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NATIONAL CAPACITY SELF-ASSESSMENT RELATED TO ENVIRONMENTAL MANAGEMENT OF GLOBAL CONVENTIONS

**Thematic Assessment Report on Capacity Development
Needs for the Convention on Biological Diversity
in the Slovak Republic**

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List of acronyms

ABS	Access to Genetic Resources and Benefit Sharing
AP NBS	Action Plan for Implementing the National Biodiversity Strategy
BB	Biological safety
BD	Biodiversity
CBD	Convention on Biological Diversity
CDI	Capacity Development Initiative
CFO	County Forest Office
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
COP	Conference of the Parties
DFO	District Forest Office
EA	Ecosystem approach
EAP	Environmental action program
EET	Environmental education and training
EIA	Environmental impact assessment
EU	European Union
FM	Forest management
FMP	Forest management plan
FRI	Forest Research Institute
GEF	Global Environment Facility
GMO	Genetically modified organism
ILS	Integrated landscape system
IS	Invasive species
MA	Ministry of Agriculture
MD	Ministry of Defense
ME	Ministry of Economy
MEA	Multilateral Environmental Agreement
MEdu	Ministry of Education
MFA	Ministry of Foreign Affairs
MH	Ministry of Health
MoE	Ministry of Environment
MTPT	Ministry of Transport, Posts and Telecommunications
NBS	National Biodiversity Strategy
NCIC	Nature conservation information centre
NCSA	National Capacity-Self Assessment
NFP	National Focal Point
NGO	Non-governmental organization
NSDS	National Sustainable Development Strategy
OECD	Organization for Economic Cooperation and Development
PA	Protected area
REC	Regional Environmental Centre
SAV	Slovenská akadémia vied/ Slovak Academy of Sciences
SB	State budget
SCI	Site of community importance
SD	Sustainable development
SEA	Slovak Environmental Agency
SEI	Slovak Environmental Inspection
SMS	Sectoral Monitoring System
SOP	Sectoral Operational Plan
SOP SR	Statna ochrana prirody SR / State Nature Conservancy of the Slovak Republic
SPA	Special protection area
SPU	Slovenska poľnohospodarska univerzita / Slovak Agricultural University
SR	Slovak Republic

SSCRI	Soil Science and Conservation Research Institute
SSD	Society for Sustainable Development
STC	Scientific and technical cooperation
SU	Sustainable use
TSES	Territorial system of ecological stability
UNCCD	United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Droughts and /or Desertification, Particularly in Africa
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
UNO	United Nations Organization

Executive summary

The United Nations Conference on Environment and Development (Earth Summit) held in 1992 in Rio de Janeiro resulted in a set of documents that laid down the principles and rules for global environmental management. They include the Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC), and the Convention to Combat Desertification in Those Countries Experiencing Serious Droughts and/or Desertification, Particularly in Africa, often referred to as the Rio Conventions. Thus capacity development for a global environmental management has suddenly become an issue for all the countries that have made commitments under these three Conventions.

In May 1999, the Capacity Development Initiative (CDI) was launched as a strategic partnership between the UNDP and the Secretariat of the Global Environment Facility. The initiative resulted in new opportunities for GEF funding in support of national capacity development, *National Capacity Self-Assessment* (NCSA) among them. In January 2004, a project entitled “National capacity needs self-assessment related to environmental management of global conventions” (NCSA Project), was approved for the Slovak Republic by the Chief Executive Officer of the GEF under this new scheme.

The objective of the NCSA project is to determine the priority needs for capacity development in Slovakia in order to expand the country capacity to meet its commitments to global environmental management. This report represents a thematic assessment of capacity development needs for implementing **the Convention on Biological Diversity** and the **Cartagena Protocol on Biosafety**.

The Convention on Biological Diversity is an important landmark in the environment and development as for the first time it takes a comprehensive rather than sectoral approach to the conservation of biodiversity and sustainable use of biological resources. It recognizes that biodiversity and biological resources should be conserved for reasons of ethics, economic benefits and indeed human survival. The CBD goes beyond traditional actions for conservation of biodiversity and sustainable use of biological resources to encompass such issues as access to genetic resources, sharing benefits from the use of genetic material and access to technology, including biotechnology. Currently, one Protocol to the CBD has been adopted – Cartagena Protocol on Biosafety.

The Slovak Republic became a party to the CBD in 1994. In 2004, Slovakia joined the Protocol on Biosafety. At the international level, the conservation of biodiversity and sustainable use of its components is addressed through various multilateral environmental agreements and initiatives. At the national level, specific documents include the National Biodiversity Strategy and the Action Plan for implementing the NBS.

For the purpose of determining the most urgent capacity development needs, priority areas under the CBD where identified where capacity development interventions could lead to the most effective effects on the conservation of biodiversity and sustainable use of its components in Slovakia. The highest priority has been accorded to improving the integration of conservation of biodiversity and sustainable use of its components into policies, strategies, programs and plans of all sectors and into decision making processes. Other priority areas include education and awareness, conservation of biodiversity *in-situ*, control of genetically modified organism and promotion of the ecosystem approach to conservation of biodiversity and sustainable use of its components within forest, freshwater and agricultural ecosystems.

With regard to system level capacities, it has been concluded that in order to strengthen capacities for implementing the CBD and Biosafety Protocol it is of vital importance to revise the NBS (and submit it for approval by the Government and the Parliament) taking due regard of the latest developments in the international agenda and other facts such as the membership of Slovakia in EU. The revised Strategy should include measurable implementation and impact indicators. The revised strategy should be based on the ecosystem approach. It should integrate existing national strategic documents that have been developed in response to the international biodiversity related legal instruments. This will contribute to the overall clarification of the national strategic framework in the area of biodiversity.

The valuation of biodiversity components should become a common practice and should be integrated into national planning and decision making processes. At the same time this would affirm that the importance of biodiversity is not purely scientific or conservation, but rather it has an influence on quality of life.

In order to support integrated approaches to the conservation of biodiversity, it is critical to improve and

complement existing incentive measures and ensure coordination of sectoral planning.

With regard to institutional level capacities, it is necessary to renew, as soon as possible, the operations of the National CBD Secretariat and restructure it into an integrated Secretariat for Biodiversity related MEAs. Simultaneously it is necessary to restore operations of the Slovak CBD Commission in order to facilitate transfer of information from the international to national level as well as among sectors.

It is also necessary to complete appointments of the National Focal Points and integrate them, ex-officio, into the activities of the National CBD Commission. Responsibilities of the National Focal Points should include cooperation with all relevant bodies and agencies active in implementing commitments/themes under the CBD, for which they have been appointed focal points.

It is of vital importance to ensure that Government and public sector institutions have ready and free of charge access to information that are needed for the conservation of biodiversity and sustainable use of its components, particularly if the information is generated through public funds, including funds that Slovakia has received through foreign assistance projects. It is also critical to improve the capacity of the agencies that

are entrusted with monitoring of biodiversity to enable them to generate up-to-date information in support of both decision making processes and assessing the impact of implementing strategic instruments and national laws.

At the individual level capacity, continuous effort should be made to raise awareness of the public, while promoting and encouraging understanding of the importance of biodiversity and biological resources, including its production and non-production functions, as a source of human well being. Access to education and training in the measures required for the conservation of biodiversity and sustainable use of its components should be facilitated for civil servants and public sector employees. Less developed concepts of commitments under the CBD such as the conservation of traditional knowledge on the conservation of biodiversity and sustainable use of its components, application of intellectual property rights over biodiversity components and liability for damages to biodiversity should be also included into education and training programs. Increased level of information and education should be ensured for decision makers at all levels – from the central to local level. Formal and informal education on biodiversity should be integrated within a broader framework of sustainable development and all the three Rio Conventions.

1. Introduction

The geographical location of Slovakia in the center of Europe and on border between the Carpathians and the Pannonian plain results in a high diversity of flora and fauna. Currently, over 11 000 plant species (including algae), over 28 800 fauna species, (including invertebrates), and 1 000 species of protozoa have been identified in Slovakia (9). Many plant and animal species have become extinct as result of intensive utilization of natural resources; others have become rare or endangered. Out of 3,124 species of higher plants, 1,135 species are listed in the Red List of Fens and Flowering Plants of Slovak Flora. For animals 45 % of the species of fish (including lampreys), all species of amphibians and reptiles, 32 % of bird species, and a 65 % of the species of mammals are also endangered. Slovakia features a relatively high diversity of habitats. Their natural distribution has been significantly altered because of spreading settlement and intensive land use.

The international community concerned with increasing rate of biodiversity loss started to address the challenge through various processes. One of the most important events was the United Nations Conference on Environment and Development (Earth Summit) held in 1992 in Rio de Janeiro. The Earth Summit resulted in a set of documents, including Agenda 21 and Rio Declaration that laid down principles of and rules for a global environmental management. The UNCED process has also produced important additions to international law including the Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC), and the Convention to Combat Desertification in Those Countries Experiencing Serious Droughts and/or Desertification, Particularly in Africa, often referred to as the Rio Conventions.

The UNCED and the adopted documents are of global importance and have relevance to all sectors. Thus capacity development for global environmental management had become an issue for all of the countries that have made commitments under these three Conventions. The issue is of particular importance to developing countries and countries with economies in

transition, which on the one hand have insufficient capacities to meet their commitments undertaken under the Conventions while on the other hand the proper implementation of the instrument is vital for their economic and social development.

In May 1999, the Capacity Development Initiative (CDI) was launched as a strategic partnership between the UNDP and the Secretariat of the Global Environment Facility. In January 2004, a project entitled “*National capacity needs self-assessment related to environmental management of global conventions*” (NSCA Project) was approved for the Slovak Republic by the Chief Executive Officer of the GEF under this new scheme. The objective of the NSCA project is to determine the priority needs for capacity development in Slovakia in order to expand the country capacity to meet commitments to global environmental management. The project also focused on capacity related issues that are common across the conventions, assessing the capacities needed to address these in a synergistic fashion. These include needs associated with strengthening existing institutional mechanisms and developing networks. Thematic capacity assessments were undertaken in the three areas of biodiversity, climate change and desertification to provide a base for determining cross-cutting issues in order to identify capacity development needs that are specific to individual Conventions. Thematic assessments considered all three capacity levels.

This report presents results from the comprehensive assessment of existing capacities in Slovakia for **the Convention on Biological Diversity** and the **Cartagena Protocol on Biosafety**. The report includes a description of existing capacities and recommendations for capacity development through various forms of interventions with the ultimate objective of ensuring long term and efficient implementation of the CBD in the context of other Rio Conventions. The Report has been prepared as stand-alone assessment document, while at the same it served as one of the background documents for developing National Self-Assessment Report (NSAR) and a proposal of the Action Plan (AP).

2. Methods

2.1. Concept of capacity building and capacity development

In the global context, “*capacity building*” is being used in many contexts. Most often it refers to developing the ability of individuals and institutions to make and implement decisions and perform functions in an effective, efficient and sustainable manner (1, 2). However, a new term “*capacity development*” has been proposed since this terminology shifts emphasis from a process that is externally driven to one which is self-motivating and takes place gradually from within. Capacity building/development needs to be addressed at the three levels: individual, institutional and systemic.

Capacity development at **the individual level** refers to the process of changing attitudes and behaviors, imparting knowledge and developing skills while maximizing the benefits of participation, knowledge exchange and ownership. It aims to investigate “individual” responsibilities and interests on plans and decisions including personal incentives and expertise.

Capacity development at the **institutional level** focuses on the overall organizational performance and functioning capabilities of the single institution, as well as its ability to adapt to change. It aims to develop the institution as a total system, including individuals, groups and the organization itself.

Capacity development at the **systemic level** is the most challenging effort, since it aims at reaching favorable political, regulatory and financial framework, in which individuals and organizations operate and interact with the external environment, as well as the formal and informal relationships of institutions. Traditionally, interventions at the systemic level were simply termed “institution strengthening.”

Capacity development concepts have been described in various documents: for the purpose of this assessment ones produced by UNDP /GEF have been most relevant (1, 2, 3, 5, and 25). Pursuance to them (2) capacity development needs are to be assessed, according to the below 5 generic indicators:

- **Capacity to conceptualize and formulate policies, legislations, strategies, and programs**

This category includes analyzing global conditions that may affect country needs and performance in a given area, developing a vision, long-term strategizing, and setting of objectives. It also includes conceptualizing broader sectoral and cross-sectoral policy, legislative

and regulatory frameworks, including synergies between global environmental conventions. It further contains prioritization, planning and formulation of programs and projects.

- **Capacity to implement policies, legislations, strategies, and programs**

This category includes process management capacities that are essential in the implementation of any type of policy, legislation, strategy and program. It also includes execution aspects of program and project implementation. It includes mobilizing and managing human, material and financial resources, and selection of technologies and procurement of equipment.

- **Capacity to engage and build consensus among all stakeholders**

This category includes issues such as mobilization and motivation of stakeholders, creation of partnerships, awareness-raising and developing an enabling environment for civil society and the private sector, stakeholder identification and involvement, managing of large group process and discussion, including mediation of divergent interests, as well as the establishment of collaborative mechanisms.

- **Capacity to mobilize information and knowledge**

This category pertains to the mobilization, access and use of information and knowledge. It includes issues such as effectively gathering, analyzing and synthesizing information, identifying problems and potential solutions, as well as consulting experts and peers. It further covers specific technical skills including the capacity to carry out scientific and technical assessments.

- **Capacity to monitor, evaluate, report and learn**

This category pertains to the monitoring of progress, measuring of results, codification of lessons, learning and feedback, and ensuring accountability to ultimate beneficiaries and partners. It also covers aspects such as reporting to donors and global conventions. It naturally links back to policy dialogue, planning and improved management of implementation.

2.2. Review of methods and procedures used in assessment

Stock-taking

Stock-taking and inventory of existing capacities were the first steps in the assessment. It was done through *review of relevant documents* (Convention on Biologi-

cal Diversity, Protocol on Biosafety, Decisions of the Conference of the Parties and Meeting of the Parties to the Protocol, National Biodiversity Strategy, and EU strategic documents on biodiversity) and *interviews*. Interviews were conducted with different stakeholders, including representatives of Ministry of the Environment, Ministry of Agriculture, Slovak Commission for the Convention on Biological Diversity, State Nature Conservancy of the Slovak Republic, Institute of Landscape Ecology of the Slovak Academy of Sciences, Forest Research Institute, Slovak Agriculture University, Daphne – Institute of Applied Ecology.

Stakeholder workshops

Two stakeholder workshops were held: an initial stakeholder was held on 29 June 2004, second stakeholder workshop was held on 11 November, both in Bratislava. These workshops were attended by participants representing interests of all three conventions.

Email networking with relevant experts and institutions

In order to ensure dissemination of timely information and to provide continuous communication with stakeholders all working documents were distributed through e-mail. All working documents were also published on the web page of the implementing agency – the Soil Science and Conservation Research Institute. These arrangements allow for all stakeholders to participate in consultations and submit their comments to this report.

Stakeholder analysis

A stakeholder analysis is an analytical tool to determine who should be involved in a project, an activity or a process, and how to involve each stakeholder. Information obtained should be used in the development of capacities for implementing key commitments under the Convention. Review of the key stakeholders to the CBD in Slovakia is presented in Annex 1.

Priority-setting

Within the framework of the commitments and actions needed to address them, those were identified, where capacity development interventions can influence

most effectively the overall implementation of the CBD at the national level. Priority-setting was inevitable considering the scope of the NSCA Project.

SWOT analysis

The SWOT analysis specifies and summarizes information on issues that deal with requirements, needs and areas that call for the improvement. It analyses strong and weak aspects. Improvement of weaknesses is the subject of strategic planning. SWOT analysis also allows for the identification of opportunities and threats to implementing of proposed measures.

2.3. Management and organization of NCSA project

Prior to the launching of the NCSA project in February 2004, the following coordination structure was introduced:

- The Ministry of Environment (MoE) acted as the executing agency for the project. In its capacity as executing agency, the MoE is responsible for the supervision of the project, production of outputs and management of UNDP funds.
- The Soil Science and Conservation Research Institute was appointed as the implementing agency for the project and takes responsibility for the day to day management of the project.
- The Project Steering Committee was established to oversee the project. The steering committee is a political platform for strategic collaboration among relevant institutions, being responsible for policy input, functional guidance, and overall co-ordination of the project.
- The Project Board was established to oversee the daily operations of the project, discuss actual matters related to the implementation of the project's follow-up, such as the work plan, financial management and other matters.
- Four working groups, namely climate change, biodiversity, desertification, and cross-cutting issues were established based on existing working group structures for the Conventions and supervised by the National Focal Point.

3. Background situation

Currently there is a broad legal and political framework that defines or prioritizes activities on conservation of biological diversity (BD) and sustainable use (SU) of its components. The Convention on Biological Diversity and the Cartagena Protocol on Biosafety are basic international legal instruments setting up the framework.

The text of the Convention on Biological Diversity (hereinafter as CBD) was adopted in Nairobi in 1992. Later, in June 1992, at the United Nations Conference on the Environment and Development the Convention was opened for signature and came into force at the end of the year 1993.

The objectives of this Convention are:

- conservation of biological diversity (Articles 6-9, 11 and 14);
- sustainable use of its components (Articles 6, 10 and 14); and
- fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including appropriate access to genetic resources (Article 15) taking into account all rights over those resources as well as transfer of relevant technologies (Articles 16 and 19) taking into account all rights to technologies.

