THE REPUBLIC OF SLOVENIA
MINISTRY OF THE ENVIRONMENT AND SPATIAL PLANNING

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Summary

Biodiversity is important for Slovenia for various reasons. It is the cornerstone of life and therefore its importance for society and the state is invaluable. **Ecosystem services** in Slovenia have not yet been systematically mapped and economically valuated. However, several studies have been conducted focusing on particular areas. In the reporting period, the awareness that healthy ecosystems bring benefits to people rose in Slovenia, at both the local and state levels. Nevertheless, decisions are rarely made on the basis of the awareness of the importance of biodiversity. At the level of the European Union, of which Slovenia is a member, understanding of the importance of healthy ecosystems is increasing. Recent policy developments show that decision-makers are changing their perspective and are integrating an ecosystem approach into some sectoral policies.

With regard to **species conservation**, the data on population trends are relatively sparse, but they show that the status of some species is deteriorating. In the last decade, owing to the great extent of the Natura 2000 sites and related obligations, Slovenia has been focused on the status of species and habitats of European importance. Amphibians, reptiles and some arthropods (crustaceans, butterflies, beetles and dragonflies) have the most unfavourable conservation status. The data available on birds show that a considerable number of species have negative population trends and the high share of species with an unknown population trend is also problematic. Of the three large carnivores, the conservation status of the brown bear is favourable, but the status of the lynx is a cause for concern, as its population has declined considerably in recent years. Not many reintroductions have been carried out in Slovenia. An example of good practice is the project of the marble trout (*Salmo marmoratus*) repopulation in the Soča river basin. The results of ichthyologic studies show that the situation is improving. According to the assessments, freshwater **ecosystems** and grassland habitat types have the worst conservation status. The deterioration of the status of grassland habitat types is particularly worrying. Many have been transformed into fields or intensive meadows or have become overgrown due to the abandonment of agricultural use. Habitats becoming overgrown is a problem in a significant portion of Slovenia's territory. The status of forest habitat types is still mostly favourable, although the pressures on the forest environment are also increasing. Forest management in Slovenia is sustainable, which is reflected in the mostly favourable status of forest habitat types. The threatened habitat types are in particular floodplain and other lowland forests and some forest habitat types found only in small areas.

Compared with the preceding reporting period, the greatest **threats** to biodiversity in Slovenia are the same. However, the negative impacts of the spread of invasive non-native species and climate change are more pronounced. All the key reasons are linked to human activities and their effect on the environment, which results in the loss, fragmentation and degradation of ecosystems and habitats in terms of both species and populations. The pressures caused by urbanisation on inland aquatic ecosystems, coastal and marine ecosystems, subterranean ecosystems and ecosystems of extensively cultivated landscape are still significant. The pressures on biodiversity are increasing, particularly due to non-sustainable management and activities affecting the environment in the lowland areas. Global changes, particularly the spread of invasive species and climate change, are also a consequence of human activities. An increase in the impact of these factors on the biodiversity of some ecosystems in Slovenia was detected in the reporting period. The most prominent among the identified pressures and threats are those related to agriculture and anthropogenic changes to

aquatic ecosystems, which is reflected in the poor conservation status of species and habitat types dependent on agricultural land and aquatic ecosystems. Intensive agricultural production, which depletes species and landscape diversity, is still the greatest threat to agricultural-landscape ecosystems. The second reason is the abandonment of traditional agricultural activities in areas of little economic interest and their becoming overgrown by forest. The pressure on habitat types of waters, bogs and marshes continued in the reporting period. Urbanisation and pollution are among the significant threats. Climate change, which is affecting the ecosystems of inland waters in Slovenia, is becoming increasingly important. With climate change, periods of drought are becoming more frequent and longer. With regard to the conservation of biological and landscape diversity, areas becoming overgrown due to the abandonment of traditional use remains a problem in some parts of Slovenia. Threats to mountain ecosystems resulting from tourism are still increasing. Threats to coastal and marine ecosystems remained more or less the same in the reporting period (habitat degradation and fragmentation due to urbanisation, tourism, intensive mariculture, etc.). Pollution due to the discharge of urban wastewater and polluted watercourses into the sea has been reduced with the construction and operation of new treatment plants. Cave ecosystems in Slovenia are threatened by both underground activities and above-ground activities that have an impact on the subterranean environment (pollution). The issue of cave management remains largely unresolved. With regard to genetic resources for agriculture and the food industry, the globalisation of the agricultural market is the main threat to the genetic diversity of domestic breeds and varieties. Agricultural practices introducing new breeds and varieties that are more suitable for intensive agriculture are widespread. **Non-native species** are being recognised as a great threat to biodiversity in Slovenia. Invasive plant species are spreading fast along rivers and traffic routes. This is most notable in wetlands and along the large rivers (the Sava, Drava, and Mura), where invasive plant species have completely replaced the natural vegetation in many large areas. Tourism and recreation, as well as invasive non-native species are the most distinct threats in protected areas. There is also increased pressure caused by illegal motor vehicles driving in the natural environment. **Climate change** is becoming a significant threat to biodiversity in Slovenia. In the reporting period, Slovenia suffered several extreme weather events. Warm winters are becoming more common, which also has an impact on biodiversity (disturbed hibernation patterns, the expansion of thermophilic species, etc.).

Demographic growth in Slovenia does not threaten biodiversity, unlike in some other places in the world, as demographic forecasts for Slovenia are unfavourable (i.e. the population over 65 years of age is increasing). Nevertheless, it can be expected that the pressures on the natural environment will continue to increase and the conservation status of plant and animal species will decline in relation to the decrease in ecosystem diversity. In the next reporting period, it is expected that the fragmentation and deterioration of natural habitats will continue, owing to urbanisation and the construction of roads and energy facilities. It is expected that the negative trends will be halted, as several new obligations and requirements for farmers have been introduced (e.g. a ban on ploughing grasslands). The spread of non-native species will remain an important threat to biodiversity. The lack of natural predators in forests can cause problems in the natural regeneration of forests, particularly with regard to non-native species. The increase in the need for biomass is also one of the factors that could threaten forest biodiversity in Slovenia considerably in the future. The climate change projection for the next decades indicates that extreme weather and climate events and hazardous events will occur more frequently than in the past. The Slovenian coast and Karst regions

and north-eastern Slovenia are endangered the most. If climate change continues, we can expect even more frequent and intensive storms.

In Slovenia, biodiversity is included in basic national and various sectoral strategies, plans and programmes. The integration of environmental requirements in all policies and activities is essential for the enforcement and promotion of sustainable development. Nature conservation planning in Slovenia is carried out through the **National Nature Protection Programme**. The period of application of the first National Nature Protection Programme, which was adopted as a part of the National Environmental Protection Programme, expired in 2014. The National Nature Protection Programme defines operational programmes that contribute to the achievement of biodiversity conservation objectives, i.e. the Operational Programme for Biodiversity Conservation with the Natura 2000 Site Management Programme, the Strategy for the Management of Populations of Large Carnivores, and the Strategy for the Management of Non-native Invasive Species. Slovenia fulfilled the obligation to draw up a Biodiversity Conservation Strategy by adopting the first Strategy for the 2002–2012 period. This document determined a set of specific objectives and directions for the coordinated implementation of measures facilitating the achievement of the three main CBD goals. The Strategy envisaged that its objectives would be achieved through the adoption and implementation of an action plan. However, the action plan has never been adopted. The **Natura 2000 Site Management Programme** is another key document for biodiversity conservation, owing to the large share of Natura 2000 sites (37.16% of Slovenia's territory). **Slovenia's Development Strategy 2014–2020** is a fundamental national strategic document which states that all changes in the economy and society will be directed towards increasing the well-being of generations, taking into account environmental restrictions and human health considerations. The **National Reform Programme (NRP)** is the Government's medium-term plan of priority measures and projects focused on achieving the objectives of the Europe 2020 strategy. It states that the preservation of a high level of biodiversity and vital ecosystems would be ensured through the effective management of existing protected areas and the accelerated implementation of measures intended to maintain the Natura 2000 network. Among its fundamental goals, the **2007–2013 National Development Programme** lists the conservation and sustainable use of biodiversity. The **Rural Development Programme** is a strategic document under which agri-environmental measures are implemented, whose objectives are to establish the concept of sustainable agriculture and preserve natural resources and biodiversity. As stated in the **Strategy for Implementing the Resolution on the Slovenian Agriculture and Food Industry Strategic Guidelines up to 2020**, the green component is implemented within direct payments under the reformed Common Agricultural Policy, which includes obligatory agricultural practices with a favourable impact on climate and the environment. In the **Operational Programme for the Implementation of the EU Cohesion Policy 2014–2020**, a special priority investment is dedicated to the protection and restoration of biodiversity and soil and the promotion of ecosystem services. At the sectoral level, biodiversity is integrated in all key support activities. **Forest management** ensures multi-purpose sustainable forest management in accordance with the protection of the environment and natural assets and the monitoring of the status of forests as ecosystems. **Wild animal management** ensures the ecological, social and economic functions of wild animals and their habitat by covering the planning, conservation, sustainable management and monitoring of wild animals. In Slovenia, **fishing** is carried out in the sea and inland waters, but commercial fishing is only carried out in the sea. The strategic vision of the **fisheries sector** is to achieve sustainable development of the sector in which the fishing effort (e.g. the capacity of the

fishing fleet) will be in accordance with the resources available. Its objective is also to achieve competitive and environmentally friendly fish farming. The drawing-up and adoption of the **Water Management Plan** in the Danube and Adriatic River Basin Districts in 2011 was the first enforcement and implementation of an integrated approach to the analysis of issues related to the achievement of environmental objectives and water use and management objectives. Among Slovenia's key long-term aims included in the **National Programme of Reforms for the Implementation of the Lisbon Strategy** are halting the loss of biodiversity and ensuring the sustainable use of its components. The programme acknowledges the importance of biodiversity as an economic and developmental advantage and opportunity. Slovenian **industrial policy** states that the planning of industrial development has to take into account that natural resources are limited. The **vision of tourism development in Slovenia** is based on sustainable development. It envisages raising public awareness of the importance of biodiversity protection and nature conservation, and promotion of the development of sustainable tourism. The activities envisioned in the Slovenian **energy sector** are directed towards the establishment of conditions for the transition to a low-carbon society. The National Action Plan for Renewable Energy Sources for 2010–2020 requires Slovenia to achieve by 2020 that at least 25% of energy sources in the final gross energy consumption are renewable. In implementing the measures, the biodiversity conservation goals are also taken into account. The common objective of the **programme for transport development** in Slovenia is to ensure conditions for the growth of sustainable mobility that also include nature and biodiversity conservation. It is mandatory to take into account the components of the nature protection programme in **spatial planning** and in the use of natural assets, as the National Nature Protection Programme and National Spatial Plan must be coordinated. A comprehensive environmental impact assessment must be made for plans and activities that could have a significant impact on the environment, and for plans with transboundary impact, also a transboundary environmental impact assessment.

Numerous **measures and activities** were carried out in the reporting period that directly or indirectly contributed to biodiversity conservation. The objectives that were followed best were those related to the implementation of the EU legislation. Almost one third of the outlined measures were not implemented adequately in terms of their contribution to biodiversity conservation, approximately half of the measures made a good contribution and only 15% of the measures contributed substantially to biodiversity conservation. In areas not regulated at the EU level, the number of measures was much lower. In the ten-year period, a new legislative framework and organisational framework for nature protection were established, and basic regulations on sustainable use were amended. The situation has also improved at the planning and sectoral policy levels. However, difficulties have occurred at the implementation level. Compliance with regulations is generally poor.

In 2004, Slovenia established **the network of Natura 2000 sites**, which following a slight increase in 2013 now covers 37% of the country's territory. This is an important achievement in nature conservation and contributed to the greater inclusion of nature protection considerations in spatial planning and planning the use of natural resources. The Natura 2000 Site Management Programme requires individual sectors to carry out management measures according to their responsibilities.

In recent years, a great deal has been done with regard to the management of large carnivore populations. Strategies and action plans for bear, wolf, and lynx have been drawn up. The Slovenian Government approved the action plan for the sustainable management of the wolf population for

2013–2017, a draft strategy for the management of the lynx population for 2015–2025 has been drawn up and many projects concerning large carnivores have yielded important results.

There has definitely been an improvement in the inclusion of biodiversity in legislative mechanisms and policies. However, the implementation of measures has been less effective. Some of the negative impacts of **agriculture** on biodiversity have been reduced recently, particularly in relation to the reduced input of fertilisers and phyto-pharmaceuticals. The implementation of measures for the preservation of native breeds and varieties can be assessed as positive, as the situation has improved. The implementation of measures in **forestry** can be assessed as good, which is reflected in the relatively favourable conservation status of the majority of forest habitats and species. In **fisheries,** gradual progress has been noted, particularly in the past five years, in the inclusion of biodiversity conservation objectives at the level of regulations and sectoral policies. The inclusion of nature protection aims and measures in plans concerning hunting has improved in recent years. Data show that the status of species defined as game is favourable. The integration of biodiversity conservation in **water management** is not yet satisfactory and there are many difficulties in practice. The Strategy's directions related to **industry, energy and transport** have not been realised. Despite some measures for improving energy efficiency, energy consumption is still on the rise. At the level of **tourism** policy, Slovenia's well-preserved nature is often highlighted as a comparative advantage. However, this has not been significantly reflected in specific policies and activities. In **spatial planning**, great pressures were noted in the reporting period in the areas of great importance for biodiversity conservation. The situation as to **monitoring** has improved but in recent years there has been a worrying lack of funds due to the crisis in public finances. Monitoring is focused solely on the status of important European species. With regard to nature protection data, an effective online nature protection atlas has been set up that allows the public to access data on areas important for nature protection. Slovenia has not yet developed a national programme for biodiversity **research**. The lack of directed action in research is also reflected in modest support for biodiversity research projects. Strategy's directions concerning **awareness-raising and communication** have not been achieved, as activities are dispersed and are mostly conducted on the project level, which does not guarantee their continuity. The biodiversity **Clearing House Mechanism** is poorly maintained. The situation in **education** with regard to biodiversity is also not satisfactory, but some improvements were made. The situation in university education is a bit better, as the number of nature protection programmes has increased and they are available in all study cycles. The development and adoption of **management plans for protected areas** have been delayed due to the demanding content and extent of the tasks. The national target regarding the establishment of new **nationally designated protected areas** has not been achieved (the current state is approx. 13%, the target share for 2014 was 22%).

In Slovenia, nature protection is, as a rule, a non-profit activity that must be provided by the state and local communities in line with their responsibilities. The **financing thereof** is generally carried out through the state budget. Important additional sources of funding are the European Regional Development Fund, the European Agricultural Guarantee Fund, the Rural Development Programme, the LIFE programme, the Cohesion Fund, the EEA and Norwegian Financial Mechanisms and the Swiss contribution. Slovenia has not yet developed payment for ecosystem services, which is a potential source of financing for biodiversity conservation measures. The Business & Biodiversity Mechanism has not been fully realised in Slovenia. The establishment of new protected areas is generally financed from the state budget. One of the basic new elements introduced by the reform

of the EU agricultural policy for the 2015–2020 period is an increase in the funds within agri-environmental and climate payments. The aim of these measures is to reduce the negative impacts of agriculture on the environment. Systemic financing that would allow for prompt data entry and maintenance of databases has not been established yet. Awareness-raising activities are part of the regular work of all public institutes and public service providers operating in nature conservation in Slovenia and financed from the state budget and other sources.

Development reports show that the sustainable development principle has been gradually realised in Slovenia but there are still deficiencies and imbalances in all three components (economic, social, and environmental) and still high energy intensity. There is still much to be done with regard to awareness-raising, as consumers can achieve a change in the orientation of the business sector. Slovenia has yet not achieved the CBD target concerning the extent of **marine protected areas**. Protected areas, without Natura 2000 sites include 0.4% of the Slovenian sea. Many measures aimed at improving the status of numerous species have been implemented under ecosystem approach and by managing some umbrella species, such as large carnivores.

In Slovenia, the ecosystems providing key services to people are mostly protected or managed pursuant to sectoral legislation. Although many of these areas have not been declared primarily for the purposes of biodiversity conservation, they play an important role in the maintenance of vital ecosystems. Total greenhouse gas emissions decreased in the reporting period, except in transport, where an increase was noted.

Slovenia signed the **Nagoya Protocol** in 2011, but it has not yet ratified it. In order to implement the Nagoya Protocol, the EU adopted *Regulation (EU) No 511/2014 of the European Parliament and of the Council on compliance measures for users from the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization in the Union.* Slovenia will implement the Protocol with regard to user compliance through this Regulation and will most probably regulate access to genetic resources in the next few years.

Owing to the economic and financial crisis, in the reporting period Slovenia was faced with the challenge of including biodiversity conservation in national priorities and achieving more targets than before with reduced resources. Compared with other sectors, biodiversity conservation is assigned relatively little importance. Slovenia was not able to make any financial commitments in the reporting period that it would be unable to fulfil.

The **updated national strategy and action plan** are currently being drawn up. Compared with the previous strategy, the targets proposed for the new strategy are focused more on the achievement of global goals. In 2014, expert groundwork was carried out and the strategy is planned to be adopted in 2016.

In the reporting period, Slovenia actively contributed to the achievement of the **Millennium Development Goals** by 2015 (goals 1, 7 and 8). By offering technical and human capacities and participating in exchanges and training, Slovenia takes part in many projects and programmes in developing countries. In addition to the Government, non-governmental organisations have also been very active in this field. Slovenia's contribution has mostly been focused on development assistance with regard to environmental protection in Western Balkan countries. Owing to the unfavourable public finance situation in the reporting period, the public funds available for nature

protection were reduced, including direct official development aid. . This was reflected in Slovenia's participation in international fora, as only the most urgent matters were covered. The fulfilment of certain obligations under ratified international agreements (the payment of membership fees, participation in COP meetings and convention bodies, project financing, etc.) was also limited.

PART I: BIODIVERSITY STATUS, TRENDS AND THREATS AND IMPLICATIONS FOR HUMAN WELL-BEING

1. Why is biodiversity important for Slovenia?

Biodiversity is important for Slovenia for various reasons. It is intrinsically valuable, a value in itself. Biodiversity is a cornerstone of life and humans are a part of it, which makes its importance for society and the country immeasurable. It is inherent in ecosystem services, which in Slovenia have not yet been fully catalogued and economically valuated. However, understanding of the importance of vital ecosystems and their services continues to develop.

1.1. The importance of ecosystem services for human welfare and social and economic development

There has not yet been a comprehensive review of ecosystem services at the state level in Slovenia. However, several studies have been conducted focusing on particular areas. Slovenia is located at the meeting point of four biogeographical regions. As a result, its ecosystems and their services are very diverse. In some cases in practice, Slovenia confirms the awareness that biodiversity conservation and consequently the conservation of ecosystem services is crucial for its social and economic development. In the reporting period, the awareness that healthy ecosystems bring benefits to people rose in Slovenia, at both the local and state levels. In general, these benefits are a stronger economy, sustainable livelihoods and positive impacts on people's health. Nevertheless, decisions are often enforced by law instead of being made on the basis of decision-makers' awareness of the importance of biodiversity and ecosystem services. This was confirmed by a comprehensive Analysis of the Achievement of National Objectives from the biodiversity strategy (2002–2012)[1] conducted in 2012, which showed that the objectives that were followed best were those related to the implementation of EU legislation. The lack of awareness of decision-makers and the low interest of the public lead to decisions that cause the deterioration of ecosystem services and biodiversity loss.

In Slovenia, like elsewhere, the examples of biodiversity benefits can be seen, for instance when genetic resources are used directly. This is the case in the development of pharmaceuticals, and the establishment and maintenance of genetic banks for agriculture, forestry and industry (e.g. woodworking industry). It is expected that the economic value of genetic material will grow as the use of biotechnology rises. Another large group of values related to biodiversity are the indirect values provided by ecosystem services. The preservation and maintenance of areas including forests, grasslands and aquatic systems contribute to the continuous provision of ecosystem services. The value of these services is immeasurable, as without them, there is no life. However, we can assess their economic value if we calculate how much it would cost to replace them with substitutes that we ourselves would make. It is hard to show the relationship between ecosystem services and biodiversity. But we can nevertheless claim that biodiversity in Slovenia is underrated, as we continue with spatial uses and development that reduce biodiversity. At the local level, the loss of biodiversity can be measured by the loss of the natural environment. If the lost natural environment was a wetland, the result could be more frequent and severe floods. Various anti-flood measures are used to solve this problem that often further degrade the environment and are also very expensive. An important aspect in biodiversity valuation is the use of nature for recreation and aesthetic enjoyment. It is extremely valuable for people's quality of life. In Slovenia, people enjoy nature for trekking, gathering plants and mushrooms, cycling, running, fishing, photography, etc. Recreation in a natural environment maintains and improves people's health, which reduces the cost of healthcare.

A special aspect of biodiversity, which is harder to define, is the sense of the moral obligation to protect other species from extinction.

At the level of the European Union, of which Slovenia is a member, the understanding of the importance of healthy ecosystems is increasing. It became evident in the reporting period that policy-makers are changing their perspective and are integrating the ecosystem approach in some sectoral policies. For example, the use of pesticides in agriculture is being revised to improve the status of pollinators, such as bees; the EU rural development policy provides aid for farmers who sign up to environmental commitments, etc.[2]
Ecosystem goods in Slovenia include plant and animal species important for food and agriculture, water, wood, etc., while ecosystem services include the purification of water and air, the natural recycling of waste, soil formation, pollination and regulatory mechanisms that control climatic conditions (e.g. precipitation and consequently floods) and populations of organisms[3]. It might be imperceptible at first, but every activity resulting in reduced biodiversity has far-reaching consequences for ecosystem services. Although in some circles in Slovenia the conviction that biodiversity is important for ecosystem services and therefore for human well-being is strengthening, the awareness of decision-makers does not always follow this. There is also an unwillingness to valuate ecosystem services and nature in general[4].

1.2. Activities related to ecosystem services in the reporting period

The first study of ecosystem services in Slovenia was conducted under the transnational project NATREG. Institute of the Republic of Slovenia for Nature Conservation led the preparation of a study on evaluating ecosystem services for small protected area on Pohorje. Study followed the guidelines on economic evaluation of ecosystem services which are a part of the NATREG's Joint Strategy for Integrated Management of Protected Areas in the South-East Europe. Study is called Economic evaluation of ecosystem services of the lakes Lovrenška jezera. Lovrenška jezera represents the southernmost and the largest active raised bog in Slovenia. This is the first study on ecosystem services in Slovenia in which we wanted to show the »hidden« values of protected areas. We calculated total economic value for two scenarios: 1st is with conservation and the 2nd without conservation of Lovrenška jezera. Study showed that conservation for the next 50 years is needed if we do not want to loose 151 millions euro of the ecosystem services[5].

In 2010, a review of the most frequently used methods for the economic valuation of ecosystem services in protected natural areas was also carried out under the NATREG project. The study highlighted that method selection depends on technical, institutional, applicable and financial considerations. The validity and reliability of the results determine the technical suitability of a valuation procedure or tool, but the main criteria for the final selection of a method are the evaluation and applicability of the results. The study also showed that the methods presented are very complex and require a wide range of knowledge and experience in various fields. Therefore, it is advisable for valuations to be made by interdisciplinary groups of experts in biology, ecology, economy and other professions[6].

In 2011, a comprehensive study of the valuation of ecosystem services in the Škocjan Caves Park was conducted. The subject of the study was the valuation of the ecosystem services of the Škocjan Caves Park in order to determine the contribution of the Park to the local, national and global economies and to gain local and political support for the conservation and sustainable use of the ecosystem services of the regional park. The valuation of ecosystem services provided comprehensive information on the impacts of particular measures on the environment and the people living there. The study is considered a model case in Slovenia for the prevention of "bad" decisions that could degrade the environment and thus worsen the living conditions of people. It was conducted under

the project "Protected Areas for the Planet of Life – Protected Areas in the Dinaric region". Within the same project, a workshop was held on the premises of the Škocjan Caves Park in April 2011, entitled "The Ecosystem Services of the Škocjan Caves Park"[7].

The majority of Slovenia's territory is covered by forests and sustainable management has long been integrated in forest management. One of more important events regarding forest ecosystem services in the reporting period was a workshop held in 2013 under the auspices of the Recharge Green project, which is co-financed by the European Regional Development Fund within the Alpine Space transnational territorial cooperation programme. The main objectives of the project is to study the impact of the use of renewable energy sources on the natural environment and ecosystem services, and examine whether it is possible to ensure various uses of space in the sensitive Alpine world in a balanced way. The workshop topic was the development of the concept of multi-purpose forest management: forest functions, ecosystem services and priority areas. Its purpose was to present new concepts in the planning of multi-purpose forest management in broader area and assess the situation in Slovenia. The workshop was attended by planners, experts in forest management and fields related to the planning of the multi-purpose use of forests[8].

In October 2011, the 2nd Regional Workshop was held within the Biomura project, where a paper prepared by the Institute of the Republic of Slovenia for Nature Conservation (hereinafter: the Institute for Nature Conservation) entitled "Natural Resources and Ecosystem Services" was presented[9].

Another important programme with regard to the consideration of ecosystem services is the EEA Financial Mechanism 2009–2014. The objective of the programme for the "Biodiversity and Ecosystem Services" programme area is to halt the loss of biodiversity, while the expected result is increased capacity to manage and monitor the Natura 2000 sites effectively. The call for proposals of the EEA Financial Mechanism focuses on the management of extensive meadows and/or protected floodplain forests and/or wetlands, the monitoring of the status of species and/or habitat types with an unfavourable conservation status and the improvement of databases, and an increase in the acceptance of the implementation of Natura 2000 management programmes by key stakeholders. In order to achieve these results it is essential to finance and implement effective protection measures on-site. The monitoring of the status of species and habitat types is necessary to effectively implement measures and measure their effects. The strategy of the programme strives to expand the existing status monitoring of Natura 2000 species, the conservation status of which is not yet known owing to the lack of data (approximately one third). In order to effectively link the data collected with the necessary measures and direct them towards the key parts of the areas, databases and web portals need to be enhanced. Every project should be accompanied by information and educational activities to ensure the cooperation of key interest groups and local communities[10].

One of the comprehensive ecosystem service analyses made in the reporting period was a socio-economic analysis of the use of marine waters and the costs of the degradation of the marine environment carried out by the Institute for Water of the Republic of Slovenia[11]. The analysis was made according to the concept of marine bills and gives information on benefits the marine environment brings to the Slovenian economy and society and on the burdens that activities related to the marine environment may cause. It presents data on the spatial distribution of activities, trends and the expected development of activities in the future. Use of the marine environment in Slovenia is intensive and very diverse. Human activities in the sea and on land affect the status of the marine environment. It is essential to be aware that a healthy and unpolluted marine environment is a prerequisite for various activities and brings certain benefits to the economy and society. Many activities depend on the favourable status of the marine environment (e.g. fisheries, aquaculture, tourism, agriculture, defence, salt production, sports, recreation, leisure activities). The deterioration of the marine environment can threaten certain income sources and jobs in these activities and

cause a loss of other social benefits, thus affecting the quality of life. Activities related to the marine environment contribute 2% of the total added value in the country and provide jobs to 2% of employed persons in Slovenia. With regard to added value and employment, marine transport, industry and storage in the coastal municipalities and tourism are the most important sectors related to the marine environment. Marine transport generates almost one half of the added value of sea-related activities in Slovenia. The study confirms that settlements, tourism, marine transport and fisheries burden the marine environment the most.

Diagram 1: The importance of direct ecosystem services of the marine environment in Slovenia12

1.2.1. Examples of good practice

There are many examples of good practice in Slovenia showing the importance of ecosystem services for human welfare and social and economic development.

The importance of some wetlands for the development of tourism should be highlighted. On two Ramsar sites in Slovenia a certain level of tourist activity is achieved with appropriate management. Studies of ecosystem services have been conducted on these sites, therefore they are referred to as examples of good practice (http://www.ramsar.org/cda/en/ramsar-documents-list-anno-slovenia/main/ramsar/1-31-218%5E16186_4000_0). The provision of good tourist practices in wetlands and surrounding areas and raising the awareness of visitors regarding the importance of wetlands can contribute to their favourable status. It must be emphasised that tourism is only one of the ecosystem services provided by wetlands in Slovenia. In the Sečovlje Salina Nature Park, the first Ramsar site, project "LIFE MANSALT – Man and Nature in Sečovlje Pans" has been carried out since October 2010 (http://www.kpss.si/si/o-parku/naloge-parka/projektno-delo/life). The main objective of this project is to preserve the biodiversity of the saltpans. Diagram 1 presents the importance of the ecosystem services of the marine environment in Slovenia, which is the result of the socio-economic analysis of the Slovenian sea, including the Sečovlje saltpans. The comprehensive study of the valuation of ecosystem services in the Škocjan Caves Park, the underground Ramsar site, conducted in 2011, is presented in the preceding section. The following is a presentation of the ecosystem services of another important wetland, Ljubljansko Barje Landscape Park (http://www.ljubljanskobarje.si/ljubljansko-barje/ekosistemske-storitve):

- Protection against floods (spreading area): peat and peat moss can absorb huge amounts of water; the area functions as an enormous sponge that protects the capital city against floods.
- The mitigation of extreme weather events: during heavy rains it accumulates water and during drought the water evaporates and cools the surrounding area.
- A supply of drinking water.
- A natural treatment plant that purifies water; it eliminates many harmful substances that people discharge into the environment.
- A carbon dioxide sink: the wetland creates a great quantity of green mass that absorbs greenhouse-gas carbon dioxide from the atmosphere and emits oxygen into the atmosphere.
- A biodiversity cradle.
- An area of rich cultural heritage (including archaeological and ethnological heritage, cultivated landscape, etc.).
- An open-air classroom.
- A green reserve for recreation and relaxation that enriches the life of the people living there and in the capital.
- Vegetable gardens and fields are a source of food.

