Biodiversity 2020,
Update of Belgium's National Strategy

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Special thanks are due to the regional and federal coordinators Catherine Debruyne (DGARNE - DPEnv), Marie-Céline Godin (IBGE-BIM), Els Martens (ANB) and Sabine Wallens (FPS DG Env.), and to Anne-Julie Rochette for her contribution to the organisation of the public consultation (voluntary work) and then to the edition of the text as member of the CBD NFP team.

Formatting and Layout: Kristien Vranken (RBINS)
Picture credits: Thierry Hubin (RBINS)

ISBN: 970890732420302

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Citation form: Belgian National Focal Point to the Convention on Biological Diversity (ed.), 2013. Biodiversity 2020 – Update of Belgium's National Biodiversity Strategy. Royal Belgian Institute of Natural Sciences, Brussels, 148 pp.

This publication is available only in electronic version and can be downloaded from the website of the Belgian Clearing-House Mechanism of the Convention on Biological Diversity: www.biodiv.be. The text is available in English, French, Dutch and German. A general information brochure in EN / FR / NL / DE may be ordered directly from the CBD National Focal Point <CBD-NFP@naturalsciences.be>.

Context and process of elaboration

National Biodiversity Strategies and Action Plans are the principal instruments for implementing the Convention on Biological Diversity (Rio, 1992) at national level, including to support the mainstreaming of biodiversity into the planning and activities of all those sectors [...]

[...] whose activities can have an impact (positive and negative) on biodiversity. Belgium's National Biodiversity Strategy 2006-2016 (NBS) was adopted on 26 October 2006 by the Interministerial Conference for the Environment, which is composed of the competent ministers of the Federal Government, the three Regions of Belgium (Flanders, Brussels, Wallonia) and the three Communities (Flemish, French, German). It is still the unique national document on biodiversity policy that embraces the responsibilities of the different governments in Belgium in order to comply with the European and international commitments made by Belgium. It offers a framework in terms of the policy to follow and the subsequent implementing actions to be developed.

The Steering Committee "Biodiversity Convention" initiated the process of updating the NBS in 2011 jointly with the Steering Committee "Nature". These committees gather the Regional and Federal competent authorities, scientists and environmental NGOs. They are established under the Belgian Coordination Committee for International Environment Policy under the auspices of the Interministerial Conference for the Environment.

In March 2012, the Interministerial Conference for the Environment decided to update Belgium's National Biodiversity Strategy 2006-2016 before its end and to align its term with the 2020 target. This offers the possibility of adjusting the content of the strategy by taking on board the new international commitments made under the biodiversity-related agreements and at EU level, while considering the conclusions of the mid-term state of play of the implementation of the NBS up to 31/12/2011 and the recommendations formulated to update the NBS[1].

The pre-project of the updated strategy went through a public consultation process between 14 May and 12 July 2013 and was debated during a dialogue with the stakeholders organized at the Royal Belgian Institute of Natural Sciences on 13 June 2013.To respond to the commitments at global and European level, the update of the NBS focuses on the following issues:

A) Tackling emerging risks and the impact of internal trade of live specimens
B) Protecting and restoring biodiversity and associated ecosystem services through protected areas – green infrastructure – no net loss. Identifying pathways of introduction of IAS
C) Phasing out perverse incentives and using guidelines on the integration of the values of biodiversity and ecosystem services in development strategies, planning processes and reporting systems included. Developing an approach to include these values in national accounting
D) Implementing the Nagoya Protocol
E) Mapping ecosystem services in Belgium and assessing their values
F) Ensuring the implementation and enforcement of biodiversity legislation
G) Involving provinces, cities and other local authorities
H) Boosting the mobilization of resources (through innovative mechanisms included) and enhancing capacities

Adopting a strategy is just the first step; achieving the aims of the NBS will be a big challenge. The active participation of not only the environment community but of all relevant stakeholders (Regional, Federal and local authorities, the Communities, the Provinces and the Municipalities, the biodiversity conservation actors, the business sector, scientific institutions, non-governmental organisations and society as a whole) in the coming decade will be crucial to the future of life on Earth and ensuring our well-being.

[1] Documents available on the Belgian Clearing-House Mechanisms at http://www.biodiv.be/implementation/docs/stratactplan

The updated NBS should be mainstreamed into the planning and activities of all those sectors whose activities are dependent or can have an impact (positive and negative) on biodiversity and will be taken on board in the federal and regional action plans as they are revised[2].

Biodiversity 2020, Update of Belgium's National Strategy has been adopted by the Interministerial Conference for the Environment on 13/11/2013 by:

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* Terms followed by an asteristk are defined in the glossary

[2] An overview of strategies and action plans for Biodiversity at federal and regional level is provided in Part II - Belgian political framework.

Preface

Biological diversity or *biodiversity* underpins the functioning of ecosystems and the provision of ecosystem services essential to human well-being. It provides for food security, human health, clean air and water. It contributes to local livelihoods and economic development, and is essential in terms of achieving the Millennium Development Goals, including poverty reduction. [...]

[...] Concern for global problems related to natural resources and the environment, like climate change and biodiversity decline, have resulted since the 1970s in numerous international agreements aimed at preserving natural resources, their renewing capacity and the quality of the environment. The Convention on Biological Diversity (CBD, Rio, 1992) encompasses many of the international agreements on the environment. It has three objectives at a global level: the conservation of biological diversity (biodiversity), the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.