The definition of “biological diversity” in this Convention covers all life forms, that is **diversity and variability among living organisms from all sources including their terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; biological diversity thus includes diversity within species, between species and of ecosystems**. The Convention on Biological Diversity does not cover human genetic resources¹. The Convention defines biological resources as components of **biological diversity with actual or potential value for humanity**.

The Cartagena Protocol on Biosafety (hereinafter as the Protocol) addresses specific questions of biosafety in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology.

The framework of international law is completed by other global or regional conventions, which deal with the conservation of biological diversity or sustainable use of its components² and to which the SR is a party.

The activities for the implementation of the Convention and Protocol commitments are detailed in 178 decisions, which have been adopted at the meetings of the *Conference of the Parties* (hereinafter as COP) and in 14 decisions of the Meeting of the Parties to the Protocol so far. Decisions dealing with the implementation of this Convention based on the ecosystem approach are of key importance.

At the national level, EU legislation has become part of the national legal framework for the conservation of biological diversity and the sustainable use of its components once Slovakia became a member of the EU (see Annex 2).

In addition to international law there are many initiatives and processes that deal with the conservation of BD and the SU of its components. In the pan-European context the most important intergovernmental processes are the Pan-European Biological and Landscape Diversity Strategy and the ministerial (the European Ministers of Environment) conferences called “Environment for Europe”. Within this context and in the framework of the pan-European process key target areas were formulated, where immediate interven-

Box 1: Strategic areas of the Pan-European Biological and Landscape Diversity Strategy

Pan-European Strategy addresses 12 areas for the implementation of the conservation of biological and landscape diversity in Europe:

- Activities necessary for starting the process of strategy implementation.
- Establishment of the Pan-European Ecological Network.
- Integration of biological and landscape diversity concerns into sectoral policies
- Building awareness and support of the public and decision-makers
- Landscape conservation
- Coastal and marine ecosystems
- European river ecosystems
- Inland wetlands
- Grasslands
- Forest ecosystems
- Mountain ecosystems
- Threatened species conservation

¹ This fact was confirmed by the decision II/11 adopted by the COP at its second meeting in Jakarta in 1995.

² The list of international conventions in the field of the conservation of biological diversity or the sustainable use of its components can be found at the webpage: www.enviro.gov.sk.

tions are needed to halt a biological diversity loss in Europe by the year 2010. These became part of the Kyiv Resolution on Biodiversity adopted at the 5th ministerial conference.

Box 2: Measures for biodiversity included in Kyiv Resolution of the ministers of environment

The Kyiv Resolution on Biodiversity adopted at the 5th ministerial conference within the Environment for Europe process (Kyiv, May, 2003) covers measures in different areas as follows:

- for the conservation of forest biodiversity to support application of the ecosystem approach, implementation of international initiatives and national implementation based on national forest programs,
- for the conservation of agricultural ecosystems to identify all high value areas in the agricultural land, which are important from the nature conservation point of view and take into consideration conservation needs while proposing financial subsidy and incentive schemes,
- for strengthening of the ecological networks it is necessary to build up Pan-European Ecological Network and adequately ensure conservation of its core areas ,
- for the invasive alien species control to support national implementation of the European Strategy on Invasive Alien Species developed under the Bern Convention,
- in financing biodiversity it is necessary substantially to increase public and private financial investments for the conservation of biological diversity and sustainable use of its component,
- in monitoring to establish European program on biodiversity monitoring with the application of an agreed set of biodiversity indicators,
- in public participation and awareness it is necessary to develop and implement national communication action plan in order to support stakeholder participation in nature and landscape conservation policy development.

At the EU level, the *European Community Biodiversity Strategy* was adopted in 1998. The Strategy covers 4 main strategic targets. Within target 1 („Conservation and sustainable use of biological diversity”) countries of the European Community should find a common approach to conservation, and where necessary, to the restoration of ecosystems and species populations approaching their natural status and conditions. In the target sub-area – „*In-situ* conservation” the Strategy significantly deals with the network of special areas of conservation that are part of NATURA 2000. Its main objective is **“...contribute to the implementation of biological diversity through the effective and active conservation of natural habitats and wild fauna and flora in the European territory of the Member States covered by the Treaty establishing the European Community”**. In addition to this, the Strategy also addresses the conservation of landscape struc-

tures. For this purpose it involves activities on minimizing impacts of economic activities on biodiversity in protected areas as well as beyond their boundaries, and especially in areas, where they significantly influence the status of species populations and natural habitats in protected areas even from a relatively long distance from the area itself (e.g. long distance emission transfers, barrier constructions etc.).

Conservation of biological diversity and renewable natural resources has a key place in environmental policy within the Organization for Economic Cooperation and Development (OECD). It is because that conservation of and trade in renewable resources, most notably biological, represents important value for the global economy. In 2001, the OECD adopted the *Environmental Strategy for the First Decade of the 21st Century*. This Strategy presents concrete measures for the reversal of undesirable trends in ecosystem degradation, climate change and pollution of drinking water resources. In pursuance of the Strategy, member states have to integrate biodiversity conservation into planning processes including strategic planning and thus prevent loss of natural habitats and their fragmentation and adjust market conditions in a way that will ensure sustainable use of natural resources.

The Slovak Government agreed with the CBD accession in May 1993 and following ratification, Slovakia became a party to the CBD in November 1994. The Slovak Government signed the Cartagena Protocol on Biosafety in May 2000 and became a party to the Protocol in February 2004.

In 1996, Slovakia hosted a preparatory meeting of the Regional Group for Central and Eastern Europe before the 3rd meeting of the Conference of the Parties. In May 1998, Slovakia was the host country of the 4th meeting of CBD COP. Slovakia has been active in diplomatically significant bodies. Specifically

- three times Slovakia had a representative at the Bureau of COP (in the positions of the reporter of the 2nd meeting of the COP, the vice-president of the 3rd meeting of the COP, and president of the 4th meeting of the COP)
- twice Slovakia held the function of the vice-chairman of the Subsidiary Body on Scientific, Technical and Technological Advice.

The following text describes the existing capacities for the implementation of selected commitments under the CBD organized according to the specific CBD Articles. While assessing capacities it is necessary to take into account that the CBD is a framework convention. Its provisions are expressed mostly as general targets and policies rather than strict and precise obligations. Parties themselves determine the extent of implementation of commitments and their national priorities through the strategic documents such as a national biodiversity strategy and action plan or program in consideration the Convention's objectives. In Slovakia, as described in the text below, priorities are not clearly defined in spite of the fact that the basic strategic documents have been developed.

3.1. General measures for conservation of biological diversity and sustainable use of its components

Article 6 (a) of the Convention requires each party to develop or adopt national strategies, plans or programs reflecting the measures set out in the Convention. This commitment to national planning is simultaneously a commitment for a repetitive process. Article 10(a) of the Convention requires each party to integrate the conservation and sustainable use of biological resources into the national decision-making process. Article 6(b) reinforces this by the requirement to integrate the conservation and SU of biological diversity into relevant sectoral plans, programs and policies.

Systemic level

Conservation of biological diversity, protection and wise use of natural resources, optimizing the spatial structure and use of landscape are considered one of five priorities of the state environmental policy³.

The National Biodiversity Strategy (hereinafter as NBS) is a specific strategic document for the implementation of the Convention in Slovakia⁴. The NBS reflects the ambition for the comprehensive and balanced implementation of the Convention as a whole. It does not define clear priorities but rather sets out 24 objectives for reinforcement of the conservation of BD and SU of its components. For the achievement of these objectives, NBS defines 126 strategic directions all together⁵. The Strategy does not contain measurable indicators, which would enable an objective assessment of its implementation. The schematic pyramid consisting of four NBS objectives is the only indication for the hierarchy of the importance of particular activities (Box 3). At same time, it shows that the system can function effectively only on the condition that all of its components are present and interacting.

Box 3: Pyramid for the implementation of the Convention on Biological Diversity

cooperation
general measures
sustainable use
conservation of biological diversity

The NSOB is implemented through action plans (hereinafter as AP NBS). Implementation of the AP NBS is monitored and evaluated in three-year-intervals. The Slovak Government is informed on the results of the

evaluation. However, evaluation is based on checking of which activities are implemented without assessing the impact of specific implemented activities on the status of biodiversity⁶. At the sub-national level, (e.g. at level of county or district) there is no tradition of developing strategies on the conservation of biological diversity and sustainable use of its components.

Principal environmental law in Slovakia is the Act No. 17/1992 on the Environment. It sets out definitions and principles for environmental protection and general obligations in environment protection, including biodiversity conservation. Many of its provisions are too general to be applicable in the practice. In addition to this Act, the national legal framework for the conservation of BD and SU of its components consists of many other legal regulations, which are described in the following text. The Act No. 543/2002 on Nature and Landscape Conservation as amended by later regulations is one of the most important.

The Slovak Government, through Resolution No. 978/2001 approved another important strategic document – the National Strategy on the Sustainable Development of SR (NSSD)⁷. Biodiversity related issues (i.e. *biodiversity loss*) are not included among 28 primary problem areas or in the strategic objectives of the NSSD of SR. This is in spite of the fact that biodiversity issues have their own place in the global and regional agenda for sustainable development.

In addition to the NBS and the AP NBS there are sectoral strategies, programs and plans, which in a different way relates to the conservation of biological diversity and the sustainable use of its components. These, however, represent responses to on-going initiatives. However, planning in general is weekly coordinated and integrated in existing strategic documents. One of the effects of this “planning inflation” is the difficulty in understanding priorities both for stakeholders and decision makers.

Institutional level

The Ministry of the Environment (hereinafter the “MoE”) is responsible for the co-ordination of implementation of the Convention. Other sectors of the government, scientific and supporting institutions, and NGOs participate in the development and implementation of the NBS through the AP NBS. The private sector plays an important role in the implementation of the Convention.

In September 1994, the National Secretariat of the CBD was established at the MoE in the form of a “Bi-

³ State environmental policy was approved by the Government Resolution No. 18/1992. Strategy, Principles and Priorities of the State Environmental Policy is the basic strategic document (Government Resolution No. 619/1993 and Resolution of the National Council No. 339/1993).

⁴ NBS in Slovakia was approved through the Government Resolution No. 231/1997 and through the Resolution of NC SR No. 676/1997. NBS was developed with financial support of GEF.

⁵ Text of NBS is available at the webpage: www.enviro.gov.sk.

⁶ Currently there is the AP NBS for period of 2003 – 2010 under implementation.

⁷ The NSSD of SR was developed within the project “Support of the Sustainable Development in the Slovak Republic, which was implemented with the financial support from UNDP in 1999 – 2001. The project was implemented by REC Slovakia and supervised by the MoE.

odiversity Unit” within the Division for Nature and Landscape Conservation. The Secretariat became the CBD *National Focal Point* (hereinafter the “NFP”). The Secretariat also supported the work of the Slovak Commission for the CBD and coordinated development of the NBS and the first National Report on the Status and Conservation of Biological Diversity in Slovakia.

In November 1995 by Resolution of the Minister of the Environment, the Slovak Commission of the CBD was established as a cross-sectoral advisory body to the Minister of the Environment⁸.

In 2001, the Biodiversity Unit was terminated and consequently the National Secretariat for the CBD terminated its work. Since then, one staff member of the Division for Nature and Landscape Conservation has been serving as the NFP in addition to his other responsibilities. This fact adversely influenced the work of the Slovak Commission for the CBD. Inactivity of the Commission contributes to the lack of transfer of information from the international to the national level and among relevant sectors.

By November 2004 there are three other focal points appointed for the purposes of the CBD:

- NFP for the clearing-house mechanisms (SPU in Nitra),
- NFP for invasive alien species (SOP SR in Banská Bystrica),
- NFP for the global taxonomy initiative (Botanical Institute of the SAV in Bratislava).

For the other areas of the CBD identification of the focal points has not been done⁹.

Co-ordination of the implementation of the NBS is insufficient as a consequence of strongly underestimated capacities (human, information, financial) at the institutional level. Effective transfer of relevant information from the international level to the national level is not achieved. There is almost no transfer of information on the development of the international agenda from the national level to the regional, district or local levels. There is no administrative support for work of the Slovak Commission for the CBD.

The lack of coordination of technical institutions dealing with issues of nature conservation, landscape, soil or the other components of the environment, due to their sectoral organization (e.g. agriculture, forestry, water management) does not allow effective use of the potential of these organizations.

The advisory initiative and coordination body of the Government – the National Committee for the Sustainable Development, was established in order to *inter alia*, “...co-ordinate activities of ministries, central bodies of the state administration and municipalities in the implementation of Agenda 21, principles of sustainable development and assessment of the indicators of sustainable development”. However, its mandate, functions and activities are formal, lacking sufficient competencies and respect (within last three years, the Committee was inactive).

Stakeholder analysis was carried out in the framework of this project (NCSA project). It resulted in the identification of key stakeholders and their respective interests and roles with respect to the project objectives and consequently capacity development in the relevant area. The results of the analysis are in Annex 3.

Individual level

At the individual level, there are many experts for the development of general measures for the conservation of biological diversity and sustainable use of its components. However, their involvement is lacking as a consequence of insufficient co-ordination and mechanisms promoting integration of the conservation of biological diversity and sustainable use of its components into strategies, policies and programs of other sectors.

3.2. Identification and monitoring

Article 7 (a, b) requires parties to the CBD to identify components of biological diversity important for the conservation of biological diversity and sustainable use of its components¹⁰. It also requires contracting parties to monitor the components of biological diversity. Particular attention is given to the components of biodiversity which require urgent conservation measures and which offer the greatest potential for sustainable use.

Systemic level

Components of biodiversity, which are important for the conservation of biological diversity and sustainable use of its components, have been identified through the national legal regulations in the field of nature conservation¹¹, hunting and fishery¹². Implementation of different legal regimes has a negative influence on the management of protected animal species and on decision-making processes.

National red lists of protected animal species are developed for all groups of vertebrates and for selected

⁸ The Slovak Government discussed the Statutes of the Slovak Commission of the CBD at its session on June 25, 1996. Entrusted representatives of sectoral ministries, scientific institutions, and NGOs became members of the Commission.

⁹ e. g. NFP for the access to genetic resources.

¹⁰ It is not required to have complete list of all components of biodiversity recorded within jurisdiction of relevant country but to have regard to the categories of the biodiversity components set down in Annex 1 of the CBD: ecosystems, natural habitats; species and communities; described genomes and genes of social, scientific or economic importance.

¹¹ Regulation No. 24/2003, which takes into consideration the identification of natural habitats and species important from the conservation point of view at the EU level.

¹² Act No. 61/1977 on Forests as amended by later regulations, Act No. 23/1962 on Hunting, and Act No. 139/2002 on Fishery.

groups of invertebrates. However, data on species are missing, especially for invertebrates.

Box 4: Species conservation

According to the current common legal regulations 1 356 vascular and non-vascular plant species are protected in Slovakia of which 539 are protected at the EU level. 110 vascular plant species included in in Annex II of the CITES are subject to the special regime in trade. From the total number of 11 246 plant species of Slovakia 12,05 % are protected. Of them, 89,6 % are vascular plants, 1,7 % are bryophytes, 1,6 % are lichens, 6,6 % are fungi and 0,5 % are algae.

In Slovakia 2 939 taxa of vascular and non-vascular plants are threatened, 196 are extinct. Compared to the 2001 assessment, number of threatened taxa was increased by 230 in case of vascular plants and by 26 species of non-vascular plants..

Furthermore, 754 taxa of animals (742 species, 12 genera) are protected in Slovakia of which 257 are protected in the EU countries. In accordance with the EU legislation, all bird species naturally occurring in the European territory of the EU Member States are protected in Slovakia also. 65 native taxa of animals are included into Annexes I and II of CITES. 2 248 taxa of animals are threatened and 42 are considered to be extinct.

According to the hunting legal regulations from the total number of protected animal species some of them are classified as game species, namely 11 species of mammals and 43 bird species. Regime of the fishery act covers 17 protected fish species.

The Concept of the Monitoring System of the Environment of Slovakia was adopted through the Government Resolution No. 449/1992¹³. Monitoring of the environment is implemented at three levels: (i) national, covering the whole area of Slovakia, (ii) regional and local, (iii) specific monitoring. The national environmental monitoring system is divided according to the monitored components of the environment into sectoral monitoring systems (hereinafter "SMS"). From the biodiversity point of view, two of them are important: BIOTA and FORESTS.

In 2001 the Slovak Government approved set of indicators for the assessment of status and trends of biodiversity. These have not been applied in practice yet and BIOTA SMS as a whole is not functional. The BIOTA SMS is divided into three sub-systems: monitor-

ing of plants, monitoring of animals and monitoring of non-forests habitats¹⁴.

Implementation of long-term monitoring of the favorable conservation status of natural habitats and species is one of the objectives of the Strategy on Establishment of the Network of Protected Areas NATURA 2000 in Slovakia. According to the Strategy methodology of monitoring for 19 types of forest habitats, 47 types of non-forest habitats, 51 plant species including bryophytes, 81 bird species and other 154 animal species was developed in 2004.

Implementation of the long-term monitoring of the status of components of agricultural biodiversity is provided for in the Act No. 215/2001 on Conservation of Plan Genetic Resources for Food and Agriculture. Provisions of this act were reflected in the National Program for the Conservation of Plan Genetic Resources for Food and Agriculture. The Ministry of Agriculture (hereinafter "MA") is responsible for its implementation¹⁵.