2. What major changes in biodiversity status have taken place in Slovenia?

The analyses of the biodiversity status have shown that the conservation status of species and habitat types deteriorated in the reporting period, particularly of those dependant on agricultural land and water surfaces. The majority of changes to the status of habitat types in Slovenia were for the worse, very rarely did the status improved. The population trends of some indicator species, particularly birds, are negative. Birds of the agricultural landscape stand out the most and the population status of some specialist bird species of the forests and amphibians and arthropods (grassland butterflies and some dragonfly and damselfly species) has also declined.

2.1. Overview of the status, trends and endangerment of biodiversity

In the last decade, owing to the great extent of Natura 2000 sites and the related obligations, Slovenia has been focused on the status of species and habitats of European importance. The report on the implementation of the Habitat Directive in Slovenia for 2013[13], including the assessment of the conservation status of 56 habitat types and 105 species, shows that 38 habitat types have a favourable status (FV), 25 an unfavourable-inadequate status (U1) and 25 an unfavourable status (U2). The assessment of the conservation status was favourable for 95 species, inadequate for 134 species and bad for 35 species. The status of one habitat type and 67 species is unknown (XX). This means that 43% of habitat types and 29% of species have a favourable status; 28% of habitat types and 40% of species have an inadequate status; and 28% of habitat types and 11% of species have a bad status.

The comparison of reports for 2007 and 2013 shows that the majority of changes to the status of habitat types were for the worse, very rarely did the status improved.

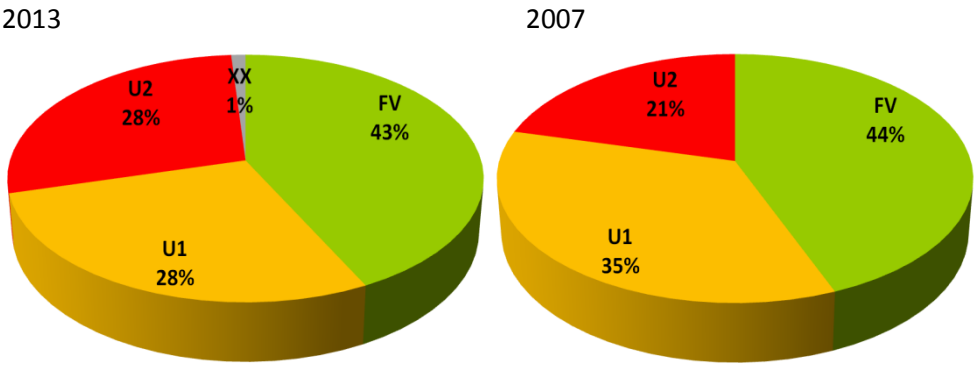

Figure 1: The share of habitat types by conservation status in 2007 and 2013.

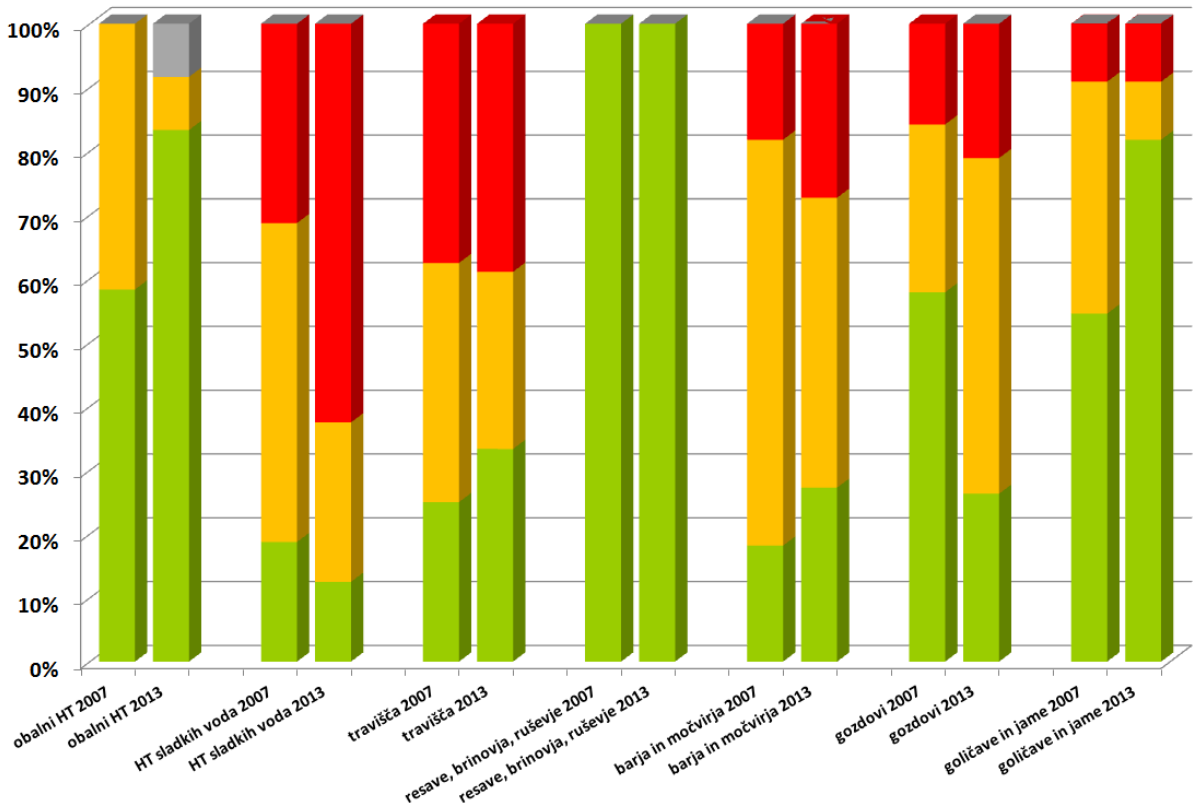

Figure 2: A comparison of the state of habitat type groups in 2007 and 2013.

Compared with 2007, the share of habitat types with a bad status increased by 7%, while the share of habitat types with a favourable status fell by 1%. Many changes in the assessed status were due to the application of different methods and more stringent assessment criteria, and some due to better data. According to the assessments, freshwater and grassland habitat types have the worst conservation status.

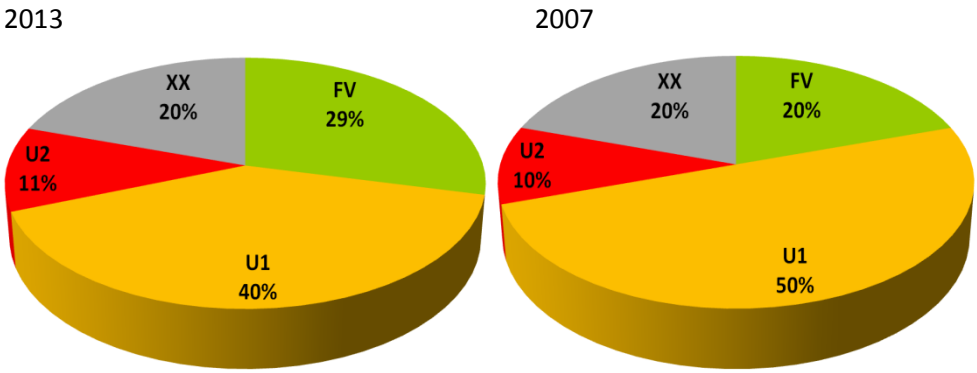

Figure 3: The share of species by conservation status in 2007 and 2013.

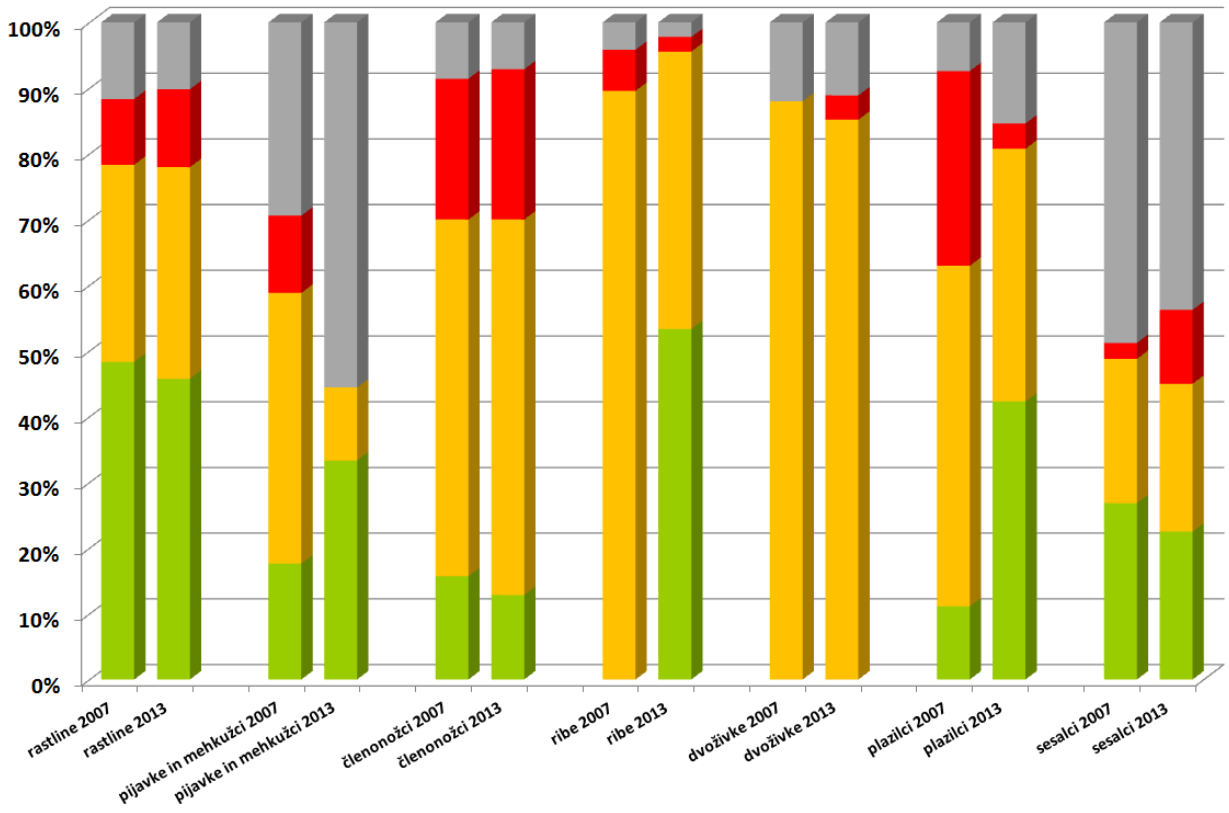

Figure 4: A comparison of the status of species groups in 2007 and 2013.

Contrary to habitat types, the status of as much as one fifth of species was not assessed owing to a lack of data. In comparison with 2007, the number of species with a favourable status increased by 9%. In the majority of cases, the change in the assessed status was due to better data (e.g. fish) or a different method (e.g. reptiles). The share of species with a bad status also increased by 1%. The assessed conservation status was the worst in amphibians and grassland butterflies and some Odonata species (arthropods).

In April 2014 Slovenia submitted the report in accordance with Article 12 of the Birds Directive[14]. The reporting method under the Birds Directive was amended considerably in 2013, making comparisons with previous reports difficult. Data for the 2001–2012 period for 50 of 210 nesting bird species show a downward trend. There are no data on trends for 69 nesting species.

According to the 2013 report under Article 17 of the Habitat Directive, the status was assessed as follows: the status of 29% of all Natura 2000 species is favourable, 40% have an inadequate status, and 11% have a bad status. The status of 20% of the species could not be assessed. Arthropods have the worst status, as only slightly over 10% of the species have a favourable status, almost 60% have an inadequate status and about 20% have a bad status. The situation regarding amphibians is even worse. The status is inadequate for as many as 80% of the species, bad for a few percent, and not one species has a favourable status. With regard to mammals, in the 2007–2013 period the status deteriorated particularly for bats. The status of the lesser horseshoe bat changed from favourable to bad. The 2014 report under Article 12 of the Birds Directive shows that the short-term trend (2001–2012) of populations of wintering species is negative in 15% and the long-term trend (1980–2012) in

40% of species. The short-term trend (2001–2012) of populations of nesting bird species is negative in 24% and the long-term tend (1980–2012) in 19% of species. The last report on the monitoring of common bird species compiled in 2014 shows that the composite index for farmland birds in 2014 was 78.1, which was 0.8% worse than in 2013. In 2014, the composite index for generalist species was 90.1 (-0.6% compared with 2013), for grassland species 62.8 (-4.5% compared to 2013) and for hedge birds 69.5 (+0.3% compared to 2013). For the fifth year in a row, the Slovenian farmland bird index is approx. 80, while the composite index for meadow birds continues to decline.

Data on any monitoring Slovenia is obliged to carry out under the Natura 2000 network and national legislation are publicly available[15]. These data are the basis for reporting under both directives, drafting nature protection guidelines, assessing the acceptability of plans and activities, managing protected areas, drafting other reports, and implementing tasks related to nature conservation.

2.1.1. Ecosystem conservation

Data on the areas where habitat types have been mapped are available on the website of the Institute for Nature Conservation[16]. Owing to the lack of funds in recent years, there has been no systemic financing available to carry out another mapping for monitoring purposes. The analysis of the implementation of the previous Biodiversity Conservation Strategy[17] found that recent data on trends in habitat type status exist for only a few areas where mapping has already been repeated. At Ljubljansko Barje (Ljubljana Marsh), the share of fields in the first protection area has increased by almost 7% in the last decade (Trčak, Erjavec, Govedič, & Grobelnik, 2010). The rapid shrinking of natural habitats has also been observed in the Goričko region, where the establishment of the Goričko Landscape Park evidently did not halt the intensification of agriculture. In the period from 2003 to 2009, in one part of the Goričko region the number of wet meadows fell by 65% (from 113 ha to 39 ha) (Paušič, Somodi, & Čarni, 2011).

2.1.2. Coastal and marine habitat types

According to the above-mentioned analysis, the Slovenian coast is relatively densely populated and the pressure is rising, particularly in view of the demand for the construction of holiday homes, tourist facilities and marinas. According to Slovenian Environment Agency, only 25% of the Slovenian coast is still in its natural state, 38% is moderately modified and 37% is considerably changed (ports, marinas, urban areas). Detailed studies have shown that between 1991 and 2007 the surface area of urbanised areas in the Koper Municipality increased by 39% (749 ha). As the coastal biogeographical region is very small in Slovenia, it can be concluded that urbanisation has had a great impact on biodiversity.

The coastal region is also under great pressure owing to non-native species. Although there are no systematically collected data for the majority of non-native species, the analytical comparison of data on taxons that the foreign, databases "Neobiota in Österreich" and DAISIE refer to as non-native shows that they are more abundant in the coastal region and along the Soča river, in the wider Ljubljana area and in large rivers and along their banks (the Sava, Drava, and Mura). The great number of non-native species in the coastal region is the result of the following factors: (1) the sub-Mediterranean climate with mild winters enables many non-native species originating in warm climates to survive; (2) the coastal region has no great geographical barriers (e.g. mountains) and adjoins the Po Valley (Italy), from where non-native species can spread faster; (3) this is the only part of Slovenia with a marine environment, where there are several non-native marine organisms; (4) owing to the Port of Koper, there is a great deal more traffic from distant parts of the Earth in the

coastal region than elsewhere in Slovenia. On the basis of the data from the monitoring of the chemical status of the sea for the MR06 indicator – chemical and ecological status of the sea, five water bodies have a poor chemical status, due to excessively high content of tributyltin compounds. The ecological status of marine water bodies was determined for three water bodies, which have good or very good status. Following the construction of modern wastewater treatment plants in the coastal municipalities, it can be expected that water quality will gradually improve. In order to determine the impact of pollution on organisms (biomonitoring), the National Institute of Biology conducts measurements of metallothionein in the tissues and DNA damage in the haemolymph cells of the Mediterranean mussel (*Mytilus galloprovincialis*). According to the results of the analysis of the pollution of sediment by aliphatic and polycyclic aromatic hydrocarbons, the Slovenian sea is moderately polluted compared with data on other coastal regions in the Mediterranean. The most significant pressures stem from land and marine transport. The concentrations of hydrocarbons, cadmium and mercury in the samples of the Mediterranean mussel (*Mytilus galloprovincialis*) in 2013 were the same as in previous years. The concentrations of aliphatic hydrocarbons in the sediment indicate an important impact of maritime transport[18].

2.1.3. Inland waters, bogs and marshes

It can be concluded from the last report on the status of inland water, bog and marsh habitat types that the situation is inadequate and continues to deteriorate. Of 16 freshwater habitat types, only 2 have a favourable status and of 11 bog and marsh habitat types, only 3 have a favourable status, 5 have an inadequate status and 3 a bad status.

2.1.4. Farmland habitat types

The monitoring of farmland birds in Slovenia has been carried out since 2007, when the pilot inventory was compiled. Subsequently, an inventory has been compiled every year. The Slovenian farmland bird index including 29 characteristic species of Slovenian farmland is used to present the biodiversity status in farmland ecosystems. In 2014[19], this index was 78, which was 0.8% less than in 2013. In 2014, the composite index for generalist species was 90 (-0.6% compared with 2013), for grassland species 63 (-4.5% compared to 2013) and for hedge birds 70 (+0.3% compared to 2013). For the fifth year in a row, the Slovenian farmland bird index is approx. 80, while the composite index for meadow birds continues to decline. A relatively sharp decline in farmland bird populations has been recorded throughout Europe. In most cases this was a direct consequence of agricultural intensification. It is imperative to examine the reasons for such decline (reasons are species- and site-specific) and the time series of the farmland bird monitoring should be continued.

The decline of the majority of IBA/SPA species dependent on farmland (corn crake, lesser grey shrike, woodlark, European scops owl, barred warbler and ortolan bunting) is cause for serious concern. The lesser grey shrike and the ortolan bunting are on the brink of extinction in Slovenia. The only Natura 2000 farmland species whose population has grown is the white stork. The disappearance of grassland habitats and mosaic structures in farmland are two of the key threats to birds in the IBA/SPA.

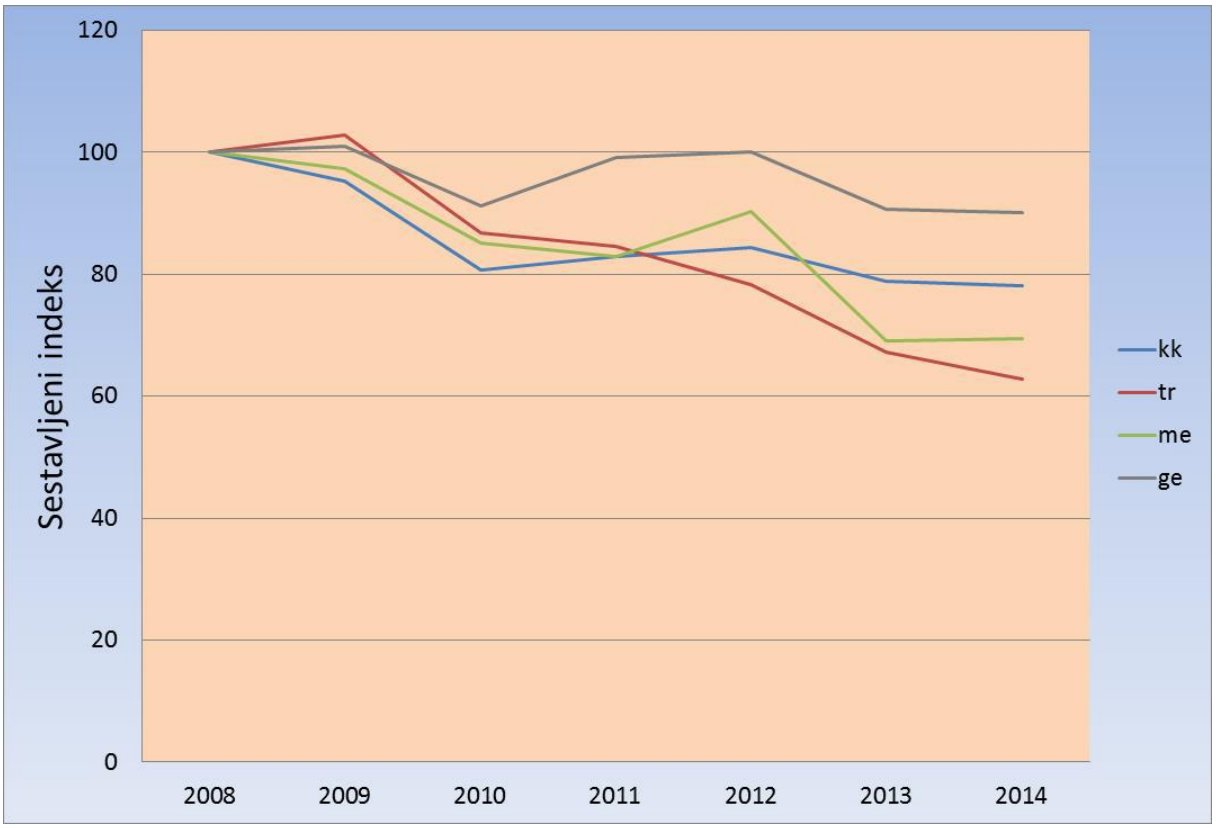

Figure 5: Composite indexes for farmland birds in Slovenia in 2008–2014 (kk – 29 indicator species, ge – generalists, tr – grassland species, me – hedge species)

The status of grassland habitats of European importance is not favourable according to the last report. The status of the continental biogeographical region, where there the majority of lowland areas lie, is particularly bad. Of 7 grassland and scrub habitat types, the status of 2 is inadequate, the status of the rest is bad. In the Alpine biogeographical region, the status of a little less than one half of grassland habitat types is favourable. However, these are mostly habitats at high altitudes, where intensive agriculture is not possible. Grassland habitats in the lower parts of the Alpine region are also threatened.

As the monitoring of habitat types has not been set up yet, data for only a few areas are available. In these areas extensive meadows are vanishing fast as they are being transformed into intensive meadows or fields.

The analysis of the achievement of the objectives of the Natura 2000 Site Management Programme for 2007–2013 shows that Slovenia has not been successful in agriculture[20]. The intensification of agricultural use has only occurred on a small number of Natura 2000 sites (e.g. Ljubljansko Barje, Šentjernejsko Polje, Goričko), but it causes significant problems. Particularly worrisome is the persistent deterioration of grassland habitat types, which are either ploughed to be transformed into fields or fertilised and reseeded and thus changed into intensive meadows. Habitats becoming overgrown is a common problem and can be found (at least in part) on almost all Natura 2000 sites. A great problem that has emerged in recent years is also the removal of landscape elements characteristic of farmland (e.g. hedges, water bodies, dry stone walls, solitary trees), which cause a great deal of problems for farmers. The rules for granting agricultural subsidies were not favourable for such landscape elements and many were destroyed.

The Natura 2000 Site Management Programme defines an agri-environmental payments scheme as a systemic instrument for the management of agricultural land within Natura 2000 sites. However, it

has to be emphasised that the agri-environmental payments scheme is voluntary – farmers are free to decide if and in which measures to participate. The analysis of the achievement of the objectives shows that the implementation was not successful, as in 2012 the objectives were achieved at only 11% of the sites.

2.1.5. Forest habitat types

Forest management in Slovenia is sustainable and multi-purpose, which is reflected in the mostly favourable status of forest habitat types. The status of 5 of 17 habitat types is favourable. The threatened habitat types are in particular floodplain and other lowland forests and some forest habitat types found only in small areas.

The greatest threats to forest ecosystems in Slovenia are natural disasters and diseases, forest fires, deforestation and fragmentation due to urbanisation and agriculture, the removal of old and dead trees, changes in the water regime, non-native species and damage caused by wild animals eating young shoots and bark. The particularly endangered animal species in forests are the hazel grouse (*Bonasa bonasia*), the western capercaillie (*Tetrao urogallus*), the Eurasian three-toed woodpecker (*Picoides tridactylus*) and the white-backed woodpecker (*Dendrocopos leucotos*). The decline in forest grouse populations is due to glades, mountain pastures and forest margins becoming overgrown and human disturbance. Woodpeckers are endangered due to the decreasing number of forests with dead wood mass.

2.1.6. Underground habitat types

Caves that are important for the conservation of Natura 2000 sites and in relation to which the custodianship may need to be determined or a concession granted are closed to the public or access to such is controlled. There are 199 such caves in total, of which about 80 are physically closed with a door. Approximately 20 caves are considered to be caves arranged for tourist visits under the Cave Protection Act[21].

Measures for the conservation of caves and cave life involve the restriction of use or visits that constitute an intentional disturbance of animals in any stage of development that live in caves or dwell there occasionally. In 2007, it was planned that use would be restricted in 33 caves for which custodianship or management concessions would be granted under the Cave Protection Act and custodianship or concession conditions set upon the granting of such. The priority areas would be determined in each annual programme of the body compiling the expert groundwork (The Institute for Nature Conservation). If in this period a custodianship or concession is granted for another cave important for the conservation of Natura 2000 sites, the measure of restricted access is included in the custodianship or concession granted. At the end of 2007, the Institute for Nature Conservation submitted to the Ministry of Agriculture and the Environment the annual report in accordance with the Cave Protection Act, which included the proposed cave protection measures. The most important of these measures were the concession for using a cave for tourism and custodianship. The Institute for Nature Conservation made expert proposals for caves in cooperation with the key stakeholders, drew up an expert opinion on the adoption of concessions and custodianship for caves, including an expert proposal as to the closure of some caves important for biodiversity, primarily due to the illegal taking of cave beetles. In the years between 2007 and 2012, the Institute for Nature Conservation, with its expert opinions and through nature protection campaigns, participated in and organised the closure of 11 caves (for 2 caves merely a door renovation was required), of which 5 are biologically important caves. With regard to the Škocjan Caves, restricted use (access) is implemented within the management of the protected area (the Škocjan Caves Regional Park). The concession for the Postojna and Predjama cave system was granted in 2003. The extent and manner of use acceptable

to nature protection is determined in the Short-term Programme of Use (2009–2013) and the Long-term Programme of Use (2009–2028) of the Postojna Cave System and Predjama Cave System Natural Assets, which are integral parts of the concession contract. Cave custodianship has not been formally granted since 2007 due to the inadequately defined delineation between custodianship and concession and, indirectly in relation to concessions, also due to undefined property relationships between the current cave "managers" and the state with regard to state infrastructure in caves. Nevertheless, some speleological societies carry out custodianship tasks in the context of cave protection, acting in the public interest concerning nature conservation. A model for granting the rights to use caves has been created, which takes into account the restricting factors due to the protection of cave habitat types and cave fauna. This was the basis for the implementation of protection measures in the future Natura 2000 Site Management Programme.

The recent assessments of the state of underground water bodies show that the underground water bodies in the central and north-eastern parts of Slovenia, where there are mostly aquifers with intergranular porosity, are the most burdened. Nitrate pollution is probably due to agriculture, but can also be attributed to the industrial and municipal discharges in these areas. The quality of underground water was best in karst and fractured aquifers, particularly in the less populated mountainous areas. The most predominant underground water pollutants were nitrates, pesticides and their decomposition products. In the central part of the Mura valley, stronger pollution by chlorinated organic solvents was found. These parameters are the most frequent reason for the quality standards or threshold values being exceeded and consequently for the poor chemical status of the underground water.
The results of the monitoring of the underground water quality in the aquifers with intergranular porosity show a statistically characteristic downward trend in the concentrations of nitrate, atrazine, its decomposition product desethyl-atrazine, and total pesticides in the period from 1998 to 2013. In some aquifers the atrazine and desethyl-atrazine content is in the vicinity of the detection limit of the analytical method, which means that they are practically absent at these measuring points[22]. The quantitative and chemical status of underground water is assessed on the basis of statutorily determined measurements. The method for determining underground water chemical status is determined in the *Decree on underground water status* (Uradni list RS (Official Gazette of the Republic of Slovenia), No. 25/09). The data from long-term monitoring of the underground water status show a downward trend in the pollutant concentrations in underground water bodies (Table 1). The situation is improving in this respect.

Table 1: Statistically typical increasing or decreasing trends in pollutant concentrations in underground water bodies in the period from 1998 to 2012.

Šifra VTPodV	Ime VTPodV	Nitrat	Atrazin	Desetil-atrazin	Vsota pesticidov
1001	Savska kotlina in Ljubljansko barje	/	/	<LOQ	pada
1002	Savinjska kotlina	pada	<LOQ	pada	pada
3012	Dravska kotlina	pada	pada	pada	pada
4016	Murska kotlina	pada	pada	pada	pada

VTPodV – vodno telo podzemne vode, **<LOQ** – v preteklosti je bil ugotovljen trend upadanja, sedaj so vrednosti že nekaj let pod mejo določljivosti, **/** - trenda nismo zaznali

With regard to **species conservation**, the data on population trends are relatively scarce, but they show that the status of many species is deteriorating and some are even in danger of extinction.

According to the last report under Article 17 of the Habitats Directive, the status of only 29% of species of European importance had a favourable conservation status in 2013. Amphibians, reptiles and some arthropods (crustaceans, butterflies, beetles and dragonflies) have the most unfavourable conservation status. The latest report on birds from 2014 shows that there is a considerable number of species with negative population trends and the high share of species with an unknown population trend is also problematic.

In recent years, a great deal has been done with regard to the management of large carnivore populations. Strategies and action plans for bear, wolf and lynx have been drawn up. The Slovenian Government approved an action plan for the sustainable management of the wolf population for 2013–2017[23], a draft strategy for the management of the lynx population for 2015–2025 has been drawn up, and many projects concerning large carnivores have yielded important results. Amongst the three large carnivores, the status of the lynx is the most worrying, as its population has declined considerably in recent years. Illegal shooting and inbreeding (only six animals were introduced in the reintroduction of 1973) have been identified as the most probable reasons. The lynx is considered one of the most endangered mammals in the Dinarides area. Only 15 adult animals were living in the territory of Slovenia in 2010 and the only area where regular reproduction has been recorded in recent years is the Javorniki and Snežnik area (Kos et al., 2012). Similarly low is the estimated population density and abundance in the neighbouring countries that share the same population24.