Article 6 of the Convention states that each Contracting Party should develop national strategies, plans or programmes for the conservation and sustainable use of biodiversity and integrate as far as possible the conservation and sustainable use of biodiversity into relevant sectoral and cross-sectoral plans, programmes and policies. The present Strategy sets out Belgium's implementation of this article.

A crucial step towards the conservation of biodiversity was taken by Belgium at the European Summit of Gothenburg in 2001 where, together with the other EU countries, Belgium committed itself to "halting biodiversity decline by 2010" in the EU[3]. At the global level, the 2010 target was endorsed during the 2002 World Summit on Sustainable Development in Johannesburg, where world leaders committed themselves to "achieving by 2010 a significant reduction in the rate of loss of biological diversity"[4]. The 2010 biodiversity target has inspired actions at many levels worldwide and in Belgium. However, such actions have not been on a scale sufficient to address the pressures on biodiversity. Moreover there has been insufficient integration of biodiversity issues into broader policies, strategies, programmes and actions, and therefore the underlying drivers of biodiversity loss have not been significantly reduced. While there is now some understanding of the linkages between biodiversity, ecosystem services and human well-being, the value of biodiversity is still not reflected in broader policies and incentive structures (CBD Decision X/2).

In October 2010, in Nagoya, Japan, world governments recognized the failure to attain the target to significantly reduce the rate of biodiversity loss by 2010 and they reached a historic global agreement to take urgent action to build a future of living in harmony with nature.

The **CBD Strategic Plan for Biodiversity 2011-2020** (SP), with a vision, a mission, five strategic goals and 20 ambitious yet achievable targets ("the Aichi Biodiversity Targets"), was adopted by the Parties to the Convention on Biological Diversity (CBD) to halt and eventually reverse the loss of biodiversity on the planet by 2020 (see Appendix4).

The Strategic Plan for Biodiversity and its Aichi Targets should inspire broad-based action by all Parties and stakeholders. It provides a flexible framework for the establishment of national and regional targets and for enhancing coherence in the implementation of the biodiversity-related conventions. All Parties committed to revising their national instruments to integrate the SP & Aichi Targets by 2014. A separate Strategic Plan for the Cartagena Protocol on Biosafety was adopted in 2010.

In December 2010, the UN General Assembly declared the period 2011-2020 to be "the **United Nations Decade on Biodiversity**" to build support and momentum for this urgent task of achieving the SP and Aichi Targets (UNGA resolution 65/161). The purpose

[3] Presidency Conclusions, Gothenburg Council, 15 and 16 June 2001. SN/200/1/01 REV1, page 8. http://ec.europa.eu/smart-regulation/impact/background/docs/goteborg_concl_en.pdf

[4] WSSD Plan of Implementation, Article 44.

United Nations Decade on Biodiversity

is to inspire action in support of biodiversity over this decade (2011-2020) throughout the UN system and by all countries and stakeholders promoting the coherent and effective implementation of the CBD.

In May 2011, the European Commission adopted an ambitious new strategy to halt the loss of biodiversity and ecosystem services in the EU by 2020. It contains six main targets and 20 actions to help Europe reach its goal (see appendix 4).

Updating Belgium's first National Biodiversity Strategy (NBS) is an opportunity to translate the ambitious global agreements reached at the 10th Conference of the Parties to the CBD in Nagoya during the Belgian Presidency of the European Union at the end of 2010 and the outcome of the eleventh Conference of the Parties in 2012 into national policy. The update also considers the contribution of Belgium to the implementation of the EU Biodiversity Strategy to 2020, the EU Council Conclusions on biodiversity and the other commitments made until 2013 under the biodiversity-related agreements. This framework document should serve as a reference for the development and updating of strategies and actions implemented by the Federal, Regional and Community Governments, as well as at provincial and municipal level.

Biodiversity 2020 – the update of Belgium's National Biodiversity Strategy 2006-2016 (SNB) spells out a range of 15 strategic objectives and 85 operational objectives that aim to halt biodiversity loss and to contribute nationally and internationally to the achievement of the 2020 target. No specific actions or targets are adopted in the Strategy itself but they will be adopted and developed at a later stage in the implementation process.

The updated Strategy in a nutshell

Biodiversity has many dimensions, and the importance of these has still not been adequately addressed. It provides, among other things, resources including all our food and many medicines and other life support products. Biodiversity underpins human well-being through the provision of ecological services that are, for instance, essential for nutrient cycling, soil fertility and fruit-tree pollination as well as clean, fresh water and air. It also provides a wide range of recreational opportunities and it is an inexhaustible resource for learning, education, inspiration and cultural identity. Biodiversity conservation is therefore a common concern for all of humankind.

In Belgium, environmental matters including nature conservation are essentially matters of Regional competence. The Federal level is competent for environmental matters in the marine areas under Belgian jurisdiction, military domains and railway embankments, it has specific environmental competences (CITES, trade of non-indigenous species, product standards) and other competences related to the environment and biodiversity (development cooperation, finance, economy, etc.) at its disposal as well as action levers (public procurements, taxation, etc.).

The Strategy is the Belgian answer to the formal obligation under the CBD and also takes the other commitments made at European and international level into account. It offers a framework for policy-making and further development of actions. It includes the existing Regional and Federal frameworks and action plans and it supports their integration and fine-tuning. It aims at giving strategic political orientations in order to allow actors for biodiversity in Belgium to work in partnership to contribute nationally and internationally towards

the achievement of the target of halting the loss of biodiversity by 2020. This will be achieved by ensuring a more effective and coherent implementation of the three objectives of the Convention on Biological Diversity, while also taking into account the other biodiversity agreements where relevant. The Strategy pays particular attention to creating more coherence and filling the gaps in existing Belgian instruments and optimising integration of biodiversity concern at national and international level.