Institutional level

The MoE is in charge of co-ordination and methodologies for national level monitoring. This is ensured through the Co-ordination Board for Monitoring of the Environment, which is an advisory body to the Minister of the Environment for the issues of co-ordination and harmonizing of the SMS. The Board consists of experts and responsible officers in managerial positions from institutions responsible for the respective SMS.

The MoE (through the SOP SR) is responsible for the BIOTA SMS, the MA (through the Forest Research Institute in Zvolen) has a responsibility for the FORESTS SMS. However, except to pilot projects, monitoring of biota has not been implemented due to insufficient financial, material, personal and technical capacities in the SOP SR and the lack of a comprehensive monitoring methodology.

The lack of financial resources has not allowed broader use of the capacities of other institutions in the monitoring of biota. Monitoring of forests is limited to the assessment of the health status of forests of Slovakia in the network 16 x 16 km on 111 permanent monitoring plots.

The MoE together with the MA are responsible for implementing monitoring for the purpose of implementation of EU directives¹⁶. The barrier to the implementation of monitoring is insufficient personal, technical

¹³ Due to continuing problems with the implementation of the Concept of monitoring, a new Concept of Building up the Complex Monitoring and Information System of the Environment was approved by the government Resolution No. 7/2000.

¹⁴ While monitoring of non-forest natural habitats is not functional due to not developed methodology, monitoring of plants and animals is partially implemented for selected species on permanent monitoring plots.

¹⁵ Attention is mainly given to the genetic erosion of threatened original cultivars of cultivated plant species and original breeds of domestic animals.

¹⁶ Directive 79/409/EEC on the Conservation of Wild Birds and Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.

equipment, and financial resources of relevant institutions.

The Research Institute of Plant Production in Piešťany provides co-ordination of activities in the field of monitoring of agricultural biodiversity. The National Gene Bank for the preservation of plant genetic resources in the form of seeds is situated at this Research Institute. The Institute for Conservation of Biological Diversity and Biosafety at the SPU, Nitra actively participates in the implementation of the monitoring. The Institute has established gene banks for the preservation of collections of vegetatively propagated plant species. Technical and material equipment for the monitoring is at the required level.

Financing of monitoring activities, which Slovakia committed to perform in accordance with the Convention, is not sufficiently addressed. Qualified estimates of costs for the implementation of biodiversity monitoring do not exist.

Individual level

Except for to particular taxa, there are many experts for biodiversity monitoring. However, their capacity has not been satisfactorily utilized for monitoring due to insufficient material and technical equipment and the lack of co-ordination. Mobilization of capacities at the individual level (as well as at the institutional level) is generally ad-hoc through projects from foreign aid.

3.3. In-situ conservation of biodiversity

In-situ conservation of biodiversity is a primary approach to the conservation of biological diversity. Article 8 requires parties to adopt legislation necessary for the protection of threatened species and populations as well as measures for the conservation of ecosystems, wild fauna and flora, and genetic diversity. It also covers *in-situ* conservation of animal breeds and plant varieties. Special attention is given to the balance between conservation measures planned within and outside of protected areas.

Article 8(f) requires the restoration of degraded ecosystems and the promotion of the recovery of threatened species. At the same time article 8(g) requires parties to undertake steps for controlling of risks for biological diversity and human health associated with the use or release of living modified organisms which are likely to have adverse environmental impacts.

Systemic level

Act No. 543/2002 on Nature and Landscape Protection provides for the conservation of ecosystems, wild fauna and flora, and genetic diversity. The Act is har-

monized with the EU directives¹⁷. It also integrates commitments that result from other international conventions to which Slovakia is a Party¹⁸. Furthermore, the Act regulates the competencies and responsibilities of state administration bodies as well as rights and obligations of natural persons and legal persons in nature and landscape protection with the aim „to support preservation of diverse living conditions and life forms on the Earth, to create conditions for sustainability, restoration and rational use of natural resources, preservation of natural heritage, characteristic landscape features and to reach and maintain ecological stability“. The act defines categories of protected areas for the conservation of natural habitats and species of national and European importance. Based on the obligation related to the accession of Slovakia into the EU, a proposal for a network of protected areas referred to as NATURA 2000, was prepared according to the criteria laid down in the EU directives. This network consists of two types of protected areas:

- special protection areas (hereinafter “SPA”)
- proposed Sites of Community interest (hereinafter “pSCI”).

Box 5: National network of protected areas

National network of protected area consists of:

9 national parks,
14 protected landscape areas,
385 nature reserves,
228 national nature reserves,
239 nature monuments,
60 national nature monuments,
189 protected sites.
(Nature monuments include also 4 499 caves and 151 natural water falls).

Box 6: NATURA 2000 sites in SR

Network of protected sites – NATURA 2000 in Slovakia consists of:

38 SPA with the total area of 1 236 545 ha
– 25,2 % of the area of the SR.
384 pSCI with the total area of 576 569,4 ha
– 11,76 % of the area of the SR

Overlapping of the pSCI with the current national network of the protected areas is 10,16 % of the area of the SR.

Landscape conservation outside protected areas is based on the principle of conservation of the system of ecological stability (hereinafter “TSES”), which en-

¹⁷ Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora as amended in Directive 97/62/EC (Habitat Directive) which became a basic instrument for the conservation of wild fauna and flora species and their habitats and Directive 79/409/EHS on the Conservation of Wild Bird as amended by 81/854/EEC, 85/411/EEC, 91/244/EEC, 94/24/EC and 97/49/EC (Birds Directive) which protect wild bird species and important habitats and nesting places.

¹⁸ Mainly, the Convention on Wetlands of International Importance especially as Waterfowl Habitat and its amendment; the Convention on the Conservation of European Wildlife and Natural Habitats; the Convention on the Conservation of Migratory Species of Wild Animals; the Convention on the Conservation of World Cultural and Natural Heritage.

sures diversity of life conditions and forms in the landscape. The basic objectives are included in the documents of nature and landscape protection such as:

- The General Framework for the Territorial System of Ecological Stability (GF TSES) approved by the Government Resolution No. 319/1992 (updated GF TSES was approved within framework of the Concept of Territorial Development of Slovakia – CTDS by the Government Resolution No. 1033/2001)
- projects of the Regional Territorial System of Ecological Stability (RTSES)
- projects of the Local Territorial System of Ecological Stability (LTSES).

For the purposes of nature conservation, the MoE called for 29 LTSES. At the regional level, 38 RTSES were elaborated in the period 1993 – 1995. These are of various quality, not inter-linked and partly outdated. In practice, the documentation of TSES has not been implemented widely neither in the decision process relevant to nature conservation nor as a basic document for territorial plans of settlements and zones. According to the prepared documentation of TSES it is possible to ensure conservation of existing components of TSES only, either through their designation as a protected area or through the decision of nature conservation authority. The current legal framework in the field of nature conservation is not a sufficient instrument for landscape restoration and landscaping. The Nature Conservation Development Concept adopted in 80s is outdated.

Trade in endangered wild plant and animal species is regulated in the Act No. 237/2002 on Trade in Endangered Species of Wild Fauna and Flora¹⁹ and its implementing Regulation No. 346 /2002²⁰.

The Act defines the scope, definitions, conditions for import, export, re-export, transit of exemplars, commercial activities and moving of exemplars, records, certification of the origin and unchangeable identification, and identifies the responsible state administration bodies. Other MoE regulations that deal with protected areas and protected plant and animal species are in place.

The legal framework for nature conservation does not take into consideration existing capacities and for this reason law enforcement has considerable gaps. The legal provisions are not sufficiently implemented in relation to damage to biological diversity and violation of national legislation (including the criminal code).

Specific legal regulations address the issue of conservation and sustainable use of genetic diversity, primarily for all economically, ecologically and culturally valuable genetic resources in agricultural and forest eco-

systems. The basic legal framework for the conservation of genetic resources of forest wood species is represented with the Act No. 217/2004 on Forest Reproductive Material.

Box 7: Network for the conservation of genetic diversity of forest wood species

Network for the in situ conservation of genetic diversity of forest wood species consists of:

- 91 gene bases for 20 wood species with the area of 33 011 ha serving for protection of gene pool and biological diversity of the autochthonous forest complexes through nature friendly management
- 11 147 approved seed collection forest tree stands with the area of 61 156 ha. Protected tree stands of phenotype in category A cover 8 407 ha and partly protected tree stands in category B 53 109 ha
- 4 094 elite seed trees of 14 wood tree species serving for the reproduction of the economically and ecologically most valuable gene pool.

Network for the in situ conservation is complemented with measures for the recovery and protection of the forest genetic resources ex-situ:

- 84 seed orchards for 14 wood species with the area of 194.7 ha serving for reproduction of elite tree species
- 36 seed collection tree stands of 6 wood species with the area of 788 ha serving for reproduction of registered seed collection tree stands
- 2 clonal archives with 1150 genotypes of Scots pine, European larch, poplars, willows and black alder.

In situ conservation of agricultural biodiversity components is provided first of all at the level of registered cultivars and hybrids in accordance with Act No. 472/2002 on Cultivars and Seeds for Sowing as well as in accordance with Act No. 215/2001 on the Conservation of Plant Genetic Resources for Food and Agriculture. Conservation is provided primarily for commercially used cultivars and hybrids. *In-situ* conservation is not sufficiently ensured of the original (old native) cultivars of cultivated plant species. This poses threats of genetic erosion and increases the vulnerability of the original (old native) genotypes of plant species in Slovakia. This has to be addressed through a specific legal framework that will be linked with the Rural Development Program, which gives more options for utilization of land races and old cultivars, as well as for funding.

The principle problems in the area of the *in situ* conservation of genetic resources are: marginal attention

¹⁹ On 1st May, 2005 new Act on Trade in Endangered Species of Wild Fauna and Flora will come into force.

²⁰ At the EU level, it is the Council Regulation No. 338/97/EC on the Protection of the Species of Wild Flora and Fauna by Regulating trade Therein as amended in the Council Regulation No. 24/2000/EC, the Council Regulation No. 939/97/EC on Setting up of Detailed Rules Concerning implementation of the Council Regulation No. 338/97/EC as amended in the Council Regulation No. 767/98/EC and the Council Regulation No. 1006/98/EC, the Council Regulation No. 191/2001/EC banning introduction of some species of wild fauna and flora into the Community.

paid to the issue, limited financial resources and consequently limited capacities for the qualified implementation of measures. It appears mostly in the rescue and restoration of meadow agricultural ecosystems as well as forests damaged by long-term air pollution or destroyed by climate extremes.

Institutional level

The MoE is the central body of the state administration for nature and landscape protection. State administration at the sub-national level is executed by regional and sub-district offices for the environment. The SOP SR is the main technical organization for the *in-situ* conservation of biodiversity²¹.

For the *in-situ* biodiversity conservation, responsibilities of individual organizations are clearly defined. However, activities are not well coordinated among sectoral institutions, which manage and implement individual (particular) projects aimed at the *in-situ* conservation of biological diversity. The potential of project steering committees is not always used efficiently. Mechanisms for the coordination of project programming and designing are established in the framework of the environmental sector.

Performance of individual institutions is limited by their capacities. Effectiveness of their performance is assessed through checking the success or failure to complete tasks within the approved annual work plan, and possibly through assessing the effectiveness of funds spent. There is no feedback on the effectiveness of institutional performance on the biodiversity status and development.

In the framework of state administration, the Slovak Environmental Inspection – Inspectorate of Nature Protection was established but its capacities are not sufficient in light of the increased violation of legal regulations. The Nature Guard (at the voluntary base) is managed by the regional offices for the environment. The Nature Guard has not been integrated into the structures serving for the prevention of violations.

The network of specialized institutes, such as the Research Institute of Plant Production²², the Research Institute of Animal Production, and SPU in Nitra, deal with the issues of the preservation of genetic resources for food and agriculture.

The FRI in Zvolen coordinates issues of the conservation and archiving of forest genetic resources. Political support for the issues of conservation of forest

genetic resources has decreased since the time of accession of the SR to the CBD and consequently capacities in this field have been weakened.

Individual level

Competitive and advantageous salary conditions influence the quality of staff at the expert level. Staffing of posts in the public service is compromised and professional requirements have been reduced. The lack of experts in such field as economic and social aspects of biodiversity and related impacts, and incentives is a specific problem. There are many training courses for professionals aimed at the exchange and increasing of knowledge in the biodiversity field. Offers of foreign courses and training are used, but command of the language of the course is the main limitation.

In order to address the legal aspects of the conservation of agricultural biodiversity, including issues of the access to genetic resources and equitable sharing of benefits arising from utilization, it is necessary to train a group of experts for the identification and assessment of original (old native) cultivars of plants.

3.4. Control of invasive alien species

Article 8(h) of the CBD deals with the issue of invasive alien species and requires parties as far as possible and as appropriate to prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species. Other Articles of the CBD and the decision of the COP²³ relate to the issue of invasive alien species indirectly. Article 8(h) includes also intentional and unintentional introductions.

Systemic level

The issue of invasive alien species is addressed through Act No. 543/2002 on Nature and Landscape Protection²⁴ and its implementing Regulation No. 24/2003. While the provisions of Act on Nature and Landscape Protection provide for the protection of the natural species composition of ecosystems, obligation to control invasive alien species according to the related regulation applies to 7 invasive alien plant species. Currently valid legal regulations adopted by other ministries (such as the MFA, MEDu, MTPT), deal with the issue of invasive alien species just marginally. The MA is an exception in a certain respect, with relation to plant health in a newly amended Act on Management of Plant Health, which has provisions concerning invasive alien species.

²¹ SOP SR is a state budgetary organization with country wide activities. In 2004 it had 415 employees.

²² The Institute coordinates National Programme for the Conservation of Genetic Plant Resources for Food and Agriculture.

²³ e.g. Article 12 – research and training, Article 14 – impact assessment and minimizing adverse impacts, Article 17 – exchange of information. The issue of invasive alien species appears for the first time in the conclusions of the COP III. While these first conclusions recommend the parties to incorporate the issue of invasive alien species into further preparation and dissemination of information (reports) on the implementation of Articles 6 and 8 in the framework of the thematic approach development, respectively they support SCOPE and ISSG- IUCN in preparation of the global strategy on invasive alien species and action plan, the conclusions of all other COPs give more and more attention to the issue of invasive alien species and thus put more commitments upon the parties.

²⁴ Provisions of §7, §12 b), §13 section 1a), §14 section 1a), §15 section 1a), §16 section 1a).

As for the strategic documents, the issue of invasive alien species has been included into the NBS. In spite of the fact that the SR should implement the European Strategy on Invasive Alien Species, the national strategy for comprehensively addressing the issue of invasive alien species including control of them has not been developed yet. Existing legal regulations do not integrate the *Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species which Threaten Ecosystems, Habitats or Species* (Decision of the COP VI/23). There is a considerable lack of coordination of the issue.

Institutional level

Responsibilities for invasive species of single authorities and sectoral organizations are not clearly defined and divided and communication and exchange of information is lacking. The consequence of this is that legal regulations are not applied effectively. Execution of the provisions of the Act on Nature and Landscape Protection and its implementing regulations related to invasive alien species is the responsibility of the authorities and organizations, which are supervised by the MoE, namely regional and sub-district environment offices, SEI and SOP SR.

As for NGOs, the DAPHNE – Institute of Applied Ecology partially deals with the issue of invasive alien species.

Individual level

Experts on the issue of invasive alien species control are available. They have opportunities for professional development, while technical equipment varies in institutions. However, experts often have to solve other problems in addition to the issue of invasive alien species. This implies, that the issue of invasive alien species is underestimated.

3.5. Protection of traditional knowledge on biodiversity and sustainable use of its components

According to the Article 8(j) a party to the COP is required to respect, preserve and maintain knowledge, innovation and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and SU of its components, promote wider application of traditional knowledge, innovation and practices with the approval and involvement of their holders and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovation and practices.

Systemic level

This issue is not addressed in a complex way due to low level of public information and underestimation of the importance and opportunities for its utilization in

social and economic programs. The issue is partially included into the National Program for the Conservation of Genetic Resources for Food and Agriculture and the National Program for Promotion of Food Production of Domestic Origin. The issue of traditional knowledge connected with growing and use of plant species is legally stipulated in Act No. 468 /2003 on the Labeling of Product Origin and Geographical Labeling of Products. However, the legislation is not implemented effectively.

Institutional level

Coordination of the activities for the issue of traditional knowledge application belongs to the competence of the MA. The issue is addressed by the Institute of Biodiversity Conservation and Biosafety in Nitra. Also, the Food Production Research Institute in Bratislava conducts the coordination of activities in the area of food production outlined in the National Programme for Promotion of Food Production of Domestic Origin.

Institutional responsibilities for this issue are not defined clearly. Coordination and effective central management of the activities is missing.

Individual level

At the individual level, traditional knowledge about biodiversity is present and applied in many activities connected with the use of biodiversity informally in families. Development of professional careers of individuals in the field of the application of traditional knowledge may be achieved through PhD studies at universities and participation in special courses.

The Institute of Biodiversity Conservation and Biosafety in Nitra prepared a proposal for the accreditation of several specialized courses that are aimed at the training of various target groups for more active use of traditional knowledge in the implementing of social and economic programs at the local and regional levels.

