU, LR, DD, NE).

The list of protected plant species of Slovakia is a part of the Decree of the Ministry of the Environment 24/2003 implementing the Act 543/2002 on nature and landscape protection as amended.

¹Marhold, k., Hindák, F.: Zoznam nižších a vyšších rastlín Slovenska (Checklist of Non-vascular and Vascular Plants of Slovakia. VEDA, Bratislava 1998, ISBN: 80-224-0526-4

²Baláž, D., Marhold, K., Urban P.: Červený zoznam rastlín a živočíchov Slovenska, Ochrana prírody 20 (Red List of Plants and Animals of Slovakia), Supplement, State Nature Protection Agency, the Centre for Nature and Landscape Protection, Banská Bystrica 2001.

Target 2: A preliminary assessment of the conservation status of all known plant species, at national, regional a international levels

Assessment of the protection status is carried out for plant species of the European importance, which are introduced in Annexes II and IV to the Habitats Directive (44 plant species). The current conservation status, appropriate management and monitoring frequency are assessed (Table 19).

More information: <http://www.sopsr.sk/natura/index1.php?p=4&lang=sk&sec=2>

Table 19: List of monitored species of European importance in Slovakia

Latin name	Slovak name
<i>Aconitum firmum</i> subsp. <i>moravicum</i>	prilbica tuhá moravská
<i>Adenophora lilifolia</i>	zvonovec ľaliolistý
<i>Angelica palustris</i> / <i>Ostericum palustre</i>	ostrík močiarny
<i>Asplenium adulterinum</i>	slezinník nepravý
<i>Apium repens</i>	zeler plazivý
<i>Buxbaumia viridis</i>	kyjanôčka zelená
<i>Cirsium brachycephalum</i>	pichliač úzkolistý
<i>Colchicum arenarium</i>	jesienka piesočná
<i>Cochlearia tatrae</i>	lyžičník tatranský
<i>Campanula serrata</i>	zvonček hrubokoreňový
<i>Crambe tataria</i>	katran tatársky
<i>Cyclamen fatrense</i>	cyklámen fatranský
<i>Cypripedium calceolus</i>	črievičník papučkový
<i>Daphne arbuscula</i>	lykovec muránsky
<i>Dianthus nitidus</i>	klinček lesklý
<i>Dianthus praecox</i> subsp. <i>lumnitzeri</i>	klinček včasný Lumnitzerov
<i>Dicranum viride</i>	dvojhrot zelený
<i>Dracocephalum austriacum</i>	včelník rakúsky
<i>Drepanocladus vernicosus</i>	kosáček plavúňovitý
<i>Echium russicum</i>	hadinec červený
<i>Eleocharis carniolica</i>	bahnička kranská
<i>Ferula sadleriana</i>	feruľa sadlerova
<i>Gladiolus palustris</i>	mečík močiarny
<i>Himantoglossum adriaticum</i>	jazyčkovec jadranský
<i>Himantoglossum caprinum</i>	jazyčkovec východný
<i>Iris aphylla</i> subsp. <i>hungarica</i>	kosatec bezlistý uhorský
<i>Iris humilis</i> subsp. <i>arenaria</i>	kosatec piesočný
<i>Ligularia sibirica</i>	jazyčník sibírsky
<i>Liparis loeselii</i>	hlúzovec Loeselov
<i>Mannia triandra</i>	grimaldia trojtyčinková
<i>Ochyraea tatrensis</i>	ochyrea tatranská
<i>Onosma tornensis</i>	rumenica turnianska
<i>Marsilea quadrifolia</i>	marsilea štvorlistá
<i>Scapania massalongi</i>	korýtkovec
<i>Serratula lycopifolia</i>	kosienka karbincolistá
<i>Tephrosia longifolia</i> subsp. <i>moravica</i>	popolavec dlholistý
<i>Pulsatilla grandis</i>	poniklec veľkokvetý
<i>Pulsatilla patens</i>	poniklec otvorený
<i>Pulsatilla pratensis</i> subsp. <i>hungarica</i>	poniklec lúčny maďarský
<i>Pulsatilla slavica</i>	poniklec slovenský
<i>Pulsatilla subslavica</i>	poniklec prostredný
<i>Thlaspi jankae</i>	peniažtek slovenský
<i>Tortella rigens</i>	závitovka
<i>Tozzia carpathica</i>	vrchovka alpínska

Target 3: Development of models with protocols for plant conservation and sustainable use, based on research and practical experience

The only lists, which can be compared to the required protocols, are registers of plants. They are worked out based on the Act 543/2002 on nature and landscape protection as amended, namely based on Article 41, for each genus of protected plants. These registers prevent from illegal possession of protected plant species.

Target 4: At least 10 per cent of the most important areas for plant diversity

In January 2008, the European Commission in the framework of accession procedures approved 381 sites of European importance in the Pannonian and Alpine bio-geographic regions, included in the NATURA 2000 system. It is possible to say that Slovakia effectively protects more than required 10 % of these regions either within Natura 2000 or within the national system of protected areas.

Target 5: Protection of 50 per cent of the most important areas for plant diversity assured

Daphne – the Institute for Applied Ecology – was dealing with a project „Important Plant Areas“ in the 2002 – 2005 period. It was a pilot project of the IPA programme (IPA – Important Plant Areas) coordinated by a British organisation Plantlife. Objective of the project was to identify the most important and most valuable plant areas in Slovakia. The project has resulted in a draft network of important plant areas covering more than 13 % of the Slovak territory.