The Strategy has a vision and a general objective that are in line with the CBD Strategic Plan and the EU Biodiversity Strategy to 2020:

***Vision**:* "By 2050, our Biodiversity and the ecosystem services it provides - our natural capital - are valued, conserved, appropriately restored and wisely used for their intrinsic value and for their essential contribution to human well-being and economic prosperity, so that catastrophic changes caused by the loss of biodiversity are avoided".

General objective: "Contribute nationally and internationally to the achievement of the 2020 target of halting the loss of biodiversity and the degradation of ecosystem services, and restoring them insofar as feasible, while stepping up our contribution to averting global biodiversity loss".

The strategy spells out a range of 15 priority strategic objectives (objective 14 is new) and 85 operational objectives (eight of them are new) to guide the development of actions by the competent regional and federal authorities. Following the recommendations to update the NBS, the content of the chapter on implementation and follow-up of the NBS and some other parts have been somewhat adapted to fully reflect the commitments to meet the CBD Aichi targets and the new EU Biodiversity Strategy to 2020 (see appendix 4 - Concordance of the Aichi Targets with the EU Biodiversity Strategy 2020 and with the updated NBS).

The text of the NBS clearly identifies, for each objective, the link with articles of the CBD, the relevant Aichi Target, thematic programmes of work, guidelines, etc. adopted under the Convention as well as the relevant EU commitment. Its main focus is on sectoral integration of Biodiversity.

Where necessary, implementation measures are taken in a coordinated way by the Federal and Regional Governments and the other relevant actors. Examples of achievements until 2009 are published in the fourth national report to the CBD (2009) and in the mid-term assessment of the NBS (2012).

The updated strategy is established for an eight-year period (2013-2020). No specific actions or indicators are adopted in the Strategy itself but they will be adopted and developed at a later stage in the implementation process, in consultation with all the actors for biodiversity in Belgium. Reporting on the progress made and on the obstacles to implementing the NBS takes place through the national reporting procedure for the CBD (2014, 2019). The information on implementation of the NBS is also published on the website of the Belgian Clearing-House Mechanism.

Many different actors have an active role to play in the implementation of the Strategy: ministries and administrations, advisory and consultative bodies, research institutes, NGOs, information centres, individuals and community groups, etc. Several actions will have to be performed simultaneously in different sectors and - after further consultation and coordination - on several administrative levels.

Overview of the 2020 Biodiversity Strategy

2050 Vision

By 2050, our Biodiversity and the ecosystem services it provides - our natural capital - are valued, conserved, appropriately restored and wisely used for their intrinsic value and for their essential contribution to human well-being and economic prosperity, so that catastrophic changes caused by the loss of biodiversity are avoided

General objective of the Strategy

Halting biodiversity loss - restoring and valuing ecosystem services – global contribution

15 STRATEGIC OBJECTIVES

85 proposed measures and 10 guiding principles for implementation

1. Identification, Monitoring	2. Threatening processes **A**	3. Management, Restoration **B**	4. Sustainable use of resources	5. Sectoral integration **C**
6. ABS Nagoya Protocol **D**	7. Scientific knowledge **E**	8. Education, Training, Awareness	9. Regulatory framework **F**	10. Coherence in implementation
11. International cooperation	12. Global biodiversity agenda	13. Global concern	14. Local authorities **G**	15. Mobilisation of resources **H**

