

**FIFTH NATIONAL REPORT TO THE UNITED NATIONS
CONVENTION ON BIOLOGICAL DIVERSITY:**

CYPRUS



**MINISTRY OF AGRICULTURE, NATURAL RESOURCES AND
ENVIRONMENT**

DEPARTMENT OF ENVIRONMENT

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Table of Contents

EXECUTIVE SUMMARY 3

PART I: AN UPDATE ON BIODIVERSITY STATUS, TRENDS, AND THREATS AND IMPLICATIONS FOR HUMAN WELL BEING 6

 Q1: Why is biodiversity important for your country? 6

 Q2: What major changes have taken place in the status and trends of biodiversity in your country? 8

 Q3: What are the main threats to biodiversity? 8

 Q4: What are the impacts of the changes in biodiversity for ecosystem services and the socio-economic and cultural implications of these impacts? 9

PART II: THE NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN, ITS IMPLEMENTATION, AND THE MAINSTREAMING OF BIODIVERSITY 11

 Q5: What are the biodiversity targets set by your country? 11

 Q6: How has your national biodiversity strategy and action plan been updated to incorporate these targets and to serve as an effective instrument to mainstream biodiversity? 12

 Q7: What actions has your country taken to implement the Convention since the fourth report and what have been the outcomes of these actions? 13

 Q8: How effectively has biodiversity been mainstreamed into relevant sectoral and cross-sectoral strategies, plans and programmes? 14

 Q9. How fully has your national biodiversity strategy and action plan been implemented? 15

Part III: Progress towards the 2020 Aichi Biodiversity Targets and contributions to the relevant 2015 Targets of the Millennium Development Goals 16

 Q10: What progress has been made by your country towards the implementation of the Strategic Plan for Biodiversity 2011-2020 and its Aichi Biodiversity Targets? 16

 Q11: What has been the contribution of actions to implement the Convention towards the achievement of the relevant 2015 targets of the Millennium Development Goals in your country? 22

 Q12: What lessons have been learned from the implementation of the Convention in your country? 23

EXECUTIVE SUMMARY

Introduction

Cyprus is the third largest island in the Mediterranean, situated at its north-eastern corner, being at the crossroads and communication routes of Europe, Middle East and Asia. The island was largely influenced by its geographic location, climatic conditions and human activities. Its position at the crossroads of three continents, the geographic position, and its isolation over the centuries from the mainland and its climatic conditions have all led to the creation of a great biological diversity and a significant number of native and endemic species. Being an island, Cyprus has a strong evolution of endemic element, whereas surrounded by big continents, it incorporates elements of the neighbouring land masses. About 8,2% of the indigenous plants of the island – 144 different taxa (species and subspecies) of flora – are endemic to Cyprus. The fauna of Cyprus includes 36 species of mammals, 26 species of amphibians and reptiles, 397 species of birds and a great variety of insects, while the coastal waters of the land give shelter to 197 fish species and various species of crabs, sponges and echinodermata. The largest wild animal on the island is the Cyprus moufflon (*Ovis gmelimi ophion*) an endemic subspecies, a rare type of wild sheep that can only be found in Cyprus. The island's sea biodiversity two marine turtles, the Green turtle (*Chelona mydas*) and the Loggerhead turtle (*Caretta caretta*) and the seal (*Monachus monachus*) that breed regularly on the island and are strictly protected include and turtles.

National Biodiversity Strategy

Cyprus has formulated the National Biodiversity Strategy (NBS) during 2013, as a reference document in order to fulfill the commitments accepted with the ratification of the Convention on Biological Diversity.

NBS aims to fulfill the three objectives of biodiversity convention, therefore focuses on conservation targets, sustainable use of natural resources, and the access to benefit sharing, to merge and integrate actions within sectoral policies. Biodiversity is a very significant and important value and the implementation of the vision of EU OF the Strategy itself. Cyprus NBS has been formulated according to the UN and EU biodiversity strategic targets 2011-2020 as well as the guidelines from COP X.

Cyprus National Biodiversity Strategy was formulated in accordance to the objectives of the Convention in order to achieve strategic targets. In order to achieve targets NBS identified in working areas according to Biodiversities components.

Main threats and pressures to biodiversity and ecosystems

In analyzing outcome of the 2nd Report for Habitat Directive (2007-2012), anthropogenic threats are the more significant source of the deterioration, destruction and loss for ecosystems (habitats and species).

Impacts are mainly generated by ecosystem changes due to humane activities (land use change, pollution of surface runoff, habitat fragmentation, use of biocides hormones and chemical products), together with natural system modification,

urbanization, forestry silviculture, agriculture, abandonment of agriculture activities, leading to reduction of natural and semi-natural habitats and to species losses.

For terrestrial species, habitats loss and fragmentation, modification of habitats, human intrusions and disturbances rank first among threats. For marine species, fisheries rank and pollution rank first among threats, followed by, anthropogenic disturbance and change of ecosystems.

Introduction of invasive alien species should also be considered, being responsible for habitat deterioration and local extinction, and being a potential major threat in a near future.