232 species of higher plants, mushrooms, lichens and mosses have been identified which are important for selection of VBU. Moreover, the national classification registers 96 types of biotopes which correspond to the European protected biotopes. More information: http://www.daphne.sk/daphne_research_fin_sk.htm

Target 6: At least 30 per cent of production lands managed consistent with the conservation of plant diversity

Current status of ecological agriculture in Slovakia

On 31 December 2008, the area of ecologically farmed land in Slovakia was 136,669 hectares, which is almost 7.2 % of total area of agriculturally used soil. As compared to 2007, this area has been increased by 14,080 hectares (11.5 %). Survey is provided in the following table:

Area of EP SR according to land types (31 December 2008)

	Agricultural soil / ha	Arable land / ha	Permanent grassland / ha	Orchards / ha	Vineyards / ha
Ecological production	114 055.00	33 921.00	79 481.00	600.00	53.00
3 rd year of conversion	33.00	0.00	0.00	33.00	0.00
2 nd year of conversion	4 502.00	1 670.00	2 785.00	47.00	0.00
1 st year of conversion	18 079.00	6 188.00	11 577.00	314.00	0.00
Total:	136 669.00	41 779.00	93 843.00	994.00	53.00

Zdroj: ÚKSÚP

Development of agricultural soil area in EP SR

Indicator	Soil area (ha)		Difference (ha) 2008-2007	Difference (%) 2008 - 2007
	2007	2008		
Agricultural soil	122 589	136 669	14 080	11,5
of that: arable soil	37 777	41 779	4 002	10,6
permanent grassland	84 052	93 843	9 791	11,6
fruit orchards	708	994	286	40,4
vineyards	53	53	0	0

Year	Area (ha)	Share in total area of agricultural land (%)	Number of farms	Average area of farm (ha)
1991	14 773	0.6	37	399.3
1997	27 809	1.14	46	604.5
2003	54 479	2.19	88	640.9
2005	93 591	4.93 (LPIS)	205	456.5
2006	121 956	6.42 (LPIS)	265	460.2
2007	122 589	6.45(LPIS)	278	440.0
2008	136 669	7.19 (LPIS)	349	391.6

Source: UKSUP

On 31 December 2008, the Central Controlling and Testing Agricultural Institute (UKSUP) registered 418 registration holders in the ecological farming system of Slovakia. They were divided into the following activities:

- 349 bio-farmers with soil + 1 apiarist
- 55 bio-food producers
- 8 collectors of wild plants and their fruits from the open nature
- 12 bio-seed producers and retailers
- 9 bio-feed producers
- 30 retailers
- 5 importers of bio-products.

At present, the area of ecologically farmed land is 93,951 hectares, of that 27,890 hectares of arable land, 65,491 hectares of permanent grassland, 490 hectares of orchards and 80 hectares of vineyards.

205 ecological farms are registered. This area constitutes 5 % of 1,879 thousand hectares of verified agricultural land registered in 2004. The principles of good agricultural practice are applied on the entire area of soil, used for production. They are controlled in a so

called cross-control – controlling the impacts of agricultural activities on the environment, nature protection and water protection.

Target 7: 60 per cent of the world’s threatened species conserved in situ

All plant species from the Red List of Plants of Slovakia, which have been included in the IUCN categories of threat EX, EN, VU, are protected in Slovakia in-situ.

Most of species in the IUCN category LR are also protected in Slovakia. Total number of plant taxons in Slovakia is 12,618, of that 2,062 protected, which is 16 % of total number of taxons in Slovakia and 0.5 % of total number of taxons in the world (global estimate is 440,000).

Target 8: 60 per cent of threatened plant species in accessible ex situ collections, preferably in the country of origin, and 10 per cent of them included in recovery and restoration programmes

Due to financial and time reasons the State Nature Protection Agency works out the conservation programmes only for endangered plant species registered in CR and EN categories (pursuant to the IUCN categorisation) if the number of sites of appearance of a particular species is lower than 10 (Table 20).

Table 20: Species for which conservation programmes have been worked out

Slovak name	Latin name	Period of validity of conservation programme
červenohlav ihlancovitý	Anacamptis pyramidalis	2005-2009
ostrica výbežkatá	Carex chordorrhiza	2005-2009
vstavač úľadný	Orchis elegans	2005-2009
vstavač močiarny	Orchis palustris	2005-2009
poniklec lúčny maďarský	Pulsatilla pratensis ssp. flavescens	2005-2009
poniklec Zimmermannov	Pulsatilla zimmermannii	2005-2009
rosička anglická	Drosera anglica	2004-2008
plavúniec zaplavovaný	Lycopodiella inundata	2004-2008
hmyzovník Holubyho	Ophrys holubyana	2004-2008
vstavač ploštičný pravý	Orchis coriophora ssp. coriophora	2004-2008
ostroplod biely	Rhynchospora alba	2004-2008
blatnica močiarna	Scheuchzeria palustris	2004-2008
palina rakúska	Artemisia austriaca	2002-2006
kozinec drsný	Astragalus asper	2002-2006
vstavačovec bledožltý	Dactylorhiza ochroleuca	2002-2006
červenačka hustolistá	Groenlandia densa	2002-2006
hrachor sedmohradský	Lathyrus transsilvanicus	2002-2006
rumenica turnianska	Onosma tornensis	2002-2006
pokrut jesenný	Spiranthes spiralis	2002-2006
sivulka prímorská	Glaux maritima	2006-2010
ostrica blšná	Carex pulicaris	2006-2010

Target 9: 70 per cent of the genetic diversity of crops and other major socioeconomically valuable plant species conserved, and associated indigenous and local knowledge maintained

Seeds of basic cereals are kept in the Gene Banks of Slovakia and represent almost 50 % of total number of samples kept in the Gene Bank. Particular items are described by classificators; data gained constitute a basis for databases of the Gene Bank information system and are provided on-line to the European system EURISCO.