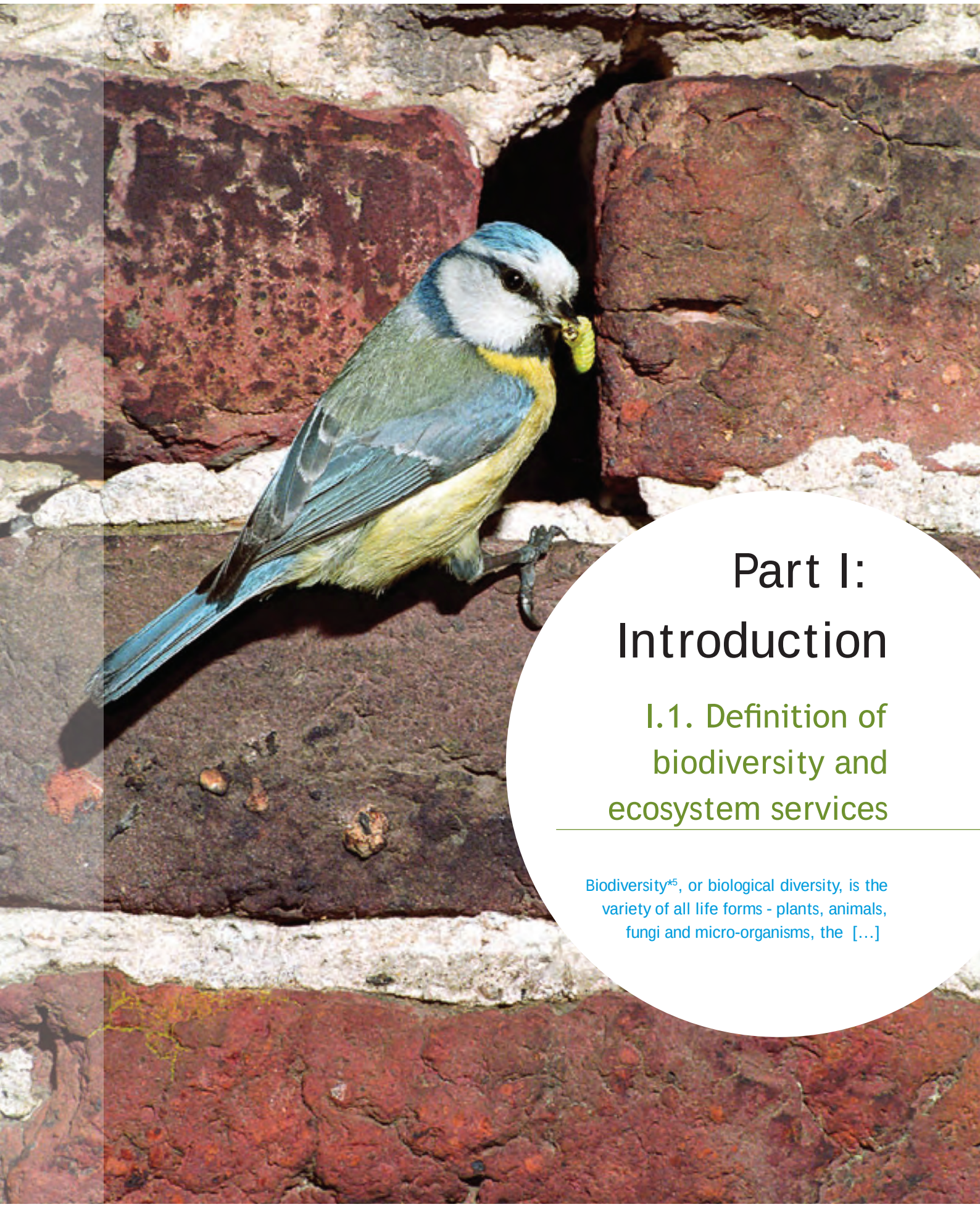
NEW OPERATIONAL OBJECTIVES

A) Tackling emerging risks and the impact of internal trade of live specimens;
B) Protecting and restoring biodiversity and associated ecosystem services through protected areas – green infrastructure – no net loss. Identify pathways of introduction of Invasive Alien Species;
C) Phasing out perverse incentives and using guidelines on the integration of the values of biodiversity and ecosystem services, in development strategies, planning processes and reporting systems included. Developing an approach to include these values in national accounting;
D) Implementing the Nagoya Protocol;
E) Mapping ecosystem services in Belgium and assessing their values;
F) Ensuring the implementation and enforcement of biodiversity legislation;
G) Involving provinces, cities and other local authorities;
H) Boosting the mobilization of resources (including through innovative mechanisms included) and enhancing capacities.

Governance
Monitoring and support mechanisms
Duration, reporting, evaluation and review

Figure 1. Overview of the content of the updated strategy (new elements are in blue).

Table of contents



Part I: Introduction

I.1. Definition of biodiversity and ecosystem services

Biodiversity*[5], or biological diversity, is the variety of all life forms - plants, animals, fungi and micro-organisms, the […]

[…] genes* they contain, and the ecosystems* of which they are part. Humans are an integral part of biodiversity.

Biodiversity is present throughout the whole biosphere, from a depth of 10,000 metres in the oceans up to the stratosphere. Biodiversity is continuously changing; it is the result of 3.8 billion years of evolutionary processes. Biodiversity is threatened by processes such as habitat destruction and fragmentation, pollution, overexploitation, spread of invasive alien species and climate change leading to population decline and species extinctions. Scientists estimate that the current extinction rate at global level is up to one thousand times higher than that seen in geological times and documented by the fossil records (Millennium Ecosystem Assessment, 2005).

For the purpose of this Strategy, the components of biodiversity are the following:

- *Ecosystems** - the variety of habitats, biotic communities and ecological processes. An ecosystem is defined by the dynamic interaction of species populations and the non-living environmental components that characterise the habitats. Ecosystems range from estuaries, rivers, ponds, marshes and temperate forests to tropical forests, coral reefs, mountains, deserts and others, including agricultural areas, urban parks and backyards. Ecosystem interactions include carbon cycle and other interactions, for example pollinators selecting flowers and predators consuming prey.

- *Species* - the variety of species on Earth, from tiny organisms such as bacteria to much bigger life forms such as trees and whales. The estimated number of species living on Earth varies from 5 to 100 million. At present, about 1.9 million species have been named and described. Every year some 20,000 new species are described world-wide.

- *Genes* - the variety of genetic information contained in all of the individual plants, animals, fungi and micro-organisms on Earth. Genetic diversity occurs within and between populations, as well as among species. Genetic variability is important to the survival of, in the first instance, populations and, ultimately, species as it is the key for populations to adapt to environmental changes and survive exposure to new diseases and parasites;

Ecosystem Services are the benefits people derive from ecosystems (Millennium Ecosystem Assessment, 2005). Different groups of ecosystem services can be distinguished (see table 1): provisioning services, regulating services, cultural services, and the supporting services maintaining the conditions for life on Earth, like nutrient cycling and photosynthesis. Although ecosystems underpin all human life and activities, people are often not aware of the benefits they receive from nature nor of their value (see part I.2).

Biodiversity has many dimensions, the importance of which has still not been adequately addressed. It is imperative to complete the inventory of Belgium's biodiversity and to improve the understanding of the role of biodiversity in ecosystem functioning. The gaps between existing knowledge and information needs for enhanced conservation policies can only be bridged by close cooperation between all the biodiversity partners in Belgium (see Appendix 1, Actors for biodiversity in Belgium).