The Cyprus Fifth National Report to the Convention on Biological Diversity (CBD) has been prepared by the Environment Department. The report follows the structure proposed in the guidance issued by the CBD secretariat. The report illustrated mainly on the following sources of information:

Policy statements and written submissions

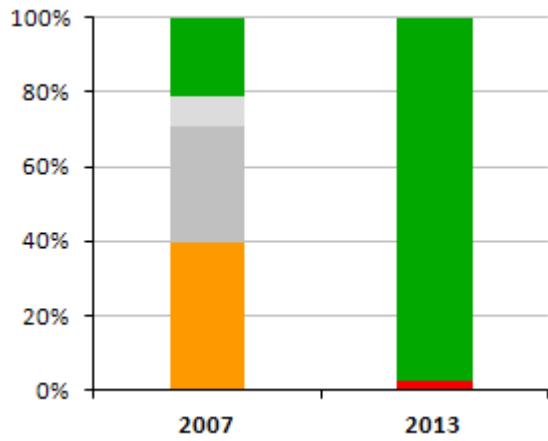
International, European and national policies, strategies and legislative measures are important for and underpin nature conservation in Cyprus. In recent years, the provisions of the EU Habitats and Birds Directives have played a significant role in nature conservation and overall to biodiversity protection. The Water Framework and recently the Marine Strategy Directives also help frame Cyprus nature conservation efforts.

In the future, new EU directives and legislation concerning profit-sharing (Access to Benefit Sharing) in connection with the exploitation of genetic resources and concerning invasive alien species will also be important legislative tools for biodiversity.

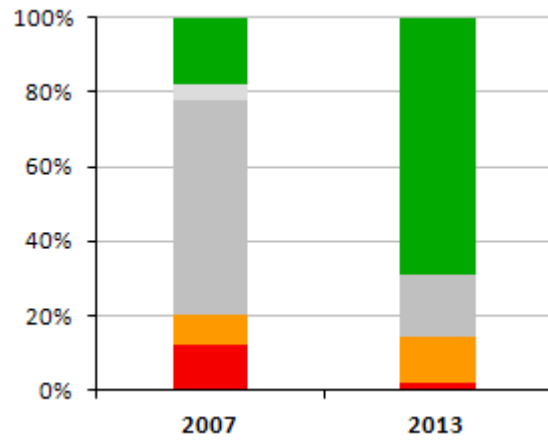
Key changes in the status and trends of biodiversity

The Protected Areas (PAs) designated under the Habitats Directive (Natura 2000 Network sites) show an improvement. Cyprus completed Article 17 of the Habitats Directive and results indicated that Protected Areas (PAs) is a milestone for conserving biodiversity in the island (habitats and species).

Data also show the central role of the protected area system in conserving biodiversity, covering 75262,19 ha of the terrestrial part of the island and 13026,50 ha of the marine. The protected areas (Natura 2000 Network include Ramsar site) showed an improving trends for both habitats and species.



i) Conservations status of Habitats



ii) Conservation status of Species

Published Reports and Assessments

- The Cyprus National Biodiversity Strategy and Action Plan (NBSAP)
- Article 17 reporting under the European Habitats Directive
- The 4th Biodiversity report

PART I: AN UPDATE ON BIODIVERSITY STATUS, TRENDS, AND THREATS AND IMPLICATIONS FOR HUMAN WELL BEING

Q1: Why is biodiversity important for your country?

Cyprus is characterized by a distinct mosaic of landscapes, where the particular microclimatic and topographic characteristics, the diversity of vegetation, forested and agricultural land, the coastal and riverine contribute to the creation of variable types of biotopes which host many types of organisms. The flora and fauna of the island is adapted to the various natural biotopes and climatic conditions, resulting in a large number of endemic and rare species. The natural environment of the island, the natural type of habitats and the fauna and flora species, are the result of evolution, affected by the particular climatic and geological conditions, the adjacency with the three continents (Europe, Asia, Africa), the island's long-lasting isolation and the effects of human activities.

The vegetation types, coastal zones and the aquatic systems constitute important habitats for wildlife and including cultivations (especially traditional ones). Various types of scrubs are dominant in the thermo-Mediterranean and semi-arid zones. Landscape is characterized by maquis (*Olea europaea* and *Ceratonia siliqua*, as well as tall *Quercus coccifera* subsp. *Calliprinos*), open dwarf scrub called garigue (phrygana), coastal zone with *Juniperus phoenicea* matorral, pastures with dry grasslands and a unique peat grassland that occurs only on Troodos (1600 -1650 m).

The forest type form the thermophilous Calabrian pine (*Pinus brutia*) the most extended forests, from sea level up to about 1400 m, and covers the Troodos and Pentadactylos mountain ranges and part of Akamas Peninsula, the Cypress (*Cupressus sempervirens*) forests which occurs mainly on Pentadactylos, and remnant individuals all over the island, the semi-deciduous shrub *Quercus infectoria* subsp. *veneris* forms only remnant stands at the western part of the island, the *Pinus nigra* subsp. *pallasiana* forest, the endemic *Cedrus brevifolia* forest and stands of mountainous junipers (*Juniperus foetidissima*, *Juniperus*, *Juniperus*) are restricted to the higher altitudes of Troodos, the golden oak (*Quercus alnifolia*) occurs in the understory of conifers or in pure stands, at altitude of 700 m, mostly across the Troodos range.