Target 10: Management plans in place for at least 100 major alien species that threaten plants, plant communities and associated habitats and ecosystems

Slovakia has worked out a list of invasive species which can be found on the Slovak territory (Gojdičová, E., Cvachová, A., Karasová, E.: List of alien, invasive and expansive vascular plants in Slovakia).

The list contains 616 taxons, of those 529 neophytes, 19 archaeophytes, 29 original and 39 non-classified taxons. Selected taxons are categorised in 8 categories.

1. Invasive taxons
 - a. Neophytes
 - b. archaeophytes
2. Potentially (regionally) invasive taxons
3. Taxons running riot often
4. Taxons running riot rarely
5. Introduced taxons
6. Domesticated taxons
7. Non-classified taxons
8. Expansive taxons

Particular categories include the following numbers of taxons: 1 invasive taxons - 47: 28/neophytes and 19/archaeophytes; 2. potentially (regionally) invasive taxons – 49; 3. taxons running riot often – 64; 4. taxons running riot rarely – 241; 5. introduced taxons – 81; domesticated taxons – 66; 7. unclassified taxons – 39; 8. expansive taxons – 29.

The Decree of the Ministry of the Environment 24/2003, implementing the Act 543/2002 on nature and landscape protection, contains seven invasive plant species for which specific conditions have been laid down: *Heracleum mantegazzianum*, *Fallopia japonica*, *Fallopia x bohemica*, *Fallopia sachalinensis*, *Impatiens glandulifera*, *Solidago canadensis* and *Solidago gigantea*.

The Decree specifies an obligation to liquidate these invasive species, defining mechanic and chemical methods of liquidation. Slovakia monitors invasive species both in and out of the protected sites.

Management programmes for particular invasive species in Slovakia have not been worked out yet, the overall invasive species management is defined by the Decree of the Ministry of the Environment 24/2003 implementing the Act 543/2002 on nature and landscape protection.

Manuals assisting in the activities dealing with invasive species have been elaborated:

1. Cvachová, A., Gojdičová, E.: Guidelines for removal of invasive plant species. State Nature Protection Agency, Banská Bystrica 2003
2. Cvachová, A., Chromý, P., Gojdičová, E., Leskovjanská, A., Pietorová, E., Šimková, A., Zaliberová, M.: Guideline for identification of selected invasive plant species. State Nature Protection Agency, Banská Bystrica 2002
3. Cvachová, A., Gojdičová, E., Sujová, K.: Liquidation of biomass from removal of invasive plant species (Methodological guide).

Target 11: No species of wild flora endangered by international trade

Of plant species, which can be found on the Slovak territory, all species of family *Orchideaceae* and *Cyclamen fatrense* are included in the strictest category - in the Annex I to the Convention on International Trade in Endangered Species (CITES).

Target 12: 30 per cent of plant-based products derived from sources that are sustainably managed

No relevant data for Slovakia are available. Diversification of agriculture to bioenergy production led to social demand for identification of soils which are the most appropriate for these purposes, not only from the point of view of conditions for crop cultivation but also from the point of view of site protection for primary food protection.

Target 13: The decline of plant resources, and associated indigenous and local knowledge, innovations and practises that support sustainable livelihoods, local food security and health care, halted

In the framework of technical assistance for the Ministry of Agriculture the use of local knowledge and practices is ensured for sustainable existence and local food safety (e.g. through extension of cultivation of minority crops in marginal areas of Slovakia, ecological cultivation of medical plants, etc.).

Under expected number of inhabitants 4.88 million (in 2050) 930.3 thousand hectares of arable land would be sufficient and 118 thousand hectares could be used for other purposes, e.g. for energy production.

Target 14: The importance of plant diversity and the need for its conservation incorporated into communication, educational and public – awareness programmes

The Ministry of the Environment of the Slovak Republic and its professional agencies, in particular the Slovak Environment Agency and State Nature Protection Agency, and some non-governmental organisations (Daphne, Bird Protection Society, Sosna) develop activities in the area of environmental education, including biological diversity issues. Some of the above mentioned organisations employ specialists focused exclusively on environmental education.

Target 15: The number of trained people working with appropriate facilities in plant conservation increased, according to national needs, to achieve the targets of this Strategy

Each unit of the State Nature Protection Agency employs at least one botanist dealing with protection of plant species pursuant to national and international requirements. Strong groups of specialists – botanists have been established in specialised facilities of the Slovak Academy of Sciences (Institute for Botany of the Slovak Academy of Sciences) and in some universities (Comenius University, Slovak Agricultural University, Constantine the Philosopher University in Nitra and P. J. Šafárik University). Specialists focusing on protection of plant species work also for some non-governmental organisations (Daphne).