In 2004, the Decree on protected wild animal species (Uradni list RS, Nos. 46/2004, 109/2004, 84/2005, 115/2007, 96/2008, 36/2009) was adopted, which protects endangered wild animal species, prescribes rules of conduct, a special protection regime, protection measures and guidelines for the preservation of the habitats of animal species, with the aim of maintaining the favourable status of these species. The Decree prohibits the deliberate harming, poisoning, killing, taking from the wild, hunting, capturing or disturbing of any animal of the species listed in Chapter A of Annex 1 to the Decree, save in exceptional cases when there is no other option and the act does not adversely affect the preservation of the favourable status of the population. A permit issued by the Ministry of the Environment and Spatial Planning (Slovenian Environment Agency) must be obtained for such exceptions. In the permitting procedure, the Slovenian Environment Agency requests the Institute for Nature Conservation to deliver an expert opinion on the acceptability of the act, except in the case of large carnivores, for which the expert opinion is delivered by the Slovenian Forest Service, while the Institute for Nature Conservation makes a written statement, which constitutes a part of the expert opinion. The selective taking of a limited number of animals from the wild in order to manage the population size may be carried out on the basis of a regulation issued by the Minister. The regulation determines the extent and method of taking animals and other conditions. This regulation is also issued on the basis of an expert opinion.

The problem of disturbing protected species is particularly serious on rock climbing sites. Although rock climbing is regulated systemically, at least on Natura 2000 sites and in protected areas (a permit for an activity affecting nature is required to establish a new rock climbing route), there are many locations in Slovenia where new rock climbing routes are being established without appropriate permits. It is evident that having a systemic regulation is not sufficient for the problem to be solved, as there is no control in the field and inspection services respond poorly (J. Kus Analysis 2012_T. Mihelič, oral information). Not many reintroductions have been carried out in Slovenia. The project of repopulating marble trout (*Salmo marmoratus*) in the Soča river basin through artificial breeding and release has been carried out since 1993. At first, phenotypic marble trout specimens (morphologically similar to the marble trout) were being introduced. However, in recent years mostly genotypic specimens (with the original marble trout genes) have been released. The results of ichthyologic studies show that the situation is improving. The share of marble trout is increasing and the share of brown trout decreasing. Nevertheless, the marble trout is still one of the most threatened fish species in Europe (J. Kus, Analysis 2012, Bertok, 2010).

Non-native species are being recognised as a great threat to biodiversity in Slovenia. In 2012, the Neobiota Slovenije study of invasive non-native species in Slovenia and their impact on biodiversity conservation and the sustainable use of resources was concluded. It showed that the amount of knowledge of Slovenian experts is good and constitutes a good basis for action, but that we are often powerless in the face of this problem[25]. Although detailed analyses have not been made, it is evident that invasive plant species are spreading fast along rivers and traffic routes. Wetland ecosystems are the most threatened by invasive non-native species, as two thirds of the most problematic invasive species are spread exclusively by and along waters. This is most prominent along the large rivers (the Sava, Drava, and Mura) and their tributaries, where in the second half of the 20th century about 20 invasive plant species spread to such an extent that they completely replaced the natural vegetation in many large areas. In the following years, we are planning to step up our efforts in this field, as on 1 January 2015 Regulation (EU) No. 1143/2014 on the prevention and management of the introduction and spread of invasive alien species entered into force.

Despite the lack of data, several activities raising awareness regarding non-native species have been carried out in the last few years for various target groups. Campaigns for the disposal of invasive species are also on the rise. They are mostly organised by non-governmental organisations, but increasingly also by the managers of protected areas and the Institute for Nature Conservation within its projects (e.g. Wetman, Climaparks, Ljuba, Suport).

3 What are the main threats to biodiversity in Slovenia?

. Compared with the preceding reporting period, the greatest threats to biodiversity in Slovenia are the same (detrimental use of agricultural land and water surfaces, activities affecting the environment, the spread of invasive non-native species, and the intensification of forest exploitation). However, the negative impacts of the spread of invasive non-native species and climate change are more pronounced. All the key reasons are linked to human activities and their effect on the environment, which results in the loss, fragmentation and degradation of ecosystems and habitats in terms of both species and populations. The pressures caused by urbanisation on inland aquatic ecosystems, coastal and marine ecosystems, subterranean ecosystems and ecosystems of extensively cultivated landscape are still critical.

3.1.The main reasons for negative changes

The pressures on biodiversity are increasing, particularly due to non-sustainable management and activities affecting the environment in the lowland areas. The most significant are the pressures caused by the expansion of settled areas, the construction of industrial zones and roads and the intensification of agricultural land which is important for nature protection. Global changes, particularly the spread of invasive species and climate change, are also a consequence of human activities. An increase in the impact of these factors on the biodiversity of some ecosystems in Slovenia was detected in the reporting period. Grassland habitats and wetlands in the lowland areas suffer the greatest pressures. The negative changes for biodiversity in agricultural land are the result of the abandonment of less attractive and the intensification of more productive agricultural land. In the areas where land consolidation has been carried out, landscape diversity is diminishing, landscape elements are disappearing, which leads to the loss of diversity in habitats and species. The pressures from the expansion of settled areas and the construction of industrial zones and roads have increased considerably. The data on the status and population trends of species are few as monitoring has only been set up in recent years and is carried out only for some species. However, the collected data show that populations are declining, particularly those of the species dependent on the traditional agricultural landscape. The status of forest habitat types is still mostly favourable, although the pressures on the forest environment are also increasing[26].

The 2013 report on the implementation of measures under Article 17 of the Habitats Directive [27] includes data on the identified pressures and threats. Pressures and potential threats to the conservation status of species and habitats were identified for every species and habitat type. The most prominent among the identified pressures and threats are those related to agriculture and anthropogenic changes to aquatic ecosystems (diagram bellow)[28], which is reflected in the poor conservation status of species and habitat types dependent on agricultural land and aquatic ecosystems.

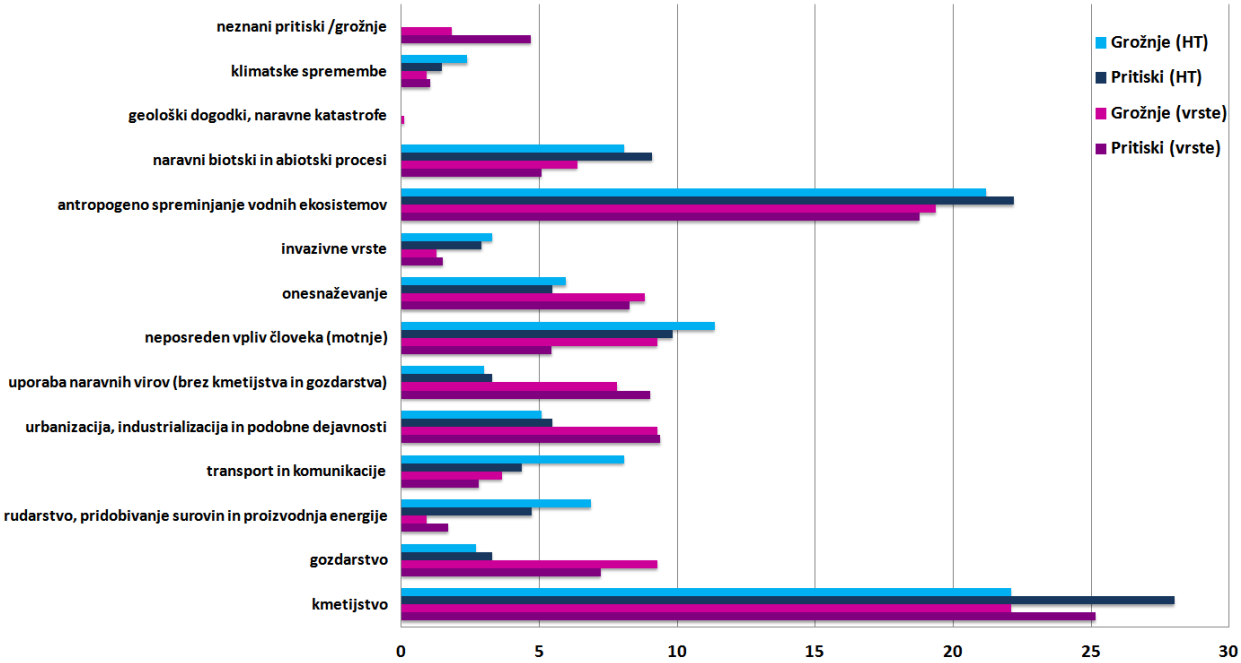

Figure 6: Pressures and threats – the results of the 2013 report under the Habitats Directive

3.2.The description of the main direct and indirect causes of biodiversity loss for the main biomes and biodiversity components

3.2.1. Agricultural-landscape ecosystems

In Slovenia, biodiversity and agricultural-landscape diversity are threatened mostly by local human activities, i.e. the intensification or abandonment of agricultural use. To a lesser but not negligible degree, climate change and the increasing occurrence of extreme weather conditions also has an impact on diversity. Intensive agricultural production, which by altering the use of land (from meadows and pastures to fields) and homogenising cultivated surfaces depletes species and landscape diversity, is still the greatest threat to agricultural-landscape ecosystems and their biological and landscape diversity. Owing to the rationalisation of agricultural production and subsidies, agricultural land is being consolidated into monocultures and agricultural production intensified. The second reason is the abandonment of traditional agricultural activities in areas of little economic interest and such areas becoming overgrown by forest.[29] Among the disappearing agricultural-landscape ecosystems, species-rich meadows comprise the majority, particularly on some Natura 2000 sites (e.g. Ljubljansko Barje, Goričko, Šentjernejsko Polje), which is mostly due to conversion into fields and intensive exploitation of meadows. The preservation of landscape elements, such as hedges, pools, and solitary trees, was also inadequate in the reporting period. A special problem for agricultural landscape biodiversity is that areas are becoming overgrown due to the abandonment or partial abandonment of agricultural exploitation for various economic and social reasons. Relevant regulations harmonised with the EU legislation have been adopted for the 2015–2020 period, providing for changes regarding ploughing (the *Decree on direct payments in agriculture*, which introduces areas without ploughing) and also in relation to landscape elements (the *Decree on regulatory requirements for management and good agricultural and environmental conditions in farming*). The exploitation of agricultural land is regulated at the EU level through

regulations laying down rules for direct payments and through cross compliance. Since 2014, these regulations have governed certain practices that contribute to the achievement of the protection objectives on Natura 2000 sites. This involves, in particular, a ban on the ploughing of species-rich grasslands with a poor conservation status on Natura 2000 sites and cross compliance that includes the preservation of characteristic landscape elements[30].

In the reporting period, the conflict between the interests of pasture animal breeders and the interests and responsibilities of society to preserve the populations of large carnivores was not resolved. A system of compensation for damage caused by animals of protected species was set up. Most often damage is caused to small ruminants by large carnivores. In 2010, a rise in damage cases was recorded compared with previous years. Consequently, funds earmarked for compensation have also been increased. In addition to large carnivores, some protected species of birds also cause damage. The most prominent is the problem of the great cormorant in relation to fresh-water fishing and fish farming. The analysis of compensation claims for damage caused by animals of protected wild animal species showed that in the period from 2006 to 2012 the number of damage claims concerning the brown bear (*Ursus arctos*) ranged between 300 and 500 per year (the brown bear is the most frequent culprit in such damage claim cases). The main reason for these fluctuations is the quantity of food available to bears in nature. In 2008, 2010 and 2012, the fruit yield in forests was poor (natural food was scarce) and the pressure from bears in search of food on cultivated land (fields, gardens, orchards) was considerably greater than in the preceding years, while in 2007, 2009 and 2011 the situation was the opposite. Similar fluctuations have been recorded regarding the approved funds. In the last five years, the number of damage events caused by wolves has ranged between 400 and 600. Measures to protect small ruminants, which are prescribed in the *Rules on methods for protecting property*, and the current method of wolf culling are evidently inadequate. Acts and implementing regulations that prescribe protection measures and enable affected breeders to obtain appropriate protective equipment or to draw subsidies for such equipment urgently need to be amended. This should also be the main measure to prevent damage caused by wolves, which will contribute to the long-term conservation of the species[31].

3.2.2. Forest ecosystems

The main threats to biodiversity in forest ecosystems in the reporting period were forest fragmentation and climate change. Specialised forest species are the most affected. Climate change is reflected particularly in the increased number and greater intensity of meteorological disasters (damage caused by snow, ice, wind, drought, etc.). When forests are damaged in these events there is a risk of the overpopulation of certain insect species, which is the most common reason for sanitary felling. This indirectly reduces the vitality and ecological stability of forests. In some regions in Slovenia, particularly karst areas, fires continue to be a serious threat to forests. Owing to climate change, we can expect longer periods of droughts resulting in greater fire risk and the expansion of areas at risk of fire. In some areas in Slovenia, overabundant deer and reindeer populations are an important factor, as they feed on forest vegetation, which affects forest regeneration and changes their composition. Activities affecting forest environments, such as the construction of roads and industrial and commercial zones and the expansion of settlements, continued in the reporting period. However, due to the economic and financial crisis, they have slowed down. In some predominantly agricultural areas and on the margins of urban areas, trees, hedges and riparian vegetation have been cleared. The pressures on forest environments in lowland areas have also increased, mostly due to the expansion of infrastructure and settled areas. Owing to the rules on the calculation of surface area eligible for payments under agri-environmental measures, solitary trees, forest margins, hedges and wind-breaking trees on agricultural land are under great pressure. In recent years, an increase in interest in forest exploitation (an increase in annual felling, the opening of new forest sections, the clearing of felling remains for pellet production) has been detected, and it

can be expected that this will be reflected in the nature conservation status in the following years. The particularly endangered animal species in forests are the hazel grouse (*Bonasa bonasia*), the western capercaillie (*Tetrao urogallus*), the black grouse (*Tetrao tetrix*), the Eurasian three-toed woodpecker (*Picoides tridactylus*) and the white-backed woodpecker (*Dendrocopos leucotos*). The decline in populations of forest grouse species is due to glades, mountain pastures and forest margins becoming overgrown and human disturbance. Woodpeckers are endangered due to the decreasing number of forests with dead wood mass[32].
At the beginning of 2014, Slovenia suffered considerable ice damage. The Slovenian Forest Service estimated that approximately 7 million m^3 of wood was damaged. In order to remedy the damage, the *Remedying Consequences of Ice Damage Act* was adopted, general decisions on felling were issued, and a special remediation plan was drawn up[33]. The plan included the extensive construction and reconstruction of forest roads (26 km of forest roads, 833 km of skid roads). These measures present an additional threat in terms of the greater accessibility of forests through new roads and the intensification of felling, which will have an adverse impact on biodiversity. With climate change and the intentional or unintentional introduction of non-indigenous species, the impact of invasive species on forest ecosystems is likely to increase[34].

3.2.3. Inland waters and wetland ecosystems

The pressures changing and destroying habitat types of waters, bogs and marshes continued in the reporting period. Among the most important threats to the biodiversity of ecosystems of running waters is watercourse regulation in order to restrain their torrential activity and flooding, and to reclaim land for agriculture and urbanisation. Agriculture remains the main source of pollution of watercourses and underground water resources owing to the use of fertilisers and pesticides. As a consequence, the chemical composition of waters changes, eutrophication increases and biodiversity is reduced. Another important pollution source in Slovenia is untreated urban and industrial wastewaters. In the case of industrial wastewaters, there are occasional discharges of hazardous substances which, particularly in a dry period, can have a considerable impact on the biodiversity of some watercourses (the death of fish and other aquatic organisms). There is also thermal watercourse pollution, which did not change in the reporting period. This type of pollution affects the biodiversity of rivers that are used for the cooling of power plants, as a different species composition is established downstream of such facilities. Water status monitoring in Slovenia is a basis for the assessment of the chemical and ecological status of surface waters, the quantitative and chemical status of underground waters, and the status of water in areas with special requirements. The basic principles of the monitoring and assessment of water status are laid down in *Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy* (the *Water Framework Directive*) and some other directives concerning waters. The *Water Framework Directive* determines common principles for the monitoring and assessment of the water status for all EU Member States. The regular monitoring of water quality status is carried out by the Slovenian Environment Agency (ARSO)[35].
In addition to pollution, particularly in periods of drought, the ecosystems of smaller streams are threatened by the uncontrolled abstraction of water for irrigation and the excessive abstraction of water from natural channels for use in small hydropower plants. Urbanisation and some anti-flood measures that affect the hydrological regime and biodiversity are also significant factors affecting inland waters. The negative impacts are also due to the unsuitable use (abstraction) of water. The introduction and spread of non-native species, including invasive species, continued in the reporting period. In some areas invasive species have completely replaced the native ones and thus changed the structure of ecosystems, particularly wetlands. Climate change, which is affecting the ecosystems of inland waters in Slovenia, is becoming increasingly important. It is believed that due to higher

temperatures, certain cold-loving fish have moved upstream to higher altitudes. With climate change, periods of drought are becoming more frequent and longer.

3.2.4. Mountain ecosystems

With regard to the conservation of biological and landscape diversity in mountain regions, hay meadows and pastures becoming overgrown due to the abandonment of traditional use remains a problem. Forest management in mountain regions is sustainable, but the construction of forest roads remains problematic. Threats to mountain ecosystems resulting from tourism are still increasing. Mass mountaineering, climbing, mountain biking and driving motor vehicles in the natural environment have a considerable impact on mountain ecosystems, which are limited and vulnerable in Slovenia. A significant factor threatening mountain ecosystems is pollution, including light and noise pollution. In mountainous parts of Slovenia, in particular in the Alps and the Dinaric Alps, invasive species are still rare. However, the notable increase in the share of such species along the western edge of the Dinaric region is a cause for concern. The issue of the disposal of non-native fish species that were introduced to mountain lakes in Slovenia is still unresolved. Owing to the extreme conditions, the consequences of climate change manifest earlier in the mountain environment than elsewhere. One such consequence is the disappearance of glaciers.

3.2.5. Coastal and marine ecosystems

Threats to coastal and marine ecosystems remained more or less the same in the reporting period. The rare parts of the Slovenian coast that are still relatively preserved are under great pressures related to the transport infrastructure and tourism. With the abandonment and reduction of the scale of commercial fishing in the Slovenian sea, the number of professional fishermen and larger vessels has fallen. However, the remaining fishermen have stepped up their activities and the pressure on the ecosystem has not lessened. The most important factors contributing to the reduction of biodiversity are still the degradation and fragmentation of habitats due to urbanisation. The negative impacts of intensive mariculture (fish and shellfish farms) change the ecological conditions, resulting in the depletion of benthic communities. Pollution due to the discharge of urban wastewater and polluted watercourses into the sea has been reduced with the construction and operation of new treatment plants. However, there is still pollution by pesticides and fertilisers from agriculture, which causes a change in the structure of benthic invertebrate communities. The impact of tourism on biodiversity is related mostly to increased urbanisation (the construction of recreational facilities both in the sea and on the shore). Owing to the large number of tourist vessels, pollution by oil and underwater noise, which is particularly disturbing for sea turtles and dolphins, is also significant. To date, twelve non-native species have been identified in the Slovenian sea – eight animal species and four species of algae. More non-native species are expected to be found, as 49 non-native species have been identified in the Adriatic. The most important factors for the introduction of non-native species are navigation and mariculture. Climate change, and in particular temperature rise, have resulted in tropicalisation, i.e. the northward spread of species from warmer climates. Some species (brown wrasse (*Labrus merula*), pelagic stingray (*Dasyatis violacea*)) have already spread to the Slovenian sea due to tropicalisation. There are no relevant data on the impact of these species on the Slovenian sea.

3.2.6. Underground ecosystems

The main sources of negative impacts on underground ecosystems remained more or less the same in the reporting period. Biodiversity is affected by activities both in underground ecosystems and above ground that have an impact on the subterranean environment. Direct threats include pollution caused by illegal dumping of waste, untreated urban wastewater, and the leaching of pesticides and fertilisers into underground waters as a result of agricultural activities. Owing to very dispersed settlement, in many areas the infrastructure for sewage collection and disposal is inadequate and wastewater is flowing directly into underground systems, which has an adverse impact on biodiversity. Urbanisation also has a direct impact, in some places destroying underground ecosystems. Highway infrastructure has already been completed in the most sensitive karst region. With regard to the majority of the underground caves, the issue of their management has not yet been resolved, which is reflected in their poor state (unregulated access, inadequate means of closure and arrangements for tourist visits).

3.2.7. Plant and animal species

The main reason for the unfavourable conservation status of species in Slovenia in the reporting period remains habitat loss caused by human activities. Among the umbrella species, large carnivores should be highlighted. The most worrying is the status of the lynx. The lynx in Slovenia belongs to the Dinaric–Southeastern Alpine population, which is isolated from other lynx populations in Europe. As the entire population originates from six specimens (introduced to Slovenia in 1973), there is a high rate of inbreeding. This presents an additional threat to the population, which is already in decline in terms of numbers and range. In 2014, two specimens were translocated from the Swiss Jura Mountains to Italy to an area near the border with Slovenia. The two animals were from a population that is also genetically poor. At the beginning of 2015 it was not known if the animals were still alive. This translocation was a short-term measure that prevented the extinction of the lynx in this part of the Alps. However, it did not remedy the situation in the Dinaric–Southeastern Alpine population[36]. Non-native species are being recognised as a great threat to biodiversity in Slovenia. The analysis of the implementation of the Convention on Biological Diversity highlighted that the area of non-native species was the weakest in terms of Convention implementation. The problem lies mostly in the undefined division of powers and obligations among government institutions and the uncompleted legal system, which does not provide for adequate response. Although detailed analyses have not been made, it is evident that invasive plant species are spreading fast along rivers and traffic routes. Wetland ecosystems are most threatened by invasive non-native species, as two thirds of the most problematic invasive species are spread exclusively by and along waters. This is most notable along the large rivers (the Sava, Drava, and Mura), where in the second half of the 20th century about 20 invasive plant species spread to such an extent that they completely replaced the natural vegetation in many large areas[37].

3.2.8. Genetic resources

With regard to genetic resources for agriculture, forestry and the food industry, the globalisation of the agricultural market is the main threat to the genetic diversity of domestic breeds and varieties. Agricultural practices introducing new breeds and varieties that are more suitable for intensive

agriculture are widespread. Slovenia has no overall system for *ex situ* protection of species. The protection of genetic material is best organised in agriculture and forestry. Slovenia has quite a few endemic species, i.e. genetic resources that can only be obtained in its territory (approximately 800 animal species and 66 plant species). The exploitation and further commercialisation of the use of genetic resources present a potential threat to these species. According to the data available, the Slovenian economy has not been developing uses (in pharmaceuticals, medicine and the cosmetics industry) based on foreign genetic resources to date. The main obstacles to the implementation of the Nagoya Protocol and related issues in Slovenia are the lack of resources and the undefined competences of individual sectors (e.g. the use of genetic resources in the food industry and agriculture, pharmacy and medicine, issues related to intellectual property, and supervision of users of genetic resources).

3.2. 9. Climate change

Climate change is becoming a significant threat to biodiversity in Slovenia. In the reporting period, Slovenia suffered several extreme weather events, which were probably due to climate change. In general, there is enough precipitation in Slovenia but in some regions the distribution of precipitation over the year differs considerably, which causes problems, sometimes even drought. The lack of precipitation in the summer was often accompanied by high temperatures and unusually long sunny periods, which further increased the need for water. Drought normally occurs every summer in the coastal region; another region at risk is north-eastern Slovenia. The other extreme – extensive precipitation – also causes problems. Heavy showers or extensive rainfall over several days cause floods and landslides. Slovenia is in the area with the largest number of storms in Europe. There have been some severe storms with hail, strong wind gusts and heavy rain in recent years. Hail can severely damage vegetation, which can significantly affect the local populations of some species. Warm and green winters, i.e. winters without snow in the lowlands, are becoming more common, which also has an impact on biodiversity (disturbed hibernation patterns, the expansion of thermophilic species, etc.). The consequences of the catastrophic ice storm that affected 50% of forest in Slovenia were described in the section on forest ecosystems.

3. 2.10. Protected areas

Areas protected at the national level are not immune to threats to biodiversity. Protection regimes in these areas are normally not very strict and the managers of protected areas do not have much legal power to prevent threats. There is also a lack of financial and human resources for management. One of the greatest threats to biodiversity conservation in Slovenia's protected areas, particularly those in lowlands, is a change in the traditional use thereof (both abandonment and intensification of use). Agriculture in Slovenia is not planned on the spatial level, but only strategically for the country as a whole. No permit is needed for changing farmland use from meadow to field and no supervision of such changes is possible. Furthermore, except when farmers participate in agri-enviromental measures, it is not possible to supervise the use of fertilisers on grasslands, which can completely change growing conditions in only a few years. Tourism and recreation also put great pressures on protected areas, as well as invasive non-native species. Despite all this, few protected areas have clearly defined guidelines for the development of tourism and recreation. The situation with regard to invasive non-native species is urgent, as many species are spreading to protected areas. Except for

a few small campaigns in some areas, the majority of protected areas do not have comprehensive measures developed to prevent or limit the spread of invasive non-native species. In recent years, the pressures related to the construction of various infrastructure have been increasing (solar and wind power plants, biogas plants, airports, industrial zones, etc.). Some problems also arise from the way spatial planning is organised. Spatial planning is carried out partly at the national and partly at the local level and sometimes the two levels are not coordinated. In many protected areas, there is increased pressure caused by illegal driving of motor vehicles in the natural environment[38].

4. What are the impacts of the changes in biodiversity and the socioeconomic and cultural implications of these impacts?

It can be expected that the pressures on the natural environment will continue to increase and the conservation status of plant and animal species decline in relation to the decline in ecosystem diversity. In the next reporting period, it is expected that the fragmentation and deterioration of natural habitats will continue owing to urbanisation, the construction of roads and energy facilities and intensified agriculture. The spread of non-native species will remain an important threat to biodiversity. The increase in the need for biomass is also one of the factors that could threaten forest biodiversity in Slovenia considerably in the future. If climate change continues, we can expect more frequent and intensive storms, which could have a great adverse impact on some species and their habitats.

4. 1. Agricultural ecosystems

It can be expected that the pressures of urbanisation will continue, particularly the construction of roads, energy infrastructure (e.g. power lines, gas pipelines) and the expansion of industrial and commercial zones to agricultural areas. We can also expect further construction of holiday and tourist facilities and related recreational infrastructure in traditionally agricultural areas, which are being abandoned by the local inhabitants. Owing to the economic and financial crisis, the urbanisation trend abated slightly in the reporting period but we can expect greater pressure on agricultural ecosystems when the economic situation improves. If the changes to the water regimes continue, they will undoubtedly result in changes in vegetation and consequently the species composition of meadows and riparian shrubs. The rising trend in the number of invasive species and the areas they are inhabiting is expected to continue in the future, as certain agricultural-landscape habitats (e.g. gardens, parks, fields) are the source of invasive species, plants in particular, which than spread to other ecosystems. There is not enough data on the direct impact of climate change on the biodiversity of agricultural ecosystems in Slovenia. However, there are clear indications of a warming climate, for instance phenological springs, more turbulent weather conditions and longer drought periods. In the long term, these phenomena will cause changes in agricultural-landscape biodiversity. More important than the changes in the average temperature and quantity of precipitation are the more turbulent weather conditions brought about by climate change. This is likely to increase the already existing risks to agricultural ecosystems (e.g. damage caused by wind and storms, hail, summer droughts and excessive reproduction of particular groups of insects).

4. 2. Forest ecosystems

The most probable threats to forests in Slovenia in the future are the development of infrastructure (e.g. road construction), the introduction and spread of non-native species, forest fires, pollution and climate change. Global warming will probably cause changes in our forests. Drought is a stress for plants and causes trees to shed leaves. The lowland forests are already in danger of drying out. The warm summers and mild winters that we can expect in the future will enable the faster development

and reproduction of some species that can considerably affect forest status (e.g. bark beetles). Forest fires will remain a threat in the future. As the number of people taking recreation in forests increases and access to forests becomes easier, it can be expected that the risk of fire will also increase. The conservation of populations of large carnivores (bear, lynx, wolf), which need large forest areas for their existence, will not be an easy task, as we can expect the activities encroaching on their habitat to increase in frequency and intensity. We can also expect more conflicts between large carnivores and people, because of increased human presence due to recreation and the expansion of pastures into the ranges of large carnivores. The lack of natural predators in forests can cause problems in the natural regeneration of forests. Overabundant deer browse on young trees and strip their bark, which is a major threat particularly to some rare tree species (e.g. the silver fir). Industrial pollution resulting from fossil-fuel combustion is abating in Slovenia but it will probably remain a significant threat to forests in the future. Global warming will enable the spread of pests from warmer parts of the world that currently cannot survive in our climate. Non-native species can cause great problems. Foresters warn about the presence of a small wasp, i.e. the chestnut gall wasp (*Dryocosmus kuriphilus*), which induces the formation of galls in the sweet chestnut and the horse chestnut[39]. In some predominantly agricultural areas and on the margins of urban areas, the clearing of trees, hedges, riparian vegetation and forests will continue, which will diminish the ecological and social function of forests. Demand for damaged or decaying wood biomass is likely to grow due to its use as a renewable energy source. The excessive reduction of decaying and old trees in forests can be a threat to cavity-nesting birds, bats and numerous non-vertebrate species, fungi and plants. Inadequately planned forest roads can also have an adverse effect on forest biodiversity. The construction of roads and tracks on steep terrain is likely to cause additional erosion. However, the probability of inappropriately constructed roads in Slovenia is not high, since construction activities in forests are carried out under the supervision of the Slovenian Forest Service. Nevertheless, forest roads facilitate access to remote forest parts and disturbances in forest and forest fruit picking are increasing, which has an adverse effect on several bird and mammal species.