The sandy coastal zone is generally narrow lines, with sand dunes forming ammophilous communities on low embryonic and shifting dunes. Extended dune systems, including stabilised dunes with shrubs and dune slacks, develop in few places e.g. Apostolos Andreas at Karpasia and Akamas peninsula, particularly in connection with halophytic wetlands, i.e. Famagusta, Agia Eirini and the Salt Lakes of Akrotiri and Larnaka.

A discontinuous and mostly narrow line of riparian shrub and forest develops along the numerous rivers and streams that flow through the island, often in the centre of cultivated land. Hydrophilous vegetation has established at most of them freshwater bodies and dams. The rocky habitats include chasmophytic communities developing on limestone (Akamas), ultramaffic rock (Troodos) and wet rocks, and also endemic serpentophilous chamaephytic communities (Troodos, Akamas and Lemesos Forest).

This great diversity in landscapes and habitat types is reflected on the number of different habitat types existing in Cyprus that are included in the Appendix I of the European Habitats Directive (92/43/EEC). About 42 different habitat types of Annex I of the Habitats Directive (92/43/EEC) have been identified in Cyprus, out of which five exist exclusively in the island.

Protected Areas

Cyprus is a biodiversity hot spot area, with 42 habitat types of Annex I of the Habitats Directive, 92/43/EEC, rich in plant and animal species with 39 species (18 plant species and 21 animal species) of Annex II of the Habitats directive of which 14 are priority species and it's a mosaic of biotopes. The island has extensive natural coniferous forests and expansion of phrygana. The ecosystems consist of high forest, shrubs, traditional cultivated orchard trees and vineyards, which constitute important habitats for rare plants. Biodiversity in Cyprus has not been fully assessed, but within the scope of the Natura 2000 Network, a monitor scheme has been initiated.

In the Island high forests cover about 17% of the island, extending mainly on the Troodos and Pentadactylos ranges, whereas the lower hills are covered by shrubs, maquis, phrygana, and cultivations as well as built-up areas. The plains, like the Mesaoria plain and the coastal zones are covered by cultivations (about 45% of the island) and settlements, with areas of natural to semi-natural vegetation types.

In Cyprus, Protected Areas (PAs) under implementation of the Habitats Directive now covers 752.26 km² terrestrial and 130.18 km² marine areas. PAs, play a pivotal role in protecting biodiversity (habitats and species), but also in raise awareness stakeholders and local communities. The Natura 2000 Network (N2K) is now being visited for leisure and/or for specific interests by an increasing number of people. In order to promote nature and its value PAs has the synergies that can allow new generations to become familiar with concepts as biodiversity, endangered species, ecosystem balance, etc.

PAs are now being visited for leisure, recreation and/or for specific interests by an increasing number of people (local and foreign). In these respect competent authorities conducted public schools produced synergies that allow new generations to become familiar with concepts as biodiversity, endangered species, ecosystem balance, etc.

PAs can provide ecosystem services, for example Natura 2000 area - Akamas Peninsula contributes towards the GDP via tourism with € 5.000.000 per year (Safari).

Natural habitats and cultivated systems (traditional farmland) sustain mainly farming of goats and sheep and regulate and provide ecosystems services. Communities of insects are sustaining in cultivated land, where pollinators can provide ecosystem services.

Q2: What major changes have taken place in the status and trends of biodiversity in your country?

The overall biodiversity status regarding the protected areas PAs has not changed. However there are changes in areas where big scale development plans have taken place in wilderness areas such as golf courses, renewable energy plan (air turbines and photovoltaic parks etc. Additionally, a major threat is infrastructure of roads expansion (big scale fragmentation and destruction of habitats and species), electrical towers (collisions of birds and bats), build up, as well as unsustainable development plans in the countryside (deterioration and fragmentation of landscape), soil sealing and land use change, wild fires, change/losses in coastal habitats.

Impacts are mainly generated by ecosystem changes, destruction of their function and services, losses of habitats and species are due to humane activities (habitat fragmentation, pollution of surface runoff, soil sealing, urbanization, use of biocides hormones and chemical products), unsustainable management of resources, and abandonment of agricultural activities, invasive alien species leading to loss and of biodiversity.

Climate changes, introduction of invasive alien species are also being considered, being a potential major threat in a near future for biodiversity. In the island drought, land degradation and water scarcity also cause a biodiversity loss. Degradation has been detected in the coastal protected areas due to the destruction of sand dunes. Protected areas are threatened due to unsustainable exploration of natural resources, agriculture practices, overgrazing and tourism leisure.

Overall, the evidence on the status and trends of biodiversity regarding protected areas of the Natura 2000 network in the Cyprus shows good conservation status, however there has been unfavourable status for some species and habitats.

Q3: What are the main threats to biodiversity?

The main threats to biodiversity are changes in ecosystem their function and structure from humane activities (land use change and modification, pollution of surface runoff, habitat fragmentation, use of biocides hormones and chemical products), forestry and agriculture, abandonment of agriculture land and activities, urbanization and disturbance, buildings, infrastructure, over exploitation of natural resources, alien species and climate change. Anthropogenic disturbance is the main threat to habitats and species and change in ecosystems.

For the fauna and flora the main threats is their habitat loss due to anthropogenic activities and disturbances, wild fires, as well as climate change.