In the period after 2005, when the Third National Report on Implementation of the Convention on Biological Diversity in Slovakia has been worked out, growth of human resources has not been supported in specialised agencies of the Ministry of the Environment. The number of specialists has been even reduced as well as the number of specialised institutes dealing with protection of plant species which adversely affects the fulfilment of this objective.

Target 16: Networks for plant conservation activities established or strengthened at national, regional and international levels

Activities related to plant protection are ensured especially in the defined protected areas in Slovakia and also in other areas of appearance on the entire territory of the country. Information on particular activities is gathered in specialised agencies of the Ministry of the Environment and Ministry of Education and the databases are available to the public under certain conditions.

There is exchange of data and cooperation on a transboundary level between bordering protected territories (Hungary, Poland, the Czech Republic).

Targets Programme of Work on Protected Areas:

Programming element 1:

Target 1.1.: To establish and strengthen national and regional systems of protected areas integrated into a global network as a contribution to globally agreed goals.

Slovakia has three categories of protected sites which can be included in the world network of protected sites: 14 wetlands of international importance (Ramsar sites), 4 biosphere reserves (BR) and 6 sites of world cultural and natural heritage of UNESCO, of that 2 sites of natural heritage (Tables 21, 22 and 23). Management of these sites is ensured based on the Act 543/2002 on nature and landscape protection.

The Programmes of Ramsar sites management are elaborated but none of them has been approved yet

Management of biosphere reserves is determined by the Action Plans for biosphere reserves worked out in the light of the UNESCO Man and Biosphere Programme (MAB).

Table 21: Wetlands included in the list of internationally important wetlands pursuant to the Ramsar Convention

No.	Site name	Date of designation	Area (ha)
1.	Parížske močiare (wetlands)	02.07.1990	184.00
2.	Šúr	02.07.1990	1 136.60
3.	Senné – rybníky (ponds)	02.07.1990	426.60
4.	Dunajské luhy (River Danube floodplains)	26.05.1993	14 488.00
5.	Niva Moravy (River Morava floodplain)	26.05.1993	5 380.00
6.	Latorica	26.05.1993	4 404.70
7.	Alúvium Rudavy (River Rudava alluvium)	17.02.1998	560.00
8.	Mokrade Turca (Turiec wetlands)	17.02.1998	466.89
9.	Poiplie (River Ipel' region)	17.02.1998	410.87
10.	Mokrade Oravskej kotliny (Orava depression wetlands)	17.02.1998	9 264.00
11.	Rieka Orava a jej prítoky (River Orava and its tributaries)	17.02.1998	865.00
12.	Domica	02.02.2001	621.76
13.	Alúvium Tisy (River Tisa alluvium)	04.12.2004	1 130.00
14.	Jaskyne Demänovskej doliny (caves of Demänovská dolina)	17.11.2006	1 448.00

Table 22: Biosphere reserves in Slovakia

	Name of the biosphere reserve	Designation year	Area (ha)		Overlapping with large-area protected sites	
			Particular zones	Total	Name	Area (ha)

1.	Slovenský kras biosphere reserve	1977	core: 8 901.6 buffer: 25 538.9 transition: 40 488.8	74 929.3	National park Slovenský kras	46 353 (area national park + protection zone) national park: 34 611 protection zone: 11 742
2.	Poľana biosphere reserve	1990	core: 1 338.7 buffer: 6 420.3 transition: 13 032.4	20 791.4	Protected landscape area Poľana	20 360
3.	Tatry biosphere reserve	1993 (bilateral BR Slovakia / Poland)	core: 50 093.3 buffer: 24 092.4 transition: 37 022.7	111 208.4	TANAP (Tatra National Park)	104 503 (area national park + protection zone) National park: 73 800 PROTECTION ZONE: 30 703
4.	Východné Karpaty biosphere reserve	1993 (bilateral BR Slovakia / Poland) 1999 (trilateral BR Slovakia / Poland / Ukraine)	core: 2 720.5 buffer: 14 555.1 transition: 23 805.3	41 079.1	National park Poloniny	40 778 (area national park + protection zone) national park: 29 805 protection zone: 10 973

Table 23: Sites of natural heritage included in the UNESCO List of world heritage

No.	Name	Category	Year of inclusion in the List	Area (ha)
1.	Caves in the Slovak and Aggtelek Karst (bilateral site with Hungary)	natural heritage	1995	core zone: 56 650.57 buffer zone: 86 797.33
2.	Carpathian Beech Forests (bilateral site with Ukraine)	natural heritage	2007	core zone: 29 278.90 buffer zone: 48 692.69

Target 1.2.: To integrate protected areas into broader land and seascapes and sectors so as to maintain ecological structure and function

On the national, regional and local levels Slovakia works out Territorial Systems of Ecological Stability (Trans-regional Territorial System of Ecological Stability – GNÚSES, Regional Territorial System of Ecological Stability – RÚSES, Local Territorial System of Ecological Stability – MÚSES) which define bio-centres, bio-corridors and interaction elements. These systems integrate also the network of protected sites in the territory. They are used in the process of preparation of landscape and spatial plans.

Target 1.3.: To establish and strengthen regional networks, transboundary protected areas (TBPAs) and collaboration between neighbouring protected areas across national boundaries.