3.6. Ex-situ conservation

Article 9(a) requires every party to adopt measures for ex-situ conservation of components of biological diversity, preferably in the country of origin of such components. This should be done while respecting the fact that ex-situ measures preferably have to complement in-situ²⁵ measures. Article 9(d) requires the regulation of the collection of specimens of species and genetic resources for ex-situ conservation purposes so as to prevent biodiversity loss.

Systemic level

The Act No. 543/2002 on Nature and Landscape Protection which is harmonized with the EU Directive 99/22/EC on Breeding of Wild Animals in Zoological Gar-

²⁵ While Article 9(a) is oriented at the components of biodiversity, Article 9(b) is oriented at the ex-situ conservation facilities for genetic resources. Article 9(c) completes the article 8(f) (rehabilitation and restoration of degraded ecosystems and promotion of the recovery of threatened species). Final purpose of some measures of the ex-situ conservation for wild species (in comparison with the domestic and cultivated species) is their reintroduction into the natural habitats.

dens sets up conditions for keeping wild animals and their breeding in facilities defined by this directive.

Institutional level

Zoological and botanical gardens, arboreta and gene banks represent typical *ex-situ* conservation facilities. *Ex-situ* conservation is ensured for several native species through rescue breeding. Here the capacities of zoological gardens are used only on a limited scale. Botanical gardens participate in *ex-situ* conservation, e.g. in the implementation of measures provided for by the approved recovery programs for critically endangered and rare plant species. The gene banks for native plant and animal species have not been established yet. The gene banks for the conservation of genetic material of cultivated species and microorganisms already exist.

Individual level

Capacities for the *ex-situ* conservation at the individual level are sufficient.

3.7. Sustainable use of components of biological diversity

Article 10 invites the parties to use the ecosystem approach²⁶ for the conservation of biodiversity and SU of its components.

The ecosystem approach (hereinafter “EA”) is an approach and strategy of integrated land use that enables the conservation and sustainable use of biological diversity (all its resources respectively) at a balanced level. Application of the EA in all sectors enables a balance to be reached in three basic objectives of the CBD – conservation, sustainable use and equitable sharing of benefits from the utilization of biological resources. The EA is based on the use of scientific knowledge and traditional experiences, which focus on the structure, processes, functions, mutual relations between organisms and their environment. Human society can be an integrated part of majority of natural or semi natural ecosystems. However, the EA requires an adaptive management in relation to the dynamic natural ecosystem. The EA is methodically based on 12 guiding principles approved by the COP.

Parties have to introduce model approaches to EA application in the use of natural resources in a short time and gradually introduce them in all economic sectors. Parties will submit reports on the effect of such an approach and will mutually cooperate. As a model solution of EA, the *Guiding Principles for the Tourist Development* were developed and approved by the Decision of the COP VII/14. In Slovakia, these guiding principles have not been further developed.

3.7.1. Sustainable use of forest ecosystems

There is a political support for the application of EA in forest ecosystems and the existing international legal framework reinforces it²⁷.

Systemic level

The existing legal framework requires some updates (need for a new act on forests and on hunting). The development of the National Forestry Programme based on cross-sectoral principles is required for more effective implementation.

Institutional level

The MA is responsible body for the implementation of decisions and commitments adopted by the COP for the area of “forest biodiversity”. The MA is the central body of the state administration in forestry and hunting sectors. Implementation support with the use of existing data, information and knowledge is provided by the FRI in Zvolen, the Faculty of Forestry of the Technical University in Zvolen, and Lesoprojekt. Key institutions for co-operation are agencies within the environment sector, SOP SR and SEA in particular.

Mandates and missions of the institutions are defined clearly. Management systems are also defined unambiguously (in the NBS). Information resources require a concept for cross-sectoral linkages, which currently does not exist. Necessary information is partially available therefore completion and updating is required. Access to information is possible through the institutions (Lesoprojekt and the FRI, Zvolen), however, it is necessary to improve the effectiveness of information resources management (to improve the structure and the system of acquiring new information).

Financial resources are insufficient because there is no direct source for financing of the implementation of tasks related to the conservation and maintenance of biological diversity of forest ecosystems within the budget of the MA.

Material conditions are not sufficient and development is not supported in sufficiently flexible way as biodiversity does not have high priority in the Concept of the State Forest Policy. The Concept is mainly focused on the commercial use of forests rather than on the conservation of forest biodiversity.

Processes such as planning, quality management, monitoring and assessment do not work effectively enough because some institution levels are not sufficiently developed or they do not function properly. Execution of the state forest administration is based on the following laws: Act No. 61/1977 on Forests as amended by later regulations, Act No. 100/1977 on

²⁶ Decisions of the COP IV/1/B and V/6.

²⁷ Membership of Slovakia in the EU, Resolutions of the Ministers on the Conservation of Forests in Europe, held in Helsinki (1993) and Vienna (2003), which the SR signed and which explicitly declare the importance of forest biodiversity, its conservation, and protection.

Forest Management as amended by later regulations, Act No. 291/1996 on Cultivars and Seeds for Sowing as amended by later regulations, and Act No. 23/1962 on Hunting as amended by later regulations²⁸.

Since 2004, the state forest administration has been implemented by 8 regional forest offices (hereinafter "RFO") and 39 sub-district forest offices (hereinafter "SFO") which are supervised by the MA²⁹. Insufficient equipment for the execution of supervision in the field (lack of computers; old vehicles with high operational costs) is a specific problem and results in lower effectiveness of the work of some SFO. Funding for the work of forest offices has been insufficient.

Both, state and non-state entities manage the forest land. State forests are administered by following state forestry organizations: the Forests of the SR, the Forest – Agricultural Estate (hereinafter as FAE) Ulič, the State Forest of TANAP. These organizations report to the MA. Military Forests and Estates of the SR, Pliešovce is supervised by the MD. State forestry organizations further manage those forests, where non-state owners have not yet submitted their restitution claims for various reasons and forests leased from non-state subjects. The FAE Ulič is a specific type of the estate since it manages agricultural land in addition to forest land. The State Forest of TANAP manages state forests in the national park (forests of special purpose and protective forests).

The non-state forestry sector is represented by private, communal and church forests. Legal and organizational forms of entities in the private sector are various including land communities with or without legal powers, limited liability companies, stock companies, natural persons registered or non-registered with the Commercial Register as well as specific structures (commercial, contributory) of municipal offices. Land cooperatives administer the majority of forests in the non-state sector.

Individual level

Human resources, which are available are sufficient, but need to obtain higher level education (specialization in biodiversity issues) and should be more efficiently deployed (e. g. the position of BD expert is missing at the MA – the Forestry Division as well as in specialized state administration offices).

The fact, that positions are not properly defined, is a continuing problem and stems from the fact that processes within institutions are not well developed and do not function well. There are capacities for appropriate training but they are not used for various reasons,

the lack of funds is a commonly interpreted as a main reason. Access to necessary information is at an acceptable level. Communication skills at the individual level are not a problem and it is possible to consider them sufficiently effective.

3.7.2. Sustainable use of non-forest ecosystems

Decisions of the COPs (III/9, III/11, V/5, VII/3, and IV/6) deal with the conservation of grasslands and wetlands referred to as agro-biodiversity programs. The issue of wetland conservation has not been addressed clearly at the beginning of the CBD processes, probably because of the overlapping of issues with the Ramsar Convention. The Joint CBD-Ramsar Work Plan was adopted at the COP V.

Systemic level

At the systemic level there are basic assumptions for the conservation of biological diversity of non-forest ecosystems. The EU Directives relevant to the conservation of natural habitats have been transposed into national legislation³⁰. The MA developed the Rural Development Plan for the SR for the period 2004-2006. Measure 5 of the Plan (Agroenvironment and Animal Living Conditions) is a key measure for the conservation and sustainable use of biological diversity.

Institutional level

In Slovakia there are currently 27 organizations that deal with biodiversity of non-forest natural habitats and species (16 of them are at universities, 5 within SAV, 3 museums, 2 sectoral institutions and 1 NGO).

Capacities are well developed at the SOP SR, which possesses the largest number of experts on flora, fauna and non-forest habitats. The DAPHNE Institute of Applied Ecology takes part in the mapping of non-forest habitats (through coordination and methodology). More than 120 experts from the above mentioned organizations were successfully mobilized in the framework of mapping.

Universities and Institutes of the SAV deal with various aspects of biodiversity within their research projects. Fragmentation and too narrow scope is the main deficiency of these research projects. The Botanical Institute of SAV is building a complex information system of relevees and of vascular and non-vascular plants distribution. The Institute of Landscape Ecology of SAV coordinates the project "National Platform for Biodiversity" within the 5th Framework program of the EU.

²⁸ All forestry acts are of 1970s and they have become outdated. Currently a proposal of the new Act on Forestry has been submitted to formal consultations.

²⁹ In 2003, state forestry administration was focused on administration processes related with the preparation of forest management plans and supervision of their implementation. A special attention was given to the compliance with binding indicators and to the assessment of quality of work done on the area of more than 14 thousands ha. In accordance with the forestry plan regulations 97% of tree stands were assessed within state forestry organizations and 80% within non-state subjects.

³⁰ Act No. 543/2002 on Nature and Landscape Protection.

Individual level

At the individual level very good experts for the conservation and sustainable use of non-forest ecosystems are available.

3.8. Incentive Measures

Article 11 of the CBD requires the parties to adopt measures that act as incentives for the conservation of BD and the SU of its components.

Systemic level

There are several implementation instruments at the systemic level. Act No. 543/2002 on Nature and Landscape Protection, for example, contains provisions for compensations for the restriction of common cultivation to support nature protection and for financial contribution for the maintenance of favorable conservation status of species and natural habitats. However, they are not implemented effectively. Compensation for damages caused by protected animal species is also possible but it is not very often used because of the difficult verification process. Some incentive schemes are partially effective in agriculture through the agro-environmental programs. In forestry, projects occur only occasionally.

Act No. 215/2003 on the Conservation of Genetic Resources for Food and Agriculture introduces a commitment to contribute to the conservation of genetic resources but this provision applies only to agriculture.

Act No. 100/1977 on Forestry and State Forestry Management sets up several incentive instruments for sustainable forestry. Within the last ten years the value of incentives dropped by 90%. Act No. 217/2004 on Forest Reproductive Material outlines the possibility of incentives for the conservation and sustainable use of forest reproductive resources. In 2004, no subsidy was given.

Following the entrance of the SR into the EU financial support is available through sectoral operational plans³¹. A similar political instrument for forests and forestry is not available from the EU.

There is also the Government Regulation No. 184/2003 on the Method of Calculation and Compensation of the Property Loss Resulting from the Restriction of Common Cultivation of Land that is non-state.

Institutional level

Insufficient allocation of financial resources at the systemic level combined with the lack of experience causes the institutions do not work effectively.

Individual level

In the area of incentive measures there is a permanent lack of experts³². Universities and postgraduate courses do not offer studies in this area.

3.9. Research and Training

Article 12 of the CBD deals with issues of scientific research. The parties commit themselves to promote and encourage research that contributes to the conservation and sustainable use of biological diversity, to encourage relevant methods and maintain education and training programs. At the same time the parties are required to cooperate in the exchange and application of research results in development of methods for the conservation of biological diversity and the sustainable use of its components.

Systemic level

There is the State Strategy for Science and Technology (up to 2005) approved by the Government Resolution No. 1228/2000. Act No. 132/2002 on Science and Technology, Act No. 133/2002 on SAV, and Act No. 203/2001 on the Agency for the Promotion of Science and Techniques cover the issue generally.

The concept of research and development within the framework of the MoE up to 2005 includes also research and development in the area of nature conservation among its priorities. The concept, however, has not been applied in practice.

Institutional level

Generally, the area of science and research is coordinated by the MEDu. Under the auspices of the MEDu, the Agency for the Promotion of Science and Technology has been established. The MoE and the MA identify the scientific tasks which need to be addressed in the area of biodiversity within a framework of AP NBS. The Institutes of SAV³³ take part in the research that contributes to the conservation and sustainable use of biological diversity. In addition, universities³⁴ and sectoral research institutes³⁵ take part in this research. Non-governmental organizations are also involved³⁶. The above mentioned institutions also participate in

³¹ The SOP Agriculture and Rural Development (agro-environmental measures), the SOP Basic Infrastructure (Measure 2.4 Conservation, improvement and restoration of nature environment), LIFE, and INTERREG.

³² For example, in the framework of this NCSA project it was not possible to identify experts in the area of law, economics, politics and communication which would be able to address practical problems of the BD and SU of its components competently.

³³ For example: Botanical Institute, Zoological Institute, Institute of Forest Ecology, Institute of Landscape Ecology, Institute of Genetics and Plant Biotechnologies, Institute of Molecular Biology, Institute of Biochemistry and Animal Genetics, Institute of Parasitology, Institute of Virology and Chemical Institute.

³⁴ For example: Departments of Botany of the Faculty of Natural Sciences of the Comenius University in Bratislava and the Faculty of agro biology and food resources of the SPU (Department of Genetics and Plant Breeding) in Nitra.

³⁵ Research Institute of Plant Production in Piešťany, Research Institute of Animal Production in Nitra, Research Institute of Grasslands and Mountain Agriculture in Banská Bystrica, Soil Science and Conservation Research Institute in Bratislava, and Forest Research Institute in Zvolen.

³⁶ For example Daphne – Institute of Applied Ecology, Society for Birds Protection of Slovakia, CA Tatry.

the development of methods for the conservation and sustainable use of biological resources together with the SNC, zoological and botanical gardens, arboreta and museums. The SPU in Nitra provides education and research in the area of agro – biodiversity.

Individual level

At the individual level there are sufficient resources for the implementation of research needs. In this area it is necessary to mention that compared to other sciences, in biodiversity research, there is no generation gap among experts. However, in the area of science and research there is lack of experts with managerial skills.

3.10. Public education and awareness

Article 13 of the CBD requires strengthening of public education in order to understand the importance of BD and measures required for conservation. At the same time it requires the parties to cooperate with other states and international organizations in developing educational and public awareness programs, with respect to the conservation of BD and SU of its components. The international legal framework in this area has been considerably strengthened by the Convention of European Economic Commission of the UN on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters³⁷.

Systemic level

Activities in the area of environmental education (hereinafter as EE) are implemented at the basis of the Concept of the Environmental Education approved by the Resolution of the Government of SR No. 846/1997. This concept covers the issue of lifetime education in the area of environment and it is focused on informal education for various grades of the school system, public awareness and on the technical education of experts in the environment.

In the SR since 1998, Act No. 171/1998 on the Free Access to Environmental Information ensured the right to information on environment. This Act was replaced by Act No. 211/2000 on Free Access to Information that codifies the right of citizens to the access to information in general. To a great extent this Act comes out from the principles of the Aarhus Convention. However, the act does not include the first pillar of the Aarhus Convention. Therefore it does not fulfill the principles consistently, e. g. for some specific issues concerning the systemic collection, maintenance and dissemination information. That is why in 2004 the Act No. 205/2004 on the Collection, Maintenance and Dissemination of Information on Environment³⁸ was adopted. The

SR is not a signatory to the Aarhus Convention, although, the MoE prepared a complex proposal for the accession to the Convention in 2004.

Institutional level

Some universities and faculties participate in the implementation of EE actively and are also involved in national and international education projects. The faculties of natural sciences and agricultural faculties are increasing the number of compulsory courses with curricula focused on the conservation and wise use of biodiversity, agrobiodiversity as well as its individual components and other tasks arising from the implementation of the CBD. The number of textbooks and teaching support materials dealing with the issue of conservation of biodiversity, agrobiodiversity and biosafety has increased recently. For example, in the edition the *Biodiversity Conservation*, the SPU in Nitra in cooperation with other universities, institutions and experts published 90 textbooks with more than 27 thousands of copies.

The Faculty of Natural Sciences of Comenius University in Bratislava, the SPU in Nitra, and the Technical University in Bratislava provided training of more than 700 participants in the framework of lifetime education programs organized within the TEMPUS Program and with financial aid from the EU. Increasing trend in these activities is ensured.

The SOP SR has built 13 information centers for nature conservation (hereinafter as "ICNC") and the School of Nature Conservation in Varín. In the network of ICNC, however, there is no information centre, which could be comparable with facilities of this type in other developed European countries. There is insufficient staffing and technical equipment of the ICNC as well as equipment and promotional material. Some EE activities are implemented by the Slovak Museum for Nature Protection and Caves, the Administration of Slovak Caves, ZOO Bojnice, and the SEA.

Cooperation between nature conservation organizations and schools in the area of EE is not systematic. There are no linkages between school and after school education programs for nature conservation. Within curricula EE is driven by the personal interest and commitment of individual teachers.

More effective cooperation between SOP SR and municipalities has not been achieved and regular education programs in the area of biodiversity conservation and sustainable development for employees and elected representatives of municipalities are not available. There is an urgent need to improve the situation, particularly in smaller municipalities.

³⁷ "Aarhus Convention" contributes to the fulfillment of one of basic human rights and liberties – the right for favorable environment in accordance with the principles of sustainable use. This Convention declares the right to access to information, to public participation in decision-making and the right to access to justice in environmental matters. The Convention was signed by 35 states and the EC at the 4th ministerial conference "Environment for Europe" in the Danish city of Aarhus in 1998. The Aarhus Convention came into force on October 30, 2001.

³⁸ EU Directive No. 2003/4/EC has been transposed into national laws and this way relevant principles and commitments flowing from the first pillar of the Aarhus Convention were transferred into legislation of the SR.