Introduction of invasive alien species should also be considered, being responsible for local extinction, and being a potential major threat in the future.

The main threats and impacts to the biodiversity have been analyzed in the 2nd reporting under the Habitat Directive and are the following:

- Urbanization and coastal development
- Tourism leisure and recreation (Golf courses and marine development)
- Land use change (Habitat) – very high impact since 2000 and increasing rapidly;
- Soil sealing – very high impact since 2000 and increasing rapidly
- Land degradation, deterioration and fragmentation
- Trampling
- Overgrazing
- Pollution and nutrient enrichment
- Overexploitation – of natural resources
- Invasive species – increasing; and
- Climate change – increasing rapidly.
- Drought, Land Degradation and Water scarcity
- Wild Fires
- Over- and under-grazing;
- Logging of olive and carob trees
- Agriculture abandonment
- Afforestation of agriculture land
- Air and water pollution, including eutrophication (nutrient enrichment);
- Intrusion in natural hydraulic conditions (e.g. water abstraction and modification of flowing waters); - big scale alteration and destruction of streams and rivers;
- Invasive non-native species and pathogens;
- Recreational damage (e.g. trampling in the coastal areas mainly);
- Renewable energy, wind turbines and photovoltaic and associated infrastructure;
- Unmanaged succession (e.g. pine forest mainly in high altitudes).
- In the marine environment the main pressures identified are: desalination plan; construction of marine with associated housing development; construction of wave barriers; fishing; climate change and; hazardous substances; and eutrophication.
- Exploitation of natural resources.
- Illegal bird tramping.

Threats can be categorized according to the impacts on biodiversity and are generated by changes in ecosystem (habitats and species losses) from anthropogenic activities (pollution of surface runoff, habitat fragmentation, use of biocides hormones and chemical products), as well as with unsustainable natural resources managed, abandonment of agriculture activities, leading to alteration of habitats and losses of biodiversity elements. Anthropogenic disturbance is the main threat to habitats and species and the overall biodiversity, due to land use changes, buildings, infrastructures etc.

Q4: What are the impacts of the changes in biodiversity for ecosystem services and the socio-economic and cultural implications of these impacts?

Ecosystem services is well known that provide and support nations with food, fresh air and clean water, fuel and building materials, as well as the pleasure of engaging in recreational activities, and they can group into four categories; provisioning, regulating, supporting and cultural services. A comprehensive mapping and analysis of ecosystems and ecosystem services has to be carried out in order to confirm the value

of specific ecosystem services in agriculture, forestry, fisheries, etc. Additional studies should be carried out in order to calculate the value of insect pollination of arable crops, and other crops. Insect pollination is very valuable ecosystem service and can be calculated, in the spring, when fruit trees are pollinated. Natural habitats can support a range of wild pollinators that can increase crop yield through provision of a resilient and complementary pollination service. An impact of the changes in biodiversity for ecosystem services could be direct in diversity of pollinators and their services due to losses of some species and their habitats.

Benefits have been calculated for the forest ecosystem services such as the absorption of CO₂, (45,8 k.t. including wild fires in forest lands). Forest offers recreational and outdoor activities and encouragement to learn about biological diversity. An impact of the changes in forest biodiversity will be socio-economic and cultural. Landscape aesthetics is another value which can be attributed to ecosystem values that affect the socio-economic and cultural prospect of the Island.

Nature and protected areas also provide socio-economic benefits, when they are calculated based on ecosystem services. Changes in both landscape and protected areas and overall to biodiversity and ecosystem services could a negative effect in both socio-economic and cultural implications.

Forest can provide ecosystem services such are regulation of the water catchments, atmospheric air and food and shelter for many organisms.

There are strong linkages and synergies between different components of the marine environment, which contribute to the provision of ecosystem services. This would be expected in such a large and interconnected habitat as the coastal, shelf and deep-sea waters. Any changes in marine biodiversity could, therefore, lead to impacts for marine ecosystem services.

Regarding natural resources such as water and their ecosystems services, Cyprus is phasing a hydrological instability that can be an overall natural threat. Consequent years with droughts in the island can cause land degradation and riverin ecosystem services deterioration.

PART II: THE NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN, ITS IMPLEMENTATION, AND THE MAINSTREAMING OF BIODIVERSITY

Q5: What are the biodiversity targets set by your country?

Cyprus completed the study on National Biodiversity Strategy (NBS) during 2013 and currently is working towards the prioritization of the measures and actions that have to be taken and implement. NBS developed in line with the Aichi Biodiversity Targets of the Strategic Plan for Biodiversity 2011-2020, and is going to be used as a base reference document in order to fulfill the commitments of the country for the Convention on Biological Diversity.

NBS aims to merge and integrate biodiversity objectives such as conservation, sustainable use of natural resources and the access to benefit sharing into sectoral policies and other strategies.

Priorities towards the five goals of the Strategic Plan for Biodiversity 2011-2020 (CBD 2010) are identified in the NBS, which includes implementation of actions plan in different sectors.

The strategy consist the following four main chapters: 1. Introduction; setting out the purpose of the biodiversity strategy and its legal framework and conservation. 2. Analysis of the present situation of biodiversity and its components (at the level of ecosystems, species and genetic resources). 3. Threats and pressures. 4. National Biodiversity Action Plan.