Since 1992, an official cooperation between the Slovak border protected areas and the border protected areas in Hungary and Poland started – this concerns the following protected

areas in Slovakia: Protected Landscape Areas Horná Orava, Cerová vrchovina, Latorica, Štiavnické vrchy and Dunajské luhy, Tatra National Park, Pieniny National Park, Poloniny National Park). The Slovak-Polish and the Slovak-Hungarian border commissions have regular sessions dealing with nature protection. In 2008, the Slovak-Czech border commission restarted its activity. The Landscape Protected Areas Biele Karpaty and Záhorie take part in cooperation with the Czech Republic. Cooperating organisations in the protected areas fulfil common tasks related to zoology, botany, forestry, mapping, monitoring, Natura 2000 site protection, environmental education, etc.

The organisations of nature protection in the protected areas in Slovakia, which are included in the world network of biosphere reserves and are bilateral biosphere reserves (Tatra National Park – Tatry BR) or trilateral biosphere reserves (Poloniny National Park – BR Východné Karpaty), carry out transboundary cooperation with partner organisations of biosphere reserves in Poland and Ukraine.

There is also transboundary cooperation in the framework of the border Ramsar sites – the bilateral Ramsar site River Tisa alluvium (Slovakia, Hungary) and the trilateral Ramsar site on the junction of the river Morava, Dyje and Danube (Slovakia, Austria and the Czech Republic). The Memorandum on cooperation was signed for this trilateral Ramsar site in 2001. In 2007 this site was designated as a trilateral Ramsar site and a common management programme is currently under preparation for this site.

Target 1.4.: To substantially improve site-based protected area planning and management.

All protected sites are administered by a Protected Site Administration (Administration of National Park, Administration of Protected Landscape Area), including small-area protected sites which are administered by corresponding organisational unit (administration of national park or administration of protected landscape area). The Directorate of the State Nature Protection Agency, functioning as a legal entity, is an umbrella organisation.

No large-area protected site (National Park, Protected Landscape Area) has a valid management programme. For the 2009 – 2011 period, preparation of draft management programmes is planned for the national parks, including the zoning of each national park. In 2011, the management programme for the Pieniny National Park should be completed (Tables 24 and 25).

Tab. 24: Approved running management programmes for MCHÚ

Name of MCHÚ	Territorial jurisdiction	Validity
Natural Reserve Kráľova studňa	S NP Slovenský kras	2005-2015
Natural Monument Súľovský hrádok	S CHKO Strážovské vrchy	2005-2015

Tab. 25: Completed and approved management programmes for MCHÚ

Name of MCHÚ	Territorial jurisdiction	Validity
Natural Monument Trubárka	S CHKO Biele Karpaty	1985-1995
Natural Monument Baricovie lúky	S CHKO Biele Karpaty	1987-1997
Natural Monument Bestinné	S CHKO Biele Karpaty	1987-1997
Natural Monument Biely vrch	S CHKO Biele Karpaty	1988-1998
Natural Monument Blažejová	S CHKO Biele Karpaty	1987-1997
Natural Monument Grúň	S CHKO Biele Karpaty	1987-1997
Natural Monument Krivoklátske lúky	S CHKO Biele Karpaty	1987-1997
Natural Monument Kurinov vrch	S CHKO Biele Karpaty	1988-1998

Natural Monument Šiflovcí	S CHKO Biele Karpaty	1988-1998
Natural Monument Žalostiná	S CHKO Biele Karpaty	1988-1998

MCHÚ – small-area protected sites

S NP – Administration of National Park

S CHKO – Administration of Protected Landscape Area

Target 1.5.: To prevent and mitigate the negative impacts of key threats to protected areas.

No mechanisms have been adopted by 2008 to identify, prevent and/or mitigate adverse impacts on protected sites.

Programming element 2:

Target 2.1.: To promote equity and benefit-sharing.

The WWF worked out the 2012 Protected Area Programme (2012 PAP) which is determined by the Programme of Work on Protected Areas in the framework of the Convention on Biological Diversity. Within this programme a project 2012 Protected Areas for a Living Planet has been elaborated. In 2008, the Slovenský Raj National Park was selected to this project as a demonstration protected site in Slovakia based on the Memorandum of Understanding between the State Nature Protection Agency, Administration of the Slovenský Raj National Park and the Danube-Carpathian Programme. This project will lay down efficient mechanisms to identify, prevent and/or mitigate adverse impacts on protected site as well as mechanisms how to reasonably share the costs and benefits of designation and management of protected sites. Social and economic aspects in a territory will be also taken into account. The project will be completed in October 2009.

Target 2.2.: To enhance and secure involvement of indigenous and local communities and relevant stakeholders.

Broader involvement of local and indigenous communities and stakeholders in the protected site management is carried out only on ad-hoc basis and not systematically.

Programming element 3:

Target 3.1.: To provide an enabling policy, institutional and socio-economic environment for protected areas.

See assessment of the objective 2.1

Target 3.2.: To build capacity for the planning establishment and management of protected areas.

Training programmes are carried out in the framework of the MAVA project of the 2012 Protected Areas for a Living Planet programme covered by WWF in cooperation with the EUROPARC Federation. The project is focused on countries which are a part of the Carpathian region, protected areas of which are included in the Carpathian network of protected areas and which are signatories of the Carpathian Convention. Selected experts of the State Nature Protection Agency, meeting the defined conditions, participated in training seminars on management plans for protected sites with involvement of stakeholders and on

sustainable tourism in protected sites in 2008. Trainings within this project continue also in 2009.