[5] Terms followed by an asterisk are defined in the glossary

I.2. Why does biodiversity matter?

Despite some progress since the 1970s, the worrying trends in the decline of biodiversity have not been reversed in Belgium, and there is therefore a need for a new impetus in order to meet the global and European target of halting biodiversity loss by 2020. This will involve a change in our lifestyle since most negative impacts on biodiversity result from human activities.

BUT WHY DOES BIODIVERSITY LOSS MATTER?

We have the ethical responsibility to preserve biodiversity for its intrinsic values: species have a value "in and of themselves" as the result of the evolution of life on earth. The current extinction rate of biodiversity also poses a direct threat to human well-being, since biodiversity plays a vital role as a provider of products and services that make life on Earth possible, and furthermore satisfies the needs of human society. The table below summarises some major services provided by biodiversity (based on the Millennium Ecosystem Assessment, 2005). However, arguments to protect biodiversity cannot be limited to what biodiversity can do for humans.

The full costs of loss and/or degradation of biodiversity are difficult to gauge, but available evidence demonstrates that they are substantial and growing. We can rarely value biodiversity itself directly; we value services of the ecosystems of which biodiversity forms an integral and essential part. However, as many of the ecosystem services and benefits are freely available, they are not reflected in standard economic measurements. Moreover, we do not know exactly how many species exist or how many are disappearing. Also many ecosystem services cannot be replaced or if they can, it is only at considerable cost.

The Economics of Ecosystems and Biodiversity (TEEB, 2010[6]) study is a major international initiative to draw attention to the economic benefits of biodiversity, to highlight the growing costs of biodiversity loss and ecosystem degradation, and to draw together expertise from the fields of science, economics and policy (see more information under objective 7). According to the report, at least 40 per cent of the world's economy and 80 per cent of the needs of the poor are derived from biological resources. In addition, the richer the diversity of life, the greater the opportunity for medical discoveries, economic development, and adaptive responses to such new challenges as climate change. These estimates give an essential insight into biodiversity's real value. Further analysis and discussion in this field will certainly help countries improve their economic and environmental decision-making processes.

[6] http://www.teebweb.org

Services		Description	Examples of links with human well-being
Supporting functions (Biodiversity guarantees ecosystem functions that provide services such as water cycling, photosynthesis and oxygen production, protection and enrichment of soils, nutrient cycling, etc.	1. Regulating services	A high level of biodiversity increases the capacity of ecosystems to adapt to environment changes (such a climate change) and natural disasters.	- protection against natural disasters (mangroves for example represent an excellent buffer against floods and storms; wetlands play a key role in mitigating flooding and drought, etc.) - health (disturbances to ecosystem functioning can influence in various ways the transmission of diseases to humans) - provision of drinkable water
		Biodiversity guarantees ecosystem functions that in turn provide vital environmental services such as water purification, pollination, seed dispersal, etc.	
	2. Provisioning services	Biodiversity is the primary source of many products such as food (fish, vegetables, fruit, livestock, etc.), fibres (paper, textile, etc.), energy sources (timber, fuel, etc.), water, medicines, building material, cosmetics, etc.	- food security (biodiversity is the primary source of food: fish, crops and edible plants, livestock, etc.) - health (biodiversity's provisioning services lie at the basis of our medicines through "traditional medicines" and "modern medicines" derived from natural sources) - source of various kinds of revenue (biodiversity is essential for maintaining the long-term viability of agriculture, forestry and fisheries and forms the basis for many industrial processes and the production of new medicines) - provision of shelter for humans
		Biomimicry: nature's models are a source of inspiration for new designs and processes to solve human problems	- use of formation, structure, function of biological organisms / substances / mechanisms / processes to develop similar products by artificial mechanisms which mimic natural ones
	3. Cultural services	The beauty possessed by biodiversity is of value for a wide range of recreational uses that are highly successful due to the willingness of people to observe and enjoy it (hikers, divers, hunters, birdwatchers, painters, authors, etc.). Many people spend their holidays at places (forests, mountains, wild sea coasts, etc.) where nature is something to be enjoyed.	- social relationships - source of various kinds of revenue (recreational uses and ecotourism* activities provide substantial direct and indirect economic benefits)
		Biodiversity contributes to the spiritual well-being of individuals. The beauty of biodiversity provides enjoyment, is an important source of inspiration and is part of many cultures' spiritual heritage.	
		Biodiversity provides symbols of cultural identity	

Table 1. The different groups of ecosystem services.

[7] See also http://cdr.eionet.europa.eu/be/eu/art17/envucdy2q

I.3. Current status of biodiversity in Belgium

HABITATS

Belgium has a surface area of 30,528 km² on land and territorial waters in the North Sea of 3,462 km². Yet for such a small territory, it has a remarkable diversity of habitats and species. Flanders, Brussels and North of Wallonia belong to the Atlantic region. The region south to the river valleys of the Meuse and Sambre belong to the Continental region while the marine waters are part of the East Atlantic Boreal biogeographic zone. The main vegetation types found in Belgium are deciduous and coniferous forests, grasslands, heathlands, peat bogs, wetlands, lakes and rivers, and marine ecosystems in the North Sea. The distribution of these varies from region to region. For example, about 80 % of the forested areas are found in the southern part of the country. On the other hand, northern Belgium is noted for its semi-natural grasslands, wetlands, heathlands and coastal dunes.