Currently there are more than 90 educational trails and 13 educational sites in protected areas. However, the majority of them has been damaged and/or is not well maintained (lack of financial resources for maintenance, vandalism).

NGOs play very positive role in EE as they are able to prepare and implement grant schemes aimed at EE. There are several EE centers maintained by NGOs in Slovakia.

Some information and promotion materials with focus on nature and landscape protection are published periodically. Periodicals include e. g.: Protected Areas of Slovakia (Chránené územia Slovenska), journals Nature Conservation of Slovakia (Ochrana prírody Slovenska), Enviromagazine (Enviromagazín), Environment (Životné prostredie), Biosphere (Biosféra), proceedings Nature Conservation (Ochrana prírody), and Aragonite (Aragonit). Some titles (such as guides for educational trails, various brochures and leaflets about protected areas, plants, animals etc.) are published in the framework of foreign projects or with support from other non-state resources.

Individual level

At the individual level there are sufficient capacities for public education and awareness.

3.11. Impact assessment, minimizing adverse impacts, liability and redress

Article 14 of the CBD requires parties to take into account impacts on biodiversity in the process of environmental impact assessment (hereinafter "EIA"), including notification, exchange of information and consultation on activities with potential transboundary impacts on biodiversity³⁹. Article 14.1(d) deals with the specific case of an emergency⁴⁰. Article 14.2 deals with the issue of liability and redress⁴¹.

The requirement for SEA is declared in the Preamble of the EU Directive 2001/42/EC on the Environmental Impact Assessment of Certain Plans and Programs.

The 5th ministerial Conference "Environment for Europe" in Kyiv adopted the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Con-

text (hereinafter "the Espoo Convention"), which in the Article 2 sets out the requirements to assess impacts on biodiversity as well.

Systemic level

The EIA is covered by the Act No.127/1994 on Environmental Impact Assessment (including assessment of impacts of strategic documents on environment – SEA) as amended by the Act No. 391/2000 and the Regulation No. 52/1995 on the List of Authorized Persons for the EIA.

The SR accessed to the Espoo Convention⁴² and according to its provisions, the SR is obliged to adopt measures for the prevention, minimization and control of considerable adverse transboundary impact and for the provision of information on proposed activities. In 2003, the Slovak Government signed the Protocol on SEA⁴³.

In May 2004, a new Act on EIA was drafted and submitted for consultations. The proposal takes into account the requirements of the Protocol on SEA as well as of the EU Directive 2001/42/EC. The Act has not yet been passed.

There are also other legal regulations in place. Act No. 151/2002 on Use of Genetic Technologies and Genetically Modified Organisms and the implementing regulation No. 252/2002 which deals with risk assessment in this area.

The issue of genetic erosion of cultivated plant species is addressed marginally through Act No. 251/2001 on Plant Genetic Resources for Food and Agriculture. That's why, for instance, that it is almost impossible to halt illegal cutting of woods of old cultivars in municipalities and regions. The woods are cut from various reasons in spite of the fact that they have critical genetic value.

In the legal system of the SR, the issue of liability for damage to the environment is not sufficiently applied (in the framework of criminal, administrative and civil liability). For example, there is no specific compulsory insurance for the compensation of damages to the environment in various emergency cases. Legal regulations, which would introduce a more effective system of assessment of natural resources, are also missing (13).

³⁹ In the framework of the COP meetings specific directions for the implementation of EIA and SEA were prepared.

⁴⁰ Parties to the CBD have to notify immediately to the potentially affected states, even though these are not the parties to the CBD, when there is a danger that the activity originating under the jurisdiction or control will cause or is causing damage to biological diversity within the area under jurisdiction of other states or in areas beyond the limits of national jurisdiction. Article 14.1(e) requires to adopt the national arrangements for emergency responses to activities or events which present a grave and imminent danger to biodiversity.

⁴¹ It is difficult to assess the impact of this Article. Similarly as in many other multilateral conventions reflection on "the issue of liability and redress" is postponed by this Article to later term. In this respect the CBD is more careful than other conventions. It requires the contracting parties simply to "examine" this issue but only on the basis of studies which have to be carried out. Negotiations on the regime of "the issue of liability and redress", including "compensation" can start when this two-stage-process is completed.

⁴² The Act No. 162/2000.

⁴³ Government Resolution No. 679/2003.

Institutional level

The MoE is the central body of the state administration for EIA, while some tasks are implemented by SEA⁴⁴. An investor finances EIA processes; public institutions fund the EIA processes from state budget resources. For the purpose of information dissemination, the following are used: the Bulletin of MoE information system of EIA and information workshops – public hearings (but they do not specifically focus on the issue of the assessment of biodiversity loss). The new Act on EIA presumes that the regional and sub-district offices of the environment will implement activities related to EIA⁴⁵. According to the new act, a proponent will continue to be responsible for payments for EIA. A legal or natural person who is responsible for the development of a strategic document covers the costs connected with the assessment of impacts of the strategic documents upon environment.

Individual level

The MoE keeps a list of authorized persons for the assessment of impacts on the environment. However, registration in the list is not required for the execution of the expert activities in the assessment of impacts on environment. In order to gain technical capability there is training and additional retraining available. There are no specialized courses for the assessment of impacts on biodiversity. Certificates for the assessment of impacts on biodiversity are not issued or required.

3.12. Access to genetic resources

According to the Article 15 of the CBD, the parties are required to create conditions to facilitate access of other parties to genetic resources for environmentally sound and adequate use of biodiversity. They also have to minimize restrictions that run counter to the objectives of the Convention. Article 15 also deals with the return of benefits arising from the subsequent utilization of genetic resources. These benefits include possible participation in scientific research which is based on the genetic resources provided, fair and equitable sharing of research and development results and commercial and other benefits arising from the utilization of genetic resources⁴⁶.

Systemic and institutional levels

In the SR, a complex policy in the area of the access to genetic resources has not yet been developed. The Bonn Guidelines on access to genetic resources, their ownership and equitable sharing of benefits give some directions in this area. It is necessary to apply them at the national level. In law, the issue is partially addressed through the Act No. 215/2003 on the Conservation of Genetic Resources of Plants for the Food

and Agriculture. No legal instrument currently covers intellectual property rights over the old cultivars and land races.

At the institutional level the responsibilities are not clearly defined.

Individual level

There are not sufficient capacities at the individual level and it is necessary to build them through specialized courses and training. The opportunity for involvement in international research is still absent.

3.13. Access to and transfer of technology

According to the Article 16 of the CBD, the parties are required to adopt measures that will facilitate the transfer of technology, first of all to developing countries. Technologies, which are transferred among parties, must not cause significant damage to the environment. Article 16(5) confirms that intellectual property rights may have an influence, positive or negative, on the implementation of the CBD objectives and it requires contracting parties to co-operate in order to ensure that such rights do not run counter to the objectives.

Systemic level

The transfer of technology to developing countries is becoming an issue in the context of the increasing level of official development aid of the SR. In the SR, no specific analysis of the influence of intellectual property rights on meeting the commitments has been completed.

3.14. Handling of biotechnology and distribution of benefits

The Protocol (Cartagena Protocol) adopted in 2000 deals with the handling of biotechnologies and distribution of benefit. The Protocol requires parties to ensure an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms which result from modern biotechnology and which may have adverse effects on the conservation of biological diversity and sustainable use of its components taking also into account risks to human health and specifically focusing on transboundary movements.

Systemic level

In 2002, Act No. 151/2002 on Use of Genetic Technologies and GMO was adopted. The Act addressed the issues of emergency measures or compensation for damages. The development revealed more gaps in

⁴⁴ e.g. Information System on EIA, organization of training and workshops, Documentation Centre for the EIA Processes.

⁴⁵ These relevant bodies will keep the records and other documentation related to the process of the assessment of strategic documents (policy, development of concepts, plans and programs) and of proposed activities according to the new law.

⁴⁶ Only two categories of genetic resources entitle provider of genetic resources to benefits arising out of utilization of genetic resources under this Convention: 1) genetic resources provided by countries, that are countries of origin of genetic resources in question, or 2) genetic resources provided by countries that have acquired them in accordance with this Convention.

the current legal framework and therefore it is necessary to improve it. One of the factor is unclear institutional responsibilities. These must be divided among the MoE, the MA, and the MH. Clear relationships must also be set up with all the regional and district institutional levels. The objective assessment of impacts and risks of GMO use is not provided for and this implies a lack of objectivity in permitting GMO for commercial purposes.

Institutional level

The SR accessed the Protocol in 2004 and set up the NFP for the Protocol at the MoE, Department of biosafety⁴⁷. The MoE is the central body of state administration for the use of genetic technologies and GMO. Already in 2003, the Commission for Biosafety was established by the decision of the Minister of the Environment as an advisory body.

The current distribution of institutional responsibility in this field is not effective. Institutions dealing with the issues of biosafety at the research and education level are working independently and without well coordination of their activities. The capacities within SEI need to be improved. There is no independent authorized laboratory for GMO in Slovakia.

In spite of the situation described above, there are some good examples of effective work in selected institutions which participate in the assessment process and have quality management. Research and education activities at some universities, such as the SPU in Nitra, the STU in Bratislava, and the Comenius University in Bratislava should be mentioned, as well as implementation and control methods at some institutes of SAV, and institutes under the MA.

Individual level

In the area of biosafety there are no clearly defined obligations of concerned stakeholders and abilities and knowledge are not sufficient in some cases. Within the state service there is a lack of experienced lawyers because they leave for better paid sectors. Experts in biosafety are obtained from various areas of the economy, research institutions, and universities. They are usually contracted as part time job consultants. The introduction of specialized courses on biosafety into the study programmes at Slovak universities would be a significant benefit.

Preparation of experts in specialized courses at universities and other accredited educational institutions is not available.

There is a significantly better situation in the area of information resources due to international cooperation and increasing access to information through the electronic media. There is a serious gap in the system

which delays the development of capacities, namely a national clearing-house for biosafety. The operation of a clearing-house would contribute significantly to the effectiveness of the exchange of scientific, technical, environmental and legal information on all aspects of biosafety.

3.15. Financial resources

Article 20 requires each party to provide financial support for national measures necessary for the implementation of the CBD. Each party is obliged to provide financial resources and supports to the extent to which it will be able to provide them. The developed country parties are required to provide „new and additional financial resources” to enable the developing country parties to meet „the agreed full incremental costs” for the implementation and benefits of the CBD⁴⁸. The GEF is a financial mechanism based on the decision of the COP.

Systemic level

At the systemic level no strategy for technical and financial support for the developing country parties has been developed in relation to the CBD. In 2003, the Concept of official developing aid (ODA) of the SR was adopted. Within this Concept, the SR supports selected activities in target countries for the conservation of biological diversity and sustainable use of its components through the priority aid areas. However, issues of BD and SU of its components have not been identified as a specific priority area.

Institutional level

The SR participates in the GEF since 1994. The MoE administers the membership of the SR in GEF. The GEF NFP was appointed within the MoE. The MFA coordinates an official development aid of the SR.

Individual level

At the individual level technical capacities are limited. The lack of capacity results from a lack of individuals focusing on issues of developing countries. The main reason is that there are just a few teams which would have the opportunity for full involvement into international projects for the developing countries.

3.16. Reporting

Article 26 introduces the obligation of regular reporting on measures which have been taken for the implementation of the CBD. The report must also assess the effectiveness of such measures. However, the CBD does not specify the intervals at which the reports have to be submitted. This interval is determined by the COP and at present it is set at three years.

⁴⁷ The NFP at the same time fulfills the role of the NFP for “biosafety clearing-house”.

⁴⁸ “New and additional financial resources” means financial resources over the existing bilateral and multilateral funds. According to the Article 20 (3), the developed country parties can provide financial resources through bilateral, regional and other multilateral channels in addition to the financial resources they shall provide according to the Article 20 (2).

Systemic level

The first national report was developed and published by the MoE with financial assistance from the GEF in 1998. The national report focused on providing information to the COP on the status of biodiversity in Slovakia and on implementing Article 6 of the CBD. In 2001, the SR developed and submitted the second national report. In the past, a few thematic reports were developed but were not published. All the reports, which the SR submitted, are available at the website of the CBD Secretariat www.biodiv.org. In 2005, the third national report will be developed.

Institutional level

The MoE is responsible for the development of national reports. The reports are compiled by the NFP that is represented by one person at the MoE. Cooperation with other sectors is essential in the development of thematic reports. The development of reports is not systematic, and teams for the development of reports are not institutionalized.

Individual level

Competent experts for developing the reports on the status and conservation of biodiversity and implementation of the CBD in Slovakia are available. As a consequence of unsatisfactory coordination, however, their capacities are not fully utilized.

3.17. International cooperation

According to Article 5 of the CBD, international cooperation can be implemented directly or through competent international organizations. Other Articles of the CBD give details for international scientific and technical cooperation.

Emphasis is given to international cooperation in the framework of other international conventions (Rio Conventions). “*Joint Liaison Group*” has an important role in strengthening of cooperation and reaching of synergy⁴⁹ among the Rio conventions. This working group consists of members of relevant bodies and secretariats of the conventions. The objective of the group is to strengthen coordination among the Conventions (first of all in the areas of information exchange and development of joint work plan focused e.g. on relations between climate change and biological diversity and soil degradation) that should contribute to harmonization of approaches and higher effectiveness.

Systemic level

From the point of view of international commitments the SR acceded to 9 international conventions dealing with nature, landscape and biodiversity protection. A few other international conventions also address this issue in part.

Special cross-sectoral panels or working groups are being established for addressing cross-sectoral issues within single international instruments. However, their effectiveness is not very high. A joint working or expert group that would cover issues of all three Rio Conventions (for the biodiversity, climate change and desertification and land degradation) has not yet been established in Slovakia. Sufficient attention has not been given currently to cooperation in the implementation of commitments of the Rio Conventions. First of all, detailed analysis of cross-cutting issues and related problem areas of these Conventions has not been developed yet. Therefore there is no objective control whether duplication occurs in the implementation of commitments and tasks arising from particular conventions and whether existing resources (financial, human, information and material) are used effectively for the national benefit and not only from the sectoral point of view.

Institutional level

The SR has representatives in many international organizations dealing with nature protection⁵⁰. In the framework of bilateral cooperation the Commissions on Transboundary Cooperation in Nature Protection with Poland and Hungary are operating. Bilateral transboundary cooperation of PA managers with neighboring protected areas in Hungary, Poland, Austria and the Czech Republic is well developed.

The implementation of particular conventions (development and implementation of national programmes, strategies and action plans), international programmes, active work in committees and expert groups of the conventions, the EC, as well as in international organizations is limited due to the lack of financial resources and personal capacities.

The current structure of technical institutions and qualified personnel creates conditions for more active participation of the SR in international activities related to the implementation of global environment conventions. The lack of coordination of activities and tied allocation of financial resources is a weakness with direct consequences on adequate information for stakeholders and qualified representation of the SR in the international context.

While adopting international commitments financial demand for implementation is underestimated (e.g. implementation of research by the MEDu, forest management in biosphere reserves and sites awarded with the European Diploma). The implementation is limited to the sector which is responsible for the implementation of the convention; other sectors are only marginally involved. Practical implementation of commitments arising from international conventions remains, in many cases, at the formal level.

⁴⁹ Synergy in this context means effective cooperation leading to effectiveness of activities in the implementation of particular conventions. One of the priorities is to eliminate possible duplications in implementation and to ensure maximum use of existing resources.

⁵⁰ E. g.: Wetlands International, World Conservation Union (IUCN), Europarc Federation, International Speleologist Union, European Association of ZOOs and Aquaria.

The mechanism for allowing easier technical and scientific cooperation among contracting parties is being developed gradually (*clearing-house* mechanism). The focal point is at the SPU in Nitra.

Individual level

The SR regularly participates in the meetings of the COP, advisory bodies and occasionally at the meetings of ad-hoc expert groups. In the initial period of the membership in the CBD, the SR was the part of the regional group for the Central and Eastern Europe. Since EU accession, the SR participates in the work of the regional group of Western Europe and other developed countries (*Western Europe and Others* –WEOG).

The representation of the SR at the meetings at the highest level is adequate (usually, the Minister of the Environment or the State Secretary of the MoE and the Slovak ambassador in the host country).

At the working level of meetings, the SR used to be represented by 2 or more representatives, however, in the

last few years, the SR is represented only by 1 representative mostly from the MoE. The participation of experts from other institutions is problematic, generally due to the issue of financing of these business trips. The current management does not respond to the need for active and full participation of the SR at the meetings where the negotiations are held simultaneous among several working groups. Thus, the SR is one the most weakly represented countries of the EU member states. One-member representation at the meetings is not the rule even in the case of the developing countries. This situation is negatively reflected in the ability to promote the Slovak interests at the meetings as well as the information transfer from the meetings to the national level. The work of Slovak delegations at the meetings held within the CBD and meetings within other international processes which are related to biodiversity issues is not coordinated (e.g. processes in forestry, processes aimed at the protection of genetic resources for food and agriculture). The current use of available information on relevant international experience or activities by experts is not satisfactory.

4. Analysis of key capacity assets and needs for implementing the Convention on Biological Diversity and the Protocol on Biosafety

In Chapter 3 existing capacities were described at systemic, institutional and individual levels in Slovakia for implementing the commitments under the CBD and the Protocol. As the next step, a SWOT analysis was carried out which is a useful tool for assessment. Based on the identified strengths and weaknesses of the process, and the opportunities and threats, this method allows for identification of existing deficiencies as well as opportunities for overcoming these deficiencies. The SWOT analysis was carried out for five groups of capacities according to the generic indicators of UNDP/GEF (1).