Target 3.3.: To develop, apply and transfer appropriate technologies for protected areas.

Such activities are not carried out.

Target 3.4.: To ensure financial sustainability of protected areas and national and regional systems of protected areas

In the period after 2005, when the Third National Report on Implementation of the Convention on Biological Diversity in Slovakia“ has been worked out, growth of human resources has not been supported. The number of specialists has been even reduced (cuts in public expenditures) as well as the budget for the nature protection institutes. Technical development was ensured mainly from non-budgetary resources (projects).

Target 3.5.: To strengthen communication, education and public awareness

The Ministry of the Environment of the Slovak Republic and its professional agencies, in particular the Slovak Environment Agency and State Nature Protection Agency, and some non-governmental organisations (Daphne, Bird Protection Society, Sosna) develop activities in the area of environmental education, including biological diversity issues. Some of the above mentioned organisations employ specialists focused exclusively on environmental education.

Programming element 4:

Target 4.1.: To develop and adopt minimum standards and best practices for national and regional protected area systems

The Slovak Republic has worked out standards and criteria for selection, designation and management of protected sites at the national level. In 2006, an umbrella organisation for all protected sites in Slovakia – the State Nature Protection Agency – was established, covering 9 national parks and 14 protected landscape areas. Since 2008, this Institution has included also the Slovak Cave Administration assuring the protection and management of caves in Slovakia.

Each protected site has a working administration responsible for the relevant territory. Criteria for selection, designation and management of protected sites in Slovakia are exactly defined by the Act 543/2002 on nature and landscape protection. A methodology for preparation of management programmes has been worked out and is expected to be approved by the Ministry of the Environment of the Slovak Republic. In 2009, preparation of management programmes for the national parks will start and in 2011 a model management programme for the Pieniny National Park will be submitted.

Target 4.2.: To evaluate and improve the effectiveness of protected areas management

A mechanism for assessment of protected site management will be created in the framework of the MAVA 2012 Protected Areas for a Living Planet programme, covered by WWF, in cooperation with the EUROPARC Federation. This mechanism will be created for the territories which are a part of the Carpathian Network of Protected Areas (CNPA). There

is a contact person appointed for each protected area included in this project. This person will communicate with the project manager and provide needed information on a territory. All activities will be carried out in the on-line form.

Target 4.3.: To assess and monitor protected area status and trends

A questionnaire „A Scorecard for Measuring Progress on the CBD Programme of Work on Protected Areas“ was filled in by the State Nature Protection Agency in 2007 in the framework of the cooperation with the WWF and within the activities of the MAVA 2012 Protected Areas for a Living Planet project. The questionnaire was updated in January 2009. This questionnaire provides a survey on the current status of protected areas in Slovakia.

Target 4.4.: To ensure that scientific knowledge contributes to the establishment and effectiveness of protected areas and protected area systems

Cooperation with research institutions and universities is going on. More financial resources for scientific activities in Slovakia generally and also for specialised nature protection organisations would be needed to achieve more effective and higher-quality cooperation. More effective linkage of the science with the practice in the framework of research activities of scientists, university teachers, students, PhD students and industrial enterprises in Slovakia would be also helpful.

Appendix IV – National indicators used in the report

The Convention on Biological Diversity requires that indicators are defined to monitor the status and trends in protection of biological diversity and to monitor implementation the Convention at the national level. The requirement to monitor particular indicators of the status and trends in biodiversity results also from the objective 6 of the National Biodiversity Conservation Strategy focused on building a comprehensive monitoring system to monitor the changes in biological diversity at all levels.

The first set of indicators of the status and trends in the protection of biodiversity in Slovakia was approved by the Government Resolution 18/2001 and consisted of 166 indicators. The set included three basic categories of indicators:

1. indicators of the status of biodiversity (species diversity, diversity of systems, sources)
2. indicators of pressures on biological diversity (public and transport facilities, industry, energy, climate change, environmental pollution)
3. indicators of response in biological diversity (management, economic instruments, international cooperation)

The Government Resolution 18/2001 laid down an obligation to ensure the assessment of the set of indicators of status and trends in biological diversity each five years (starting in 2005), to publish the assessment in a written form and in an electronic form on the web page of the Ministry of the Environment. It is also necessary to update the set of indicators in accordance with the internationally developed set of biodiversity indicators (so far worked out for the 2004 – 2010 period).

In 2007, an updated set of indicators was worked out to monitor the status and trends in biodiversity protection in Slovakia which was then approved by the Government Resolution 837/2007. The updated set includes only 90 indicators and is determined by the original set of indicators monitored in 2001 – 2005 and takes into account the SEBI 2010 proposal, i.e. the set of new biodiversity indicators which are relevant for Slovakia. Both the

proposed set of European biodiversity indicators and the specified set of indicators of the status and trends in biodiversity in Slovakia have to be considered to be an open system where some changes can be made in the future.