4.3. Inland waters and wetland ecosystems

Water management is important for the conservation of biodiversity and the achievement of favourable status. This relates to species that live a part of the annual or life cycle in or near water due to reproduction, feeding or hibernation, and habitat types that require the constant presence of water (underground or surface waters). They are mostly affected by changes in the hydromorphological characteristics of surface waters and in the quantitative and chemical status of underground waters[40]. With regard to the use of water power, at present, 47% of the technically available hydropower potential in Slovenia is used. Strategic plans envisage that by 2030, this share will rise to 63%. Considering the trend in the changing of the river regimes, the construction of new reservoirs for the supply of drinking water and irrigation will continue and the share of used quantities of available water, which at present is 1%, will increase. We can expect that the demand for the construction of new hydropower facilities, including in the areas important for biodiversity (e.g. the Mura River) will continue. The construction of any power plant is an encroachment on a watercourse, changing its structure and function, which affects habitat types and consequently biodiversity. One of the largest such encroachments in recent years was the construction of a chain of hydropower plants on the Sava river, which will continue over the next few years. The construction of a large number of small hydropower plants on small rivers and streams may also become a problem, since excessive abstraction of water from the natural streambed may prove

detrimental to local biodiversity. The trend of the spread of invasive non-native species along large rivers and other watercourses is expected to continue. Slovenia is not adequately prepared for the impact of climate change, various anthropogenic disturbances and the introduction of non-native species in its aquatic and riparian environments[41]. Despite many efforts to preserve important wetland habitats, increasing urbanisation and intensive agriculture are likely to keep putting pressure on wetlands. If the trend persists, the diverse landscape of slow-flowing waters, flooded forests, wet meadows and plains between rivers will continue to disappear. They will be replaced by monocultured fields, roads and urban areas, which burden the environment and directly and indirectly affect human health. The disappearance of wetlands will affect the water regime, on which biological communities and processes depend. Wetlands serve as a transition zone between terrestrial and aquatic ecosystems, i.e. as a buffer zone mitigating the impacts from the land. The loss of wetlands means the loss of important areas that protect us from excessive pollution, ensure and maintain better quality water and are a reservoir of good drinking water. They also retain high waters (flood safety) and increase sedimentation. The direct negative effects of inadequate wetland management may result in the worsening of human health or even loss of life (diseases related to water, floods, water pollution)[42].

4.4. Mountain ecosystems

The greatest threat to Slovenian mountain ecosystems will remain tourism and leisure activities, such as mountaineering, climbing, the expansion of mountain huts and shelters, new ski resorts, and in particular recreational activities that disturb the environment, such as helicopter flights, canyoning and driving motor vehicles in the natural environment. It is likely that the pressure from these activities will increase in the future. Natural grasslands are very rare in Slovenia's mountains. Most grasslands have been created by humans who made pastures for domestic animals and carefully maintained them through the centuries. Abandoned pastures are quickly overgrown and numerous mountain plants and animals living on them also disappear. Climate change will continue to pose a great threat to mountain ecosystems in the future. Treelines and vegetation zones in the Alps are moving up. This means that plants adapted to certain living conditions will not be able to move higher up. Slovenia may lose a great portion of its mountain plants due to climate change, particularly in areas above the treeline, where biodiversity is the greatest, are particularly endangered. Mountains are the source of our drinking water, but the destruction of mountain ecosystems will reduce its quantity. Climate change will also increase the risk of natural disasters, which further increase with the deterioration of mountain ecosystems. Events that have always regularly occurred in mountains, such as landslides and rock falls, storms and avalanches, will become more frequent due to the disturbed balance[43]. In Slovenia, mountain ecosystems bring many benefits that are essential for sustainable development. These ecosystems play a key role in the water supply for a large part of Slovenia's population. In the future, mountain ecosystems are likely to become even more endangered owing to the negative effects of climate change, tourism, forest degradation, changes in land use and land degradation.

4.5. Coastal and marine ecosystems

There are not many coastal and marine habitat types on the short Slovenian coast, but they contribute considerably to biodiversity in the country. The smallness of these areas means greater vulnerability and a large share of endangered species. In the last fifty years, the extent of coastal habitat types has been reduced and pressures on them increased. The state of marine habitat types

fluctuates greatly, mostly due to the lack of oxygen in bottom layers during summer months, which causes the death of the majority of species. We can expect that the pressure on marine and coastal ecosystems will increase in the future, since there are numerous activities (tourism, fishery, transport, ports, urban and protected areas, etc.) carried out in this very small area. Tourism development that does not comply with the principles of sustainability can pose a considerable threat to coastal and marine ecosystems. The expansion of port facilities and land surfaces into the sea (marinas, passenger port terminals and the third pier in the Port of Koper) will increase the disturbances in the marine environment, which will have a great impact on the presence of some species (e.g. dolphins). The areas of the natural environment will continue to shrink due to the construction of housing, the expansion of the transport infrastructure and the intensification of agriculture. There is also the problem of ineffective supervision in construction, inadequate treatment of urban wastewater and deficient management of protected areas. Climate change will accelerate the loss of coastal and marine ecosystems, which will affect individual species and have a significant impact on ecosystems and their services on which the society depends. Some land-use methods and planning decisions and unsustainable exploitation of the sea (e.g. overfishing) will result in the greater vulnerability of ecosystems and socio-economic systems to climate change and their reduced flexibility[44].

4.6. Cave ecosystems

One characteristic of underground ecosystems in Slovenia is a large number of narrowly endemic species. Owing to their great ecological sensitivity, these ecosystems are very vulnerable. The animal species in these ecosystems are highly specialised for the typical subterranean conditions and have a limited ability to adapt to new conditions. They are greatly affected by any above-ground activities that have an impact on the conditions below ground (e.g. reduced inflow of water and nutrients, increased pollution). Inappropriate activities (complete closure of entrances, disturbances due to visitors) also threaten some groups that take shelter in underground ecosystems only a part of the year (e.g. wintering of bats). It is expected that in the future the main threats to underground ecosystems in Slovenia will remain intensive agriculture, the construction of roads and energy infrastructure (e.g. gas pipelines), urbanisation and the increasingly larger scale of tourism and recreation in unpopulated areas. Visits to tourist caves cause continuous disturbances due to the construction of paths, lighting and large groups of visitors walking through. Lighting and numerous visitors bring considerable amounts of additional energy into caves, which is not negligible for this environment. Most detrimental to these ecosystems is the expansion of tourist use into biologically preserved parts of caves and unsupervised alternative tourism. It is likely that the pressure from these activities will further increase. In the future, underground aquatic ecosystems will be increasingly endangered by the growing need for drinking water, unless losses in the process of pumping and conveying water are reduced. The construction of new and the improvement of existing wastewater treatment plants and the greater connectivity of households to sewage collection and the disposal infrastructure will reduce the pollution of underground water (appropriate treatment of urban wastewater must be provided for by 2017).

4.7. Plant and animal species

Demographic growth in Slovenia does not threaten plant and animal species, unlike in some other places in the world. Demographic forecasts for Slovenia are unfavourable, as the population over 65 years of age is increasing[45]. Nevertheless, it can be expected that the pressures on the natural environment will continue to increase and the conservation status of plant and animal species will decline in relation to the decrease in ecosystem diversity. In the next reporting period, it is expected that the fragmentation and deterioration of natural habitats will continue, owing to the construction of roads and energy facilities and intensified agriculture. The introduction of non-native species will

remain an important threat factor, as well as the excessive gathering of some species (e.g. medicinal plants, mushrooms). It is likely that pollution will continue to abate owing to the implementation of new measures concerning the treatment of urban and industrial wastewaters and air pollution. Nevertheless, the impacts of pollution will still be a cause for concern, as in some cases they only become evident after a certain time due to accumulation. In the long term, this can be reflected in populations becoming less successful and their density starting to decline. Bats will remain the most threatened species due to the loss of habitat, shelters and wintering sites. Large carnivores will be threatened by the fragmentation of their habitats. The habitats of birds will also suffer pressures, particularly due to the disappearance of extensively cultivated agricultural land and some landscape elements (e.g. hedges, treelines and riparian shrubs). Marsh birds will be under threat due to the draining of wetlands and the destruction of riparian vegetation. The expanded scope of recreation in nature will increase the pressure on certain species due to disturbances (e.g. western capercaillie, some birds of prey and owl species). The most probable scenario for amphibians is the continuation of the fragmentation and shrinking of their habitats and increased mortality owing to new transport infrastructure and increased traffic. With regard to fish, it is expected that most populations will be threatened by habitat loss, mostly due to the regulation of watercourses and the construction of hydropower plants and also due to water pollution. Non-native species are being recognised as a great threat to biodiversity in Slovenia, but this area is the weakest in terms of the implementation of the Convention. Although detailed analyses have not been made, it is evident that invasive plant species are spreading fast along rivers and traffic routes.

4.8. Genetic resources

In recent years, little attention has been devoted to *ex situ* conservation, therefore mechanisms for such will have to be restored and supplemented. A system is being set up at the level of the EU, of which Slovenia is a member, to regulate the obligations of users of genetic resources. We can expect that capacities for the implementation of the *Nagoya Protocol* will improve in EU Member States. Slovenia does not have adequate human resources and the implementation mechanisms have not been set up yet. A study of the effect of *Regulation (EU) No 511/2014* conducted by the European Commission shows that interest in accessing genetic resources in nature (*in situ*) is declining in most sectors, except in scientific research. There are many endemic species in Slovenia (approximately 850), which represent genetic resources that can only be obtained in its territory. Slovenia is planning to regulate access to genetic resources in the following years, on the basis of a relevant study. According to available data, the Slovenian economy has not been developing uses (in pharmaceuticals, medicine and the cosmetics industry) based on foreign genetic resources to date, but it cannot be excluded that it might do so in the future. Although the status of native and locally adapted breeds and varieties improved in the reporting period, they are still under great threat. The awareness of the negative impact of big roads on the movements of animals has been increasing in recent years, which is reflected in the planning of new transport connections. It is likely that this aspect will be better taken into account in the future planning of roads.

4.9. Climate change

Slovenia lies in a temperate geographical and climate zone. The climate and weather conditions vary considerably here, as the influences of the Mediterranean, Alpine and continental climates mix. Every year, Slovenia suffers extreme weather and climate events. Climate change projections for the coming decades indicate that extreme weather and climate events and hazardous events will occur more frequently than in the past. We can expect severe summer droughts, which will have a considerable impact on local biodiversity and will severely affect arable farming and in some places endanger drinking water resources. The Slovenian coast and Karst regions and north-eastern Slovenia are endangered the most. Slovenia is in the area with the largest number of storms in Europe. Every

year there are a few severe storms that can affect local populations of some species. Storms, particularly those featuring hail but also strong wind and heavy rain, will probably continue to cause damage in agriculture[46]. Severe storms are usually accompanied by strong winds; wind gusts are particularly unpredictable and can occur anywhere in Slovenia. If climate change continues, we can expect even more frequent and intense storms. In general, there is enough precipitation in Slovenia to allow for successful farming, when its distribution is normal. However, any greater deviation from the normal distribution during a year can cause problems or even drought. If the trends recorded to date continue, north-eastern Slovenia will soon face great difficulties. According to current trends, the quantity of precipitation is increasing in autumn and decreasing in summer, when it is needed the most. Any great deviations from the normal distribution would also affect the rest of Slovenia. The other extreme – extensive precipitation, also causes problems. Heavy showers or extensive rainfall lasting several days cause flooding. Long rains also have undesirable consequences, as the wet terrain can result in landslides. These problems are likely to continue. Warm and green winters, i.e. winters without snow in lowlands, are becoming a reality, which has to be taken into account.

PART II: THE NATIONAL BIODIVERSITY CONSERVATION STRATEGY, ITS IMPLEMENTATION AND BIODIVERSITY MAINSTREAMING

5. What are Slovenia's biodiversity targets?

Owing to the large share of Natura 2000 sites in Slovenia (covering more than 37% of its territory), Slovenia has made great efforts to achieve the objectives of the Natura 2000 network in recent years. The specific objectives for all sites by species and habitat types are defined in the Natura 2000 Site Management Programme for 2015–2020, adopted by the Government in April 2015. A new national strategy for biodiversity conservation is being drafted, which will include overall goals to improve the conservation status of species and habitats, to increase the knowledge, understanding and awareness of biodiversity, to improve the interdisciplinary and integrated approach to biodiversity conservation and to ensure funds for the implementation of biodiversity conservation measures.

Nature conservation planning in Slovenia is carried out through the *National Nature Protection Programme* http://www.uradni-list.si/files/RS_-2006-002-00003-OB~P001-0000.PDF#!/pdf. The period of application of the first *National Nature Protection Programme*, which was adopted as a part of the *National Environmental Protection Programme*, expired in 2014. The *National Nature Protection Programme* covers the conservation of biodiversity and protection of natural assets and defines the scope of public interest in biodiversity conservation for at least ten years. The content of the programme is defined in detail and implemented through operational programmes adopted by the Government. The content of some operational programmes is defined in more detail in other legal acts.

Article 6 of the Convention requires Contracting Parties to develop national biodiversity strategies and action plans. Slovenia fulfilled this obligation in December 2001, when the Government adopted the *Biodiversity Conservation Strategy of Slovenia* (hereinafter: the BCSS). The BCSS determines a set of specific objectives and directions for the coordinated implementation of measures facilitating the achievement of the three main CBD goals for the period 2002–2012. The BCSS objectives and directions are divided into three chapters: Biodiversity Conservation Directions, Activities for Sustainable Use of Biodiversity Components and Sustainable Development, and Activities Supporting Biodiversity Conservation and Sustainable Use. The main challenge of the BCSS was to achieve a shift towards coordinated biodiversity conservation and sustainable use of its components in all key segments of society, The Strategy envisaged that its objectives will be achieved by the adoption and implementation of an action plan and sectoral and regional development policies and plans. This would lead to gradual changes in social habits, so that current biodiversity assets and well-being deriving therefrom could be preserved for the present and future generations. The BCSS highlights the approach of *in situ* biodiversity conservation with the key point being the conservation of ecosystems by maintaining the favourable status of the relevant communities of plant and animal species (habitat types). The Strategy also provides directions for the key sectors in ensuring the sustainable use of biodiversity components and sustainable development (agriculture, forestry, hunting, fisheries, water management, transport, the industry and energy sector and tourism). In this way, it complies with the Convention's provision that threats should be eliminated at their source. In this part the Strategy significantly contributes to the concept of sustainable development and the more specific inclusion of other sectors (in addition to the ones listed above, also science, education, health, culture, finance). The objectives of the BCSS (2002–2012) are set out in Section 5.2. Detailed directions for achieving these objectives are included in the Strategy text, which is available at: https://www.cbd.int/doc/world/si/si-nbsap-01-en.pdf.

The Natura 2000 Site Management Programme is another key document for biodiversity conservation, owing to the large share of Natura 2000 sites (comprising 37.16% of Slovenia's territory). The Programme is presented in detail in the answer to question 6. A summary of its objectives can be found in Section 5.3. http://www.natura2000.si/fileadmin/user_upload/zakonodaja/141-natura.pdf, http://www.natura2000.si/fileadmin/user_upload/LIFE_Upravljanje/PUN__ProgramNatura.pdf.

At the 10th Conference of the Parties in Nagoya in 2010 (when the BCSS was still applicable), the global Strategic Plan for Biodiversity, including 20 Aichi Biodiversity Targets, was adopted. The proposed targets of the new Strategy for Biodiversity Conservation in Slovenia are presented in Section 5.4. The proposed measures of the new Strategy (action plan) are not included in this report. They are available at: http://www.biotskaraznovrstnost.si/. Unlike the previous one, the new Strategy will be focused more on the implementation of global goals and a timetable will be determined for its measures. In addition to strategic targets, the new Strategy proposal includes implementation measures and determines the bodies responsible for the implementation. One of the weakest points of the previous Strategy was the absence of an implementation level, which should have been defined in an action plan, which has never been adopted. The targets and measures will have to be sufficiently ambitious, so that they ensure that the general goals of biodiversity conservation are achieved. However, the available human and financial resources have to be taken into account in the planning. In order to be feasible, the new Strategy is expected to include a financial plan for the implementation of measures, as implementation can only be efficient if funds and their sources are clearly defined. The Strategy will also define indicators for the monitoring of its implementation, which will enable reporting on the targets achieved. The document is expected to be adopted by the Government in 2016.

5.1. Objectives of the National Environmental Protection Programme concerning biodiversity conservation

The *National Nature Protection Programme* is a part of the *National Environmental Protection Programme* defining operational programmes (which in terms of their content are also action plans), which contribute to the achievement of the biodiversity conservation objectives set at the national, European and global levels.

The Operational Programme for Biodiversity Conservation with the Natura 2000 Site Management Programme

OBJECTIVE: To maintain a high level of biodiversity and halt biodiversity loss:

- to maintain and/or achieve the favourable conservation status of endangered species and habitat types;
- to maintain and/or achieve the favourable status (scope and quality) of species habitats and habitat types, for which areas important for biodiversity conservation are determined (ecologically important areas, Natura 2000 sites, Ramsar sites);
- to ensure coordinated nature conservation in protected areas with management plans and other measures;
- to improve the standard of any handling of wild animal species;
- to ensure the sustainable use of biodiversity components and sustainable activities affecting nature.

Operational Programme – The Strategy for Managing Populations of Large Carnivores This Strategy includes the control of population size and distribution, and the management and elimination of conflicts with other human interests in the environment.

OBJECTIVE: To maintain the favourable status of endangered large carnivore species and reduce conflicts. The implementation of the strategy for brown bear management and drafting of the action plan for this species, and the drafting of strategies for the management of wolf and lynx will provide more detailed measures for achieving this objective. *The Action Plan for the Management of Wolf Population* (*Canis lupus*) in Slovenia for 2013–2017 was adopted in the reporting period.
http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/velike_zveri/akcijski_nacrt_upravljanja_volk_2013_2017.pdf

Operational Programme – The Strategy for the Management of Non-native Invasive Species.

OBJECTIVE: To preserve the natural composition of ecological community, as far as possible. The Operational Programme (in terms of content also a strategy) includes detailed measures and their implementation for achieving the objective. It has not been adopted yet.

5.2. Objectives of the Biodiversity Conservation Strategy (BCSS) 2002–2012

5. 2.1. Ecosystem conservation

General objective: To conserve ecosystems by maintaining the favourable status of habitat types.

Coastal and marine habitat types

- To reduce the industrial, agricultural and urban pollution of water on the coast and in the hinterland to a level that does not threaten biologically diverse or well-preserved habitat types and the habitats of endangered or endemic plant and animal species.
- To restore degraded habitat types to a favourable status, where possible.
- To prevent the introduction of non-native species into the natural environment and the spread of already introduced non-native species to ecologically important areas.

Inland waters, bogs and marshes

- To conserve the existing ecologically important wetlands and maintain the favourable status of their habitat types and restore the ecological characteristics of degraded inland waters, bogs and marshes, where feasible.
- To consider waters as a system in which underground and surface waters and their habitat types form an integral whole.
- To attain water quality status that does not threaten biologically exceptionally diverse or well-preserved habitat types and the habitats of endangered or endemic plant and animal species, in particular by reducing the industrial, agricultural and urban pollution of water.

  To prevent the introduction of non-native species into inland waters and the spread of already introduced non-native species to ecologically important areas.

  To encourage land use on river banks and in alluvial river areas with the aim of conserving habitat types that maintain the water cycle and are important for biodiversity conservation, and of reducing and preventing damage caused by waters.
- To adjust land use to natural water regimes and keep it out of the areas of intensive hydrodynamic processes and areas of strategically important water resources.

Farmland habitat types

- To conserve the current range of wet and dry grasslands and meadow orchards, giving priority to areas inhabited by threatened or endemic animal and plant species.

  To conserve or increase the current extent of hedges, giving priority to ecologically important areas.

Forest habitat types

To maintain the favourable conservation status of all forest habitat types and expand the areas with such status.

Subterranean habitat types

To maintain the favourable conservation status of subterranean habitat types in ecologically important areas, and the entire subterranean fauna.

Conservation of landscape diversity

- To preserve the traditional extensive and sustainable land use, which maintains the high level of biodiversity, landscape diversity and cultural identity of the landscape in parts of protected areas and in outstanding landscape areas.
- To preserve the existing landscape diversity and its natural and cultural assets.

Species conservation

- To maintain the favourable status all native animal and plant species.

The conservation of genetic diversity

- To prevent population fragmentation and re-connect previously connected populations with a view to maintaining gene flow and to ensure the *in situ* conservation of naturally isolated populations and their increase, where necessary.
- To ensure the *ex situ* protection of native flora and fauna whose populations are too small for successful *in situ* protection.

Ex situ conservation

- To conserve wild species *ex situ* when *in situ* conservation is not possible or is seriously threatened.
- To conserve native domestic breeds and varieties for the production of food, materials and medicines, and the genetic resources of wild relatives of domesticated breeds and varieties.

5. 2.2. Activities for sustainable use of biodiversity components and sustainable development

Agriculture

- To establish the ecological and social functions of agriculture which contribute to the preservation of rural areas and high biodiversity in these areas, and which are based on sustainable forms of agriculture and the sustainable development of these areas.
- To expand sustainable agricultural practices based on native genetic resources of plant varieties and domestic animal breeds.
- To promote market-oriented agricultural policies and activities that comply with the requirements of the conservation and sustainable use of biodiversity components. To preserve the genetic potential of native varieties and breeds.

Forestry

- To ensure forest conservation and sustainable development in terms of biodiversity and all the ecological, social and production functions of forests.
- To preserve the natural environment and ecological balance in the landscape.
- To maintain the level of population density and land cultivation and improve the quality of life in rural areas.

Hunting

To maintain the favourable status of species and habitat types and, where necessary, to improve their status by guiding the development of wild fauna.

Fisheries

To manage freshwater-fish populations on the basis of an expert and transparent definition of fish population sizes, while taking into account ecological processes in water ecosystems, the natural load-bearing capacity of the environment and nature-protection guidelines to conserve biodiversity.

- To ensure the sustainable use of biotic resources that are subject to marine fishing and the harvesting of marine organisms, and to conserve biodiversity in marine and coastal habitat types.

Water management

- To manage and protect waters in a manner so as to preserve biodiversity and to ensure that their use is sustainable.

  To manage waters in an integrated manner, taking into account their dynamics and natural processes and the interconnectedness and mutual dependency of habitat types.

Industry and energy

To ensure the competitiveness of industry through sustainable development that conserves biodiversity.

To ensure reliable and sufficient long-term energy supply that is environmentally acceptable and conserves biodiversity as well as to ensure efficient energy use.

Transport

- To ensure the mobility of people and cargo in such a manner that conserves biodiversity.

Tourism

To develop more balanced and sustainable tourist products and services by incorporating natural sites of special interest and by taking into account the potential of the entire country and the risk to particular natural sites.

5. 2.3. Activities supporting biodiversity conservation and sustainable use

Legislative and economic mechanisms

To enforce the biodiversity conservation measures provided for in the Nature Conservation Act.

To enforce the measures for the conservation of biodiversity and the sustainable use of the components thereof provided for in the National Environmental Action Programme.

Spatial planning

- To adequately integrate biodiversity conservation in spatial planning documents and into the procedures for drawing up spatial planning and implementing acts (e.g. vulnerability studies, comprehensive environmental impact assessments and environmental impact assessments), in particular in protected and internationally important areas.
- To ensure the inclusion of the public in procedures for drawing up and adopting spatial planning documents.

Regional development

- To ensure that regional development is based on principles of sustainable development.
- To promote the development of activities exploiting the developmental potential of areas with preserved biodiversity in a manner that does not threaten biodiversity but conserves it.

Monitoring

- To update the list of species and populations in Slovenia.
- To monitor the state of biodiversity on the basis of a set of indicators.

  To monitor the impacts of the most important pressures on biodiversity on the basis of a set of indicators.

  To monitor reactions to the reduction of pressures and also society's willingness to change established behavioural patterns.
- To provide access to interpretations of collected data and the data themselves, if needed.

Research and development of technology

To expand studies of endangerment and relevant pressures on biodiversity components and their causes.

To develop tools and alternatives for partners in biodiversity conservation and the use of its components by researching clean technologies and *ex situ* protection technologies.

To expand relevant key research programmes in systematics, evolution biology, physiology, ecology and genetics.

To ensure access to research results and studies to facilitate decision-making.*Rights to use knowledge*

- To enable access to genetic resources by means of environmentally friendly technologies.

Education and communication

To increase the number of environmentally aware interest groups that understand the importance of biodiversity and are familiar with activities that conserve or may threaten biodiversity.

To ensure that all actors who affect biodiversity in their profession have the specific technical knowledge required for biodiversity conservation.

To guarantee a satisfactory level of general education providing knowledge on the environment, biology and biodiversity at all stages of the educational process.

The exchange of information and co-operation

To promote decision-making based on available information, the comparison of information and knowledge, and the upgrading and integration of knowledge, and to prevent the duplication of work.

International cooperation

To strengthen international cooperation and improve the results at particular levels and between them.

5.3. The goals of the Natura 2000 Site Management Programme

General protection goals are determined for and apply to an entire Natura 2000 site. They are determined so as to contribute to maintaining or attaining the favourable status of species or habitat types (which is determined at the level of the biogeographical region of the country). The Management Programme determines detailed protection goals. In general, the goals and measures apply to each species or habitat type in each Natura 2000 site and are based on protection goals in accordance with the *Decree on special protection areas*. Depending on the situation in the natural environment, detailed protection goals determine whether the state should be maintained, restored or improved in order to maintain or restore the favourable conservation status of a species or habitat type. Detailed protection goals are determined on the basis of the favourable status reference values. Protection goals regarding favourable status based on reference values define the key requirements that have to be fulfilled for a species or habitat type to have a favourable conservation status. They determine the population size (the multi-annual average in species with natural fluctuations in population size), habitat or habitat type size, and specific structures in the habitat and use for every species or habitat type.

The goals and measures of the Slovenian *Natura 2000 Site Management Programme* are available at: http://www.natura2000.si/fileadmin/user_upload/LIFE_Upravljanje/PUN__Pril6.1CiljiUkrepi.xlsx

5. 4. Proposed targets of the updated Biodiversity Conservation Strategy

Overall national target A: Improvement of conservation status of species and of their habitats

- *Detailed national target 1:* By 2025, the status of habitat types and species, including their genetic diversity will improve and/or will be maintained

- *Detailed national target 2:* By 2025 agriculture, forestry, water management and fisheries sectors will increase inclusion of conservation of species and habitat types of national and wider (EU) importance into their plans and programmes
- *Detailed national target 3:* By 2020 the invasive alien species and their pathways will be identified. By 2025, the invasive alien species and their pathways will be brought under control

Overall national target B: Knowledge, understanding and awareness on biodiversity and its importance will increase at all levels of society

- *Detailed national target 4:* By 2020, a national program on research and monitoring of biodiversity will be established
- *Detailed national target 5:* By 2025, the biodiversity will be a part of compulsory education programmes
- *Detailed national target 6:* By 2025, public will be adequately informed about importance of biodiversity
- *Detailed national target 7:* By 2025, promotion of biodiversity will increase and good practices that support it will be rewarded

Overall national target C: For conservation of biodiversity, the interdisciplinary and cross-sectoral cooperation and application of comprehensive approach will improve

- *Detailed national target 8:* By no later than 2025, the biodiversity values will be integrated into relevant national and local strategies and decision making processess
- *Detailed national target 9:* By 2020, the existing protected areas and Natura 2000 sites will be preserved through efficient management
- *Detailed national target 10:* By 2025, traditional knowledge scientific research, innovations and new technologies will be involved into conservation of biodiversity

Overall national target D: Stimulative financial incentives will be provided for biodiversity conservation

- *Detailed national target 11:* By no later than 2020, the subsidies and incentives harmful to biodiversity will be identified and removed
- *Detailed national target 12:* By 2025, a sustainable financial resources for research activities, programmes and projects that support conservation of biodiversity will be provided

6. How are the national strategy and action plan updated to incorporate global biodiversity goals and serve as effective instruments for biodiversity mainstreaming?

The new Biodiversity Conservation Strategy currently being drafted takes into account the global biodiversity goals. The representatives of other sectors are actively participating in the drafting of the strategy and we believe that the targets and measures for their achievement thus formulated will be a good starting point for better integration of biodiversity in the policies and strategic documents of other sectors.

The updated Biodiversity Conservation Strategy until 2025 is still being drafted. Compared with the previous Strategy, the targets proposed for the new Strategy are focused more on the achievement of global goals. The proposed overall and detailed targets are presented in the answer to question 5. This Section reviews how the proposed national targets overlap with the global and EU biodiversity conservation targets until 2020. The majority of measures related to individual aims of the proposed Biodiversity Conservation Strategy Include cooperation among different sectors.