4.1. SWOT analysis and capacity assessment

4.1.1. Capacity to conceptualize and formulate policies, legislations, strategies, and programs

In the Slovak Republic, a key driving force for developing capacities to conceptualize and formulate policies

and strategies for the protection of BD and SU of its components is the positive international framework and the priority position of the issue in the major environmental international initiatives. This framework is also strengthened by the membership of the SR in the EU. The weak point is, however, insufficient ability to transfer the international framework to the national (and lower) levels. This is accompanied with insufficient coordination of the activities required to meet the obligations of the CBD and the Protocol at both the horizontal and vertical levels. The main problem, however, is the overall formal approach to the preparation of strategic instruments for the protection of biological diversity and for the sustainable use of its components.

The valuation of BD components, taking into account of non-production functions and integration of this value into national planning provides an important opportunity to improve the situation. This might develop an understanding of the importance of conservation of BD and SU of its components in the context of

Table 4.1: SWOT analysis of capacities to conceptualize and formulate policies, legislations, strategies, and programs

S/Strengths	W/Weaknesses
Positive political and legal framework to formulate national policy, strategies, legislation and programs for the conservation of BD and SU of its components	Insufficient capacities for the transfer of the international policy framework to the national and regional (county) levels as well as to municipalities
Existing the NBS and the AP	Broadly and formally formulated strategic priorities for the conservation of BD and SU of its components are without measurable indicators
Ability to formulate and prepare policies, strategies, legislation and programs	Insufficient capacities to monitor and evaluate the implementation of the strategies and programs; the absence of indicators of implementation and impact – insufficient feedback
Adequate methodical, scientific and technical support	Insufficient coordination among sectors during the preparation of strategies and the low level of integration of measures for protection of BD and SU of its components into the policies, strategies, legislation and programs of the other sectors
Existence of sectoral policies, strategies and legal instruments	Formal approach to the preparation of policies, strategies, legislation and programs
	Significant differences in qualification and competence of managerial staff working in the field of protection of BD and SU of its components

Table 4.1: Continued

O/Opportunities	T/Threats
Growing international emphasis on halting the loss of BD and achieving SU of its components	Underestimated importance of BD and SU of its components within the context of sustainable development
Membership of the SR in the EU and related change in the political priorities and strategic goals at the national level	"Inflation" of policies, strategies and programs
Valuation of BD components and integration of its value into national planning processes	Low interest to mobilize capacities to update policies, strategies and programs
Increased involvement of local and regional self-government into strategic decision-making and the application of the principle of subsidiarity	Insufficient application of knowledge in the formulation of the strategies, policies, programs and legislation

sustainable development. In addition, it might cause the mobilization of capacities to update and make clearer the existing policies, strategies and programs. It is important to note that via relatively modest changes in capacities (such as cross-sectoral coordination) it is possible to achieve significant improvements in implementing policies and measures.

4.1.2. Capacity to implement policies, legislations, strategies, and programs

There is a comprehensive institutional framework in Slovakia to implement strategies, policies, laws and programs. Planning at the institutional level, however, is not linked to conceptual and strategic planning. In

decision-making on the allocation of the resources strategic priorities are not taken into consideration. This results in insufficient capacity of institutions to implement approved strategies and programs. Activities of particular institutions are in many cases modified and accommodated from external (not from the state budget) financing with the resources, moving away the priority needs. On the other hand, the access to external resources (outside the state budget) and the growing capacities of the institutions, including the public sector institutions, to utilize these resources represent a positive stimulation to implement strategies, policies, legislation and programs. The use of expert and technical equipment in the private sector and NGOs also creates opportunities to improve the current situation.

Table 4.2: SWOT analysis of capacities to implement policies, legislation, strategies and programs

S/Strengths	W/Weaknesses
Existing AP to implement the NBS	Insufficient linkages of strategic planning to planning at the institutional level, both horizontally (among sectors) and vertically (within sectors)
The Existing comprehensive institutional framework for the protection of BD and SU of its components	Absence of implementation tools for some issues under the CBD
Existence of some incentives for the conservation of BD and SU of its components	Lack of legal tools for some issues under the CBD
Approach to the information on implementation of programs and strategies abroad	Insufficient level of financial, human and information resources in relevant institutions
Broad availability of high-quality experts for the conservation of BD and SU of its components	Insufficient incentives (such as subsidies) and insufficient implementation of existing incentives for the conservation of BD and SU of its components
Existing legal framework for nature and landscape protection	Absence of definitions of best practices at the national level
Long tradition and high quality of existing measures to preserve genetic resources in agriculture and forestry	Absence of experts in the field of law, economy, policy and communication able to address legal and economic challenges relevant to conservation of BD and SU of its components
O/Opportunities	T/Threats
Opportunities to use and obtain experience in the international projects	Lack of political will to change the existing state of capacities for the protection of BD and SU of its components
Access to EU funds for the protection of BD and SU of its components	Frequent restructuring of the institutions within the public sector without assessing needs and effectiveness
Opportunities to use experts and equipment of the private sector and NGOs	Insufficient awareness/information on the scope of activities required to meet the CBD commitments
Strong mechanisms to monitor the implementation of commitments at the level of the EU and OECD	

4.1.3. Capacity to engage and build consensus among all stakeholders

The developing legal framework enables a gradual growth of the public participation in the environmental protection, including protection of biological diversity. Despite that, two phenomena “inherited” from the past still remain: on the one hand the low level of public involvement and the participation of various interest groups and on the other hand the formal attitude of and the public sector towards the consultations and searching for consensus based solutions.

Growing international pressure (Aarhus Convention) is seen as an opportunity to improve the situation. The public use of the legal opportunities is also limited by insufficient information on the subject of the consultations. There are gaps in available information and lack of access to the relevant information even within the public institutions. This problem can be solved through introducing new information technologies and by developing integrated information systems. From the long-term prospect, however, the low interest of the public in participating in decision-making can have negative consequences. This low interest is caused by a low level of awareness on how particular decisions influence the quality of life of the individual.

Table 4.3: SWOT analysis of capacities to engage and build consensus among all stakeholders

S/Strengths	W/Weaknesses
Developing legal framework to support participative approaches	Absence of the tradition of public involvement
Active participation of the academic institutions and NGOs in developing and implementation of strategies and concepts	Formal attitude to the implementation of participation approaches by public bodies
Developed NGOs in the Slovakia, competent in the fields of the protection of BD and SU of its components	Incomplete scope of information needed for implementation of the commitments of the CBD in the decision-making sphere
Growing application of the principle of subsidiarity	Lack of staff experienced in communication in the public sectors
	Low expert and managerial competence in existing information centers and PR centers
O/Opportunities	T/Threats
Accession to the Aarhus Convention	Application of opinions and activities based on private or extreme interests
Development of communication and information technologies	Insufficient time framework for negotiations and consensus building
Decentralization of the decision-making process	Lack of willingness or ability to communicate and to make information available
New non-traditional forms of raising environmental awareness	Low interest from the public to participate in the decision-making process due to lack of confidence to political decisions
Opportunity to train specialists in the field of environmental law, economy, policy, communication and media activity	

4.1.4. Capacity to mobilize information and knowledge

There is a broad scale of research institutions and experts for biological diversity in the SR. Their capacities, however, are not used effectively and in a coordinated manner due to the absence of a complex research program for protection of the BD and SU of its components. This results research priorities not being clearly defined. Scientific institutes develop projects that are likely to obtain financial support regardless of their relative importance to the conditions in Slovakia.

There is a lack of projects that would support a synergistic potential of the Rio Conventions. The current trends in research on BD and SU of its components do not guarantee the ability of institutions to continue ongoing initiatives, nor to maintain a sufficient pool of experts with adequate qualifications to fulfill the requirements of CBD and the Protocol. Talented scientists and environmental experts leaving education and research institutions also have negative consequences. On the other hand, the positive feature of the situation is the growing capacity of organizations in the private sector and in selected NGOs and the opportunity to solve scientific-research projects with the support of the official development aid program of the Slovak Republic.

Table 4.4: SWOT analysis of capacities to mobilize information and knowledge

S/Strengths	W/Weaknesses
Existing legislation to support research and development	Absence of a comprehensive research program for the conservation of BD and SU of its components and insufficient coordination and prioritizing of research
Long-term tradition of scientific and research institutions	Not using the synergistic opportunities within the activities of the UNFCCC-CBD-UNCCD in the Slovakia
Broad scope of scientific-research projects in the protection of BD and SU of its components	Low effectiveness in the use of existing scientific-research activities
Enough qualified experts with opportunities for scientific education	Absence of skilled managerial staff in science and research
Existence of financial mechanisms to obtain support for small scientific projects (VEGA, etc.)	Insufficient financial resources to support participation of experts in education
Opportunity to use EU financial resources for science and research	Absence of experts in the field of environmental law, economy and policy able to solve practical legal and economic problems of the protection of BD and SU of its components
Existence of formal and informal education in the field of protection of biological diversity and sustainable use of its components	
O/Opportunities	T/Threats
Increasing experience in accessing funding for the implementation of research projects (not from the state budget)	Gradual shift of young scientists abroad due to lack of motivation tools at the institutional level
Increasing share of private resources in financing research activities	Insufficient monitoring of allocated resources
Implementation of research programs for the conservation of BD and SU of its components in the target countries for the development aid of Slovakia	Lack of competent teachers for environmental issues in schools as a result of low salaries in education sector
	Continuous targeting of environmental education for the knowledge on BD instead of explanation of its importance for sustainable development

4.1.5. Capacity to monitor, evaluate, report and learn

The extent and the quality of capacities for monitoring, reporting, evaluation and education influence the quality of planning and decision-making processes at all levels including the overall level of the CBD implementation. The existing concept of integrated environmental monitoring and information system as well as experts of high quality, often with international experience, are major capacity strengths. The weak point is the absence of a comprehensive system for monitoring of BD status and trends and the lack of the BIOTA Sectoral Monitoring System as a consequence of insufficient resources (personal, financial and material) at the institutional level (e.g. the SOP SR) as well as lack of monitoring methodology. Despite a remarkable increase in knowledge on the status of

biodiversity in Slovakia it has not been possible so far to define the baseline status of biodiversity, since generally accepted indicators are missing. The development of criteria and indicators for the species and habitats status, development of procedures to assess them for the purpose of implementing the Habitats and Birds Directives as well as the need to implement a comprehensive monitoring and reporting for both EU directives is seen as an important opportunity. The threat, however, is the continual marginal position of the biodiversity monitoring with underestimated financial and personal support caused by low political support due to low political support, demanding logistic and methodological challenges. This threat makes vulnerable also the existing activities in monitoring and assessment that has enabled the significantly implementation of the obligation of the SR in the framework of the accession process.

Table 4.5: SWOT analysis of a capacities to monitoring, evaluate, report and learn

S/Strengths	W/Weaknesses
Existence of the Concept of integrated environmental monitoring	The BIOTA SMS is not functioning
Existing information system for environmental monitoring	Lack of a complex information system on BD and the lack of a <i>clearing-house</i> mechanism
Information system on taxa and habitats	Unclear mandate for particular institutions in the field of monitoring of BD
Components of BD important for the protection of BD and SU have been legally identified	Lack of financial, personal and material support for monitoring and assessment
Advanced level of inventorying of non-forest habitats	Non-compatibility of the input data provided by the involved institutions as a result of use of different methods for data collection
Long-term time series of selected data on forest habitats	Lack of experts for several components of BD
Development of criteria and indicators for assessing of selected BD components (habitats and species from the Habitats Directive and the Birds Directive)	No documented base-line situation
Drafting of methods to monitor selected BD components	Absence of the tradition of use of indicators of the status and trends of BD in planning and decision-making.
Enough qualified experts with international experience in monitoring, assessment and reporting for most of the components of BD	Difficulty in obtaining input data from the private sector
Monitoring of selected processes that threaten BD	Absence of an institutionalized reporting mechanism for the purpose of the CBD
Opportunities for formal and informal education in the protection of BD	Insufficient opportunities – for some issues of education on BD and SU of its components
O/Opportunities	T/Threats
EU membership and related obligations to monitor and report on the status of selected components of BD	Continuing underestimation of the importance of monitoring of BD
Making use of the synergy in global environmental conventions	Breaking the continuation of existing monitoring and assessment processes (forests, selected components of agro biodiversity, selected processes that threaten BD)
Development of informational technologies in the public sector with respect to the involved bodies	Not applying diversified mechanism to finance monitoring, assessment and reporting via several chapters of the state budget
Involvement of non-state sector into the monitoring and assessment of BD	Non-integration of capacities and irreversible loss of a significant part of autochthonous genetic sources

4.2. Key assets and needs in priority areas to strengthen and develop capacities

Commitments following from the CBD listed in Chapter 3 are summarized in the following areas and requirements:

- 4.2.1. Updating of the National Biodiversity Strategy, integration of the considerations of conservation of biological diversity and sustainable use of its components into the sectoral strategies and plans and the decision-making process.
- 4.2.2. Research, monitoring, assessment, reporting
- 4.2.3. Conservation of biological diversity *in-situ* and *ex-situ*

- 4.2.4. Supporting sustainable use of biological diversity
- 4.2.5. Access to genetic resources and equitable sharing of benefits arising from the use of genetic resources
- 4.2.6. Specific issues of biological safety in the field of safe transfer, handling and utilization of living modified organisms
- 2.4.7. Support for education and of public awareness on the causes and consequences of biodiversity loss.

Key Slovak assets and capacity development needs at all levels have been summarized according to the above listed objectives. They are presented in the tables below.

4.2.1. Updating of the National Biodiversity Strategy, integration of the considerations of conservation of biological diversity conservation into the sectoral strategies and plans and the decision-making process

Table 4.6: Identified assets, needs and limits of the capacity framework

Level	Assets	Needs	Limits, barriers
Systemic	<ul style="list-style-type: none"> • National Strategy for Protection of Biological Diversity developed and published. • Action Plan for implementation of the National Strategy developed. • Some economic incentives to support protection of the biological diversity and the sustainable use of its components are available. • Information resources and information campaigns to use economic incentives are available. • EU legislation for the conservation of biological diversity and sustainable use of its components transposed into the national legislation. 	<ul style="list-style-type: none"> • To update the NBS and integrate indicators into the Strategy. • To integrate EP into the preparation of strategic documents and implementation. • To ensure coordination among sectors in the preparation and implementation of the conceptual and strategic documents, including use of information, financial and human resources. • To integrate the protection of BD and SU of its components into the sectoral strategies and the into the decision-making process. • To expand continuous supports for education and training of experts for developing and implementing the policy and measures. • To expand continuous support for the ongoing monitoring and assessment of measures applied. 	<ul style="list-style-type: none"> • Relatively “secured” implementation of commitments does not motivate higher systematic and financial support of implementation capacities. • Insufficient coordination among sectors in the preparation of strategies and low level of integration of measures for protection of BD and SU of its components into the strategies, legislation and programs of the other sectors. • Continuing understanding of BD as a technical issue of the “nature protection” problem. • Lack of incentives limits integration of the protection of BD and SU of its components into the sectoral policies, strategies and implementation. • Absence of the valuation of the components of BD. • Planning measures within strategic and political documents is not supported by providing resources for implementation.
Institutional	<ul style="list-style-type: none"> • Administrative structures to implement the CBD (NFP, the Slovak Commission for CBD). • Institutions with methodological, technical and scientific capacities to implement the CBD are available. 	<ul style="list-style-type: none"> • To restore activities of the Slovak Commission for CBD. • To re-establish the National Secretariat for CBD. • To improve coordination and communication among existing structures for the UNFCCC and UN CCD, as well as for other conventions in the field of protection of BD and SU of its components. • To set up the <i>clearing-house</i> mechanism. • To complete appointments of NFPs for specific CBD areas. 	<ul style="list-style-type: none"> • Termination of the National CBD Secretariat had negative impacts on implementing the CBD commitments. • Low level of the coordination and communication among cross-sectoral committees. • Insufficient connection between conceptual and strategic planning and planning at the institutional level has negative impacts on the effectiveness of implementation of strategies and policies.
Individual	<ul style="list-style-type: none"> • Human resources to develop and implement strategic and conceptual documents in the field of protection of BD and SU of its components are available. 	<ul style="list-style-type: none"> • To mobilize and use existing human resources in the planning and decision-making processes. • To support the mutual exchange of information and experience of employees in the field of planning and implementation. • To motivate employees to obtain higher qualification for planning in the protection of BD and SU of its components. 	<ul style="list-style-type: none"> • Insufficient awareness and knowledge of scope of issues of the CBD. • Insufficient awareness and knowledge of the importance of BD in the context of sustainable development. • Insufficient transfer of information on development of the international agenda within the CBD into the national, regional and local levels.