In order to reach the EU and Aichi Biodiversity targets, working areas have been identified: 1. Natural Ecosystems - habitats and landscape, Species (fauna and flora); Agricultural Ecosystems, Traditional varieties/breeds and Wild relatives of cultivated species; Forests Ecosystems; 6. Inland water; Marine environment; Genetic Resources; Protected areas; Landscape; Ecosystem Services; Creation of National lists (data base) of threatened species and Habitats; 2. Compatibility of conservation of biodiversity with the development; Tourist Development; Urbanization-Development; Road network; Pollution; 3. Desertification and climate change; Fires; 4. Invasive Species; 5. Environmental Education; 6. Research and innovation;

For any of the above targets (working areas) there have been identified: current status, main threats and pressure; main target to tackle these threats and pressures; priorities for measures and actions.

NBS implementation is in line with EU policies dealing with biodiversity (Directives), and with European Union Biodiversity Strategy, whose targets are also consistent with Aichi Biodiversity targets. The Strategy and a related Action Plan (5-years) will commence its implementation in 2015 after its approval from National Council of Ministries.

Q6: How has your national biodiversity strategy and action plan been updated to incorporate these targets and to serve as an effective instrument to mainstream biodiversity?

Cyprus national biodiversity strategy and action plan have been completed during 2013 and currently we are in the processes of prioritizing the measures and preparing a proposal for implementation via a ministerial Decree. The Cyprus NBS is expected to form the basis for the national management and conservation of biodiversity and the actions and measures are target towards conservation and protection as well as the hold of biodiversity loss throughout of the territory of the island.

The strategy is a multifaceted and multidisciplinary, targeting the establishment of those measures in various fields and specific a generic configuration framework of national policies and instruments necessary for the fulfillment of the obligations arising from the Convention on biological diversity. NBS implementation is going to be in line with UN policy for Biodiversity and with European Union Biodiversity Strategy, whose targets are also consistent with Aichi Biodiversity targets.

Cyprus NBS sets out vision, mission, and a series of priority actions that will be needed to deliver the outcome for 2020. These are grouped in the following priority areas:

- A more integrated large-scale approach to conservation on land and sea (Goals C and D of the Strategic Plan for Biodiversity 2011-2020 (CBD 2010))
- Reducing environmental pressures - focus on the drivers of biodiversity loss, primarily: invasive non-native species, habitat fragmentation, pollution, and climate change (Goal B)
- Stakeholders participation in conservation action - connect people with the natural world, for their health and well-being and to involve them more in decisions about their environment. (Goal A)
- Improving our knowledge (including monitoring and reporting- Goal E)
- A move to an ecosystem approach for delivering biodiversity conservation and ecosystem services.
- Mainstreaming biodiversity by ensuring key decision makers understand the multiple benefits, including ecosystem services, people's health and well-being, that well functioning ecosystems deliver.

Furthermore the over-all arching by 2020 will put in place measures so that biodiversity is maintained and enhanced, further degradation has to be halted and where possible, restoration should be enforced to help and deliver more resilient and coherent ecological networks, healthy and well-functioning ecosystems, which can deliver multiple benefits for wildlife and people, and should include:

- Better habitats for wildlife and for priority habitats in favourable or recovering condition for at least 50 per cent of PAs;

- Less fragmented areas for wildlife, with no net loss of priority habitat;
- At least 17 per cent of land and inland water, especially areas of particular importance for biodiversity and ecosystem services, should be conserved through effective, integrated and joined up approaches to safeguard biodiversity and ecosystem services including through management of protected areas;
- Should restore at least 15 per cent of degraded ecosystems for climate change mitigation and adaptation;
- An overall improvement in the status of wildlife and their habitats especially the threatened species;
- Significantly more people should be engaged in biodiversity issues, aware of its value and taking positive action.

Q7: What actions has your country taken to implement the Convention since the fourth report and what have been the outcomes of these actions?

Cyprus is foreseeing to have a workshop prior finalizing the prioritization of the measures and actions during September – October 2014. The Implementation of Biological Diversity Convention as described in NBS requires a multidisciplinary approach and sharing and collaboration between policy makers and central and regional authorities, local communities, support of the academic and scientific sector, as well as stakeholders. In Cyprus the implementation of NBS is foreseeing for 2015.

In Cyprus the "Natura 2000" network of protected natural habitats and species in the European Union under Habitats and Birds Directives include 62 areas of 28% of the island. The designated areas are preserving and protecting natural habitats and wildlife (flora and fauna) species which are endemic, rare, endangered or characteristic for EU Member States.

The Natura 2000 network has almost been completed and major efforts are directed towards an efficient manage the areas (habitats and species). For all areas have been prepared management plans that include conservation measures for each site. Additionally Sites of Community Importance (SCIs) have been designated as Special Areas of Conservation (SACs), whereas Ministerial Decree are foreseeing for 2015.

Among measures and actions in NBS, target and priorities, of N2K network, special attention has been given to the management of protected areas and to the need to enhance a new approach for adequate funding towards improvement of scientific knowledge and socio-economic aspects, in order to support policy and decision making process.