Table 2: Mapping of national targets/objectives to global and EU biodiversity targets

National strategy targets or objectives (proposal)	Corresponding EU targets	Corresponding Aichi targets
Overall national target A: Improvement of conservation status of species and of their habitats		
Detailed national target 1: By 2025, the status of habitat types and species, including their genetic diversity will improve and/or will be maintained	1, 2, 3	5, 11, 12, 13, 15
Detailed national target 2: By 2025 agriculture, forestry, water management and fisheries sectors will increase inclusion of conservation of species and habitat types of national and wider (EU) importance into their plans and programmes	1, 2, 3, 4	4, 6, 7, 8, 13
Detailed national target 3: By 2020 the invasive alien species and their pathways will be identified. By 2025, the invasive alien species and their pathways	1, 2, 5	9. 19

will be brought under control

Overall national target B: Knowledge, understanding and awareness on biodiversity and its importance will increase at all levels of society		
Detailed national target 4: By 2020, a national program on research and monitoring of biodiversity will be established	1, 2, 3, 4, 5, 6	1.2
Detailed national target 5: By 2025, the biodiversity will be a part of compulsory education programmes	1, 2, 3, 5, 6	1, 19
Detailed national target 6: By 2025, public will be adequately informed about importance of biodiversity	3, 5	1, 19
Detailed national target 7: By 2025, promotion of biodiversity will increase and good practices that support it will be rewarded	1, 2, 3, 4	1, 2, 18, 19, 20
Overall national target C: For conservation of biodiversity, the interdisciplinary and cross-sectoral cooperation and application of comprehensive approach will improve		
Detailed national target 8: By no later than 2025, the biodiversity values will be intergrated into relevant national and local strategies and decision making processess	1, 2, 3	2, 4, 16, 17
Detailed national target 9: By 2020, the existing protected areas and Natura 2000 sites will be preserved through efficient management	1, 2, 3, 4	2, 5, 7, 8, 10, 11, 12, 13, 14, 15
Detailed national target 10: By 2025, traditional knowledge scientific research, inovations and new technologies will be involved into conservation of biodiversity	1, 2, 3, 4	18, 19
Overall national target D:		

Stimulative financial incentives will be provided for biodiversity conservation		
Detailed national target 11: By no later than 2020, the subsidies and incentives harmful to biodiversity will be identified and removed	1, 2, 3	3, 20
Detailed national target 12: By 2025, a sustainable financial resources for research activities, programmes and projects that support conservation of biodiversity will be provided	1, 4, 5, 6	3, 20

Several aims to which individual measures are related (the action plan) are envisaged for each detailed national target listed in the table above. Considering the limited human and financial resources, it was highlighted during the drafting of the updated Strategy that focus should be on the areas and support activities (sectors) that were not adequately covered in the previous Strategy or are key to improving the situation. The following are the proposed measures of the updated Strategy that are directly related to the mainstreaming of biodiversity:

General measures for improving the integration of biodiversity in other sectors:

- To appropriately include biodiversity content in all key strategies in the country by 2025;
- To integrate specific measures for the conservation of endangered habitat types in all programmes and plans governing the management of natural resources and spatial planning;
- To ensure that commitments concerning biodiversity conservation are included in sectoral action plans;
- To form an inter-sectoral group that will be responsible for the implementation of the Biodiversity Strategy in Slovenia;
- To ensure that the inter-sectoral group, which is to be composed of main stakeholders (representatives of ministries, research institutions and universities, managers of protected areas, non-governmental organisations) reviews the status of biodiversity and makes relevant recommendations every two years;
- To participate in the promotion of the capacity-building of management groups and their regular education and training.

Measures for better inclusion of decision-makers:

- To conduct public opinion surveys on biodiversity every five years.
- To appropriately convey the results of public opinion surveys to decision-makers at all decision-making levels.

Measures related to agriculture:

- To include in the agricultural rural development programme after 2020 (or in any amendment of the current programme) additional aims for the protection of habitat types on Natura 2000 sites and in protected areas;
- To expand the breeding and use of native and traditional breeds of domestic animals in order to preserve genetic diversity in agriculture;
- To expand the areas where native and traditional varieties are cultivated;
- To promote native and traditional breeds and varieties;
- To maintain and update the biological safety system;

- To protect the agricultural landscape with cross-compliance mechanisms and by raising the awareness of farmers regarding such;
- To promote extensive grazing in areas where grazing has been abandoned in recent years;
- To conserve, establish and maintain margin habitats (e.g. hedges);
- To consistently implement agricultural practices within the green component, particularly supervision of the preservation of sensitive permanent grassland (the prohibition of ploughing or changing the use);
- To participate in the improvement of the capacities of farmers regarding the application of traditional knowledge in the conservation of biodiversity.

Measures related to forestry:

- To improve the fulfilment of the specific requirements of some specialised Natura 2000 qualifying habitat types in forest management;
- To determine particularly valuable habitats for animals of forest environments or eco-cells with a view to conserving biodiversity;
- To implement biodiversity protection measures as a priority in state-owned forests;
- To declare forest reserves for the protection of biodiversity.

Measures related to fisheries:

- To increase the biodiversity content in the Programme for Fish Management in Inland Waters in Slovenia until 2021;
- To include scientific participation, so that an ecological approach will support a sustainable yield.

Measures related to water management:

- To ensure the continuity and passability of watercourses – conditions for the free movement of aquatic organisms;
- To ensure that watercourse management is planned and implemented so as to preserve, as far as possible, the natural hydromorphology of streambeds and the diversity of aquatic habitats;
- To re-establish functional aquatic habitats with renaturation measures;
- To provide clear instructions for works contractors (formulated through inter-sectoral coordination) and expert supervision of any watercourse management works, use of water and management of riparian vegetation;
- To set up effective inspection of works carried out on watercourses and of water use;
- To take into account the cumulative impacts of works carried out and existing use of water in individual watercourses and river basins.

Measures for inter-sectoral cooperation regarding invasive non-native species:

- To coordinate work related to non-native invasive species among sectors, as well as non-governmental organisations, local communities, experts and private companies, institutes and other stakeholders;
- To educate and raise the awareness of the general public as regards the issue of non-native invasive species (what they are, why they pose a problem, what every person can do, etc.);
- To include the public in the prevention of the introduction and spreading of non-native invasive species (acquire support in and for the implementation of measures) and the gathering of data on these species;
- To set up a system for monitoring warnings and providing information, which will be supported by the system for monitoring (with an emphasis on key introduction points) and inspection;
- To set up a rapid response system when the introduction of a non-native invasive species is detected or a warning regarding such a species is received (determining activities for prevention, disposal, control or keeping);
- To supplement the deliberate introduction system in cooperation with other sectors (health, the veterinary sector, customs, agriculture);

- To promote and participate in the strengthening of capacities, and the performance and effectiveness of institutions and individuals involved in biodiversity conservation.

Measures for inter-sectoral cooperation regarding education and public awareness-raising:

- To encourage the participation of volunteers in the performance of tasks related to biodiversity conservation (citizen science);
- To ensure that educational content on the importance of biodiversity is included in all formal education programmes and that the quality of execution of such programmes is improved;
- To ensure uniform technical training on biodiversity within the continuous training of employees;
- To prepare materials on biodiversity that will be included in natural science subjects at all education levels in an appropriate manner;
- To ensure that ecology and environmental and nature protection are mandatory components of subjects involving natural science and biology and subjects involving technologies related to activities affecting the natural environment;
- To ensure that emphasis is placed on learning about local biodiversity, its functions and interconnections at the local and global levels;
- To ensure, through the clearing-house mechanism, that the public is promptly informed of new developments in biodiversity and of possibilities for participating in various campaigns and decision-making procedures related to biodiversity conservation;
- To ensure the promotion of biodiversity on the websites of public services and the presentation of links between biodiversity conservation and access to quality ecosystem services;
- To compose a list of professions and services (e.g. concessionaries in watercourse management) related to biodiversity and prepare materials related to their area of work to be included in their training and awareness-raising;
- To ensure the quality presentation of subject content on the importance of biodiversity in formal educational programmes for certain occupations;
- To ensure and implement the continuous inclusion of biodiversity content in the operation of certain occupations and services;
- To monitor the activities of services within the public sector that are related to the education and awareness-raising of various publics and, if necessary, to enhance their cooperation.

Measures for inter-sectoral cooperation regarding tourism:

- To include biodiversity content in tourism plans and participate in the identification of potential areas for tourism development;
- To improve biodiversity promotion programmes for visitors to protected areas and Natura 2000 sites and include them in management programmes.

Measures for increased inclusion of the public in biodiversity conservation activities:

- To develop a network of volunteers and volunteer programmes (participation in inventory-taking, monitoring, education), so that they can actively contribute to biodiversity conservation;
- To organise workshops and meetings for representatives of the media, the competent ministries, public services, companies and non-governmental organisations in the field of nature protection with the aim of finding opportunities for cooperation;
- To improve media relations;
- To create an award for achievements in biodiversity conservation;
- To provide tax relief to award-winners (best practices).

Measures related to spatial planning and landscape conservation:

- To include biodiversity content in the programmes at the national level and in the national and municipal spatial planning.

- To consistently carry out environmental impact assessments and acceptability assessments on Natura 2000 sites and in protected areas for:
  – operational programmes,
  – national spatial plans,
  – municipal spatial plans;
- To improve the quality of environmental reports – to introduce a review system;
- To reduce and prevent adverse impacts of spatial-development activities on the landscape;
- To carry out environmental impact assessments, acceptability assessments and prior procedures for public and private projects affecting the environment;
- To preserve the mosaic nature of the landscape and identify landscape elements contributing to biodiversity within spatial planning and land use.

Measures related to cooperation with a view to mitigating the effects of climate change:

- To promote the linking of research in biodiversity, climate change and ecosystem services;
- To raise the awareness of the general public regarding the impacts of climate change on biodiversity and regarding the importance of reducing the carbon footprint for the conservation of biodiversity and ecosystem services.

7. What actions has Slovenia taken to implement the Convention since the Fourth National Report?

Slovenia has adopted many regulations that are important for biodiversity conservation, as well as strategic and programme documents. Efforts have been made to ensure public funds with a view to providing the best possible basis for the implementation of biodiversity conservation measures in accordance with the Convention.

7.1. Legislative measures related to the implementation of the Convention that have been adopted since the Fourth National Report

- *Decree amending the Decree on ecologically important areas* (Uradni list RS, Nos. 33/13, 99/13) This amendment replaces both Annexes to the Decree. The Annexes determine ecologically important areas corresponding to the spatial planning supplements and amendments concerning Natura 2000 sites that were adopted in April 2013. The Decree also provides for demanding technical changes: a uniform geographical definition of ecologically important areas and their graphic classification. http://www.uradni-list.si/1/content?id=115209#!/Uredba-o-spremembah-Uredbe-o-ekolosko-pomembnih-obmocjih, http://www.uradni-list.si/1/content?id=112904

- *Rules on the register of injured parties, protective measures taken and compensation agreements for damage caused by animals of protected species* (Uradni list RS, No. 23/15). *The Act Amending the Nature Conservation Act* (Uradni list RS, No. 46/14 of 23 June 2014) was supplemented with a new article stipulating that the competent ministry shall keep a register of injured parties, protective measures taken, and agreements on compensation signed for the purposes of processing claims and performing other tasks concerning compensation for damage caused by protected animal species. The register is used for the processing of claims, statistical purposes and for the adoption and implementation of measures for preventing further damage. http://www.uradni-list.si/1/content?id=121184#!

- *Decree on the Škocjanski Zatok Nature Reserve* (Uradni list RS, Nos. 75/13, 46/14) The Škocjanski Zatok Nature Reserve near Koper had been protected by the *Škocjanski Zatok Nature Reserve Act*, which is no longer in force. The *Decree on the Škocjanski Zatok Nature Reserve* is an act on protection, drawn up on the basis of the *Nature Conservation Act*, which, in accordance with its content, is an amendment of the protection act. http://www.uradni-list.si/1/content?id=114418

- *Decree on the Zelenci Nature Reserve* (Uradni list RS, No. 53/13). As the area has the status of a natural asset of national importance, the implementation of protection measures is the responsibility of the state. The legislation allows for a protected area to be established as a nature protection measure together by the state and the local community, including natural assets of national importance. http://www.uradni-list.si/1/content?id=113658

- *Decree on the management plan for the Sečovlje Salina Landscape Park for the period 2011–2021* (Uradni list RS, No. 53/11). The plan for the management of the Sečovlje Salina Landscape Park is annexed to the Decree as an integral part thereof. It is a programme act outlining the vision of the protection and development of the landscape park for a 10-year period. The management plan also determines detailed protection arrangements and aims for activities and actions and their locations. http://www.uradni-list.si/1/content?id=104419

- *Decree on protected wild species of fungi* (Uradni list RS, No. 58/11). The Decree regulates in particular the protection status of truffles in order to allow limited and controlled exploitation and trade. The Decree stipulates that the species threatened by picking are protected and only allows exceptions for the purposes of scientific research and education. http://www.uradni-list.si/1/content?id=104639

- *Decree on the rules of conduct and protection methods in trade in animal and plant species* (Uradni list RS, No. 78/12). In accordance with the needs expressed by users and with the legal basis of the EU allowing this, the central subject of this Decree is the regulation of the procedure for acquiring prior certificates and the related rights and obligations of eligible persons. http://www.uradni-list.si/1/content?id=110129

- *Rules on the designation and protection of natural assets* (Uradni list RS, No. 23/15). The Minster of the Environment and Spatial Planning issued the amended Rules on the designation and protection of natural assets determining those parts of the natural environment that owing to their characteristics are recognised as natural assets, classifying them into natural assets of national importance and natural assets of local importance, and regulating the detailed protection and development aims and other compulsory rules of conduct aimed at their protection. http://www.uradni-list.si/1/content?id=121181#!

- *Decree on protected wild plant species* (Uradni list RS, No. 15/14). The Decree supplements the list of species to take into account the accession of the Republic of Croatia to the EU and to comply with the requirements of Directive 2013/17/EU. http://www.uradni-list.si/1/content?id=116473

The Decree determining special protection areas (Natura 2000 sites) and protection goals in these areas, and protection aims for maintaining or achieving the favourable status of wild plant and animal species, and their habitats and habitat types, whose conservation is in the interests of the European Union, as well as other rules of conduct for the conservation of these areas. The Decree also determines rules for identifying potential special areas of conservation and determines potential

special areas of conservation and the method of their protection. In the reporting period, the Decree was amended several times by the following acts:

- *Decree amending the Decree on special protection areas* (Natura 2000 sites) (Uradni list RS, No. 8/12 of 3 February 2012),
- *Decree amending the Decree on special protection areas* (Natura 2000 sites) (Uradni list RS, No. 33/13 of 19 April 2013),
- *Decree amending the Decree on special protection areas* (Natura 2000 sites) (Uradni list RS, No. 35/13 of 26 April 2013),
- *Decree amending the Decree on special protection areas* (Natura 2000 sites) (Uradni list RS, No. 3/14 of 10 January 2014).

7.2. Plans and strategic and planning documents

- *The plan for determining the effect of Natura 2000 sites and development measures, 2013*. A special protection area (Natura 2000 site) is an ecologically important area that lies in the territory of the EU and is important for maintaining or achieving the favourable status of bird species (a special protection area) and other animal and plant species, and their habitats and habitat types (a special area of conservation). Considering the effect of special protection areas and potential special areas of conservation on local communities, the Government adopts a plan by means of which the consequences for the social and economic conditions are examined and the appropriate development measures determined. The plan must be adopted prior to the designation of a special protection area, and in the case of a potential special area of conservation, prior to approval by the competent EU body.
  http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/zakonodaja/ohranjanje_narave/nacrt_ugotavljanja_posledic_vpliva_natura2000.pdf

- *Operational Programme: Natura 2000 Site Management Programme (2015–2020).* The obligation to protect special protection areas – Natura 2000 sites – arises from *Council Directive 92/43/EEC on the conservation of natural habitats and on wild fauna and flora*, in relation to *Council Directive 79/409/EEC on the conservation of wild birds*. The Habitats Directive requires Member States to prevent the deterioration of natural habitats and the disturbance of species for which Natura 2000 sites have been designated, in so far as such disturbance could be significant in relation to the objectives of the Directive. This provision applies to proposals for special protection areas in accordance with criteria and procedure under the Habitats Directive and for areas designated under the Birds Directive. The obligations under both directives have been fully transposed into the Slovenian legislation by regulations on nature conservation.
  http://www.natura2000.si/fileadmin/user_upload/LIFE_Upravljanje/PUN__ProgramNatura.pdf

- *The Action Plan for the Management of Wolf Population (Canis lupus) in Slovenia for 2013–201*The aim of the Action Plan is to preserve the wolf population in Slovenia in the long term and to minimise conflicts with humans. As the operative part of the *Strategy for the Conservation of Wolf* (*Canis lupus*) in Slovenia (2009), the Action Plan lists specific activities and measures that will contribute to the achievement of its fundamental goal, the implementing bodies, and the timeline and financial framework for the implementation of these measures. The plan was developed within the Life+ project Conservation and Surveillance of the Conservation Status of the Wolf (*Canis lupus*) Population in Slovenia (2010–2013) – SloWolf, co-financed by the European Commission and Slovenia.
  http://www.mko.gov.si/fileadmin/mko.gov.si/pageuploads/podrocja/velike_zveri/akcijski_nacrt_upravljanja_volk_2013_2017.pdf

7. 2.1. Management of nature parks

- Triglav National Park: *Decision on the start of the procedure for drawing up a management plan for the Triglav National Park* (February 2011)
    - *Decision on temporary management guidelines for the Triglav National Park*
- Ljubljansko Barje Landscape Park: *Decision on temporary management guidelines for the Ljubljansko barje Landscape Park* (October 2011)
- Sečovlje Salina Nature Park : Decree on Sečovlje Salina Nature Park management plan for 2011-2020 period: http://www.pisrs.si/Pis.web/pregledPredpisa?id=URED4800 (June 2011)
- Škocjan caves Regional Park: Decree on Škocjan caves Regional Park programme for protection and development (Januray 2014): https://www.uradni-list.si/1/content?id=116275

7.3. Institutional mechanisms for the implementation of the Convention and the structure of the staff of the public service providing nature conservation in Slovenia

All institutions of Slovenia's nature conservation system have been established. At the same time as the *Nature Conservation Act* was being implemented, Slovenia was in the process of integrating into international nature protection organisations and preparing for accession to the EU. In order to implement EU legislation, in particular during its preparations for holding the Presidency of the EU Council in the first half of 2008, Slovenia needed more expert staff in this field. The employment process was concluded by the end of the Presidency, and the possibilities for employment in the public service providing nature conservation were exhausted. Staff reinforcement during the preparations for the Presidency and during the Presidency itself was only temporary. The number of employees of the Ministry of the Environment and Spatial Planning, which is responsible for the implementation of the Convention, has been falling since 2009. Owing to the financial and economic crises, which severely affected Slovenia in the reporting period, the public funds available for nature protection, and consequently the possibility of new employment, were reduced.

Diagram 2 Bodies and organisations performing tasks related to biodiversity conservation in Slovenia[47]

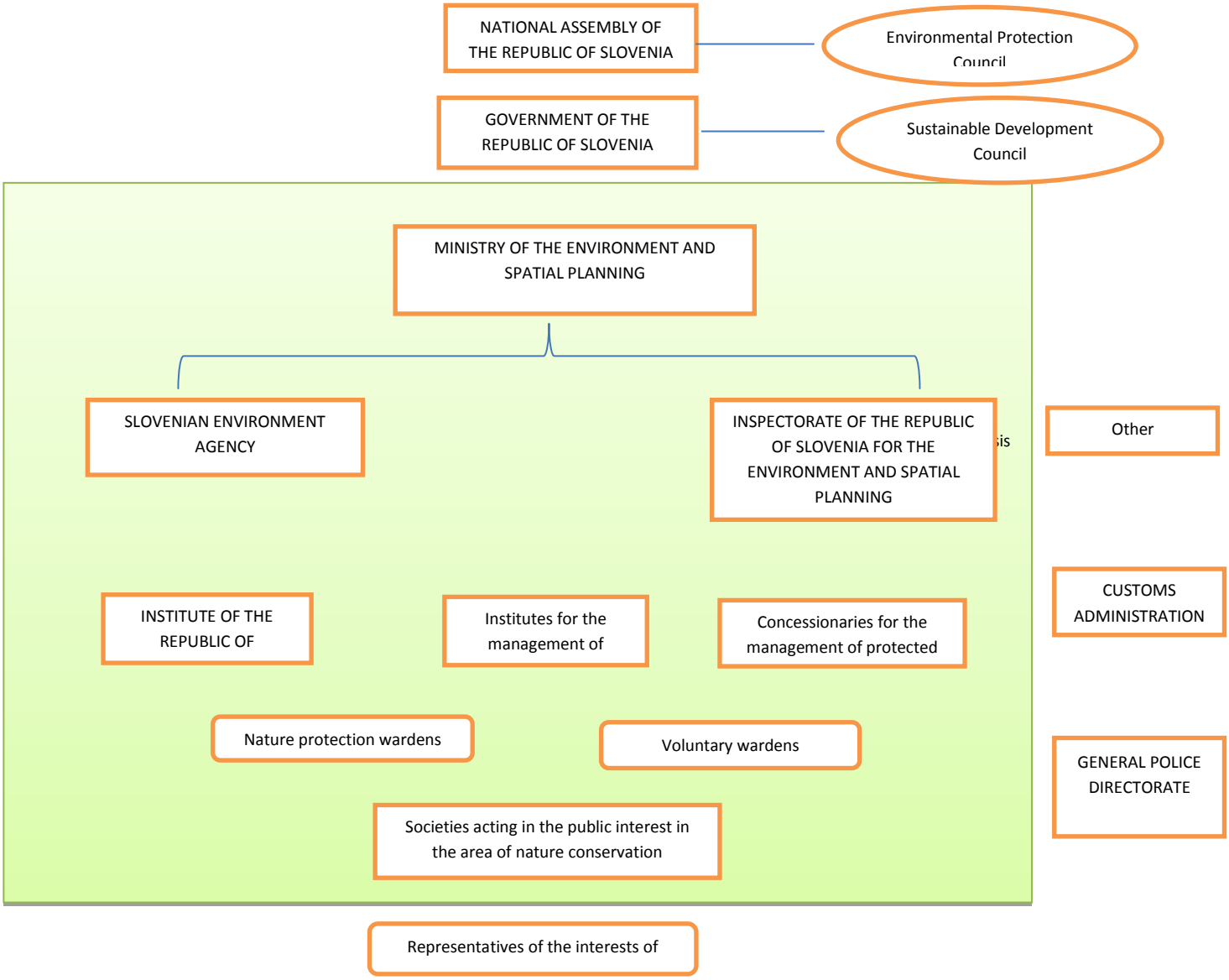

Table 3: Staff structure in the existing public services providing nature protection in Slovenia (as of January 2014)

	No. of employees in specialised positions	No. of employees in general positions	No. of employees in supervisory positions
Ministry of the Environment and Spatial Planning – Nature Conservation Division	13	3	
Slovenian Environment Agency – Nature Conservation Division	15	1	
Institute for Nature Conservation	64	13	
Public institutes for the management of protected areas	59	20	35
Total by posts	151	37	35
Total			
225			

7.4. Financing mechanisms

In Slovenia, nature protection is, as a general rule, mainly a non-profit activity that must be provided by the state and local communities in accordance with their responsibilities. The funding thereof is generally carried out through the state budget. The state provides the funds for measures aimed at biodiversity conservation and the protection of natural assets, for the public service providing nature conservation and for compensation. Local communities provide funds for measures aimed at the protection of natural assets, for the public service providing nature conservation and for compensation when related to the protection of natural assets. The *Nature Conservation Act* also provides for other sources for the financing of the public service providing nature conservation, which are regulated through the funding of institutes as entities that perform a public-service. This includes payments for services performed, grants, donations and other sources allowed by law. In addition to the system of public, direct and purpose-based financing of nature protection, its financing by means of funds provided by other sources, in particular international financial sources, foreign and domestic donations, and sponsorships, is of equal importance. These funds can be used by public institutions, local communities, non-governmental organisations, companies or individuals. Important sources are the European Regional Development Fund, the European Agricultural Guarantee Fund, the Rural Development Programme, the LIFE programme, the Cohesion Fund, the EEA and the Norwegian Financial Mechanisms and the Swiss contribution[48].

The Business & Biodiversity Mechanism has not been fully realised in Slovenia. Its scope is negligible. Slovenia has not yet developed systematic payment for ecosystem services, which is a potential source for financing biodiversity conservation measures[49].

7. 4.1. Financing biodiversity conservation m easures in protected areas

The establishment of new protected areas is generally financed from the budget. However, the establishment can be more successful if project funds are also obtained in order to actively include local people and key interest groups. In the preparation of management plans for the existing protected areas, additional funds can be acquired for a detailed status assessment and assistance in defining goals and measures. International funds can also be obtained for this purpose. Funds can be obtained for issues related to activities focused on a species or a group of species or habitat types. There are potential European sources of financing within the programmes for territorial cooperation of the European Regional Development Fund (particularly cross-border cooperation) and within the Operational Programme for the Implementation of EU Cohesion Policy 2014–2020 for green infrastructure with a view to achieving the objectives of Natura 2000 sites. Funds under the LIFE programme are also an important source. In agreement with the donor countries, a significant part of the financial mechanisms (the Swiss financial contribution, the Norwegian Financial Mechanism, the EEA Financial Mechanism) may be allocated to content contributing to the development of quality management plans. On the basis of cooperation with the Western Balkan countries, Slovenia is eligible for certain funds that are otherwise unavailable to it (e.g. within the LifeWeb Initiative, the Mava Foundation). An option for financing contractual measures that are not eligible for funding from agri-environmental, forestry-environmental and fisheries-environmental measures is the submission and implementation of appropriate LIFE project. The LEADER programme, which is a potentially good instrument for achieving nature protection goals, can also be carried out in protected areas. It can include the acquisition of expert knowledge and the promotion of the establishment and management of local public-private partnerships, which have to be included in the local development strategy of local action groups. LIFE programme funds can be obtained for the implementation and improvement of the system of nature protection supervision. From the EU programmes intended for young people, the training of future young wardens can be financed, e.g. the Youth in Action Programme[50].

7. 4.2. Financing biodiversity conservation measures in cave ecosystems

In addition to budgetary funds, EU financial resources are particularly important for the conservation of cave ecosystems, in particular for the management of cave infrastructure. Important sources are the territorial cooperation programmes of the European Regional Development Fund, and potentially also the European Regional Development Fund in the Operational Programme for the Implementation of EU Cohesion Policy 2014–2020. Other possible sources of financing are the EEA and Norwegian Financial Mechanisms, the Swiss contribution and other sources, for example those available within the framework of cooperation with the Western Balkan countries. Certain funds can be provided through donations[51].

7. 4.3. Financing biodiversity conservation measures in forestry

In general, the budget funds allocated to forestry contribute to biodiversity conservation in forests. With regard to additional funds for investments in forests, the co-financing of Eco-cell measures on Natura 2000 sites is envisaged. It is also planned that the share of national funds will be determined so as to be allocated exclusively to target measures for qualifying species and habitat types whose status is deteriorating. As sources of financing for forestry measures, the EU Biodiversity Strategy until 2020 lists the funds of other policies, including the EU Rural Development Policy. The financing of measures for biodiversity conservation in the forest environment is also provided for in the LIFE programme, which supports nature conservation, adaptation to climate change and information

requirements. The measures that cannot be financed from other sources can be financed under the LIFE programme. According to the European Commission guidelines, the financing of forest biodiversity measures with the funds of the Regional Development Fund and the Cohesion Fund is possible in the form of investments in the setting up or revitalisation of green infrastructure[52].

7. 4.4. Financing biodiversity conservation measures in agricultural ecosystems

One of the basic new elements introduced by the reform of the EU agricultural policy for the 2015–2020 period is the green component. It means that 30% of the national envelope for direct payments is allocated to obligatory agricultural practices with a favourable impact on climate and the environment. Furthermore, the fulfilment of requirements that reduce the potentially harmful effects of agriculture on the environment, maintain natural resources, biodiversity and the traditional cultivated landscape and contribute to the protection of protected areas will be promoted within agri-environmental and climate payments under the 2014–2020 Rural Development Programme. The participation of eligible farmers in the agri-environmental payments scheme is voluntary. Payments within the Natura 2000 network can be granted to eligible persons once a year per hectare of agricultural land or forest to cover additional costs and loss of income due to restrictions. The experience of recent years shows that the LEADER programme with its bottom-up approach can also be an excellent instrument for achieving nature protection goals. This programme supports the acquisition of new skills and the promotion of the establishment of local public–private partnerships, their management, the drawing up and implementation of local development strategies and the cooperation and integration of local action groups[53].

7. 4.5. Financing biodiversity conservation measures in fisheries

In the previous Financial Perspective (2007–2013), the Natura 2000 protection measures relating to fisheries were not financed from EU funds. One of the reasons was that fishing associations, which in Slovenia are responsible for the implementation of the majority of measures, were not eligible for funds from the European Fisheries Fund. Considering the current programming regarding the funds from this programme, the situation will remain the same in the next period (2014–2020). If this changes, it can be expected that the implementation of the planned measures will improve. There are several new possibilities for financing potential protection measures in the 2014–2020 period. Since commercial fishing in Slovenia is limited to the sea, the measures related to fishing can only be financed in reference to the sea[54].

7. 4.6. Financing biodiversity conservation measures in aquatic ecosystems

The majority of water management activities in Slovenia are carried out within the provision of the mandatory public utility service (funds for the work of the service are provided from the Water Fund). In the EU Financial Framework 2014–2020, investments in green infrastructure will be supported, where priority will be given to synergy with anti-flood measures and measures aimed at improving the hydromorphological status of waters. If necessary and where relevant and justified, financial support will also be given to the purchase of property important for nature protection in order to conserve and restore ecosystems providing key ecosystem services, as a part of the comprehensive measures on Natura 2000 sites[55].

7. 4.7. Financing biodiversity research

Individual ministries play an important role in proposing research activities, particularly within the Target Research Programmes, where they participate in procedures for approving research programmes and co-finance them. This area offers many possibilities for achieving research results applicable in biodiversity conservation. EU funds may be used to co-finance the setting-up of the monitoring of target species and habitat types, particularly the species listed in the Annexes to the *Birds Directive* and the *Habitats Directive*. The EU Framework Programme for Research and Innovation is entitled Horizon 2020. It is a centralised mechanism in which biodiversity research is more explicitly defined, including financing options. The programme for the 2014–2015 period, particularly the sections on climate measures, the environment, and resource efficiency, define projects concerning environmental protection, the sustainable management of natural resources, water, and biodiversity and ecosystems, which are focused mostly on ecosystem services and the role of biodiversity[56].