4.2.2. Research, monitoring, assessment and reporting

Table 4.7: Identified assets, needs and limits of the capacity framework

Level	Assets	Needs	Limits, barriers
Systemic	<ul style="list-style-type: none"> • Concept of the environmental monitoring, including Information system of Monitoring and Sectoral Monitoring systems (incl. BIOTA and FORESTS). • Important components of BD and SU are legally identified. • Information system on taxa and habitats. • Monitoring of the health condition of forests. • Inventories of non-forest habitats. • Collection of data for forest management planning. • Criteria and indicators for the assessment of the conservation status of selected BD components. • Drafts of monitoring methods for selected species and habitats. • Mechanisms for financing research and small research projects (VEGA or sectoral sources for research and science). • Concept of the state scientific and technical policy (until 2005), the Act on science and technology, the Act on the Slovak Academy of Sciences. • The first national report developed and published (1998). • The second national report developed (2001). 	<ul style="list-style-type: none"> • To institutionalize the preparation of reports on the CBD. • To ensure a systematic support for comprehensive monitoring of BD (financial and human resources). • To improve coordination and the more effectively use of existing capacities in research, academic institutions, and in universities as well as in the private sector (information and human resources). • To identify priorities for research in the field of protection of BD and SU of its components, to ensure financing. • To support integrated research for the Rio Conventions. 	<ul style="list-style-type: none"> • Under-estimation of the importance of the actual information on the status and trends of BD in the planning and decision-making. • Insufficient political support to improving of reporting processes.
Institutional	<ul style="list-style-type: none"> • Long-term tradition of research institutes active in research and monitoring of the changes of the environment. • Responsibilities are clearly stated by law and by the statutes of the institutions. • Accreditations as an effective tool for monitoring of quality of institutions. • Organizations within the private sector that are research-oriented. 	<ul style="list-style-type: none"> • To enlarge (to modify) the actual scope of research considering the CBD requirements. • To use official information resources to better promote activities and results of the private sector in the field of the biodiversity research. • To strengthen human and financial resources at the institutional level for monitoring and research of BD. 	<ul style="list-style-type: none"> • Historically low level of cooperation among institutions. • State budget constrains cause shifting national priorities from BD to other areas of economy and social policy.
Individual	<ul style="list-style-type: none"> • International experience of local experts. • Competent and experienced experts. • Potential to develop specialized scientific teams. 	<ul style="list-style-type: none"> • To motivate young experts to improved participation in the scientific-research programs in the field of protection of BD and SU of its components. • To expand training to managerial staff working in science and research. • To ensure specialists in the field of environmental law, economy, policy and communication oriented to practical problems of the protection of BD and SU of its components. 	<ul style="list-style-type: none"> • Emerging generation problem – young experts do not find it attractive to work in research and science compared to opportunities the private sector. • Lack of skilled middle age managerial staff in science and research. • Lack of specialists on selected taxonomic groups.

4.2.3. Protection of biological diversity in-situ and *ex-situ*

Table 4.8: Identified assets, needs and limits of the capacity framework

Level	Assets	Needs	Limits, barriers
Systemic	<ul style="list-style-type: none"> • Protection of BD legally supported and in compliance with EU law. • Network of protected areas. • Territorial system of ecological stability. • Legal protection of species. • Red lists of endangered species. • Strategy for development of the NATURA 2000 network. • National strategy for the <i>in-situ</i> protection of genetic diversity in populations of old plant varieties and original breeds of the animals. 	<ul style="list-style-type: none"> • To adopt the updated Concept of development of nature protection. • To develop the national strategy for invasive alien species. • To develop the concept for the protection of the original breeds that are threatened with genetic erosion. • To integrate the protection of genetic resources of forest tree species into the National program of protection of plant genetic resources. 	<ul style="list-style-type: none"> • Existing supportive measures/tools to protect BD are not effectively used. • Insufficient repressive tools for protection of BD and SU of its components. • Current legal and strategic tools deal only partially with the issue of invasive species. • Improper understanding of the importance of protection of genetic diversity.
Institutional	<ul style="list-style-type: none"> • Institutional network for the protection of BD <i>in-situ</i> and facilities or protection <i>ex-situ</i>, including facilities for protection of genetic diversity. • Network of gene bases, seed collection stands and seed orchards for protection of genetic diversity of the forest trees <i>in-situ</i> and <i>ex-situ</i>. • Two gene banks meeting international standards to preserve genetic resources at the level of seeds. 	<ul style="list-style-type: none"> • To strengthen current capacities of institutions (financial, material and human resources) so that they enable strengthening of both protection <i>in-situ</i> and <i>ex-situ</i>. • To improve effectiveness of institutions in the public sector for application of the protection <i>in-situ</i> and <i>ex-situ</i>. • To improve the use of support for protection of BD. • To strengthen communication with concerned stakeholders. 	<ul style="list-style-type: none"> • Due to state budget constraints, priority is given to other than BD issues and this causes postponing the implementation of the CBD. • Communication with involved subjects is not sufficient.
Individual	<ul style="list-style-type: none"> • Experts for protection of BD <i>in-situ</i> and <i>ex-situ</i> in the public and private sectors. • High level of enthusiasm and personal involvement of individual experts. 	<ul style="list-style-type: none"> • To prepare training for employees of the public sector in the field of the CBD. • To strengthen tools for the individual motivation. 	<ul style="list-style-type: none"> • Systematic motivation tools at the individual level are not effective, opportunities of motivation rewards are limited. • Insufficient awareness on the broader scale of the CBD commitments.

4.2.4. Ensuring sustainable use of biological diversity

Table 4.9: Identified assets, needs and limits of the capacity framework

Level	Assets	Needs	Limits, barriers
Systemic	<ul style="list-style-type: none"> • The NSB includes goals and strategic trends for sustainable use of the BD components. • The EU directive transposed into the national legislation. • Agro-environmental schemes. • EIA for BD is legally stated. • The National program for protection of plants genetic resources for food and agriculture. 	<ul style="list-style-type: none"> • To transpose the EP into planning of use of biological resources (integrated planning). • To achieve consensus on the values/prices of the BD components. • To develop the National forestry program based on the EP. • To complete the scale of support schemes for silvi-environmental schemes. • To support the promotion of BD (its values) in socio-economic programs. • To amend the Forest Act. • To amend the Hunting Act. • To develop the Act on sustainable tourism. 	<ul style="list-style-type: none"> • Lack of political will to integrate a value/price of the BD into the national planning. • Lack of or weak application of integrated approaches to the use of biological resources. • Ineffective application of existing supportive mechanisms. • Insufficient application of liability for damage to BD. • No tradition of the application of indicators in assessments of the effects of utilization of biological resources.

Table 4.9: Continued

Level	Assets	Needs	Limits, barriers
Institutional	<ul style="list-style-type: none"> • Institutions exist in the public and private sectors that have the potential of sustainable use of the biological resources under condition of systematic supports. • Human and some information resources are available at the institutional level. 	<ul style="list-style-type: none"> • To ensure systematic support to motivate institutions for the SU of biological resources. • To improve effectiveness of managing the information resources (structure, systematic approach of obtaining of information etc. need to be improved). 	<ul style="list-style-type: none"> • There are not sufficient financial resources/ systematic support for motivation toward sustainable use. • Insufficient awareness of the concept of the SU of biological resources, missing examples of best practices.
Individual	<ul style="list-style-type: none"> • Qualified experts in the field of SU of biological resources are available. • Raising the level of education is possible in the form of PhD studies and specialized courses to obtain specific technical skills. • Modern information technologies enable access to information on best practices in the conservation of BD and SU. 	<ul style="list-style-type: none"> • To promote training for senior managers in SU of biological resources. 	<ul style="list-style-type: none"> • Systematic motivation tools are not effective at the individual level; opportunities for individual rewards are limited. • The majority of users of biological resources have not understood their values and opportunities of the application within socio-economic programs.

4.2.5. Access to genetic resources and fair sharing of benefits from utilization of genetic resources

Table 4.10: Identified assets, needs and limits of the capacity framework

Level	Assets	Needs	Limits, barriers
Systemic	<ul style="list-style-type: none"> • The Bonn guidelines oriented to the access to genetic resources, ownership and fair sharing of benefits arising from their utilization. 	<ul style="list-style-type: none"> • To elaborate Bonn guidelines to the situations in the Slovak Republic. • To integrate the issue of ABS into the NBS. • To improve human, financial and information resources at the system level in order to implement the Bonn guidelines. • Continually harmonize national activities with policies and laws of the EU 	<ul style="list-style-type: none"> • Weak political support accorded to application of ABS issue.
Institutional	<ul style="list-style-type: none"> • Existing institutions that have capacities for addressing issues of ABS. 	<ul style="list-style-type: none"> • To improve human, financial and information resources at the institutional level to implement Bonn guidelines both at supervising and application levels. 	<ul style="list-style-type: none"> • Not clear mandates of institutions with respect to ABS are barriers for more systematic developing of capacities.
Individual	<ul style="list-style-type: none"> • Experts in ABS are available. 	<ul style="list-style-type: none"> • To improve human resources via running of training on ABS. 	<ul style="list-style-type: none"> • Weak awareness on this particular CBD objective and unclear understanding of this concept is a barrier for more systematic developing of capacities.

4.2.6. Specific issues of biological safety

Table 4.11: Identified assets, needs and limits of the capacity framework

Level	Assets	Needs	Limits, barriers
Systemic	<ul style="list-style-type: none"> • Act on use of genetic technologies and GMOs and implementing regulations exist. • EU law complemented the national legal framework. • Slovakia is a party to the Protocol. • Responsibilities for ethical questions related to GMOs and biosafety are adequately addressed. 	<ul style="list-style-type: none"> • To amend the existing legal framework so that it is in accordance with the Protocol and that competencies for the biosafety would be clarified among 3 ministries (environment, agriculture, and health). • To define competencies among institutions in the field of biosafety and to optimize their activities at all levels. • To improve the process of accreditation of institutions for addressing issues of biosafety. 	<ul style="list-style-type: none"> • The support to the protection of BD and related areas of the biosafety is often only formally declared, without more consistent implementation. • Research and education are not adequately coordinated in practice.
Institutional	<ul style="list-style-type: none"> • Basic institutional framework with respect to biosafety is available (ME, SEI, Commission for Biological Safety). • Examples of quality evaluation and of management exist in some institutions. • Research and education in some universities such as the SPU in Nitra, the STU in Bratislava and the Comenius University in Bratislava. • Implementation and control methods in several institutes of the SAV and within the MA. • The SEI has capacities to control transfer, handling and utilization of GMOs. 	<ul style="list-style-type: none"> • To develop a national Biosafety clearing-house mechanism. • To increase educational capacities oriented toward better awareness of state officials in the field of biosafety. • To develop laboratories for assessment of risks related to GMOs. 	<ul style="list-style-type: none"> • Lack of initiative and often insufficient experience with preparation of high quality proposals for new projects in the field of biosafety cause differences in participation of institutions into the projects financed from international resources. • Planning, landscape management, monitoring, and assessment can not be sufficiently effective if the relevant activity is slowed-down by the slow communication, non-transparent relations and weakly defined competencies.
Individual	<ul style="list-style-type: none"> • Concerned experts (for biosafety) are available and have the potential to improve their level of expertise. 	<ul style="list-style-type: none"> • To introduce specialized courses in universities and other educational institutions with accreditation for biological safety. 	<ul style="list-style-type: none"> • Insufficient number of experienced specialists does not allow for the solving of important questions of biosafety to a satisfactory level.

4.2.7. Support for education and raising of public awareness on causes and consequences of biodiversity loss

Table 4.12: Identified assets, needs and limits of the capacity framework

Level	Assets	Needs	Limits, barriers
Systemic	<ul style="list-style-type: none"> • Issues of environmental education are integrated in conceptual and strategic documents. • Legal support for education of employees in the public sector. • Specialized events are organized for protection of BD and SU of its components that enable the exchange of information and experience. • NGOs having qualified experts participate in environmental education as well as in expert training. 	<ul style="list-style-type: none"> • To prepare a comprehensive strategy for training and education in the issues of BD and SU of its components at all the levels. • To create support tools at the systematic level (legal, regulatory and economic) in order to provide continuous training for managerial staff within sectors relevant to the CBD. • To ensure capacities for a system of continuous education of experts in all CBD issues. • To improve opportunities for grant support for the informal environmental education. 	<ul style="list-style-type: none"> • Limited resources of individual sectors for education of the managerial staff are used according to the most urgent on-going priorities, rather than for systematic education. • Politically declared priorities of raising the qualification level of the society are not supported by measures that would enable improvement of capacities for education in protection of BD and SU of its components.

Table 4.12: Continued

Level	Assets	Needs	Limits, barriers
Institutional	<ul style="list-style-type: none"> • Institutions and organizations exist for formal and informal education in protection of BD and SU of its components, some with long-term traditions in particular CBD areas. 	<ul style="list-style-type: none"> • To improve institutional capacities in the area of financial, material and also human resources. • To ensure the opportunity for specialized university education at higher levels in the field of environmental law, economy, policy and communication that would be focused on the implementation of measures for the conservation of BD and SU of its components. 	<ul style="list-style-type: none"> • At the institutions, there are no committed positions for CBD within the institutions or dealing with CBD.
Individual	<ul style="list-style-type: none"> • Specialized experts to provide education are available. 	<ul style="list-style-type: none"> • To ensure systematic training-of-trainers. • To support access of the public to internet technologies. 	<ul style="list-style-type: none"> • Decline in specialized trainers due to low incentives including low compensations. • Lack of trainers with communication skills.

5. Recommendations

In Slovakia, capacities are available for implementing at certain extent all provisions of the CBD and the Protocol on Biosafety. But there are still gaps.

Generally, capacities for implementing the CBD have improved in recent years, in particular within the framework for preparation for the country accession to the EU. In some areas this has resulted in significant strengthening of capacities for implementing the CBD. It has to be stressed, however, that a major driving force for positive development has not been an ambition to improve implementation of the CBD, but rather an effort for successful and timely completion of the accession process. EU membership received the highest political support at the time of accession.

Chapter 3 of this report contains an analysis of commitments under the CBD and the Protocol and a description of the relevant existing capacities for implementing them. Chapter 4 contains SWOT analysis of existing capacities and analysis of capacity development needs for meeting commitments under the CBD and the Protocol. The current analyses provide the basis for making recommendations for capacity development interventions that will lead to improved implementation of the CBD. They are included in the tables below.

With regard to implementation time frames, the recommended measures are organized into the three time horizons: short-term measures (2005-2007), medium-term measures (2008-2009) and long-term measures (2010 and following). Timing relates to a period, in which a proposed capacity development intervention (building refers to setting up a new capacity, while development refers to strengthening/mobilizing of an existing capacity) is proposed to happen for the first time and/or to be completed. If the time needed for completion of the proposed intervention exceeds the specific time-frame, the measure is included into more than one table (for instance, completion of management plans for all protected areas will take a couple of years). However, if a proposed intervention should be repeated in regular cycles, for instance revision of the NBS, a measure is included in one table only. Within each table, measures are organized along with commitments/themes under the CBD, for which existing capacities were described in Chapter 3 of this report.

Each measure has been assessed against the following criteria:

- EU priority (i.e. developed capacity will support implementation of the EU *acquis* or environmental priorities),

- national priority (i.e. the developed capacity will contribute to improving national implementation of the CBD and the Protocol, as well as other BD related international commitments)
- cross-cutting-impact (i.e. potential for developing synergistic effects in implementing the Rio Conventions)
- “easy-to-do” solution (i.e. capacity can be developed in an uncomplicated manner, at low cost, for instance through redeployment of existing capacities, increased management efficiency or through improved coordination).

It is foreseen that the proposed measures will be funded mainly from the state budget or from EU Funds.

Implementation of the proposed measures will not only have a positive impact on overall implementation of the CBD in Slovakia, but also will result in improved implementation of other biodiversity related MEAs to which Slovakia is a Party. Some measures will also support implementation of other Rio Conventions.

The improvement of the administration of the CBD in Slovakia and overall coordination of BD related activities has been recognized as the area, where highest priority measures are needed in order to improve the national capacities for implementing the CBD. The same priority was accorded to the integration of the BD into planning at each level and to decision-making processes, and to increasing the awareness of the general public, the public sector including civil servants on the importance of the BD in the context of sustainable development. Interventions in these areas will have a positive effect on increasing the capacities for implementing other areas within the scope of the CBD and ultimately will contribute to implementation of all three of the Convention's objectives.

With regard to system level capacities, it is necessary to revise the NBS taking into account the latest developments in the international agenda and other facts such as membership of Slovakia in the EU. The revised Strategy should include measurable implementation and impact indicators. The revised Strategy should be based on the ecosystem approach. It should integrate existing national strategic documents that had been developed in response to international BD related legal instruments. This will contribute to the overall clarification of the national strategic framework in the area of the BD.

Valuation of BD components should become a common practice and should be integrated into national

planning and decision-making processes. At the same time this would affirm that the importance of biodiversity is not purely scientific or conservation, but rather it has an influence on overall quality of life.

In order to support integrated approaches to conservation of BD, it is important to improve and complement existing incentive measures and ensure the coordination of sectoral planning.

With regard to institutional level capacities, it is necessary to revitalize the operations of the National CBD Secretariat and restructure it into an integrated Secretariat for BD related MEAs. Simultaneously; the operations of the Slovak CBD Commission should also be restored in order to facilitate the transfer of information from the international to the national level as well as among sectors. The Slovak CBD Commission should meet regularly, while the system is put in place to monitor the implementation of the recommendations. The Slovak SCB Commission should be responsible for the preparation of the national reports to the CBD.

It is also necessary to complete the appointments of the National Focal Points and integrate them *ex-officio* into the activities of the National CBD Commission. The responsibilities of the National Focal Points should include cooperation with all relevant bodies and agencies active in implementing of those commitments/themes under the CBD, for which they have been appointed focal points. *Ex-officio* representatives of structures serving for other relevant MEAs, including the Commission for Biosafety should participate in the work of the Slovak CBD Commission. The chairman of the Slovak CBD Commission should participate in the meetings of the Governmental Board for Sustainable Development (See Figure 1).