The geographical and geological characteristics of Belgium (high plateaus of the Ardennes in the south, the extensive river valleys of the Meuse and Scheldt and the fertile loamy areas in the centre and the low-lying polders on the coast) together with the long-standing human impact in the area of land use have resulted in a huge diversity of natural to semi-natural *habitats*, many of which are of European importance. At present, no fewer than 58 of them are listed in the EU Habitats Directive and are protected as part of the Natura 2000 network. The Natura 2000 network currently covers up to 12.77 % of Belgian territory at land and 35.85 % at sea).The trends in habitats have been evaluated within the framework of the Article 17 reporting of the EU Habitats Directive (2008-2013)[7]. The overall assessment of conservation status is the following: 9 % of the Belgian habitats of European interest have a favourable conservation status*; 17% have an inadequate, 73 % a bad and 1 % an unknown status.

SPECIES

The Belgian diversity of life forms is made up of around 36,300 recorded *species* of micro-organisms, plants, fungi and animals. However, expert extrapolations suggest that the actual number should range between 52.000 and 55.000 species. Bacteria and blue-green algae are not included in these numbers. Roughly 6.000 species of bacteria are known worldwide, but this is deemed to be only a fraction of the real number. As many bacteria species are cosmopolitan, we assume that at least a few thousand of them are present in Belgium. In addition, some 300 species of blue-green algae have been found in Belgium, and many more are expected to be discovered. Hence, the total number of species living in Belgium probably amounts to over 55.000 species (Peeters *et al.*, 2003). This figure exceeds all previous estimates and indicates that at present less than two thirds of the species living in our country have been recorded. Moreover, our knowledge is unbalanced and less than 4 % of the species living in Belgium have been studied in detail. The best known are the vascular plants (flowering plants, conifers, ferns, horsetails, quillworts and clubmosses), bryophytes, macro-algae and macro-lichens, vertebrates (fish, amphibians, reptiles, birds and mammals), carabids (ground beetles), butterflies, and dragon and damselflies. They are often used to underpin and justify conservation measures and many species are well-known bio-indicators. Obviously, expanding our knowledge of the remaining 96 % of organisms would improve, refine and optimise Belgian conservation policies and actions.

Detailed monitoring and thorough comparisons of old collection and observation data with more recent ones show that many species in Belgium are in decline or have indeed already vanished from our country. It can be estimated that roughly between 20 % and 70 % of the species per main group of organism are threatened, depending on the group and the region of the country. The trends in the species listed in the EU Habitats Directive have been evaluated within the framework of the Article 17 reporting of the Habitats Directive for the period 2008-2013[8]. The overall results for the species of European interest

show that 43 % have a bad conservation status, 26 % an inadequate status and 19 % a favourable status. For 12 % of the species there is not enough information.

Although biodiversity offers a broad range of goods and services, human activities are the main reasons for its loss. A third of plant and animal species in Belgium are under threat. Today, dozens of plant and animal species in our country are only known from less than five populations and are therefore in critical danger. Many hundreds, probably thousands, of species are at risk in Belgium (Peeters *et al.*, 2003; Dumortier *et al.*, 2005; CEEW, 2005).

The most important processes that threaten the country's biodiversity are briefly described in the next section. The pressures on biodiversity are similar throughout the country, although they vary in intensity between the Regions.

For a comprehensive panorama of the status and trends of biodiversity in Belgium (including prokaryotic, fungal, botanical and zoological diversity) we refer you to the book "Biodiversity in Belgium, a country study" (Peeters *et al.*, 2003[9]), which also addresses the most important and protected ecosystems in our country. More detailed and more precise information is available for each region of Belgium and the North Sea. For

Percentage of threatened species, by region (last evaluation available in 2011)

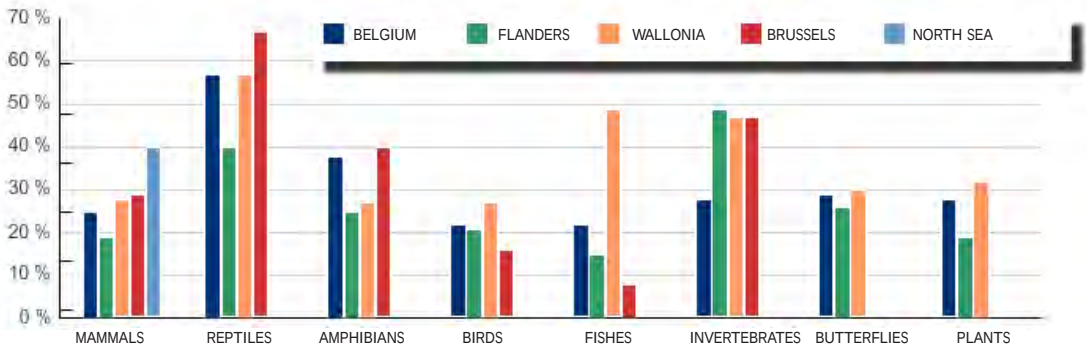


Figure 2. Species status in Belgium, Flanders, Wallonia, Brussels and the Belgian part of the North Sea in 2011. (Source: Statistics Belgium - http://statbel.fgov.be/fr/statistiques/chiffres/environnement/diversite_biologique/).

[8] See also: http://cdr.eionet.europa.eu/be/eu/art17/envucdy2q

[9] An executive summary of this book is available online in French and Dutch: "La biodiversité en Belgique: un aperçu" / "Biodiversiteit in België: een overzicht" (Peeters *et al.*, 2013). http://www.sciencesnaturelles.be/institute/structure/biodiv/biodiversity/treasures/pdf/bibke_fr.pdf (in French), http://www.natuurwetenschappen.be/institute/structure/biodiv/biodiversity/treasures/pdf/bibke_nl.pdf (in Dutch)

all of them, nature and environment reports are compiled using European headline biodiversity indicators. The Environmental Outlook for Wallonia 2010[10] and the "Key environmental indicators for Wallonia in 2012"[11], the "Rapport Nature 2012"[12](Nature Report of the Brussels-Capital Region) and the "Natuurrapport"[13] ("Nature Report", abbreviated NARA 2009, Dumortier *et al.*, 2009) provide up-to-date data for the three regions.