7. 4.8. Financing biodiversity conservation measures in relation to databases

The setting-up of well organised and properly functioning databases and web portals have occasionally been financed from national resources. Systemic financing that would allow for prompt data entry, and the maintenance and smooth functioning of databases has not yet been established. Slovenia is eligible for donated funds from some highly developed countries (the Swiss financial contribution, the Norwegian Financial Mechanism, the EEA Financial Mechanism) for this purpose. There is an option available in the submission and implementation of projects involving financing the setting-up and management of databases from these sources[57].

7. 4.9. Financing biodiversity conservation measures in the fields of communication and awareness-raising

These activities are part of the regular work of all public institutes and public service providers operating in nature conservation in Slovenia and financed from the state budget. Other possible sources include donations and sponsorships from companies. Petrol and Krka are companies that have contributed to the awareness-raising and promotion of nature conservation in the past. In the first multiannual LIFE work programme, the European Commission envisages funds for national and transnational awareness-raising campaigns. The campaigns should significantly raise awareness and, if possible, bring about a change in the behaviour of the target public or a specific administrative or economic sectors. Furthermore, these funds are to be allocated to the campaigns for individual large carnivore species populations. Funds have been earmarked for informing and raising awareness of the EU Biodiversity Strategy until 2020 to raise the awareness and understanding of citizens and key stakeholders (including decision-makers, the business sector and the local administration) on the goals of the Strategy. There are also funds envisaged for awareness-raising campaigns with regard to invasive non-native species, which will be focused on the general public and key stakeholders, including decision-makers, the enterprise sector, local communities and state institutions. There are also funds contributed by countries that are not EU members, e.g. the Swiss financial contribution, the Norwegian Financial Mechanism, the EEA Financial Mechanism[58].

8. How effectively has biodiversity been mainstreamed into relevant sectoral and cross-sectoral strategies, plans and programmes?

In principle, biodiversity is relatively well included in relevant sectoral strategies and plans in Slovenia. However, there are often difficulties in the achievement of these goals, as implementing measures are not planned appropriately or the adopted measures are implemented poorly.

In Slovenia, biodiversity is included in basic national and various sectoral strategies, plans and programmes. The key strategic documents that include biodiversity among their goals in relation to efforts to reduce poverty are listed bellow. This Section also includes an overview of the integration of biodiversity in the framework strategies of the state and the strategic documents of various sectors. The National Environmental Protection Programme emphasises that the integration of environmental requirements in all policies and activities is essential for the enforcement and promotion of sustainable development. In adopting their policies, strategies, plans and general legal acts, and in dealing with other issues under their responsibility, the state, regions and municipalities have to promote the economic and social development of society that allows for future generations to have equal opportunities for fulfilling their needs as the present generations and facilitates long-term environmental conservation. The previous Biodiversity Conservation Strategy (2002–2012) envisaged the drawing up and implementation of an inter-sectoral four-year biodiversity conservation action plan for the main sectoral development policies. The basic programme document for achieving that the species and habitat types on Natura 2000 sites have a favourable conservation status is the Natura 2000 Site Management Programme. Although biodiversity conservation is integrated in the mechanisms of strategic planning, the analysis of the implementation of the Biodiversity Conservation Strategy shows that in the reporting period the biodiversity goals in the policies of other sectors were poorly implemented. Therefore, when the new strategy is developed, more attention should be devoted to cooperation with the representatives of various sectors.

8.1. The importance of biodiversity for poverty reduction strategies and other key inter-sectoral documents

Slovenia's Development Strategy 2014–2020 is a fundamental national strategic document that defines the well-being of the population as the highest development goal. All changes in the economy and society will be directed towards increasing the well-being of the present and future generations, taking into account the environmental restrictions and human health considerations. The aim of development is not only to achieve economic growth but also progress in the service of increased well-being and the conservation of natural capital. Slovenia's development will therefore be directed toward ensuring a green living environment by investments in green infrastructure, measures for nature protection and biodiversity conservation, and the provision of a biosafety system. During the development of Slovenia's Development Strategy, the initiative for green development occured, which identifies areas in which Slovenia should invest to accelerate economic growth, create new jobs and use its natural potential (wood, water, biodiversity) and ensure that pressures on the environment are reduced (food self-sufficiency with an emphasis on organic production, the establishment of a wood-processing value chain, the energy renovation of buildings, the transition to renewable energy sources, modernisation of the railway network and public transport, efficient use of natural resources, and green tourism).
http://www.svrk.gov.si/si/delovna_podrocja/evropska_kohezijska_politika/razvojno_nacrtovanje_in_programiranje_strateskih_in_izvedbenih_dokumentov/strategija_razvoja_slovenije_2014_2020_srs_2014_2020/

The **National Reform Programme (NRP)** is the Government's medium-term plan of priority measures and projects focused on achieving the objectives of the Europe 2020 strategy. This document is the core of the European Semester and, together with the Stability Programme, represents the foundation for the preparation of country-specific recommendations to Member States, which are drafted at the end of the Semester by the European Commission and approved by the European Council. One of the fundamental goals of the NRP concerning sustainable growth through effective transport and energy policy is indirectly related to biodiversity conservation. The NRP states that this will provide for secure high-quality energy supply in support of economic development, at the same time reducing greenhouse gas emissions and ensuring the protection and preservation of the natural environment. A horizontal priority which ensures a transition to an environmentally efficient low-carbon society is adequately represented in all priority measures of the NRP. In the reporting period, the 2012–2013 programme applied, which stated that the preservation of a high level of biodiversity and vital ecosystems would be ensured through the effective management of existing protected areas and the accelerated implementation of measures intended to maintain the Natura 2000 network. Forest management will be improved, the forest production potential used better, and the competitiveness of the industry enhanced.
http://www.mf.gov.si/fileadmin/mf.gov.si/pageuploads/sporocila/NRP_cistopis.pdf

Two of the four fundamental goals of Slovenia's **2007–2013 National Development Programme** are related to the conservation and sustainable use of biodiversity:

- The *cross-generational and sustainable development objective* is to enforce the sustainability principle as the fundamental quality measure in all areas of development.

- The *social development objective* is to improve the quality of living and the welfare of all citizens, measured by the indicators of human development, social risks and social cohesion.

With regard to investing, the National Development Programme attaches special importance to an increase in economic, environmental and social capital and to greater efficiency in the sense of economic competitiveness, quality of life and sustainable use of natural resources. The Programme puts special emphasis on rural areas, which play a key role in biodiversity conservation in Slovenia. Slovenia is one of the EU countries with an above-average share of rural areas. According to OECD criteria, 77% of the territory is classified as rural, and 41% of the population lives in rural areas. Urbanisation has a great impact on rural development and the vitality of rural areas, as the population in less urbanised areas is falling and the land is becoming overgrown due to poor accessibility and changes in the socio-economic conditions. Rural areas are characterised by emigration, a poor education structure of the population and agriculture and forestry having diminishing roles. In addition to forests, agriculture is important in shaping the landscape in rural areas. It is particularly important for the long-term provision of quality food. The National Development Programme states that in order to achieve sustainable rural development, a suitable level of nature protection and extent of agricultural land for food production have to be ensured (e.g. the protection of Natura 2000 sites), as well as appropriate use of space, taking into account the following objectives:

- to maintain and/or achieve the favourable conservation status of endangered species and habitat types;
- to maintain and/or achieve the favourable status (scope and quality) of species habitats and habitat types for which areas important for biodiversity conservation are determined (ecologically important areas, Natura 2000 sites, Ramsar sites);
- to ensure effective and coordinated nature conservation in protected areas with management plans and other measures;
- to improve the standard of any handling of wild animal species;
- to ensure the sustainable use of biodiversity components and sustainable activities affecting nature;

- to maintain and improve the production potential of agricultural land to ensure food security;
- to plan the management of agricultural land so that it facilitates the development of agricultural holdings, takes into account sustainable, multi-purpose and integrated rural development, and preserves the population density level;
- to protect agricultural land.

http://www.arhiv.svrez.gov.si/fileadmin/svez.gov.si/pageuploads/docs/Razvojni_dokumenti/CIST_NOV_NRP_2_18_4.pdf

The **Rural Development Programme** is a strategic document under which agri-environmental measures are implemented, whose objective is to establish a balance between agricultural production and environmental and nature protection. These are measures for reducing erosion and increasing the content of organic matter in the soil, measures for adapting to the requirements of farming in water protection areas, introducing more environmentally friendly types of farming, adapting to environmental standards and climate change, and preserving agricultural production in less favoured areas. The promotion of the concept of sustainable agriculture is aimed at ensuring the appropriate management and preservation of natural resources (water, air and soil quality) and biodiversity.

http://www.program-podezelja.si/sl/strateski-dokumenti/strateski-dokumenti/slovenija

The green component has been implemented since 2015 as an obligatory direct payment scheme under the Common Agricultural Policy. Three agricultural practices that have a favourable impact on climate and the environment are defined in detail in the *Decree on Direct Payment Schemes*. The aim of agricultural plant diversification is to prevent monocultures and improve soil quality. Ecological focus areas are introduced with the aim of preserving and improving biodiversity on farms. The preservation of environmentally sensitive permanent grasslands is important in terms of biodiversity conservation, habitat conservation and carbon sequestration. These agricultural practices are obligatory for all persons eligible for the basic payment. Which practice an agricultural holding must apply depends on the type and extent of its agricultural land.

In the **Operational Programme for the Implementation of the EU Cohesion Policy 2014–2020**[59], a special priority investment is dedicated to the protection and restoration of biodiversity and soil and the promotion of ecosystem services, including the Natura 2000 network and green infrastructure. The specific objectives of investment are to improve the status of species and habitat types of European importance and to give priority to those with poor conservation status and endemic species. 45 million EUR from the European Regional Development Fund and funds from national co-financing are intended for projects that will contribute to the achievement of the objectives of Natura 2000 sites, in accordance with the Natura 2000 Site Management Programme for 2015–2020[60].

The **National Environmental Protection Programme** is a fundamental strategic environmental document that is adopted by the National Assembly of the Republic of Slovenia. The Programme also includes the National Nature Protection Programme, which covers biodiversity conservation and the protection of natural assets. The National Nature Protection Programme is a document defining the scope of the public interest concerning biodiversity conservation and the protection of natural assets for a period of at least 10 years by determining the goals and aims for the following on the basis of an assessment of the nature conservation status:

- biodiversity conservation through a programme of measures for the protection of plant and animal species, and their habitats and ecosystems;
- protection of natural assets through a programme for the establishment of protected areas and the restoration of natural assets;
- the manner of fulfilling international obligations;
- education in the field of nature conservation;

- public awareness of the importance of nature conservation;
- The provision of financial resources for nature protection.

The report on the status of nature conservation is an integral part of the report on environmental status and includes, in particular, data on the following: the status of plant and animal species, their habitats, habitat types, ecologically important areas, special protection areas and ecosystems, and on the implementation of the programme for biodiversity conservation and the protection of natural assets. In order to ensure compliance with the principles of sustainable development, integrity, prevention and cooperation, procedures are determined for examining the impact of plans and activities on the environment in Slovenia and neighbouring countries or other EU Member States and Contracting Parties to the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context.

8.2. The integration of biodiversity in sectoral policies

On the basis of the National Environmental Protection Programme, the integration of environmental content in sectoral policies is ensured by the following:

- taking environmental objectives into account when drawing up sectoral policies with a view to developing effective sectoral programmes of measures that will facilitate the achievement of environmental objectives;
- regular monitoring of integration through relevant indicators on the basis of a common methodology for each sector, and reporting on the process of sectoral integration;
- including environmental criteria in financing programmes;
- establishing and implementing a system for environmental impact assessments;
- taking the programme objectives into account in national strategic documents and future financial perspectives.

8. 2.1. Forestry

Forest management is regulated by the *Forest Act* and the National Forest Programme, which provide for conditions for multi-purpose forest management in accordance with the protection of the environment and natural assets and for the monitoring of the status of forests as ecosystems. The provisions of the *Forest Act* facilitate the achievement of the following objectives set in the National Forest Development Programme:

- to ensure forest conservation and the sustainable development of forests in terms of their biodiversity and all ecological, social and production functions;
- to preserve the natural environment and ecological balance in the landscape;
- to maintain the level of population density and land cultivation and to improve the quality of life in rural areas.

Ownership rights on forests are exercised so that their ecological, social and production function is ensured. Forest owners must manage their forests in accordance with the forest management and silvicultural plan. They have a right to participate in the procedure for the adoption of forest management plans and the drawing-up of silvicultural plans. Forest management plans are drawn up as common plans for all forests regardless of their ownership, taking into account the specifics of particular areas. Forest management areas are definite territorial and ecosystem units determined in order to ensure the sustainability of forests and the planning, guidance and monitoring of forest development and the forest environment regardless of ownership. Forest management areas are divided into forest management units. On the basis of the silvicultural plan, trees are chosen for

potential felling and their maximum quantity is determined. Silvicultural plans are the implementing part of forest management plans, and determine the following for individual ecosystems or parts thereof:

- silvicultural objectives, guidelines and management measures;
- the scope, intensity and urgency of cultivation and protection activities;
- areas where the selection of individual trees for felling is not obligatory;
- the time range and spatial scope of felling;
- the methods of and conditions for wood production;
- guidelines and activities for simultaneous conservation and promotion of the ecological and social functions of forests.

http://www.arhiv.mkgp.gov.si/si/o_ministrstvu/direktorati/direktorat_za_gozdarstvo_lovstvo_in_ribistvo/stara_sektor_za_gozdarstvo/gospodarjenje_z_gozdovi_v_sloveniji/

8. 2.2. Hunting

In Slovenia, wild animal management ensures the ecological, social and economic functions of wild animals and their habitats by covering the planning, conservation, sustainable management and monitoring of wild animals. Under certain conditions, the state may transfer the responsibility for sustainable management to a qualified legal entity as a hunting right. With the expert planning entrusted to the Slovenian Forest Service, the state directs the development of populations of particular wild animal species and measures taken in their habitats within larger ecologically delineated areas, in cooperation with all other space users. The basis for planning is the monitoring of the status of wild animals and their life cycles through objective biological indicators in populations of individual species and in their habitats. The Slovenian Forest Service draws up proposals for annual hunting management plans for individual areas. Aims included in the plans are determined on the basis of ten-year forest management and hunting management plans for individual areas (area plans) for 2011–2020.

http://www.mkgp.gov.si/si/delovna_podrocja/lovstvo/
http://www.mkgp.gov.si/fileadmin/mkgp.gov.si/pageuploads/GGO/Povzetek_nacrtov_obmocij_2011-2020.pdf

8. 2.3. Fisheries

In the reporting period, Slovenia had in place two strategic documents on fisheries. The first is the National Strategic Plan for Fisheries Development (2007–2013), whose general objective is the balanced and sustainable development of the fisheries sector. In relation to biodiversity conservation, the strategic vision of the fisheries sector is to achieve the sustainable development of the fishing fleet in accordance with the available fishery resources and to develop competitive and environmentally friendly aquaculture. The second key programme document is the Operational Programme for the Development of Fisheries for 2007–2013, which provides for the implementation of measures on the basis of the analysis of the status of the fisheries sector. The Slovenian coast is 46 km long and marine fisheries is a very limited industry in Slovenia. There are only a few dozen professional fishermen whose main activity is small-scale coastal fishing. Pursuant to the *Nature Conservation Act*, Slovenia treats parts of the territorial sea as areas for the protection and augmentation of fishery resources and are therefore not intended for fishing or the harvesting of marine organisms. In addition to marine commercial fishing, sport and recreational fishing is carried out in the Slovenian sea. In freshwater fishing, only sport and recreational fishing is carried out in the Slovenian inland waters. In the reporting period, the elaboration of the National Programme for Fish Management in Inland Waters for 2010–2021 started, which, according to the *Freshwater Fisheries Act*, is the framework planning document on freshwater fisheries. Biodiversity conservation

components were included in the elaboration of the programme. http://www.arhiv.mkgp.gov.si/si/o_ministrstvu/direktorati/direktorat_za_gozdarstvo_lovstvo_in_ribistvo/

8. 2.4. Agriculture

The Slovenian Rural Development Programme is a joint programme document of Slovenia and the European Commission representing the basis for the absorption of funds from the European Agricultural Fund for Rural Development (EAFRD). It reflects the national priorities that Slovenia defined on the basis of analysis of the conditions and the situation of its agriculture, food industry and forestry and of the integration of these branches of the economy in the development of rural areas and in the country as a whole. The national priorities contribute to the effective achievement of common EU goals, as determined in EU legislation. Amongst its measures, the Programme lists the conservation of natural resources and the response and adjustment of agriculture to climate change. Specific programme measures include measures for reducing greenhouse gasses and ammonia emissions from agriculture and for maintaining or improving the biodiversity status in habitats related to the agricultural landscape.
http://www.mko.gov.si/si/delovna_podrocja/program_razvoja_podezelja/

8. 2.5. Water management

In the planning process, the impacts and burdens on water are examined, as well as the effects of measures already being implemented. On the basis thereof, any supplementing measures needed to achieve the good status of all waters in Slovenia are determined. In accordance with the EU Water Framework Directive, every Member State must draw up a water management plan. The drawing-up and adoption of the Water Management Plan in the Danube and Adriatic River Basin Districts for 2009–2015 in 2011 was the first enforcement and implementation of an integrated approach to the analysis of issues related to the achievement of environmental objectives and water use and management objectives. The key concept to be considered in all activities related to water management is the integrity concept. This has to be ensured while examining the chemical, ecological and quantitative objectives in order to ensure the protection of sensitive aquatic ecosystems and the good status of all waters.
http://www.mko.gov.si/si/delovna_podrocja/voda/nacrt_upravljanja_voda/

8. 2.6. Research

The fundamental strategic document on research in Slovenia is the National Research and Development Programme. It determines strategic development areas and national priorities for financing research and development activities and the content and scope of public services, the scope of research and development activities, and training for research at universities and other research and development institutions, so as to establish a link between the research and enterprise sectors. The National Research and Development Programme is implemented by carrying out basic research, applicable research, pre-competitive development activities, industrial research, technical feasibility studies, knowledge transfer, and other activities related to research and development policy. Among the key long-term aims of Slovenia regarding nature and the environment included in the National Programme of Reforms for the Implementation of the Lisbon Strategy are halting the loss of biodiversity and ensuring the sustainable use of its components, primarily by linking measures of key areas for biodiversity conservation. The programme acknowledges the importance of biodiversity as an economic and developmental advantage and opportunity.
http://www.arhiv.svrez.gov.si/fileadmin/svez.gov.si/pageuploads/docs/katal_inf_javn_znac/SI-NRP2008-slo.pdf

http://www.mgrt.gov.si/fileadmin/mgrt.gov.si/pageuploads/DPK/SI_NRP_2005_SLO_kon__na_verzija__28.10.2005.pdf

8. 2.7. Industry

The Slovenian Industrial Policy adopted by the Government in 2013 is the fundamental document in this area. It states that in the planning of industrial development, it has to be taken into account that natural resources are limited and that the circumstances at the national and other levels have changed, as human activities impose such a burden on the environment that we are approaching the environmental limits of the planet or have already exceeded them (climate change, biodiversity).
http://www.mgrt.gov.si/fileadmin/mgrt.gov.si/pageuploads/DPK/SIP/SIP_-_vladni_dokument.pdf

8. 2.8. Tourism

In the 2012–2016 Slovenian Tourism Development Strategy – Partnership for Sustainable Development[61], the vision of tourism development in Slovenia is based on sustainable development. Its principles include raising public awareness of the importance of biodiversity protection and nature conservation, and promoting the development of sustainable tourism in protected areas with the participation of all key sectors. Its well-preserved nature and natural features give Slovenia a key advantage and are a common thread running through the primary description and core areas of Slovenian tourism. The Strategy envisages investments in public infrastructure to enable visits to protected areas and recognises investment in the conservation of the favourable status of species and habitats as good for the sustainable development of tourism.
http://www.mgrt.gov.si/fileadmin/mgrt.gov.si/pageuploads/turizem/Turizem strategije_politike/Strategija_turizem_sprejeto_7.6.2012.pdf

8. 2.9. Energy

The fundamental programme document in the energy sector in Slovenia is the National Energy Programme (2010–2030). The activities envisioned in the Slovenian energy sector are directed towards the establishment of conditions for the transition to a low-carbon society. Providing conditions for the reliable, competitive and environmentally sustainable supply of energy and energy services to users is one of the most important development challenges. The National Action Plan for Renewable Energy Sources for 2010–2020 requires that by 2020 Slovenia achieve that at least 25% of the energy sources in its final gross energy consumption are renewable. In implementing the measures under the Action Plan, the biodiversity conservation goals are also taken into account. The comprehensive environmental impact assessment is carried out for the National Energy Programme. It has been established that the National Energy Programme Action Plan can have a significant impact on protected areas, natural assets, biodiversity and objectives with regard to ensuring the good status of waters.
http://www.energetika-portal.si/fileadmin/dokumenti/publikacije/NEP/NEP_2010_2030_povzetek.pdf
http://www.energetika-portal.si/fileadmin/dokumenti/publikacije/AN_OVE/AN_OVE_2010-2020_final.pdf

8. 2.10. Transport

The Operational Programme for the Development of Environmental and Transport Infrastructure for 2007–2013 is an implementing document that determines Slovenia's legal obligations and rights arising from the EU Cohesion Policy. The common goal of the programme is to ensure conditions for growth by providing for sustainable mobility, and for improvement of the quality of the environment and the construction of suitable infrastructure. The impact of the implementation of the Programme on the environment has been evaluated by comparing the foreseen impacts of activities on the

environmental goals of the Programme; special attention being devoted to the evaluation of cumulative effects. The segment on nature and biodiversity was included in the environmental goals of the Programme.
http://www.energetika-portal.si/fileadmin/dokumenti/publikacije/OP_ROPI/OP_ROPI_2007-2013.pdf

8. 2.11. Climate change

The Operational Programme for Reducing Greenhouse Gas Emissions by 2012 adopted pursuant to the National Environmental Protection Programme in relation to air and climate protection provides instruments for reducing greenhouse gas emissions. The Operational Programme was coordinated between sectors and defines key instruments aimed at achieving the Kyoto Protocol targets. By accession to the Kyoto Protocol, Slovenia undertook to reduce its greenhouse gas emission by 8% in the first commitment period of 2008–2012, with 1986 as the baseline year. In many areas, such as energy research and the introduction of measures to promote efficient energy use and an increase in the use of renewable energy sources, the reduction of greenhouse gas emissions is the key linking factor.
http://www.mko.gov.si/fileadmin/mko.gov.si/pageuploads/zakonodaja/varstvo_okolja/operativni_programi/op_toplogredni_plini2012_1.pdf

8.3. The integration of biodiversity in planning and spatial planning mechanisms

As laid down in the National Environmental Protection Programme, the elements of the nature protection programme must be taken into account in spatial planning and the use of natural resources. These tasks should be defined in more detail in the operational programmes adopted by the Government. The national nature protection programme and the national spatial plan must be coordinated, so that in planning the use of natural resources and in spatial planning the competent state or local body chooses the option that meets the criterion of the minimum possible impact on nature. Nature conservation is a part of the environmental protection system with common planning and programming, joint environmental assessment procedures, common arrangements for environmental monitoring, public information on environmental data and their availability, an environmental tax for the use of natural resources, non-governmental organisations acting in the public interest, and the regulation of natural resource concessions. The Environmental Protection Act stipulates that a comprehensive environmental impact assessment must be made for plans and activities that could have a significant impact on the environment, and for plans with transboundary impact, as well as a transboundary environmental impact assessment. The aim of such comprehensive assessment is to identify and assess environmental impacts and to review if the plan includes the requirements in accordance with environmental protection, nature conservation, the protection of human health, and the cultural heritage. An environmental report defines, describes and evaluates the effects of the plan's implementation on the environment and possible alternatives, taking into account all the objectives and geographical characteristics of the area to which the plan refers. The purpose of comprehensive impact assessment is to prevent or, at least, significantly reduce activities that can have a significant adverse impact on or consequences for the environment and protected areas, by which the principles of sustainable development, integration and prevention are realised. A comprehensive environmental impact assessment procedure is carried out for plans that:

- determine or plan an activity affecting the environment, for which an environmental impact assessment is required under environmental protection regulations;
- require an assessment of the acceptability of impacts on protected natural areas under nature conservation regulations;

- according to the Ministry's assessment, could have a significant impact on the environment if implemented.

Within the comprehensive environmental impact assessment procedure, the impacts of the plan are determined based on the environmental report. The procedure ensures the participation of all competent state bodies and organisations, as well public information and participation. Public participation is regulated by law and it is stipulated that the environmental report be available to the public for 30 days. Before starting to develop a plan, state authorities and local communities must inform the Ministry of the Environment and Spatial Planning thereof in the prescribed manner. Protected areas for which the impacts of plans have to be assessed are the areas protected under the regulations on nature conservation and Natura 2000 sites.

A comprehensive environmental impact assessment is also carried out for plans that do not include activities requiring an environmental impact assessment or do not cover areas protected under nature conservation regulations if the Ministry assesses that their implementation could have a significant impact on the environment. The aim of a comprehensive environmental impact assessment is to ensure a high level of environmental protection and to contribute to the integration of environmental aspects in the development and adoption of plans and programmes in order to promote sustainable development.

9. How fully has your national biodiversity strategy and action plan been implemented?

In the reporting period, several activities envisaged in the Strategy were carried out, but in a manner that was not sufficiently target-oriented, nor intensive. Consequently, the process of biodiversity loss was not halted in Slovenia, much like at the global level. The conservation status of many habitats and species has deteriorated in a relatively short time and, without more active and directed measures, biodiversity will continue to be lost.

The analysis of the implementation of the 2007–2013 Natura 2000 Site Management Programme shows that the volume of implemented measures was very modest, as these were not priority measures in particular sectors and insufficient funds were allocated for them.

9.1. The assessment of strategy implementation

The analysis of the achievement of the objectives and directions of the 2002 - 2012 Strategy shows that we have not succeeded in halting the process of biodiversity loss[62]. In the analysis, the achievement of the objectives and aims of various policies, regulations and programmes is described. The contribution of the implemented measures to biodiversity conservation according to individual objectives and directions is evaluated through indicators and given a rating from 1 to 4 ("not implemented" to "considerable contribution"). The measures under the National Environmental Protection Programme and Natura Operational Programme, through which the Strategy's objectives and directions were realised, are also analysed. The objectives and directions are divided into three groups, in accordance with which an analysis of their implementation is summarised below. In the fourth section the envisaged implementation structure of the Strategy is presented and the actual monitoring of strategy implementation commented upon.

9. 1.1. Directions of biodiversity conservation

Many **biodiversity conservation measures** have been implemented. However, they were not able to stop the deterioration as regards the habitat and species conservation status due to the increased pressures stemming from human activity. The main reason for the unfavourable species conservation status is habitat loss caused by unsustainable management and other human activities affecting the environment. Grassland habitats and wetlands in the lowland areas experienced the greatest pressures. The changes in agricultural policy and the pursuit of the best economic effects are reflected in the abandonment of less attractive agricultural land and the intensification of more productive agricultural land. In the areas where land consolidation has been carried out, landscape diversity is diminishing; landscape elements are disappearing, which leads to the degradation of the diversity of habitats and species. However, this issue was regulated by the amendment to the *Decree on special protection areas*, which introduced the environmental impact assessment requirement. Pressures due to the expansion of settled areas and the construction of industrial zones and roads have increased considerably. Data on the status and population trends of species are few, as monitoring has only been set up in recent years and is only carried out for a limited number of species. However, the collected data show that populations are declining, particularly those of the

species dependent on the traditional agricultural landscape. The status of forest habitat types is still mostly favourable, although the pressures on the forest environment are also increasing,
Progress has been made as regards setting-up the new **nature protection legislation system** (the umbrella act, the majority of implementing regulations, a new organisational structure with the Institute for Nature Conservation as the central expert organisation). However, although the system is complete, it still does not ensure effective nature protection. The regulations are not complied with, the inspection services are understaffed, and supervision in nature is not adequately established.

Some systemic solutions, such as **contractual protection and custodianship**, have barely been applied in practice.

The management of **protected areas** is improving in terms of the clear priority to conserve biodiversity, but too slowly. The process of establishing new protected areas is long and the public funds available for the implementation of specific nature protection activities in the existing protected areas are insufficient. The target share of protected areas in accordance with the National Environmental Protection Programme[63], which was 17% for 2008 and 22% for 2014, has not been achieved. At present, the share of protected areas in Slovenia is approximately 13%[64].

In 2004, Slovenia **established a network of Natura 2000 sites**, which, following a slight increase in 2013, covers 37%[65] of the country's territory. This is an important achievement in nature conservation, and has contributed to the greater inclusion of nature protection considerations in spatial planning and planning the use of natural resources. In 2007, the Government adopted the Natura 2000 Site Management Programme for 2007–2013[66]. The programme requires individual sectors to carry out management measures on Natura 2000 sites according to their responsibilities as regards spatial planning. An analysis of the implementation of these measures shows that many difficulties occurred in practice and the measures were only partly implemented[67]. In 2015, the Government approved a new Natura 2000 Site Management Programme for 2015–2020[68], which continues the approach entailing the partnership of various sectors (nature protection, agriculture, forestry, hunting, fisheries, water management, tourism, culture) in achieving the Natura 2000 objectives.

The **conservation of underground biodiversity** has been regulated by the *Cave Protection Act* since 2004. The protection of caves is well regulated at the systemic level. All caves have been declared natural assets. They are classified in three categories according to the access regime: open caves with free access, open caves with controlled access, and closed caves. The situation at the level of implementation is not very favourable. The proposed measures of direct protection, which would regulate the manner in which caves with significant nature protection value are managed, have not been implemented. The major threat to caves is pollution. It is estimated that in lowland karst areas 15–20% of caves are polluted.