The Clearing-house mechanism to promote and facilitate technical and scientific cooperation should be set up and the biosafety clearing-house should also be established. Government and public sector institutions should have timely, free of charge access to information that is needed for the conservation of biodiversity and sustainable use of its components, particularly if the information is generated through public funds, including funds that Slovakia received through ODA projects. It is also very important to improve the capacity of the agencies that are entrusted with monitoring of BD to enable them to generate up-to-date information in support of both decision making processes and assessing the impact of implementing strategic instruments and national laws.

At the individual level capacity, a continuous effort should be made to raise public awareness, while promoting and encouraging the understanding of the importance of biodiversity and biological resources, including production and non-production functions. Access to education and training in the measures required for the conservation of biodiversity and sustainable use of its components should be facilitated of public sector employees. Less developed concepts for the commitments under the CBD such as the conservation of traditional knowledge on the conservation of biodiversity and sustainable use of its components, application of intellectual property rights over BD components and the liability for damages to BD should also be included in education and training programs. An increased level of information and education should be provided for decision makers at all levels – from the central to the local level. Formal and informal education on biodiversity should be integrated into the broader framework of sustainable development and all three Rio Conventions.

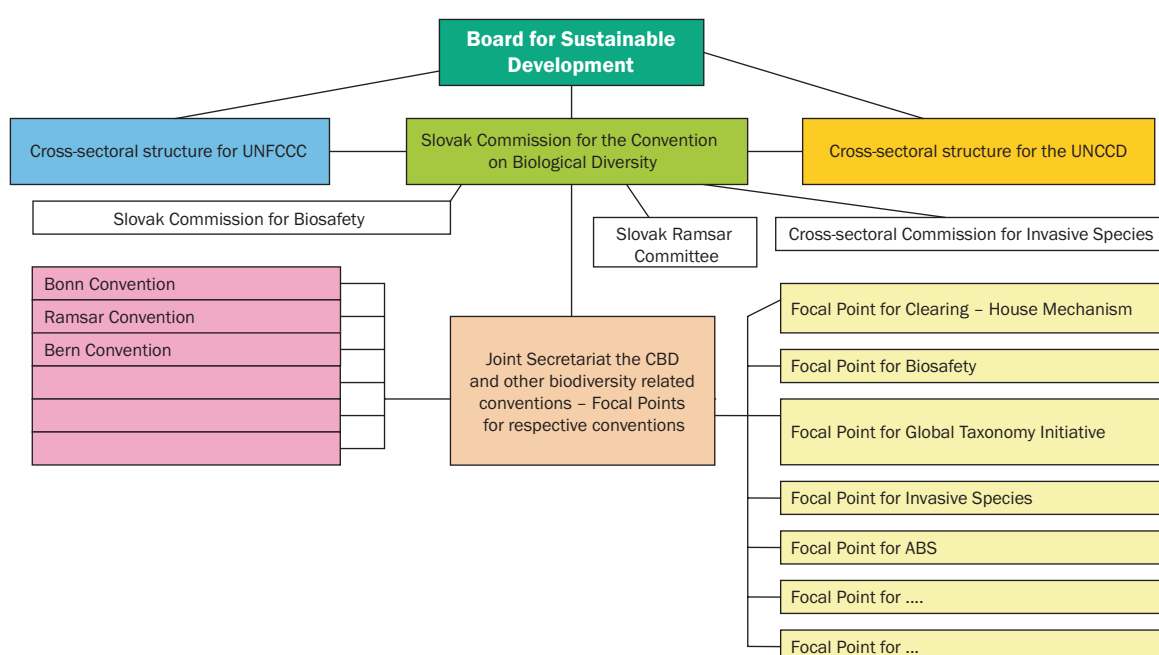


Figure 1: Proposed administrative arrangements for multilateral environmental conventions in Slovakia.

Table 5.1: Short-term measures (2005- 2007)

Measure	Criterion				Source of funding	Type of Intervention
	EU Priority	National priority	Cross-cutting impact /Potential for synergies	Easy-to do solution		
Co-ordination, general measures for the conservation of BD and SU of its components, integration of consideration of the conservation and sustainable use of biological resources into national decision making						
Revitalize the operations of the Slovak Commission for the CBD and update its Statutes	-	++	+++	+++	State budget	Development
Establish a unit within the structure of the ME for coordination of multilateral environmental agreements related to BD	-	+++	+++	+++	State budget	Building
Complete the appointments of NFPs for different issues under the CBD	-	+++	+++	+++	State budget	Building
Improve communication and coordination of the Slovak Commission for the CBD with other structures established to support sustainable development	-	+++	+++	+++	State budget	Development
Compile the 2nd National Country Study on Biodiversity for the purpose of revision of the NBS	-	+++	+++	+++	State budget	Building
Identify, considering national and EU priorities those decisions of the COP that should be integrated into the AP NBS	-	+	+	+++	State budget	Building
Develop methods for assessing the economic value of BD components	-	+++	+++	+++	State budget	Building
Strengthen the representation of the SR at intergovernmental CBD related processes	-	+	+	++	State budget	Development
Ensure financial resources for the implementation of the BD and SU at all sectors	-	-	+++	-	State budget	Development
Incentive measures						
Develop silvi-environmental measures and integrate them into the Rural Development Plan in the next programming period	-	++	+++	-	State budget, EU Funds	Building
Increase allocations for the provision of financial contribution pursuant to §60 of the Nature and Landscape Conservation Act	-	++	+++	-	State budget	Development
Improve the payment of compensation payments pursuant to §61 of the Nature and Landscape Conservation Act	-	++	+++	-	State budget	Development
Update agro environmental schemes so to include incentives for conservation management of valuable nature areas within the agricultural ecosystems in accordance with the recommendation from the Conference of Environment Ministers in Kiev (2003)	-	++	+++	-	State budget, EU Funds	Development
Ecosystem approach						
Develop methods for application of the EA in conservation of BD and SU of its components	+++	+++	+++	-	State budget	Development

Table 5.1: Continued 1.

Measure	Criterion				Source of funding	Type of Intervention
	EU Priority	National priority	Cross-cutting impact /Potential for synergies	Easy-to do solution		
Identification and monitoring						
Introduce BD indicators into the monitoring of BD and develop capacities for regular assessment (in support of BIOTA and FORESTS SMSs)	+++	+++	+++	+++	State budget	Building
Link, through a clearing-house mechanism, the information system of BD monitoring with agro environmental and other programs and information systems, that need to integrate BD related information to support conservation of BD <i>In-situ</i>	++	+++	+++	+++	State budget	Development
Develop capacities for regular mapping of habitats, complete the initial phase mapping and determine the baseline conservation status of habitats	++	+++	+++	-	State budget	Building
In-situ conservation of biodiversity						
Revise the Nature Conservation Development Concept based on the ecological network of protected areas	++	+++	+++	-	State budget	Development
Strengthen capacities of the nature conservation agencies (including ranger service) through improvement of decision making processes and enforcement of the law	-	+++	++	-	State budget	Development
Introduce a program for integrated landscape management considering the need for restoration of eco-stabilizing elements	++	+++	+++	+++	State budget	Development
Develop and approve management plans for protected areas	+++	+++	+++	-	State budget, EU funds	Development
Control of invasive species						
Establish a cross-sectoral group for invasive species within the Slovak CBD Commission	-	++	-	-	State budget	Building
Appoint liaison officers for invasive species at relevant Ministries and sectoral institutions	-	++	+++	-	State budget	Development
Develop and approve a National Strategy for Invasive Species and an Action Plan	-	+++	+++	-	State budget	Building
Conservation and sustainable use of forest ecosystems						
Develop and approve a new Forest Act that will integrate an extended work program for BD of forest ecosystems and Resolutions adopted at the Conferences of European Forest Ministers	+	+++	++	-	State budget	Development
Develop a National Forestry Program	+	+++	+++	-	State budget	Building
Amend the guidelines for forest management planning so to integrate concept of favorable conservation status of forest habitats	+	+++	+++	+++	State budget	Development

Table 5.1: Continued 2.

Measure	Criterion				Source of funding	Type of Intervention
	EU Priority	National priority	Cross-cutting impact /Potential for synergies	Easy-to do solution		
Conservation and sustainable use of agro – biodiversity						
Integrate into national legislation the protection of genetic resources for food and agriculture as recently adopted in international commitments, including the development of regulations to control genetic erosion, funding of gene bank and repositories and the application of genetic resources in social and economic programs	+++	+++	+++	-	State budget	Development / Building
Develop capacities for implementing national law on the protection of genetic resources for food and agriculture	+++	+++	+++	+	State budget	Building
Revise the National program for conservation and use of genetic resources for food and agriculture so to integrate the latest developments in the framework of the CBD	+++	+++	+++	++	State budget	Development / Building
Access to genetic resources and equitable sharing of benefits arising from the use of genetic resources						
Develop a mechanism for implementation of the Bonn Guidelines and strengthen institution and individual capacities for implementation	++	+++	++	-	State budget	Development / Building
Develop a legal framework for the application of intellectual property rights over BD components	++	+++	+++	+	State budget	Development / Building
Biosafety						
Amend the national legislation on the application of genetic technologies to ensure compliance with the Protocol	+++	+++	+++	+	State budget	Development / Building
Revise the responsibilities of the National Biosafety Commission	++	+++	+++	+	State budget	Development / Building
Improve the operations of Biosafety clearing-house mechanism	+	+++	+++	+	State budget	Building
Traditional knowledge and practices						
Make use of traditional old varieties and breeds in implementing the EU program on Quality of agricultural products according to the Directives 2081 and 2082/1992 and Act No. 469/2003 on Certification of Origin of Agricultural Products and Site Labeling	+++	+++	+++	+	State budget	Development / Building
Adopt a regulation to Act No. 469/2003 that will control genetic erosions and make use of traditional knowledge on BD in social and economic programs	+++	+++	+++	++	State budget	Development / Building
Promote the use of traditional old genetic resources as outlined in the National program for promotion of production of agricultural products of local origin	+++	+++	+++	-	State budget	Development / Building
Introduce training focused on the application of traditional knowledge and practices in conservation of BD and SU of its components	++	++	++	+	State budget and budget of relevant institutions	Development

Table 5.1: Continued 3.

Measure	Criterion				Source of funding	Type of Intervention
	EU Priority	National priority	Cross-cutting impact /Potential for synergies	Easy-to do solution		
Public education and awareness						
Introduce regular education programs on BD in public media	++	++	++	-	State budget, EU Funds	Development
Carry out regular training for public sector employees on the measures for the conservation of BD and SU of its components	++	++	++	-	State budget, EU Funds	Development
Expand curricula for special subjects relevant to conservation of BD and SU of its components, expand a scope of certified distance studies	++	++	++	-	State budget, EU Funds	Development
Establish accredited university studies of the 2 nd and the 3 rd degree in environmental law and economics	++	+++	+++	-	State budget, EU Funds	Building
Research						
Carry out training for staff in managerial positions in scientific and education institutions	-	-	-	+	State budget	Building
Develop a BD related research program	-	++	++	-	State budget	Development
Mobilize capacities for implementing integrated research projects relevant to the scope of the Rio Conventions	-	++	+++	-	State budget	Development
EIA, liability and redress						
Improve a legal framework for issues of liability and redress for damage to BD	+	+		-	State budget	Building
Develop capacities, including layers, for enforcement of BD related liability and redress	-	+	-	-	State budget	Building
Carry out an information campaign to increase public awareness of the importance of addressing BD related liability and redress	+	+	+	-	State budget, EU Funds, other grants	Development
Publish in the EIA Documentary Center case studies including short versions of EIA as a resource document for EIA experts						
Integrate into the “IMPACTS” SMS, data on the territory under assessment, to provide for future assessments	-	+	+	-	State budget	Development
Sustainable tourism						
Adopt an Act on sustainable tourism	+	++	+++	+	State budget, EU Funds	Development
Promote the EA to sustainable tourism		+	+	-	State budget	Building
Strengthen the guiding services in vulnerable areas	-	+	+	-	State budget	Development

Table 5.2.: Medium-term Measures (2008-2009)

Measure	Criterion				Source of funding	Type of Intervention
	EU Priority	National priority	Cross-cutting impact /Potential for synergies	Easy-to do solution		
Coordination, general measures for conservation of BD and SU of its components, integration of consideration of the conservation and sustainable use of biological resources into national decision making						
Revise the NBS in compliance with the EU Biodiversity Strategy	-	++	+++	+++	State budget	Development
Develop a legal framework that will promote the integration of valuation of BD components into financial planning and budgetary rules	-	+++	+++	+++	State budget	Building
Incentive measures						
Assess the effectiveness of existing incentives for the conservation of BD and SU of its components	-	++	+++	-	State budget	Development
Ecosystem approach						
Integrate EA into integrated planning and management processes	-	+++	+++	-	State budget	Development
Implement feasibility studies for the application of EA in various types of ecosystems	-	+++	+++	-	State budget	Development
Identification and monitoring						
Strengthen the capacities of institutions entrusted with monitoring the status and trends in BD	+++	+++	++	-	State budget	Development
In-situ conservation of biodiversity						
Develop and implement management plans for PAs	+++	+++	+++	++	State budget	Development
Control of invasive species						
Develop and implement management plans for particular invasive species and affected ecosystems	+++	+++	+++	++	State budget, EU Funds	Development
Conservation and sustainable use of forest ecosystems						
Develop capacities for implementing the National Forestry Program	+	+++	+	-	State budget	Development
Conservation and sustainable use of agro – biodiversity						
Develop research and education programs and establish advisory service for implementation of the National program for conservation of plant genetic resources for food and agriculture	++	+++	+++	+++	State budget and budget of relevant institutions	Development
Develop a concept for the conservation of original varieties threatened with genetic erosion	++	+++	-	-	State budget	Building
Strengthen human, financial and information resources for the conservation and SU of genetic resources for food and agriculture	++	+++	++	+++	State budget and budget of relevant institutions	Development

Table 5.2: Continued 1.

Measure	Criterion				Source of funding	Type of Intervention
	EU Priority	National priority	Cross-cutting impact /Potential for synergies	Easy-to do solution		
Access to genetic resources and equitable sharing of benefits arising from the use of genetic resources						
Integrate issues addressed through the Bonn Guidelines into research education programs to an advisory service and to social and economic programs	++	+++	+++	+++	State budget and budget of relevant institutions	Development
Strengthen human, financial and information resources for implementing the Bonn Guidelines	++	+++	++	+++	State budget and budget of relevant institutions	Development
Biosafety						
Establish an independent laboratory for GMO identification and EIA of GMO	+	+++	+++	+	State budget	Building
Introduce procedures for assessing the long term impact of GMO on the environment, particularly in agro technical applications	+	+++	+++	+++	State budget and budget of relevant institutions	Development
Carry out education and training programs in biosafety, particularly for politicians and managers	+	+++	+++	+++	State budget and budget of relevant institutions	Development
Traditional knowledge and practices						
Promote cooperation of various sectors and institutions in implementing the Leipzig Declaration on the conservation and SU of plant genetic resources for food and agriculture through social and economic programs of small and medium agricultural enterprises	+++	+++	+++	+	State budget	Development
Promote research, training and developing of advisory services for implementing the National program for support of local products	++	+++	+++	+++	State budget and budget of relevant institutions	Development
Public education and awareness						
Develop capacities for education and training of various stakeholders on measures for the conservation of BD and SU	++	++	++	+	State budget, EU Funds	Development
Promote development of publications and public information materials on BD	++	++	++	+	State budget, EU Funds	Development

Table 5.2: Continued 2.

Measure	Criterion				Source of funding	Type of Intervention
	EU Priority	National priority	Cross-cutting impact /Potential for synergies	Easy-to do solution		
Research						
Develop effective linkages between science, research and education and address regional research priorities	-	-	-	+	State budget	Building
EIA, liability and redress						
Carry out the Strategic Environmental Assessment of existing sectoral policies, strategies, concepts and programs	+	+	-	-	State budget	Building
Strengthen capacities for addressing issues of liability and redress for damage to BD	-	+	-	-	State budget	Development
Ensure regular participation of experts in international exchanges of information and experience with EIA	++	-	-	++	State budget	Development
Sustainable tourism						
Design and implement incentives for sustainable tourism	-	+	-	-	State budget	Building

Table 5.3.: Long-term Measures (2010+)

Measure	Criterion				Source of funding	Type of Intervention
	EU Priority	National priority	Cross-cutting impact /Potential for synergies	Easy-to do solution		
Coordination, general measures for conservation of BD and SU of its components, integration of consideration of the conservation and SU of biological resources into national decision making						
Develop an Action Plan for implementing the NBS in the period 2010-2015	-	++	+++	+++	State budget	Building
Introduce a procedure for regular assessment of the effectiveness of implementation of AP based on impact indicators	-	+++	+++	+++	State budget	Building
Carry out the next NCSA for the CBD jointly with assessments for other Rio Conventions	-	+++	+++	+++	State budget	Development
In-situ conservation of biodiversity						
Maintain NATURA 2000 network and network of PAs	+++	+++	+++	+	State budget	Development
Promote implementation of the long-term programs aimed at restoration and revitalization of the landscape		+++	+++	+++	State budget	Development

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