During 2012 Cyprus established a monitoring system for both marine and terrestrial habitats and species. The monitoring system comprises different sub contractor for monitor, evaluate and analyze habitats and species in PAs. NBS (Biodiversity 2020) sets out Cyprus's priority actions in order to achieve targets. Actions are focus to improve biodiversity components of the Island.

Cyprus's 2020 aim 'to prevent overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people'. The over-arching outcomes have been the implementation of the Aichi Biodiversity Targets.

Q8: How effectively has biodiversity been mainstreamed into relevant sectoral and cross-sectoral strategies, plans and programmes?

The way to achieve a complete and effective integration of biodiversity matters in policies is one of the main aims for National Biodiversity Strategy (NBS). The need to mainstream biodiversity issues was given particular attention to the sectors of agricultural, fisheries, and forestry.

Efforts should be increased to mainstream biodiversity issues in other sectors and policies and strategies. Such efforts are included in the respective of Actions Plans to implement the Biodiversity Strategy and commence implementation in 2020.

In order to achieve action plan of biodiversity there should be an integration of biodiversity objectives in other plans of the island e.g. energy plans, building plans, infrastructure plans etc.

There should be emphases in main synergies with sectors that are closely related biodiversity issues, such as rural development planning.

There should be mention that a process for financing PAs (PAFs) has been included in EU funds (Horizon 2020).

EU funds 2014-2020

Cyprus completed Prioritized Action framework (PAFs) for Natura 2000 in order to effectively achieve conservation and protection of the N2K areas.

There have been efforts to include Biodiversity issues in the Structural Funds. The final amount is yet to be defined. The LIFE and RDF program also gives opportunity for funding.

Adoption of ecological network in planning

The Natura 2000 Ecological Network is aiming to protect and conserve biodiversity. The network can mitigate habitat fragmentation, and in its ecological-functional approach, in order to ensure permanence of ecosystem process and the connectivity for sensitive species.

Management plans of PAs have been integrated in territorial planning and in the rural (countryside) policy as well as other large scale plans such as renewable energy plan. National Strategies for Desertification and Climate Change

For the other two United Nations Conventions on Desertification and Climate Change (UN – CCD and CCC), the Department of Environment is completing the draft National Strategy for Combating Desertification and Adaptation to Climate Change. The overall aim of the Strategies is to work out a national vision on how to tackle in the future the phenomenon of desertification and the impacts of climate change, aiming to minimize risks, protect human health and welfare, protect goods and nature, maintain or improve adaptation capacity of natural, social and economic systems, as well as take advantage of possible opportunities.

The national Strategies will be implemented and integrated in several sector of environmental and socio-economic aspects, where priority actions will be establish. Among priorities, according to NBS, there are interventions aiming to maintain and restore biodiversity and related ecosystem services, to ensure resilience to the phenomena of the other two conventions.

Agriculture and forestry

Through the implementation of the Measures of the Rural Development Programme 2007-2013, several actions were promoted such as the expansion and improvement of production, the modernization of units and the creation of sustainable farms with more modern pursuits, as well as improving the quality and food safety, the protection of the environment and landscape and the quality of life in rural areas. The RDP, aiming to preserve and enhance the value of environment, the value of genetic resources in agriculture, the value of the landscape ad agro-ecosystems with several activities that have been endorsed.

These Guidelines, in synergy with National Strategy for Biodiversity are a practical support for farmers that care for biodiversity, with reference to foreseen interventions in the framework of Rural Development Plans at Regional level and for protection of the environment, agriculture ecosystems, landscape and genetic resources.

The state forests in Cyprus are management for the protection biodiversity and the ecosystems services, and in a sustainable way. Forest provides ecosystems services e.g. cultural, economic and social aspects. The main object of the State Forest Policy is the development through sustainable management, maintain its multiple use, biodiversity conservation and upgrading and promotion/ utilization of all functions of forest ecosystems, aiming at providing a longer and better quality life to society and preserving at the same time the forests for future generations.

Q9. How fully has your national biodiversity strategy and action plan been implemented?

The National Biodiversity Strategy, at the country level, is still under development, therefore most areas of implementation are also at an early stage. However for PAs management plans have been completed and the areas will be designated as Special Areas for Conservation (SAC).

The actions set at NBS will be endorsed by the Council of Ministries. The NBS have been completed and a workshop will take place for the prioritization of the measures. Measures have been grouped according to the main NBS categories e.g. Ecosystems, Species, Protected Areas, Agriculture, Forestry, etc.

Part III: Progress towards the 2020 Aichi Biodiversity Targets and contributions to the relevant 2015 Targets of the Millennium Development Goals

Q10: What progress has been made by your country towards the implementation of the Strategic Plan for Biodiversity 2011-2020 and its Aichi Biodiversity Targets?

This section will cover action towards the Aichi Targets. The implementation of NBS is not endorsed, and at this point progress is not assessed in regard to actions.

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'.

Work has been carried out in Cyprus in many areas to increase public awareness of the values of the biological diversity. Seminars for several Life projects as well as consultation for PAs focus on the biodiversity and its value and the added value of the N2K in the local Communities. The following activities have been launched:

- Evaluation of plans and large scale projects
- Improvement of Conservation Status
- Information/ Consultation seminar for NBS with all stakeholders
- Information seminar on Climate Change and biodiversity
- Information seminar on Desertification and biodiversity
- Presentation of the results of Life Nature and Information Projects
- Presentation of financing Natura (PAs) and Biodiversity
- Environmental education mainly for Schools
- Stakeholder's awareness – general seminars for public, use of internet media etc.