GENETIC DIVERSITY AND *EX SITU* CONSERVATION*

No comprehensive overview of genetic resources in Belgium has been conducted so far and ever more data are becoming available with the setting up of new research programmes in the area of cryobanks* and *ex situ* collections. The status of conservation of genetic diversity of crops and livestock, and that of harvested species of trees, fishes, micro-organisms and wildlife are addressed by different programmes in Belgium. Our zoos, botanic gardens and universities coordinate or participate in several international programmes for *ex situ* conservation, such as breeding programmes that aim at the reintroduction of endangered species worldwide. An overview of these programmes and the species involved is available in the Third National Report to the CBD (Peeters, 2005). A first report on animal genetic resources was submitted to the FAO in 2004 within the framework of the first State of the World's Animal Genetic Resources (Massart, 2004).

I.4. Threats to biodiversity

Although we depend on biodiversity for our survival and well-being, causes of biodiversity loss are mostly human-induced, arising as a secondary result of activities in sectors such as agriculture, forestry, fisheries, water supply, transportation, urban development, tourism, or energy. Combinations of these activities generate processes that threaten biodiversity, such as habitat destruction and fragmentation, pollution, overexploitation, the spread of invasive alien species, physical pollution by chemicals or through noise perturbation, the longer term changes to climate that result from various atmospheric emissions, etc. Figure 2 illustrates percentages of species threatened in 6 important classes.

The threats described below are not listed in order of importance. All these processes cause significant damage to biodiversity and their effects are cumulative.

Land conversion, whether for urban, industrial, agricultural, transport or tourism purposes, is undoubtedly the main cause of biodiversity loss in Belgium. It results in the destruction, degradation and fragmentation of all habitat types.

Pollution, reducing the quality of the environment and leading to phenomena such as eutrophication, acidification, soil degradation, and noise perturbation, is considered as the second main threat to biodiversity in our country. In Flanders, Brussels and the marine area, changes in environmental quality due to eutrophication put serious pressure on the fauna and flora. This problem is probably less acute in Wallonia, but pollution (including eutrophication) is nevertheless considered to be the second threat to biodiversity in the Region.

The direct and indirect overexploitation (*i.e.* over-use or over-harvesting mainly for food) of natural resources leads to population decline and species extinction. Groundwater pumping leads to desiccation of wetlands and disappearance of related fauna and flora. Over-fishing of commercial fish stocks (cod, sole and plaice) is a sad reality in the North Sea. The fishing activities also lead to bycatches, putting a heavy pressure on other species not intentionally fished such as the harbour porpoise. Sea-bottom habitats and their biodiversity are under severe pressure from beam trawling, the most common fishing practice in Belgian marine waters. Overall fishing activities have resulted in a sharp decline in long-living and slowly reproducing

[10] See: http://etat.environnement.wallonie.be/index.php?page=environmental-outlook-2010

[11] See: http://etat.environnement.wallonie.be/index.php?page=key-environmental-indicators-for-wallonia-2012

[12] See: http://documentation.bruxellesenvironnement.be/documents/NARABRU_20120910_FR_150dpi.pdf (in French) and http://documentatie.leefmilieubrussel.be/documents/NARABRU_20121004_NL_150dpi.PDF (in Flemish).

[13] See: http://www.inbo.be/files/bibliotheek/26/185826.pdf

species such as rays and sharks and many habitat-structuring species like oysters and other large invertebrates.

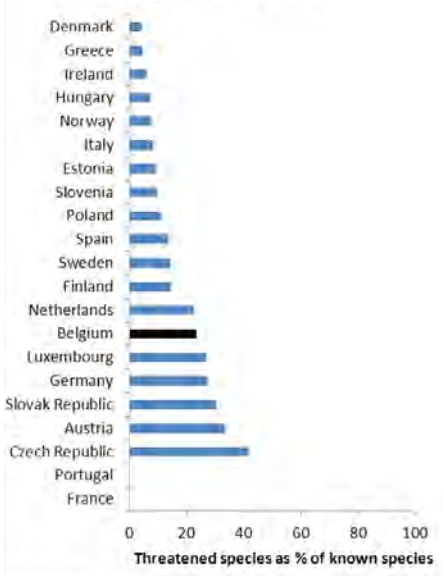
The increasing number of invasive alien species is an important threat in Belgium. In the Belgian coastal waters, invasive alien species constitute a predominant proportion of the marine fauna. They compete with native species, change the original habitat and significantly alter the overall composition and abundance of species. Brussels is a major entry point for alien species due to the concentration of transport activities and contact possibilities. Besides their out-competing potential, invasive alien species can also have an impact on agriculture, economy and public health.

Climate change is not only at the origin of outbreaks of some invasive alien species, pests and diseases, but it also constitutes a direct threat to biodiversity by disrupting ecological relations, unbalancing ecosystem functioning, causing disturbance to the lifecycle of some species (birds among others), and the migration of species. The presence and number of warm-temperate species have been increasing over the past decades, including in the North Sea (among others zooplankton, insects, spiders, fish, birds). New Southern dragonfly species were among the first reported to breed in Belgium. The survival of different bird species wintering in Europe has increased. The positive effects of temperature increase on vegetation growth (growing season has increased by 10 days between 1962 and 1995) are projected to be counteracted by an increased risk of water shortage which would adversely affect vegetation (EEA, 2004).