Regarding the **conservation of genetic diversity,** a comprehensive legislative and institutional system in compliance with EU legislation has been set up in relation to contained use of GMOs, the deliberate release of GMOs into the environment, the placing of GMO products on the market, and the transboundary movement of GMOs.

9. 1.2. Activities for the sustainable use of biodiversity components and sustainable development

In the last decade there has definitely been an improvement in the inclusion of biodiversity in legislative mechanisms and policies in agriculture, forestry, hunting, fisheries, water management, industry, energy, transport, and tourism. However, the implementation of these measures has been less effective.

In **agriculture**, progress has been made in the last decade, such as the establishment of agri-environmental payments. Such payments facilitate the preservation of agricultural activities and land cultivation, the prevention of land or habitats becoming overgrown, and the promotion of more environmentally friendly agriculture, with restrictions that mitigate the adverse impacts of intensive agriculture. The participation of farmers in these schemes is voluntary. Between 2001 and 2007, the surface area of land included in these schemes increased, then the situation came to a standstill, as the payments for some measures are not sufficiently stimulating and do not cover all the costs of the resulting adapted production and income loss. The areas included in agri-environmental schemes that facilitate biodiversity conservation are often not large enough to ensure the conservation of habitats and species with the concurrent trends of agricultural intensification. Owing to the rules on the calculation of the surface area eligible for payments under agri-environmental schemes, solitary trees, forest margins, hedges and wind-breaking trees on agricultural land are under great pressure. Some impacts of agriculture have recently been reduced as a result of the implementation of cross-compliance; there has been an indirect positive impact on biodiversity conservation particularly in relation to the reduced input of fertilisers and phyto-pharmaceuticals.

The implementation of measures for the preservation of native breeds and varieties can be assessed as positive, as the situation has improved in the last decade. A public service dedicated to the preservation of Slovenian agricultural animal genetic resources has also been set up. The operation of the gene bank for plant resources is relatively well coordinated. Activities are underway to establish the relevant public service.

The implementation of measures in **forestry** can be assessed as good, which is reflected in the relatively favourable conservation status of the majority of forest habitats and species. However, the increasing pressure on some characteristic forest species (e.g. the hazel grouse, the western capercaillie, the Eurasian three-toed woodpecker, and the white-backed woodpecker) that are already considered endangered is a cause for concern. Forest reserves contribute to nature conservation. Activities directed at the establishment of eco-cells are under way. Pressures on forest environments in lowland areas have also increased, mostly due to the expansion of infrastructure and settled areas. In recent years, an increase in the interest in more intensive forest exploitation (an increase in annual felling, the opening of new forest sections, the clearing of felling remains for pellet production) has been noticed, and it can be expected that this will be reflected in the nature conservation status in the coming years.

In freshwater **fisheries,** gradual progress has been noticed, particularly in the past five years, as regards the inclusion of biodiversity conservation objectives at the level of regulations and sectoral policies. In the *Freshwater Fisheries Act* adopted in 2006 more attention is devoted to biodiversity protection, which is also reflected in the policies and implementing measures. The main problem in fisheries is the past introduction of non-native species, which in some water bodies have significantly changed the species composition and ratios. In many waters the preservation of fish populations is

made difficult due to inappropriate implementation of water protection measures and the absence of mitigating measures during the construction of facilities on watercourses, as well as the inappropriate use of water.

In the last decade, a new framework act has also been adopted regarding **hunting**. Planning in the field of hunting is an established practice and is based on data on the actual state of game species. The inclusion of nature protection directions and measures in plans concerning hunting has improved in recent years. Data show that the status of species defined as game is favourable. The number of specimens of certain game species (herbivorous cloven-hoofed species and wild boar) that have a significant impact on the ecosystem (as regards forest plant biomass, field crops) has declined as a result of increased taking of such from nature. However, the increase in the loss of animals, particularly due to traffic, is a cause for concern.

The analysis has shown that the integration of biodiversity conservation in **water management** is not yet satisfactory. It is relatively well regulated in principle and included in various regulations, but it still faces numerous difficulties when it comes to practice. The legislation is often disregarded, although solutions for sustainable arrangements can be found through cooperation among institutions. Water management works are often carried out in inappropriate periods or in a manner preventing habitat preservation. These activities have considerable adverse impacts on aquatic and riparian species and habitats. Gradual improvement can be expected in the next few years, as many activities related to the implementation of the Water Framework Directive are under way. In 2011, the Water Management Plan in the Danube and Adriatic River Basin Districts was adopted. It includes many measures that should indirectly contribute to biodiversity conservation. In the past decade, the pressures deriving from construction in flood areas have increased considerably, which also increases tendencies to change water regimes and regulate watercourses. The implementation of the EU Directive on the assessment and management of flood risks (the Floods Directive) will improve the situation in this area.

Industry and energy are included in the Strategy owing to their indirect impacts on biodiversity caused by pollution and environment degradation due to construction, and indirect impacts on climate change. The Strategy's directions related to energy have not been realised. Despite some measures for improving energy efficiency (the ratio between the total energy consumption and domestic production), energy consumption is still on the rise. In Slovenia, renewable energy sources (the most important being wood biomass and hydropower) significantly contribute to energy production and fulfil a large part of the electricity requirements. Although energy production from renewable sources increased by 10% in 2000–2008, gross electricity consumption increased by as much as 20% in the same period, so the set targets were not achieved. Inefficient energy use and the commitment to achieve the EU targets resulted in great pressure to exploit natural resources. The siting of energy facilities is often in conflict with nature conservation objectives.

Transport affects biodiversity through the degradation and fragmentation of habitats, an increase in the death of animals on migration routes, and indirectly also through pollution. An extensive highway network has been built in Slovenia in the last decade. Although this considerably improved the mobility of people and road safety, highways put significant pressure on the environment. These are greater on road sections where mitigating measures have not been (appropriately) carried out (green bridges, directing fences and underpasses, substitute habitats). The majority of the Strategy's directions relating to the reduction of pollution caused by transport have not been realised. The

redirection of transport from roads to railway has been unsuccessful, as in recent decades investments have mostly been in road infrastructure. Efforts to reduce road transport have also not been successful. In the past decade, the number of passengers using interurban bus service has decreased, while personal transport has increased significantly. Freight transport by road has increased considerably since Slovenia's accession to the EU, which escalated the environmental damage caused by transport. As the measures to reduce road transport have been ineffective, greenhouse gas emissions in transport are rising despite the technical improvements as regards vehicles and fuels.

The 2008 analysis of the effectiveness of the management of protected areas includes an analysis of the pressures on and threats to protected areas. **Tourism** was identified as an activity with significant impacts on nature in the majority of managed protected areas. At the level of tourism policy, Slovenia's well-preserved nature is often highlighted as a comparative advantage. However, this has not been reflected much in specific policies or activities. Measures for implementing the policy of sustainable and regional tourism development, which were set out in the Development Plan and Policies of Slovene Tourism 2007–2011, have not been implemented in the majority of cases. The new Tourism Strategy for 2012–2016 includes some references to the coordination of tourism with nature protection objectives. Among other, the Strategy states: "In the next five-year period, all key stakeholders will strive for tourism development in the natural environment in ways that will not increase the loss of habitats due to the presence of tourism in the landscape or cause disturbances and damage to protected species of animals and plants"[69].

9. 1.3. Activities supporting biodiversity conservation and sustainable use

This includes various horizontal activities supporting the implementation of measures for biodiversity conservation and sustainable use of its components.

In **spatial planning**, great pressures have been noted in the last decade to expand shopping centres and industrial zones, often into areas of great importance for biodiversity conservation. On the other hand, the enforcement of environmental impact assessments has improved the way nature protection objectives are taken into account in spatial planning. After 2004, comprehensive environmental impact assessment was established in Slovenia on the basis of the EU directive. On Natura 2000 sites and other protected areas, procedures for assessing the acceptability of plans and activities affecting nature were introduced.

In **regional development**, the role of protected areas as vehicles of sustainable development has strengthened in the last decade. However, many opportunities remain for cooperation with regional development actors. The managers of protected areas stimulate local and regional development in various ways, for example by introducing trademarks that promote crops produced by nature-friendly land cultivation and products and services with a positive impact on the achievement of the protection objectives of these areas, by projects linking development with nature protection (e.g. the project Landscape in Harmony in the Goričko Landscape Park[70] promoting cheese production with the aim of preserving butterflies on extensive meadows).

The situation as regards **monitoring** has improved but in recent years there have been difficulties in securing budgetary funds due to the crisis regarding public finances. Monitoring is carried out by various competent institutions for birds, bats, amphibians, beetles, butterflies, crustaceans and

molluscs. Monitoring is focused solely on the status of important European species. This includes, in particular, the species listed in Annexes II and IV of the Habitats Directive and Annex I of the Birds Directive. The monitoring of protected species that have no status under EU directives has not yet been established. Of the monitoring envisaged in the 2007–2013 Natura Operational Programme, the monitoring of non-forest habitat types and mosses and the monitoring of reptiles and dragonflies and damselflies had not been set up by 2011. With regard to nature protection data, an effective online nature protection atlas has been set up that allows the public to access data on areas important for nature protection. Access to data on the distribution of species in Slovenia is not satisfactory, as there is still no comprehensive publicly available database.

Slovenia has not yet developed a national programme for **biodiversity research,** nor has it formulated a systemic basis for such. The lack of directed action in research is also reflected in modest support for biodiversity research projects. The only document that defines research priorities more specifically is the 2007–2013 Natura Operational Programme and Natura 2000 Site Management Programme for 2015–2020, which lists priority studies of qualifying habitats and species of Natura 2000 sites.

Awareness-raising and communication are key support activities ensuring the understanding of and support for biodiversity conservation measures. The analysis has shown that the Strategy's directions in these areas have not been realised. Slovenia has no comprehensive national plan or orientations in this area. The Institute for Nature Conservation, the managers of protected areas and non-governmental organisations carry out many educational and communication activities, but these activities are dispersed and are mostly conducted on the project level, which does not guarantee their continuity. The results of the survey conducted in EU Member States in 2007 and 2010 by the Gallup Organisation also confirm that Slovenia needs a comprehensive system for raising awareness of nature protection. In the survey, more than half of citizens said that they had heard of biodiversity but almost one third thereof did not know what the term meant. More than half of the respondents believed that they were badly informed or not informed with regard to biodiversity loss. The share of such respondents increased between 2007 and 2010, which shows that communication activities did not reach the public.

The results of the Eurobarometer public opinion surveys show that Slovenians are familiar with the subjects of the *Birds Directive* and the *Habitats Directive*. Public awareness of the Natura 2000 network in Slovenia is high (and on the rise: 46% in 2007, 55% in 2010 and 62% in 2013, which is twice the European Union's average). On the question of their contribution to biodiversity conservation, 92% of respondents in Slovenia answered that they actively contribute to it, which is the highest share in the EU[71,72]. Public support for further expansion of protected areas in the EU is high in Slovenia[73]The general public in Slovenia does not see the Natura 2000 network as an obstacle to development[74].

The Biodiversity Clearing House Mechanism, which should serve as a central website for current information, was renovated in 2008 but has not been properly maintained since then and includes incomplete and out-dated information.

The situation in **education** with regard to biodiversity is also not satisfactory. Before the reform carried out in the 1990s, the two-year vocational programmes did not include the subject of biology, only natural science, which covered some ecology themes. In the reform, the subject of natural

science was replaced by natural and social sciences, but the combined subject has the total of hours of both of the previously individual subjects.

The majority of three-year vocational programmes also did not include the subject of biology before the reform. Schools had included the chosen themes of the biology and ecology syllabi in various subjects at their own discretion. The reform introduced the obligatory subject of natural science, comprising 132 hours, which also includes themes from biology and ecology. The situation in university education improved in the reporting period, as the number of nature protection programmes increased and they are available at all study cycles.

9. 1.4. The implementation structure for the achievement of the Strategy objectives

9. 1.4.1. THE ADOPTION OF THE ACTION PLAN

Upon the adoption of the Strategy in 2001, it was envisaged that general directions would be determined and an action plan for its implementation developed. The action plan was supposed to be adopted not later that one year after the adoption of the Strategy. However, when the Strategy was adopted, work on these tasks was stalled as the Ministry focused on the transposition of EU legislation and the many new tasks related thereto. The biodiversity conservation action plan has never been adopted and thus no specific measures for biodiversity conservation have been developed. In 2006, the implementing tasks for some directions were included in the National Environmental Protection Programme, therefore the implementation of these measures was also examined in the analysis. In 2007, the Government adopted the 2007–2013 Natura 2000 Site Management Programme. However, the Programme is focused solely on the maintenance of the favourable conservation status of qualifying species and habitat types on Natura 2000 sites. Nevertheless, this Operational Programme is extremely important as it covers a significant part of Slovenian biodiversity through habitats important for nature protection (wetlands, waters, grasslands, forests) and species, some of which are of key importance for other species.

9. 1.4.2. THE MONITORING OF SUCCESS IN ACHIEVING THE OBJECTIVES

A biodiversity working group should have been established within three months of the adoption of the Strategy to monitor the achievement of the objectives that was to function within the Sustainable Development Council. The working group, however, has not been established. The following responsibilities were envisaged for the working group:

- to monitor the fulfilment of strategy objectives;
- to regularly report on the fulfilment of the objectives to the Sustainable Development Council and the Government;
- to make proposals for amending the Strategy;
- to include the sustainable use of biodiversity components in relevant sectoral and inter-sectoral plans.

With regard to the National Environmental Protection Programme, the establishment of a special group to monitor the implementation of the programme was envisaged. The group, which should

have drawn up annual progress reports on the implementation of the programme, has not been established. In accordance with the *Environmental Protection Act*, the report on the implementation of the National Environmental Protection Programme is an integral part of the environmental report. The last environmental report, which was drawn up in 2009 and approved by the Government in 2010, included Annex 2 as the prescribed monitoring report form as to the implementation of the National Environmental Protection Programme, but the majority of fields concerning the evaluation were left blank.

The 2007–2013 Natura 2000 Operational Programme states that its implementation is monitored within the monitoring of nature conservation status, which is carried out in accordance with Article 108 of the *Nature Conservation Act*. This should be carried out on the basis of indicators of species and habitat types and indicators of measure implementation monitoring. An analysis of the implementation of the 2007–2013 Programme was conducted within the development of the new Natura 2000 Site Management Programme[75].

*9.2. Assessment of the implementation of the Natura 2000 Site Management Programme for 2007–2013*76

9. 2.1. Nature protection measures

The development and adoption of **management plans for protected areas** have been delayed due to the demanding content and the extent of the tasks arising from many sector responsibilities and the size of park areas, as well as the lack of human resources in public institutes and the Ministry.

The **establishment of new protected areas**: the national target regarding the share of protected areas has not been achieved (the current portion is approx. 13%, while the target share for 2014 was 22%), owing to limited human and financial resources. The procedures for establishing new protected areas that have already begun are being finalised as a priority. In order to achieve the protection and sustainable development objectives of protected areas, it is essential to integrate all stakeholders and policies at state and local levels that directly or indirectly benefit from a protection area, including the integration of public funds from different sectors (particularly tourism, regional development and agriculture).

The mechanism of **contractual protection or custodianship** entailing a group of measures related to underground caves and other measures did not yet function properly in the period from 2007 to 2013. Of the planned 60 specific measures of contractual protection or custodianship for species or habitat type conservation, only a small number have been implemented, mostly due to a lack of funds. Among measures for caves, in 33 cases of the planned custodianship or concession for cave management under the *Cave Protection Act*, restrictions on use were envisaged. Custodianships and concessions have not been formally granted due to the inadequately defined delineation between a custodianship and a concession and, indirectly in relation to concessions, also due to undefined property relationships between the current holders of the right to use caves and the state with regard to state-owned infrastructure in caves. Nevertheless, some of the custodianship tasks in the context of cave protection have been performed. In the next period, the instruments of custodianship and concession must be legally delineated in detail and property relationships on cave infrastructure between the current holders of the right to use caves and the state regulated.

The **sustainable development measures** focused on the direct benefits of Natura 2000 sites for the local population included a list of 23 investments and services of national importance related to park infrastructure for the development of the tourist offer in protected areas. The Programme determined 52 project proposals for co-financing from the European Regional Development Fund to finance projects under the responsibility of the Council of Regions. The total indicative allocation of resources within this fund in Section 51 - Promoting Biodiversity and Nature Protection (including Natura 2000) and Section 56 - Protecting and Developing Natural Heritage amounted to EUR 57.3 million. Only a small part of the investments and services of national importance have been realised from the planned financial resources. The main reason was that securing funds for these projects was not a high priority. The implementation of investments and services from project proposals, which were supposed to be financed from regional development programmes was only partly realised (by 2012, only 19 Natura 2000 projects of the target indicator of 100 projects). The main reasons were that municipalities had different priority orientations and that tenders had not clearly separated funds according to subject.

The inclusion of **research activities** envisaged in the Programme in the co-financing of research programmes and projects has only been realised to a minimal extent. The Programme listed the groups of research activities in the basic and applied sciences that are necessary to improve knowledge of the ecology of plant and animal species and habitat types. Upon the adoption of the Programme, the Government issued a decision that these activities should be included in the co-financing of research programmes and projects. In the future, the inclusion of relevant themes in regular research programmes of research institutions should be increased.

The **monitoring of species and habitat status** has been carried out to a smaller extent than planned. The Programme determines the essential extent of monitoring to determine the conservation status of species and habitats at the level of the entire state. The scope of monitoring had been increasing until 2010 and came close to the planned scope, but then it was reduced owing to the lack of funds. Stable financing will have to be ensured in the future for long-term monitoring of the status of target species and habitat types according to standard protocols.

9. 2.2. Agriculture

Although the agri-environmental payments scheme is voluntary, the Natura 2000 Site Management Programme defines it as a systemic instrument for the management of agricultural land within Natura 2000 sites. The analysis of the achievement of objectives shows that the implementation was not successful in the 2007–2013 period, as in 2012 the objectives were achieved in only 11% of the sites. The reasons lie mostly in the voluntary participation of farmers in agri-environmental payment schemes, an inappropriate agri-environmental payments scheme which allowed the entry of general (horizontal) measures also on Natura 2000 sites, inappropriate financial evaluation of so-called biodiversity measures of the agri-environmental payments scheme, inadequate promotion of the scheme, and inadequate education.

Other difficulties include the rapid disappearance of species-rich meadows on some Natura 2000 sites (e.g. Ljubljansko Barje, Goričko, Šentjernejsko Polje), which is mostly due to conversion into fields and intensive exploitation of meadows. An additional significant problem is the elimination of landscape elements (hedges, pools, solitary trees, etc.). The rules on the drawing of graphical

agricultural units of farm holdings stipulate that only agricultural land can be included and all other elements must be excluded from the graphical presentation (e.g. linear structures wider than 2 m, water bodies with a surface area of more than 25 m^2). Many farmers decide to eliminate these elements to avoid difficulties in field inspections. Another difficulty of Natura 2000 sites is that some land becomes overgrown, which is the result of complete or partial abandonment of agricultural use due to various economic and social reasons.

9. 2.3. Forestry

The drawing-up of nature protection guidelines for forest management plans for forest management units is in accordance with the Operational Programme. In 2007–2012, 74 guidelines for forest management plans for forest management units were drawn up on the basis of management zones created on 20 complex Natura 2000 sites. All together, 140 guidelines were drawn up. Nature protection orientations thus covered 57% of forests on Natura 2000 sites.
The implementation of protection measures under the programme and specific nature protection orientations have been evaluated on the basis of the analysis of data collected by the Slovenian Forest Service in its regular work. Twelve thematic groups have been formed, regarding which an analysis of complex Natura 2000 sites has been conducted. Thematic groups are intended for individual qualifying species and habitat types. The analysis also covers the financing of measures on Natura 2000 sites. In the 2007–2012 period, EUR 9,650 was spent to implement substitution measures and EUR 220,675 on bio-amelioration (the maintenance of shrubs, pastures and water sources and the planting of fruit-bearing species). EUR 32,428 was spent for specific measures, such as biotope preservation – felling, natural biotope development, leaving dead mass on site and setting up nesting boxes.

In the future, more attention should be devoted to the implementation level. Natura 2000 site management must be upgraded with active and payable measures to improve the specific requirements of certain qualifying species or habitat types.

9. 2.4. Water management and fisheries

In 2011, the first Water Management Plan for 2009–2015 (*Decree on the Water Management Plan in the Danube and Adriatic River Basin Districts*) and the Water Management Action Programme for 2011–2015, for which nature protection guidelines have been drawn up, were adopted on the basis of the *Water Framework Directive (2000/60/EC)*. The nature protection guidelines followed the water management content of the Operational Programme at a more detailed level. The plans on the basis of the *Marine Strategy Framework Directive (2008/56/EC)* and the *Floods Directive (2007/60/EC)* are in preparation. They have to be adopted, together with the action plans, by 2015.
The responsibilities for water management are dispersed and not coordinated in Slovenia. The most problematic aspect is the absence of a long-term water management plan and the undefined availability of surface waters for use, which makes the implementation of the protection measures of the Operational Programme difficult. Nevertheless, there are many synergies between the measures of the Water Management Action Programme and the Operational Programme. They will have to be even more effectively integrated in the development of the measures of the new Operational Programme and plans regarding waters.

In freshwater fisheries, the current fish-farming plans were adopted before the amendment of the first for the Natura 2000 Site Management Programme and were not adapted to the protection of Natura 2000 qualifying species and habitat types. Nevertheless, some fisheries plans include measures that include some parts of protection measures from the Programme and thus contribute to sustainable management.

With the adoption of the Freshwater Fisheries Act, a new planning system for freshwater fisheries was defined. The Act stipulates that a framework planning document must be drawn up, i.e. a programme for fish management in inland waters in Slovenia and a subordinate detailed fisheries management plan. Due to the delay in the adoption of the national Programme for Fish Management in Inland Waters in Slovenia, the detailed plans have not been adopted yet (fishing district plans and fish-farming plans), which will include objectives and measures determined in the Natura 2000 Site Management Programme.

9. 3. Reporting on the implementation of the Strategy

The Strategy did not envisage a special form of reporting at the national level. Since the biodiversity working group provided for in the Strategy has not been established, reports at the national level have not been made. At the international level, implementation reports follow the standard format under the Convention on Biological Diversity. The Contracting Parties must report to the Secretariat of the Convention every four years. In the period from 2001 to 2011, Slovenia submitted its third (2005) and fourth (2011) reports on the implementation of the Convention. In 2003, thematic reports on protected areas and mountain ecosystems were compiled.

9.3.1. The conclusions of the analysis of the achievement of the objectives of the 2001–2011 Biodiversity Conservation Strategy of Slovenia

On the basis of an in-depth analysis of the Strategy, it is concluded that numerous measures and activities have been carried out in the past decade that directly or indirectly contributed to biodiversity conservation. However, it has to be emphasised that almost one third of the outlined measures have not been implemented adequately in terms of their contribution to biodiversity conservation, approximately half of the measures made a good contribution, and only 15% of the measures contributed substantially to biodiversity conservation. The majority of the implemented measures have been measures to implement EU directives. In areas not regulated at the EU level, the number of measures has been much lower. Although the Strategy has never been implemented comprehensively and its action plan has not been adopted, many measures have contributed to the realisation of the directions and achievement of the objectives. However, at the same time, the human impact and pressures on biodiversity have increased considerably as a result of social and developmental changes. Consequently, the process of biodiversity loss was not halted in Slovenia, much like at the global level. The conservation status of many habitats and species has deteriorated in a relatively short period of time and without more active and directed measures biodiversity will continue to be lost. The development of a new Biodiversity Conservation Strategy is not only one of the internationally adopted obligations, but also a necessity, if we want to preserve nature for future generations and ensure their well-being by maintaining ecosystem services. In the ten-year period, a

new legislative framework and organisational framework for nature protection were established, and basic regulations on sustainable use were amended. The situation has also improved at the planning and sectoral policy levels. However, difficulties have occurred at the implementation level. Compliance with regulations is weak, and as the inspection services are understaffed and direct supervision in nature only partially established, the results are not satisfactory.

The implementation of the new Strategy will only be successful if political and public support and cooperation among sectors are ensured. In recent years, politics has generally not been favourably inclined towards nature conservation. Although Slovenia takes pride in its well-preserved nature and supports sustainable development in principle, there is not enough support for these causes at the national level. This is reflected in the modest financial resources allocated. Public support can only be built by the strengthened and more directed raising of awareness of the importance of biodiversity conservation due to nature itself and the quality of life of the present and future generations.

PART III: PROGRESS IN ACHIEVING THE AICHI TARGETS BY 2020 AND THE MILLENNIUM DEVELOPMENT GOALS BY 2015

10. What progress has been made by Slovenia towards the implementation of the 2020 global biodiversity targets?

In the reporting period, Slovenia made every effort to achieve the global biodiversity targets. Owing to the lack of financial and human resources, attention was focused on the fulfilment of obligations under the Natura 2000 network. Progress in achieving the global targets was too modest and will have to be improved.

Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

In the national legislation little attention is given to education and awareness-raising regarding biodiversity and the responsibilities for drawing up education programmes are unclear. The Institute for Nature Conservation has to participate but the main body responsible is not determined. The Institute for Nature Conservation raises public awareness of the importance of nature conservation by organising lectures, presentations and exhibitions, participating in fairs and similar events, round tables and similar meetings, putting up information boards, issuing publications and writing articles for the media[77]. The National Nature Protection Programme cites nature conservation education and raising public awareness of the importance of biodiversity among its goals and aims. However, the implementation of the Programme in practice has been inadequate. Nature protection in Slovenia still has no mission statement, code, development strategy or programme[78]. Biology as an independent subject was removed from many study programmes of vocational schools. The situation has worsened particularly in primary and vocational secondary schools, where the number of hours of biology has been reduced by 40%. In 2010, implementation of the nature protection higher education programme started. The University of Ljubljana offers Protection of the Natural Heritage and Ecology and Biodiversity programmes in second cycle studies. The Protection of the Natural Heritage programme continues in the third cycle. Important actors in awareness-raising are non-governmental organisations, such as the Foundation for Environmental Education in Europe in Slovenia, which contributes significantly to awareness-raising through the Eco-Schools project. The financing of such projects was reduced in the reporting period. Despite the lack of data, several activities concerning non-native species have been carried out in the last few years for various target groups[79]. The updated Biodiversity Conservation Strategy currently in preparation includes the following overall goal: "To improve knowledge, understanding and awareness of biodiversity and its importance at all levels of society", which will be supported by detailed national targets and specific measures for improving the situation by 2020.

Target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.

In Slovenia, biodiversity is included in basic national and various sectoral strategies, plans and programmes. The situation regarding biodiversity integration is presented in the answers to questions 5 and 8.

Target 3: By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio-economic conditions.

Progress has been made in relation to the agri-environmental payments scheme through the popularisation of agricultural production that is appropriate to consumer needs and protects human health, ensures the sustainable use of natural resources, and enables the negative impacts of agriculture on the environment to be reduced. Particularly important in this regard is the education of farmers and the promotion of measures and such products (e.g. informing consumers of the quality of organically produced food)[80]. The aim of agri-environmental schemes is to preserve natural resources, biodiversity, soil fertility and the traditional cultivated landscape and protected areas. The measures are directed towards reducing the adverse impacts of agriculture on the environment (e.g. field greening, organic farming, preserving mountain pastures and meadow orchards, the farming of native breeds and traditional varieties) and protecting protected areas (e.g. the preservation of grassland habitats). It is also expected that obligatory agricultural practices from the green component will result in positive results. Energy subsidies are another group of subsidies with an important impact on the environment. There is no common agreement at the EU level on the definition of subsidies in the energy sector. The term subsidy most frequently includes direct payments to an energy producer or consumer; however, subsidies can also include other less transparent forms of aid or support mechanisms, such as exemption from the payment of taxes and discounts, controlled prices, restrictions on trade, restrictions on entering the market, etc. Environmentally harmful subsidies are those that lower the price of environmentally harmful energy by changing the relative relations between energy prices to the benefit of the subsidized resource. The share of "environmentally friendly subsidies" intended for the exploitation of sustainable energy sources increased in the reporting period. In general, these subsidies do not always contribute to the improvement of the state of biodiversity but sometimes have negative impacts (e.g. fragmentation of watercourses due to hydropower plants, intensification in agriculture due to biogas production).

Target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

Sustainable development is the common denominator of all development priorities. It is a starting point of Slovenia's strategic and implementing documents (e.g. Slovenia's Development Strategy), while the environmental dimension is addressed in detail in the National Environmental Protection Programme. One of the priorities of the National Development Programme is the integration of environmental criteria into sectoral policies and consumption patterns. The National Reform Programme (2012–2013) also devotes attention to measures for the large-scale introduction of eco labels for products and services, and of environmental management systems in public and private organisations, and to education and raising public awareness of sustainable consumption and production. The above-mentioned aims represent a commitment to ensure development with

balanced economic, social and environmental aspects. Development reports show that the sustainable development principle has been gradually realised in Slovenia but there are still deficiencies and an imbalance in all three components (economic, social and environmental), high energy intensity, and poor integration of environmental, social and economic aspects of development. In general, the situation in Slovenia is the same as in other EU Member States, where the environmental impacts of consumption are the greatest in the food, building and transport sectors81. Public authorities play a major role in the introduction of the environmental orientations of the economy. Green public procurement was introduced in the reporting period, which can increase the demand for services and products exploiting resources in a more efficient manner. Although the changes seem slow, it can be expected that by 2020 the application of environmental product and innovation planning and more efficient production procedures will increase and dependence on raw materials will decrease in Slovenia. There is still much to be done with regard to awareness-raising, as consumers can achieve a change in the orientation of the business sector by choosing and buying certain products.

Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

The fragmentation and transformation of natural habitats continued in the reporting period in Slovenia. The situation is the worst for inland freshwater habitat types, of which only slightly more than 10% have a favourable status. Grassland habitat types follow, of which slightly fewer than 30% have a favourable status. Over 45% of bog and marsh habitat types have an inadequate status and approximately 15% have a bad status. Almost 60% of forest habitats also have an inadequate status. The new Natura 2000 Site Management Programme (2015–2020) adopted by the Government in April 2015 is designed so as to facilitate the achievement of this target if it is implemented properly. The first proposed overall national target of the updated Biodiversity Conservation Strategy reads as follows: To improve the conservation status of species and their habitats. This target will be supported by detailed national targets and measures for improving the situation by 2020.

Target 6: By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem-based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.

The 2002–2012 Biodiversity Conservation Strategy had two objectives related to fisheries: to manage freshwater-fish populations on the basis of an expert and transparent determination of fish population sizes, while taking into account ecological processes in aquatic ecosystems, the natural load-bearing capacity of the environment and nature-protection guidelines, and to ensure the sustainable use of biotic resources that are subject to marine fishing and harvesting and biodiversity conservation in marine and coastal habitat types. In the reporting period, the 2010–2021 Programme for Fish Management in Inland Waters in Slovenia was drawn up. The Programme takes into account the premise that the sustainable use of fish is closely related to the general social, economic and spatial development of Slovenia. It also emphasises that the culture of the attitude towards aquatic ecosystems and the professional qualifications of actors in the fisheries sector are key factors as to the comprehensive implementation of fish management and the sustainable use thereof. The releases of fish into watercourses for the purposes of sport and recreational fishing were not reduced in the reporting period. However, supervision of the origin of fish used in stocking was strengthened[82].

Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring the conservation of biodiversity.

In the national Biodiversity Conservation Strategy, agriculture, forestry and fisheries are defined as activities for the sustainable use of biodiversity components and sustainable development. Since 2015, the green component is an obligatory measure, while the specific objectives and measures for nature protection on agricultural land are set out in the 2007–2013 Natura 2000 Site Management Programme. In this Programme, agri-environmental schemes are recognised as a systemic instrument for managing these areas, but Slovenia lags behind in the achievement of the set objectives. The analysis of the implementation of the objectives of the Biodiversity Conservation Strategy shows that the areas where measures under agri-environmental schemes are carried out are too small to ensure effective habitat protection. At the policy and legislation levels, Slovenian forestry is favourably inclined towards nature protection. One of the main objectives of the National Forest Programme (Uradni list RS, No. 111/2007) is the sustainable development of forests as ecosystems within the meaning of their biodiversity and all their ecological, economic and social functions. Concern for nature conservation was well demonstrated in programmes at all levels of forest management planning in the reporting period. However, in practice there is a considerable divide between the declarative and implementing level of nature protection activities in forests. The updated Biodiversity Conservation Strategy will ensure compliance with the global Target 7. It states that by 2025 agriculture, forestry, water management and aquaculture will increase the inclusion of the protection of species and habitats of Slovenian and European importance in their programmes, plans and activities.

Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

According to environmental indicators managed by the Slovenian Environment Agency[83], the recycling of municipal waste has been increasing in Slovenia and reached nearly 40% in 2012. Municipal waste management is still a cause for concern, although the landfilling of waste has been declining and incineration has remained minimal. However, the quantity of hazardous waste has been increasing. The exploitation of natural resources produced or extracted in Slovenia is falling. In 2012, 42% less resources were used than in 2007 and 26% less than in 2000. The quantity of packaging waste produced has stabilised in recent years, currently amounting to approximately 100 kg per person per year. The recovery of packaging waste has been increasing and in 2011 stood at 70%. The recycling rate also continues to rise, and has exceeded 60% in recent years. The quantity of sludge from municipal wastewater treatment plants is increasing as expected. It is mostly disposed of by incineration. Ambient air pollution by sulphur dioxide in populated areas is no longer hazardous to human health. The critical annual concentration for vegetation protection has not been exceeded. The improved situation in the reporting period should be attributed to the use of better-quality fuels, desulphurisation devices used by thermal power plants, and the use of cleaner fuels in home heating systems. The most worrying aspects are the level of air pollution by ozone and particles, particularly in the heating season. In recent years, increasingly more wastewater has been treated by secondary and tertiary treatment and less only in primary treatment. The quantity of wastewater treated by secondary procedures has increased by approximately 250% over the last decade. Tertiary wastewater treatment was almost non-existent in Slovenia in 2002, while in 2013 as much as 43% of wastewater was treated by tertiary treatment. Through the implementation of EU directives, the impacts of agriculture on water resources have also been reduced owing to the prohibition of the application of fertilisers or phytopharmaceuticals on riparian land, although it is not always complied with in practice.

Target 9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

There is not enough information on the situation regarding invasive non-native species in Slovenia. From 2010 to 2012, a research project was carried out entitled "Neobiota Slovenije", which was a study of invasive non-native species in Slovenia and their impact on biodiversity conservation and the sustainable use of resources. Its aim was to collect the existing data on invasive non-native species in Slovenia and examine their impacts on biodiversity. The study will be the basis for strategy measures. Despite the lack of data, several activities raising awareness of non-native species have been carried out in the last few years for various target groups. Campaigns for the disposal of invasive species are also on the rise. They are mostly organised by non-governmental organisations, but in some cases also by the managers of protected areas. As an EU Member State, Slovenia is obliged to start implementing *Regulation (EU) No. 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species* in 2016. The European Commission has published as study, i.e. the *Framework for the identification of invasive alien species of EU concern*, which brings new scientific knowledge on invasive species and will probably be one of the basis for compiling a list of invasive non-native species. Due to the lack of human and financial resources, a comprehensive national system for managing invasive non-native species has not been set up yet. A comprehensive system for supervision, monitoring, research and administrative procedures which do not exist at present should be set up at the national level and inter-sectoral cooperation established and improved.

Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

Slovenia cannot directly affect the status of coral reefs. However, it contributes towards the achievement of this target indirectly by preserving ecosystems and by other activities contributing to the reduction of ocean acidification. According to the data collected by the Slovenian Environment Agency, the total emissions of substances causing acidification and eutrophication (SO_x, NO_x in NH_3) decreased by 74% in Slovenia in 1990–2012. The emissions of sulphur oxides were reduced the most, by as much as 95%. Nitrogen oxides emissions fell by 26%, and emissions of ammonia by 21%. In 2012, the emissions of sulphur oxides and ammonia were lower than the prescribed target values, which since 2010 may not be exceeded. However, nitrogen oxides emissions exceeded the target value in 2012. In 2011, Slovenia ranked 15th among EU Member States in emissions per person and only slightly exceeded the EU average.

Target 11: By 2020, at least 17 percent of terrestrial and inland water areas, and 10 percent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

Slovenia has yet not achieved the CBD target concerning the extent of marine protected areas. Various areas intended for biodiversity conservation cover a large part of the endangered coastal habitats and species, but the majority of these areas only have the status of a natural asset or Natura 2000 site. They are not protected areas, have no appointed managers and no targeted conservation measures have been adopted regarding such. The target for marine areas has also not been reached. Protected areas include 0.4% of the Slovenian sea. Considering the small extent of the national sea

and the great pressures of many activities (e.g. tourism, ports, urbanisation), it is not likely that this target will be achieved. The target share of protected areas in accordance with the National Environmental Protection Programme[84], which was 17% for 2008 and 22% for 2014, has not been reached. At present, the share of protected areas in Slovenia is approximately 13%[85].

Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

According to the available data, no known endangered species became extinct in Slovenia in the reporting period. Many measures aimed at improving the status of numerous species have been implemented under ecosystem protection programmes and by managing some umbrella species, such as large carnivores. Strategies and action plans for bear, wolf and lynx have been drawn up. Although the Government has not yet approved all of these programmes, many tasks are performed appropriately. With the application of new methods, knowledge on the movements and populations of bear, lynx and wolf has improved significantly.

Target 13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

The implementation of measures for the preservation of native breeds and varieties can be assessed as positive, as the situation has improved in the last decade. A public service for the preservation of Slovenian agricultural animal genetic resources has been set up, which ensures that direct and indirect measures for the protection of native and traditional breeds are implemented. The gene bank for plant resources is still functioning on the basis of programmes, but the operation of various institutions is relatively well coordinated. Activities are underway to set up a public service[86]. The proposed updated Biodiversity Conservation Strategy includes the aim to preserve Slovenian native and traditional breeds and varieties by expanding the breeding and use of native and traditional breeds of domestic animals in order to preserve genetic diversity in agriculture. Other measures concern the expansion of areas where native and traditional varieties are cultivated and the promotion of Slovenian native and traditional breeds and varieties.

Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

In Slovenia, the ecosystems providing key services to people are mostly protected or managed pursuant to sectoral legislation (e.g. water protection areas, protective forests, protected natural areas, Natura 2000 sites). Although many of these areas have not been declared primarily for the purposes of biodiversity conservation, they play an important role in the maintenance of vital ecosystems. Natura 2000 sites cover 37.16% of the territory of Slovenia. Their main objective is to preserve the biodiversity for future generations by preserving animal and plant species and habitats that are rare or already endangered in Europe. Human activities are not excluded from the Natura 2000 sites. However, it has to be ensured that they do not endanger nature but, as far as possible, support the conservation thereof. Protected forests and forest reserves play a special role in the provision of the ecosystem services of forests. These are forests protecting steep slopes from water erosion and breaking, forests on steep slopes or banks, forests exposed to strong winds, forests preventing excessive outflow of water in torrent areas, thus protecting the land from erosion and

landslides, forests protecting against wind, water, avalanches and landslides, and forests at the upper treeline[87]. As regards the water supply in Slovenia, pursuant to the *Waters Act*, the Government designates water protection areas with a view to protecting water bodies that are used, or intended to be used, for the public supply of drinking water against contamination or other types of pollution that might affect the wholesomeness of water or its quantity. In addition to these, also measures determining restricted agricultural use exist. More than 1000 water supply systems supply drinking water to more than 90% of the population. There are also many individual or small water supply systems, but they supply only a small share of the population. Small water supply systems are often not quite adequate, which is reflected in the poorer quality of water[88]. The needs of women, local communities and vulnerable groups (e.g. physically impaired persons) are increasingly taken into account in the planning and implementation of projects (e.g. projects under the EEA and Norwegian Financial Mechanisms).

Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 percent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

Slovenia made every effort to preserve vital ecosystems in the reporting period. The two significant processes, i.e. urbanisation and fields becoming overgrown, i.e. forest expansion, due to the abandonment of agricultural use, have continued. In 2012, Slovenia's environmental footprint was 5.2 gha/capita, which was above the European average. Compared with 1992, it increased by 3.5 gha/capita. Since 1999, Slovenia has been in environmental deficit. In 1999, the environmental deficit stood at 0.1 gha/capita, while by 2007 it had increased to 2.7 gha/capita. In the 1992–2012 period, the footprint of biological resources, the carbon footprint and the infrastructure footprint showed an upward trend. After 2010, the carbon footprint started to slowly decline, reaching 3.4 gha/capita. In 2012, greenhouse gas emissions were 2.8% lower compared with 2011. The only increase in greenhouse gas emissions was recorded in transport (1.3% higher compared with 2011). In all other sectors emissions were lower than in 2011. In 2012, the total quantity of greenhouse gas emissions in Slovenia reached 18,911 Gg of CO_2 equivalent, which is 7.1% below the base year value. Slovenia intends to achieve the Kyoto target by introducing sinks (amounting to 1,320 kilotonnes of CO_2 per year)[89.]

Target 16: By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.

Slovenia signed the Nagoya Protocol in 2011, but it has not ratified it yet. In order to implement the Nagoya Protocol, the EU adopted *Regulation (EU) No 511/2014 of the European Parliament and of the Council on compliance measures for users from the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization in the Union.* The Regulation regulates the fulfilment of the obligations of gene resource users in all EU Member States. Harmonisation at the EU level is only necessary for user compliance, while with regard to access to genetic resources, Member States have discretion to decide whether they will request prior informed consent and benefit-sharing for the genetic resources they provide. Access to genetic resources and gene banks has not yet been regulated. The Nature Conservation Act provides for the

regulation of these areas by an implementing act. Slovenia will most probably regulate access to genetic resources in the next years, on the basis of a relevant study and expert assessment.

Target 17: By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.

The updated national strategy and action plan are currently being drawn up. In 2014, expert groundwork was carried out and the strategy is to be adopted by the in 2016.

Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.

There are no indigenous communities in Slovenia. Local communities participate in the adoption and implementation of biodiversity measures. In principle, all natural persons and legal entities can participate. At the local level, these can be bodies responsible for a public service or that exercise public powers[90].

Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

Slovenia has not yet developed a national programme for biodiversity research, nor does it have systemic bases for such. The lack of directed action in research is also reflected in the modest support for biodiversity research projects. In addition to the University of Ljubljana, research is also conducted by the Institute for Biodiversity Studies of the Science and Research Centre of the University of Primorska. The Institute studies biodiversity at genetic, species and ecosystem levels. In addition to the territory of Slovenia, the Institute devotes a great deal of attention to biodiversity in south-eastern Europe. The central organisation issuing tenders for programmes and projects is the Slovenian Research Agency. Biodiversity is not classified separately, so the data on the number of projects concerning biodiversity are not readily available. Social and economic studies conducted in relation to biodiversity are still rare. Economic evaluations have been carried out for some time in forestry and agriculture, but the first studies in nature protection were conducted in 2010. The proposed updated Biodiversity Conservation Strategy includes detailed national targets related to knowledge and research on biodiversity ("By 2025, permanent financial resources will be provided for research and programmes and projects supporting the conservation and restoration of biodiversity and an interdisciplinary national programme for biodiversity research and monitoring will be developed").

Target 20: By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent on assessments of resource needs that are to be developed and reported by the Parties.

Owing to the economic and financial crisis, in the reporting period Slovenia was faced with the challenge of including biodiversity conservation in national priorities and achieving more targets than previously, but with reduced resources. Compared with other sectors with which it competes for

resources (e.g. renewable energy sources, agriculture, health, waste and wastewater management), biodiversity conservation is assigned relatively little importance. Considering the need to consolidate public finances, Slovenia was not able to make any financial commitments in the reporting period that it would be unable to fulfil. In addition, it had to comply with the principle of budgetary integrity. Slovenia is aware of the expectations of developing countries regarding resources for the implementation of the Convention's Strategic Plan adopted at the 11th meeting of the Conference of the Parties. Many countries and the EU have encountered difficulties in achieving these targets owing to similar circumstances. In the reporting period, Slovenia joined the efforts, particularly at the EU level, to achieve the targets of the Convention's Strategic Plan through innovative financing mechanisms.

11. What has been the contribution of actions to implement the Convention towards the achievement of the relevant Millennium Development Goals in Slovenia?

In the reporting period, Slovenia actively contributed to the achievement of the Millennium Development Goals by 2015 (goals 1, 7 and 8). By offering technical and human capacities and participating in exchanges and training, Slovenia takes part in many projects and programmes in developing countries. In addition to the Government, non-governmental organisations have also been very active in this field. Slovenia's contribution has mostly been focused on development assistance with regard to environmental protection in Western Balkan countries. Owing to the unfavourable public finance situation, direct official development aid was reduced in the reporting period.

In the reporting period, Slovenia actively contributed to the achievement of the Millennium Development Goals by 2015. Owing to the unfavourable public finance situation, direct official development aid to developing countries representing Slovenia's contribution to the achievement of the Millennium Development Goals, was reduced. Slovenia's contribution was mostly focused on development aid with regard to environmental protection in Western Balkan countries, and to a smaller extent in other world regions. In addition to direct development aid, Slovenia takes part in many projects and programmes in developing countries by offering technical and human capacities and examples of good practice, and by participating in exchanges and training programmes. Slovenia has a Council for Sustainable Development, i.e. an advisory body of the Government operating within the Government Office for Development. The Council is intended to achieve dialogue with civil society on all core issues of development. The Government Office for Development manages the project "Scenarios of Slovenia's Development until 2035: Trends and Opportunities in the Time of Climate Change". The purpose of the project is to seek answers to the question of whether and how Slovenia can become a society of prosperity in light of the challenges and opportunities arising from climate change. On the basis if these answers, new foundations for overall strategic aims and documents until 2035 will be developed.

In the reporting period, Slovenia directly and indirectly contributed to the implementation of the following Millennium Development Goals in particular:

Goal 1: Eradicate extreme poverty and hunger;
Goal 7: Ensure environmental sustainability; and
Goal 8: Global partnership for development.

11.1. Slovenia's contribution to the achievement of Millennium Goal 7

In 2011–2013, Slovenia contributed more than four million euros (exact amount: EUR 4,144,775) of direct development aid to environmental protection. These projects also contribute to the achievement of other Millennium Goals, as improvement of the state of the environment improves the quality of life in general and is thus related to the achievement of other goals, particularly a reduction in the loss of natural resources and the eradication of poverty. Slovenia contributes official development aid in the form of financial support to various programmes and projects in developing countries. The Development Cooperation and Humanitarian Assistance Division at the Ministry of Foreign Affaires maintains a database on development aid and ensures the transparency thereof.

There has been a focus on environmental projects that have an impact on biodiversity. The implementation of these programmes and projects are considered to be Slovenia's contribution to the fulfilment of global goals as regards achieving the Millennium Development Milestones by 2015. The implementation of the Convention in Slovenia as a contribution to the achievement of the Millennium Development Goals by 2015 is described in the answers to questions 7–10.

The official development aid of Slovenia to developing countries in the field of the environment is presented in Table 4. During the financial and economic crisis, official development aid has been reduced significantly owing to the considerable reduction of Slovenia's contribution to the Global Environment Facility. The Global Environment Facility contribution intended for the conservation and improvement of the state of biodiversity is estimated at 40% of the contributed amount.

Table 4: **Official development aid of Slovenia for biodiversity in the 2006–2012 period**

	2006	2007	2008	2009	2010	2011	2012
IUCN	9430	12575		12949		9482	10358
CITES	2894	2894	2894	3590	3590	3590	4085
GEF (40%)	94902	405062	384197	489885	490806	274862	244204
Total	107226	420531	387091	506424	494396	287934	258647

Table 5: Slovenia's contribution to the achievement of the Millennium Development Goals in developing countries (official development aid) in the period from 2010 to 2013

Year	Activity	Beneficiary country	Implementer	Funds used	Development goal
2010	Prenos dobrih praks / Transfer of best practices	Bosnia-Herzegovina	UNIDO	45,200.00	7.8
2010	Članarina / Membership fee		UNEP	37,113.00	1,7,8
2010	Članarina / Membership fee	Developing countries, unspecified	CITES	3,766.70	1,7,8
2010	Članarina / Membership fee		Montreal Protocol	117,327.48	7.8
2010	Članarina / Membership fee		UNCCD	7,130.00	7.8
2010	Prostovoljni prispevek / Voluntary contribution		GEF	1,197,500.00	1,7,8
2011	Prostovoljni prispevek / Voluntary contribution	Developing countries, unspecified	UNEP	37,113.00	7.8
2011	Članarina / Membership fee		UNEP	60,278.97	1,7,8
2011	Članarina / Membership fee	Developing countries,	CITES	3,960.19	1,7,8

		unspecified			
2011	Članarina / Membership fee	Developing countries, unspecified	Montreal Protocol	3,082.64	7.8
2011	Članarina / Membership fee		Montreal Protocol	108,922.86	7.8
2011	Članarina / Membership fee		UNCCD	14,513.00	1,7,8
2011	Članarina / Membership fee	Developing countries, unspecified	IUCN	11,701.91	1,7,8
2011	Trajnostni razvoj kulture sobivanja in varovanja okolja v krajih Niš, Aleksinac in Leskovac	Serbia	Slovenska Karitas / Caritas Slovenia	30,000.00	7.8
2011	Študiji izvedljivosti v mestu Berane / Feasibility Study of Mechanical-biological and Thermal Waste Treatment in the Municipality of Berane and Feasibility Study of Municipal Heating Network in Municipality of Berane	Montenegro	CMSR / Centre for International Cooperation and Development	100,000.00	7
2011	Prostovoljni prispevek / Voluntary contribution		GEF	648,000.00	1,7,8
2011	Mislim, ločujem, (pre)delujem in zemljo rešujem, Gračanica (BiH)	Bosnia-Herzegovina	Slovenska filantropija / Slovene Philanthropy	29,614.06	7
2012	Trajnostni razvoj kulture sobivanja in varovanja okolja v krajih Niš, Aleksinac in Leskovac	Serbia	Slovenska Karitas / Caritas Slovenia	40,000.00	7.8
2012	Mislim, ločujem, (pre)delujem in zemljo rešujem, Gračanica (BiH)	Bosnia-Herzegovina	Slovenska filantropija / Slovene Philanthropy	40,000.00	7
2012	Učinkovito ravnanje z viri, uvajanje čiste proizvodnje in spodbujanje "zelene industrije" v državah vzhodne in osrednje Evrope / Resource Efficient and Cleaner Production Network to foster Green Industry Cooperation in Eastern and Central Europe	Europe, regional	UNIDO	90,000.00	1,7,8
2012	Nacionalni program čiste proizvodnje (NPČP) - Bosna in Hercegovina / National Cleaner Production Programme (NCPP) - Bosnia and Herzegovina	Bosnia-Herzegovina	UNIDO	50,000.00	7.8
2012	Nacionalni program čiste proizvodnje (NPČP) – Črna gora / National Cleaner Production Programme (NCPP) -	Montenegro	UNIDO	40,000.00	7.8

	Montenegro				
2012	Štiri-letni regionalni program sonaravne čiste proizvodnje za države regije Vzhodnega partnerstva / Four-year regional Sustainable Consumption and Production (SCP) Programme for the countries of the Eastern Partnership Region	Developing countries, unspecified	UNIDO	60,000.00	7.8
2012	Članarina / Membership fee	Developing countries, unspecified	Montreal Protocol	3,272.81	7.8
2012	Članarina / Membership fee		UNFCCC	8,852.93	1,7,8
2012	Članarina / Membership fee	Developing countries, unspecified	UNFCCC	2,885.91	1,7,8
2012	Ekoremediacije kot strategija razvoja Črne gore / Ecoremediation as a Development Strategy of Montenegro	Montenegro	CMSR / Centre for International Cooperation and Development	126,000.00	7
2012	Prostovoljni prispevek / Voluntary contribution		GEF	600,000.00	1,7,8
2012	Članarina / Membership fee		Montreal Protocol	126,193.57	7.8
2012	Prostovoljni prispevek / Voluntary contribution	Developing countries, unspecified	Montreal Protocol	461.00	7.8
2012	Prostovoljni prispevek / Voluntary contribution	Developing countries, unspecified	UNEP	37,113.00	7.8
2012	Članarina / Membership fee	Developing countries, unspecified	CITES	4,204.49	1,7,8
2012	Vzpostavitev modela sodelovanja in povezovanja občin za pripravo skupnih projektov na področju komunalne infrastrukture	Serbia	Regionalna razvojna agencija Koroška	14,203.20	7
2012	Članarina / Membership fee		UNEP	9,461.04	1,7,8
2013	Zaščita okolja in razvoj Unsko-Sanjskega kantona z uporabo ekoremediacij	Bosnia-Herzegovina	CMSR / Centre for International Cooperation and Development	120,000.00	7
2013	Trajnostna raba vodnih virov in zagotavljanje konkurenčnosti lokalnega območja	Bosnia-Herzegovina	Kmetijsko gozdarska zbornica Slovenije, Kmetijski zavod Maribor / Chamber of	19,453.69	7

			Agriculture and Forestry of Slovenia		
2013	Trajnostni razvoj kulture sobivanja in varovanja okolja v krajih Niš, Aleksinac in Leskovac	Serbia	Slovenska Karitas / Caritas Slovenia	30,000.00	7.8
2013	Mislim, ločujem, (pre)delujem in zemljo rešujem, Gračanica (BiH)	Bosnia-Herzegovina	Slovenska filantropija / Slovene Philanthropy	30,000.00	7
2013	Krovni projekt bilateralne tehnične pomoči Črni gori pri pogajanjih o pristopu k EU	Montenegro	Public sector institutions	17,249.30	7.8
2013	Učinkovito ravnanje z viri, uvajanje čiste proizvodnje in spodbujanje "zelene industrije" v državah vzhodne in osrednje Evrope / Resource Efficient and Cleaner Production Network to foster Green Industry Cooperation in Eastern and Central Europe	Europe, regional	UNIDO	60,000.00	7.8
2013	Nacionalni program čiste proizvodnje (NPČP) - Bosna in Hercegovina / National Cleaner Production Programme (NCPP) - Bosnia and Herzegovina	Bosnia-Herzegovina	UNIDO	100,000.00	7
2013	Štiri-letni regionalni program sonaravne čiste proizvodnje za države regije Vzhodnega partnerstva / Four-year regional Sustainable Consumption and Production (SCP) Programme for the countries of the Eastern Partnership Region	Developing countries, unspecified	UNIDO	60,000.00	7.8
Total	**4,144,775**				

11.2. The activities of non-governmental organisations

There are many non-governmental organisations in Slovenia involved in biodiversity conservation that contributed significantly to the achievement of the objectives of the 2002–2012 National Biodiversity Conservation Strategy. Some of them actively participated in the preparation of the expert groundwork for the updated Strategy (NBSAP). The Centre for Information Service, Co-operation and Development of NGOs is a national non-governmental network of more than 800 associations and individual small and larger NGOs from all fields: http://www.cnvos.si/. The following organisations participated as partners in connection with the International Day for Biological Diversity 2010:

- Botanično društvo Slovenije (Botanical Society of Slovenia): http://bds.biologija.org/
- Center za kartografijo favne in flore (Centre for Cartography of Fauna and Flora): http://www.ckff.si/?lang=en&pid=1&rid=0

- CIPRA: http://www.cipra.org/en?set_language=en
- DONDES **(**Slovenian Association for Conservation of Natural Heritage)**:** http://www.naravnadediscina.org/
- DPPVN: http://www.dppvn.eu/o-drustvu/
- Društvo Dinaricum: http://dinaricum.si/en/
- Društvo Drobnovratnik: http://drobnovratnik.si/
- Društvo študentov biologije: http://dsb.biologija.org/
- Društvo za opazovanje in preučevanje ptic (DOPPS-Birdlife Slovenia): http://ptice.si/en/
- Inštitut za trajnostni razvoj (Institute for Sustainable Development): http://www.itr.si/
- Lovska zveza Slovenije: http://www.lovska-zveza.si/
- Lutra: http://lutra.si/en/
- Mikološka zveza Slovenije: http://www.gobe-zveza.si/
- Naravovarstvena zveza Smrekovec: http://www.smrekovec.net/?lang=en
- Planinska zveza Slovenije - Komisija za varovanje gorske narave (Alpine Association of Slovenia): http://kvgn.pzs.si/
- Prirodoslovno društvo Slovenije: http://www.proteus.si/
- Ribiška zveza Slovenije: http://ribiska-zveza.si/
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In addition to the Government, there are many non-governmental organisations engaged in promoting and ensuring environmental sustainability. The more prominent ones are Umanotera, Focus, Društvo planet Zemlja, and Slovensko društvo ZN za trajnostni razvoj. NGOs contribute to the achievement of objectives by carrying out many projects in Slovenia and abroad. Their activities are listed on the website http://www.milenijski-cilji.org/razvojni-cilji.html

11. 2.1. The United Nations Association of Slovenia

The United Nations Association of Slovenia spreads the ideas and goals of the UN in Slovenia. Its main task is to gather and provide information on the role and activities of the UN. Since 2009, the Association, with the support of the UN, has been implementing the Millennium Campaign, through which it informs the Slovenian public of the Millennium Development Goals. In 2008, it started to coordinate the "Stand Up and Act" campaign in Slovenia, which is a global call to support efforts to achieve Millennium Goal 1. For more information, see: http://www.unaslovenia.org/ and http://www.milenijski-cilji.si/.

11.2. 2. UNICEF Slovenia

UNICEF Slovenia is one of the 36 National UNICEF Committees operating in economically developed countries. The partnership between UNICEF and UNICEF Slovenia is based on a pledge, the agreement to act for the benefit of children in developing countries and to implement programmes of advocacy and education for the development in Slovenia. UNICEF Slovenia collects funds for UNCIEF's long-term development programmes and urgent aid programmes for children in developing countries, develops educational programmes for development in Slovenia, and monitors the status of children and promotes and advocates the exercise of children's rights.
The website of UNICEF Slovenia: http://www.unicef.si/projekti-v-sloveniji/zagovornistvo/razvojni-cilji-tisocletja

11.2. 3. Slovene Philanthropy

In addition to promoting volunteerism as a positive opportunity, the association directs individuals towards desired forms of voluntary work, trains volunteers, and assists organisations in the development of volunteer work. With regard to the Millennium Development Goals, Slovene Philanthropy holds the view that Slovenia is capable of and must assume its share of the responsibility for reducing the disparity between the developed and undeveloped world and supports more balanced global development.
For more information, see: http://www.filantropija.org/

11.2. 4. Humanitas

HUMANITAS, Society for Human Rights and Supportive Action, supports less privileged groups in Slovenia and around the world. Its activities include a sponsorship programme for children in Africa and Slovenia, and the promotion of fair trade and responsible tourism. It advocates the recognition of the right to water as a fundamental human right. For more information, see: http://www.humanitas.si/

11.2. 5. Voluntariat (SCI Slovenia)

Voluntariat – Institute for International Voluntary Work, is the Slovenian branch of Service Civil International (SCI). Together with HUMANITAS, Voluntariat participates in the European project A.W.A.R.E, which is focused on the achievement of Millennium Goal 2 – achieving universal primary education. For more information, see: http://www.zavod-voluntariat.si/

Annex 1

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