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'.

The value of biological diversity has been recognized and will be integrated in sectoral policies and strategies of the Island by 2020, and will be incorporated into projects such as Integrated Projects (IP) and Operational Programmes (OP). Biological diversity is integrated into a number of strategies and policies and is included in programs such as the agriculture rural development plan, structural fund, regional development fund, fisheries fund, etc.

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’.

The majority of Cyprus rural areas is natural habitats and are found or linked to farming and forested areas. A new Common Agricultural Policy (CAP) and RDP for 2014-2020 is being compiled, and focus on "greening" concerning consideration of the nature, protection of habitats and species that depend on agriculture practices.

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’.

Issues for sustainable consumption and production in relation to their environmental impact are taken into consideration within the framework of the Action Plan for Green Economy which is currently being prepared by the Ministry of Agriculture, Natural Resources and Environment.

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’.

Focus in Cyprus has been placed on the protection N2K areas for habitats and species as well as the connectivity of the network. Cyprus's N2K areas represent 28% including both SCIs and SPAs.

Some of the most significant LIFE projects focused on the improvement of conservation and restoration of the N2K areas for ecosystems, habitats and species. Currently the Environment Department has paid significant attention on designation of Special Areas of Conservation (SAC) and general protection of the habitats and wildlife (flora and fauna) and, conservation of the sites integrity. Specific attention has been given to wetlands coastal habitats and rivers.

Current funds (horizon 2014-2020) will contribute significantly to the establishment of more - cohesive - natural landscapes, and to prevent further fragmentation and natural destruction of natural habitats. Landscape elements have been incorporated in the Rural Development Plan (2014-2020) for protection, conservation and rehabilitation.

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 Governmental policy in the Fisheries Resources Sector aims at sustainable and balanced management of the resources, the increased contribution of fisheries in the domestic production of fish and in the improvement of professional fishermen's work conditions.

The management of fisheries resources is achieved through fisheries research, the collection of fishery data and their utilisation for the exploitation of the Cyprus fisheries stocks, as well as the development of the Government's fisheries policy.

The data collected concern the following:

1. Biology of the economically most important species of fish
2. Fishing fleet activity
3. Fishing capacity of fishing vessels (capacity, power)
4. Fishing effort (days at sea, type and quantity of fishing gear)
5. Catches (quantitative and qualitative data for marketed and non-marketed species)
6. Economic situation of the fisheries sector

Target 7

'By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity'.

Cyprus areas that are utilized for agriculture, aquaculture and forestry are managed towards a sustainable way. Policies for the three sectors set targets in order to integrate and ensure conservation of biodiversity components.

Forest management ensured ecosystem services, maintain aesthetic values, recreational, and conservation of biodiversity.

Agriculture activities are currently managed to ensure more environmental friendly practices e.g. biological products.

Aquaculture in Cyprus is an important economical activity. It contributes significantly to the production of fishery products, reduces fishing deficit reduces the negative trade balance, creates job placements and occupies employees with specialized scientific background. Also, it provides an affordable in terms of price and highly nutritional product.

Target 8

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

The Department of Environment has the responsibility for the control and prevention of water and soil pollution arising from the operation of wastewater treatment plants and the discharge of the treated urban wastewater according to the Urban Wastewater Treatment Directive 91/271/EEC.

In Cyprus, the UWWTD 91/271/EEC and the control of sewage discharges to ground and surface waters is implemented via the Water Pollution Control Law as well as Regulations and Ministerial Decrees issued under the provisions of this Law as well as the Sewerage Law.

For the effective enforcement of the above Laws, Waste Discharge Permits are issued by the Minister of Agriculture, Natural Resources and Environment. Each permit includes specific conditions regarding measures that must be taken by operator. Most commonly, measures refer to the following:

- Discharge method, quantity, areas, crops irrigated etc.
- Sludge Management.
- Self monitoring of effluent quality and quantity and record keeping.
- Compliance with relevant quality requirements.

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'.

Several projects within the Framework of the LIFE Programs have focussed on the eradication of invasive alien species such as Acacia spp., aquatic water tortoise, etc. Additionally, the upcoming EU legislation (regulation) on Invasive Alien Species (IAS) will be implemented and strengthened towards this target.

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'.

Cyprus's territorial waters do not contain coral reefs, and the target is therefore of less relevance to the country'.

Target 11

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

Cyprus has designated a large number of protected areas at land but fewer in the sea, under the Natura 2000 network. On land, over 752.26 km² of the total area is protected as Natura 2000 areas consisting of forest, shrubs, maquis and phrygana, rivers, coastal and agriculture land. Marine sites protected areas are 5 with an area of 130.18 km² consisting of *Posidonia oceanica* Beds.

All Natura 2000 areas have management plans that include measures and actions for PAs (habitats and species). PAs has been designed for the main biodiversity element of the island and is a tool to halt the decline in biological diversity. The Environment department along with the other competent authorities is protecting and restores natural habitats and species with actions and measures that are taken in the sites.