Updated set of indicators of the status and trends in biodiversity in Slovakia (Annex to the Government Resolution 837/2008)

A. Indicators of the status of biodiversity

A.1. Species diversity

A.1.1 Status and changes in numbers and/or distribution of a selected group of species

A.1.1.1. Status and trends in development of numbers of selected vascular plants, mosses, lichens, alga (*assessed by the Ministry of the Environment*)

A.1.1.2. Status and trends in development of numbers of selected species of reptiles, amphibians and invertebrates (*assessed by the Ministry of the Environment*)

A.1.1.3. Status and trends in development of numbers of selected species of mammals, birds and fish (*assessed by the Ministry of the Environment*)

A.1.1.4. Survey of protected areas in Slovakia (*assessed by the Ministry of the Environment*)

A.1.1.5. Recording the sites of appearance of critically endangered, endangered and rare animal species (*assessed by the Ministry of the Environment*)

A.1.1.6. Recording the sites with appearance of rare and endangered plant species (*assessed by the Ministry of the Environment*)

A.1.2. Endangered species

A.1.2.1. Red list of plants (*assessed by the Ministry of the Environment*)

A.1.2.2. Red list of animals (*assessed by the Ministry of the Environment*)

A.1.3. Species of European importance

A.1.3.1. Status and trends in development of numbers of plant species of European importance (*assessed by the Ministry of the Environment*)

A.1.3.2. Status and trends in development of numbers of selected species of animals of European importance (*assessed by the Ministry of the Environment*)

A.1.4. Alien and invasive species

A.1.4.1. Number of alien species of organisms (*assessed by the Ministry of the Environment*)

A.1.4.2. Distribution of known invasive species of organisms (*assessed by the Ministry of the Environment*)

A.2. Diversity of ecosystems

A.2.1. Water and wetland ecosystems

A.2.1.1. Changes in numbers of selected plant species which are connected to water and wetland ecosystems (*assessed by the Ministry of the Environment*)

A.2.1.2. Number of plant species which are connected to water and wetland ecosystems and are included in the red lists of Slovakia (*assessed by the Ministry of the Environment*)

A.2.2. Grassland and xerotherm ecosystems

A.2.2.1. Changes in numbers of selected plant species which are connected to grassland and xerotherm biotopes (*assessed by the Ministry of the Environment*)

A.2.2.2. Number of plant species which are connected to grassland and xerotherm biotopes and are included in the red lists of Slovakia (*assessed by the Ministry of the Environment*)

A.2.4. Forest ecosystems

A.2.4.1. Health condition of forests (*assessed by the Ministry of Agriculture*)

A.2.4.2. Age structure of forests (*assessed by the Ministry of Agriculture*)

A.2.4.3. Forest ownership (*assessed by the Ministry of Agriculture*)

A.2.4.4. Decrement and increment of forest (*assessed by the Ministry of Agriculture*)

A.2.4.5. Representation of stand types (*assessed by the Ministry of Agriculture*)

- A.2.4.6. Intensity in the use of forest resources – timber reserve, increment, harvesting (*assessed by the Ministry of Agriculture*)
- A.2.4.7. Forest transport network (*assessed by the Ministry of Agriculture*)
- A.2.4.8. Forest categorisation (*assessed by the Ministry of Agriculture*)
- A.2.4.9. Representation of coniferous and broad-leaved species (*assessed by the Ministry of Agriculture*)
- A.2.4.10. Hunting and spring basic status of forest species of game animals (*assessed by the Ministry of Agriculture*)
- A.2.5. Agricultural ecosystems
 - A.2.5.1. Arable land per capita (*assessed by the Statistical Office*)
 - A.2.5.2. Change in land structure (*assessed by the Statistical Office*)
 - A.2.5.3. Built-up areas on agricultural lands in the first three quality classes (*assessed by the Ministry of Agriculture*)
 - A.2.5.4. Numbers of farming animals (*assessed by the Statistical Office*)
 - A.2.5.5. Consumption of pesticides (*assessed by the Ministry of Agriculture*)
 - A.2.5.6. Consumption of industrial fertilisers (*assessed by the Ministry of Agriculture*)
 - A.2.5.7. Irrigated and meliorated areas (*assessed by the Ministry of Agriculture*)
 - A.2.5.8. Precipitation and run-off conditions (*assessed by the Ministry of the Environment*)
 - A.2.5.9. Quality and quantity of atmospheric precipitation (*assessed by the Ministry of the Environment*)
 - A.2.5.10. Water erosion on agricultural soil (*assessed by the Ministry of Agriculture*)
 - A.2.5.11. Wind erosion (*assessed by the Ministry of Agriculture*)
 - A.2.5.12. Nitrogen balance (*assessed by the Ministry of Agriculture*)
 - A.2.5.13. Genetic diversity of farming animals (*assessed by the Ministry of Agriculture*)
 - A.2.5.14. Size of areas where agri-environmental techniques are applied (*assessed by the Ministry of Agriculture*)

B. Indicators of pressures on biodiversity

B.1. Public and transport facilities, industry and energy

- B.1.1. Transport infrastructure
 - B.1.1.1. Fragmentation of landscape by transport infrastructure (*assessed by the Ministry of Transport, Posts and Telecommunications*)
 - B.1.1.2. Density of road infrastructure (*assessed by the Ministry of Transport, Posts and Telecommunications*)
 - B.1.2.3. Density of railway infrastructure (*assessed by the Ministry of Transport, Posts and Telecommunications*)
- B.1.2. Settlement
 - B.1.2.1. Density of settlement by regions (*assessed by the Statistical Office*)
 - B.1.2.2. Share of urban and rural inhabitants in regions (*assessed by the Statistical Office*)

B.2. Pollution

- B.2.1. Soil quality
 - B.2.1.1. Soil reaction (*assessed by the Ministry of Agriculture*)
 - B.2.1.2. Soil contamination (*assessed by the Ministry of Agriculture*)
- B.2.2. Water quality
 - B.2.2.1. Organic pollution in the Slovak watercourses (*assessed by the Ministry of the Environment*)
 - B.2.2.2. Content of nutrient and chlorophyll „a“ in the Slovak watercourses (*assessed by the Ministry of the Environment*)
 - B.2.2.3. Concentration of nitrates in the Slovak watercourses (*assessed by the Ministry of the Environment*)

- B.2.2.4. Concentration of total phosphorus in the Slovak watercourses (*assessed by the Ministry of the Environment*)
- B.2.2.5. Average values of selected heavy metals in the Slovak watercourses - cadmium, lead, chromium, copper (*assessed by the Ministry of the Environment*)
- B.2.2.6. Appearance of xenobiotics in water (*assessed by the Ministry of the Environment*)
- B.2.2.7. Acidity and concentration of sulphates in watercourses (*assessed by the Ministry of the Environment*)
- B.2.2.8. Alkalinity in watercourses (*assessed by the Ministry of the Environment*)
- B.2.2.9. Quality of surface water in the Slovak watercourses (*assessed by the Ministry of the Environment*)
- B.2.2.10. Quality of groundwater (*assessed by the Ministry of the Environment*)
- B.2.2.11. Concentration of nitrates (nitrate ions) in groundwater (*assessed by the Ministry of the Environment*)
- B.2.2.12. Emissions of nutrients and heavy metals in waste water (*assessed by the Ministry of the Environment*)
- B.2.2.13. Waste water discharge to watercourses (*assessed by the Ministry of the Environment*)
- B.2.2.14. Waste water treatment plants (*assessed by the Statistical Office*)
- B.2.2.15. Fragmentation of water ecosystems (*assessed by the Ministry of the Environment*)
- B.2.3. Air quality
 - B.2.3.1. Air pollution in the areas of air quality management (*assessed by the Ministry of the Environment*)
 - B.2.3.2. Total emissions of selected basic pollutants (*assessed by the Ministry of the Environment*)
 - B.2.3.3. Total emissions of ammonia (*assessed by the Ministry of the Environment*)
 - B.2.3.4. Total emissions of pollutants with major contribution to acidification from the point of view of meeting the commitments resulted from the international conventions and agreements (*assessed by the Ministry of the Environment*)
 - B.2.3.5. Emissions of heavy metals (*assessed by the Ministry of the Environment*)
 - B.2.3.6. Emissions of volatile organic compounds (VOC) (*assessed by the Ministry of the Environment*)
 - B.2.3.7. Emissions of persistent organic pollutants (POP) (*assessed by the Ministry of the Environment*)
 - B.2.3.8. The most important sources of air pollution in Slovakia (*assessed by the Ministry of the Environment*)
 - B.2.3.9. The level of ground ozone, exceeding the concentration limits (*assessed by the Ministry of the Environment*)
 - B.2.3.10. Index of AOT exposition for vegetation protection (*assessed by the Ministry of the Environment*)
 - B.2.3.11. Amount of emitted sulphur and nitrogen from the Slovak territory (*assessed by the Ministry of the Environment*)
 - B.2.3.12. Amount of sulphur and nitrogen deposited on the Slovak territory (*assessed by the Ministry of the Environment*)
 - B.2.3.13. Emissions to air by industrial sectors (*assessed by the Ministry of the Environment*)
- B.2.4. Waste management
 - B.2.4.1. Wastes from agriculture (*assessed by the Statistical Office*)
 - B.2.4.2. Intensity of waste paper recycling (*assessed by the Ministry of the Environment*)
 - B.2.4.3. Intensity of waste glass recycling (*assessed by the Ministry of the Environment*)
 - B.2.4.4. Recycling of ferrous waste in Slovakia (*assessed by the Ministry of the Environment*)
- B.2.5. Fires and floods

B.2.5.1. Forest fires (*assessed by the Ministry of Interior*)

B.2.5.2. Floods in Slovakia (*assessed by the Ministry of the Environment*)

B.3. Climate change

B.3.1. Trend in global average air temperature (*assessed by the Ministry of the Environment*)

B.3.2. Consequences of climate changes for biota (*assessed by the Ministry of the Environment*)

B.3.3. Consequence of climate change for hydrological conditions (*assessed by the Ministry of the Environment*)

C. Indicators of response in biodiversity

C.1. Management

C.1.1. Economic indicators

C.1.1.1 Total expenses in the environment from the national budget, including the European Union resources (*assessed by the Ministry of the Environment in cooperation with other sectors*)

C.1.1.2. Share of expenses of the Ministry of the Environment in total expenses for the environment (*assessed by the Ministry of the Environment*)

C.1.1.3. Financial resources provided from the Environmental Fund (*assessed by the Ministry of the Environment*)

C.1.1.4. Incomes of the Environmental Fund (*assessed by the Ministry of the Environment*)

C.1.2. International cooperation

C.1.2.1. International conventions in the area of environmental protection and management (*assessed by the Ministry of the Environment*)

C.1.2.2. Bilateral assistance and cooperation in the area of environmental protection (*assessed by the Ministry of the Environment*)

C.1.2.3. Multilateral assistance (*assessed by the Ministry of the Environment*)