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'.

Competent authorities for protecting Nature are working towards halting and preventing the degradation and decline of habitats and species at many different levels. In addition to the habitat and species cover in Habitats and Birds in Natura 2000 network, a number of other species will also be protected. The aim is to protect the habitats, breeding, feeding and resting areas used by such species.

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 Institute of Agricultural Research (IAR) created a gene bank for plant material and domesticated animals of traditional breed. A programme has been taking place to locate and register the wild relatives of crops and their preservation status carried out for some species with foreign Universities and institutes (e.g. Spain).

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'.

Cyprus focuses on protection of the areas in the N2K network, for habitats, species and ecosystems in general, and a large effort is towards ecosystems retention/restoration and improvement.

Actions and measures include:

- Nature protection of natural habitat types and species covered by the EU's habitat and bird protection directive, protection of natural habitat areas.
- Woodland planting and an increase in wooded areas help towards CO2 retention and thus make a positive contribution to the CO2 accounts, protect groundwater and ensure high quality drinking water.
- Restoration of coastal habitats
- Restoration and maintain species habitats
- Restoration of river ecosystems and wetlands
- Continuation of monitoring scheme
- Initiation of mapping of both habitats and species
- Promotion of green infrastructure for landscape connectivity
- Designation of HNVf areas
- Within the LIFE Program, Projects have been launched for both habitats and species

- Raising of Local communities awareness

Target 15

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

Cyprus formulated the National Action Plans for the three RIO Conventions. Implementation of National Action Plans for Climate Change, Desertification and Biodiversity will be implemented after their approval from the National Council of Ministries by the end of 2014.

All three National Action Plans include measures for conservation and restoration of habitats their function and structure, focusing to reverse biodiversity loss, to implement climate changes adaptation scheme and to combat desertification as well as integration to other sectors, policies and strategies.

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'.

The protocol was ratified by the UN in 2012, and agreement reached in the EU on a new directive to fulfil its provisions. Cyprus signed the Protocol and is foreseeing to ratify the Nagoya Protocol by end of 2014.

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'.

Cyprus has not yet implemented the NBS. NBS will put in force by end of 2014. However there are actions take already for PAs for N2K network.

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'.

This target has no direct application for Cyprus therefore no measures are directly formulated towards this target.

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'.

Cyprus has initiated a monitoring system (2012) for all types of natural habitat and species. The system is designed to provide an understanding of the status of natural habitats and species and the environment in the country.

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 to resource needs assessments to be developed and reported by Parties'.

The Environment Department has secured funds from Structural Funds, which will be contributing for the Natura 2000 areas. Measures and actions have been prioritized for protecting and conserving PAs (Habitats and Species).

Rural development programs has a pivotal role in order to improve integration between agricultural and environmental policies, with particular reference to conservation and enhancement of biodiversity and ecosystem services in agricultural and forested lands.

Axe 2 of RDP includes most significant actions for environment to make possible a sustainable management of agricultural and forested land as well as conservation of biodiversity. Measures have been proposed for the new RDP 2014-2020, foreseeing to be implementing in the N2K areas.

The LIFE Program (the Financial Instrument for the Environment) is the EU's financial instrument supporting environmental and nature conservation projects throughout the EU. A total of € 6.182.040 have been granted during 2007-2013 for projects for Nature in Cyprus. Efforts are being made in order to be able to have access to funds from the new LIFE Program.

The Ministry of Agriculture Natural Resource and Environment (MANRE) are committed to implement the Strategic Plan for Biodiversity. Mobilization of financial resources for the Implementation of NSB will be take place during 2015.

Q11: What has been the contribution of actions to implement the Convention towards the achievement of the relevant 2015 targets of the Millennium Development Goals in your country?

The biodiversity conservation issue plays an important role for the wealth of human being and of our planet, therefore the mission of Cyprus is to integrate environmental policies and initiatives in order to implementation the 2015 milestones and Aichi Biodiversity Targets of the Strategic Plan for Biodiversity 2011-2020. The NBS based

on measures and action for conserving biodiversity, but also to develop opportunities for green jobs.

Q12: What lessons have been learned from the implementation of the Convention in your country?

National Strategy for Biodiversity, aims to enhance biodiversity related issues in a cross-cutting approach, widening opportunities and procedures of spreading and communicating about significant initiatives for biodiversity elements and its conservation. The Biodiversity status that is illustrated in NBS and the proposed measures and actions is a useful source of information in order to underpin integration among different sectors, and assess values at national level.

Annexes and appendices

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

The report was prepared by the Department of Environment, as CBD focal point.

The starting point for the elaboration of this report was the PAs status and actions taken as well as the reporting activities carried out in 2013 on the conservation status of habitats and protected species according to Habitats Directives and, more generally, from what Cyprus have been doing in relation to the European Strategy for the European Union biodiversity.

Appendix II - Further sources of information.

http://bd.eionet.europa.eu/activities/Reporting/Article_17/reference_portal

http://www.moa.gov.cy/moa/environment/environment.nsf/index_gr/index_gr?opendocument

http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/DMLindex_gr/DMLindex_gr?OpenDocument

http://www.moa.gov.cy/moa/fd/fd.nsf/DMLindex_gr/DMLindex_gr?OpenDocument