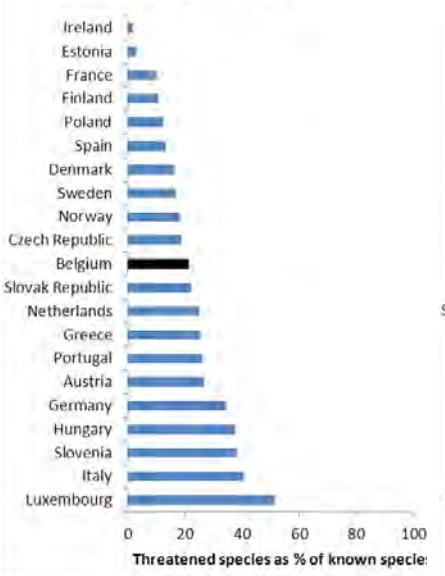
Public authorities and Belgian household consumption and production patterns have a significant impact on the environment and on biodiversity. Our current way of life, consumption and production patterns centred on growth and competitiveness exert major pressures on biodiversity. It is crucial to evolve towards sustainable production, consumption, products and services, land use and mobility patterns.Other causes of pressure on biodiversity are the growing recreational pressure on green areas (mainly in Brussels) and the extraction of sand and gravel in our marine waters and some river systems. Some threats are methodological or institutional, such as the lack of ecological and taxonomical knowledge on various aspects of biodiversity, and the fragmentation of competences in Belgium hampering early action and coordinated initiatives.

Biodiversity is not distributed evenly on earth. Belgium mainly has an impact on biodiversity abroad, either indirectly through the pollution originating from our country, or directly through its importations or projects and development supported or generated by Belgian private or public actors abroad, for example various industrial players and tourism.

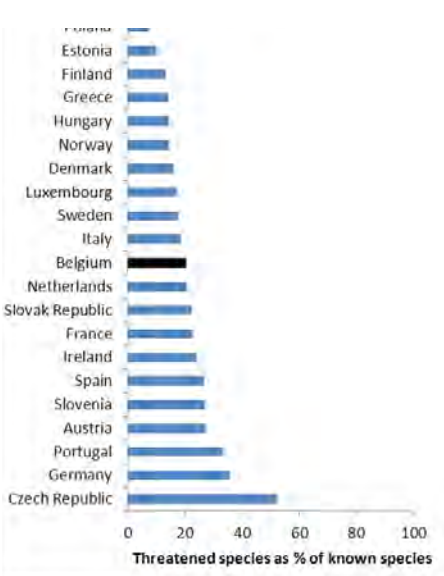
VASCULAR PLANTS



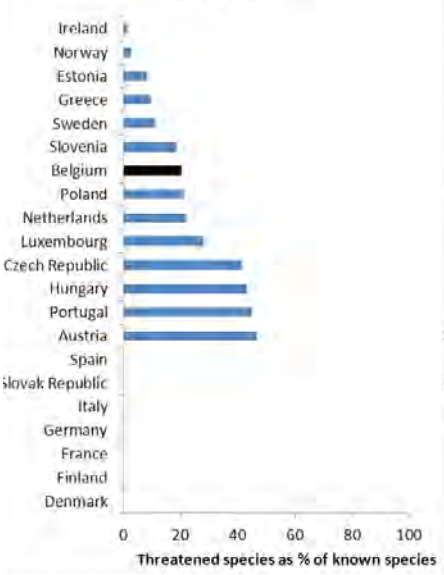
MAMMALS



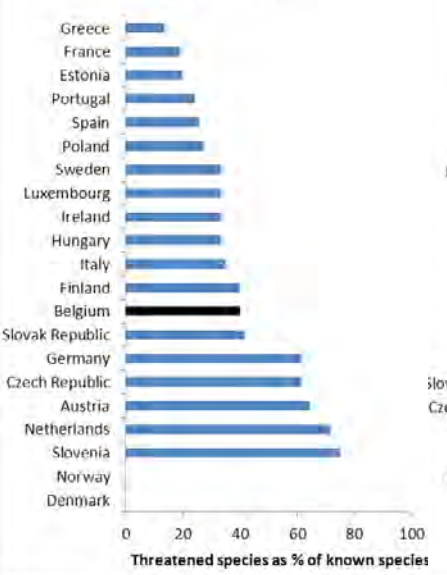
BIRDS



FISHES



REPTILES



AMPHIBIANS

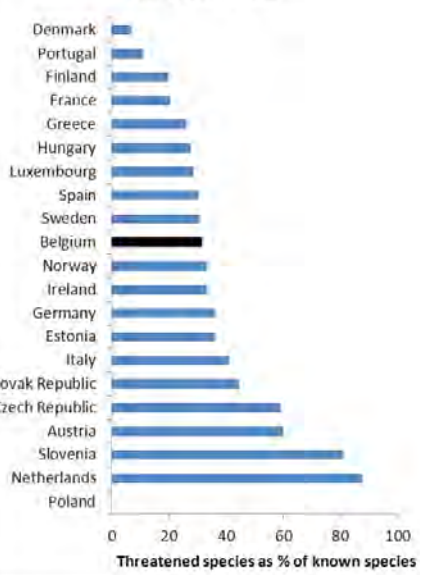
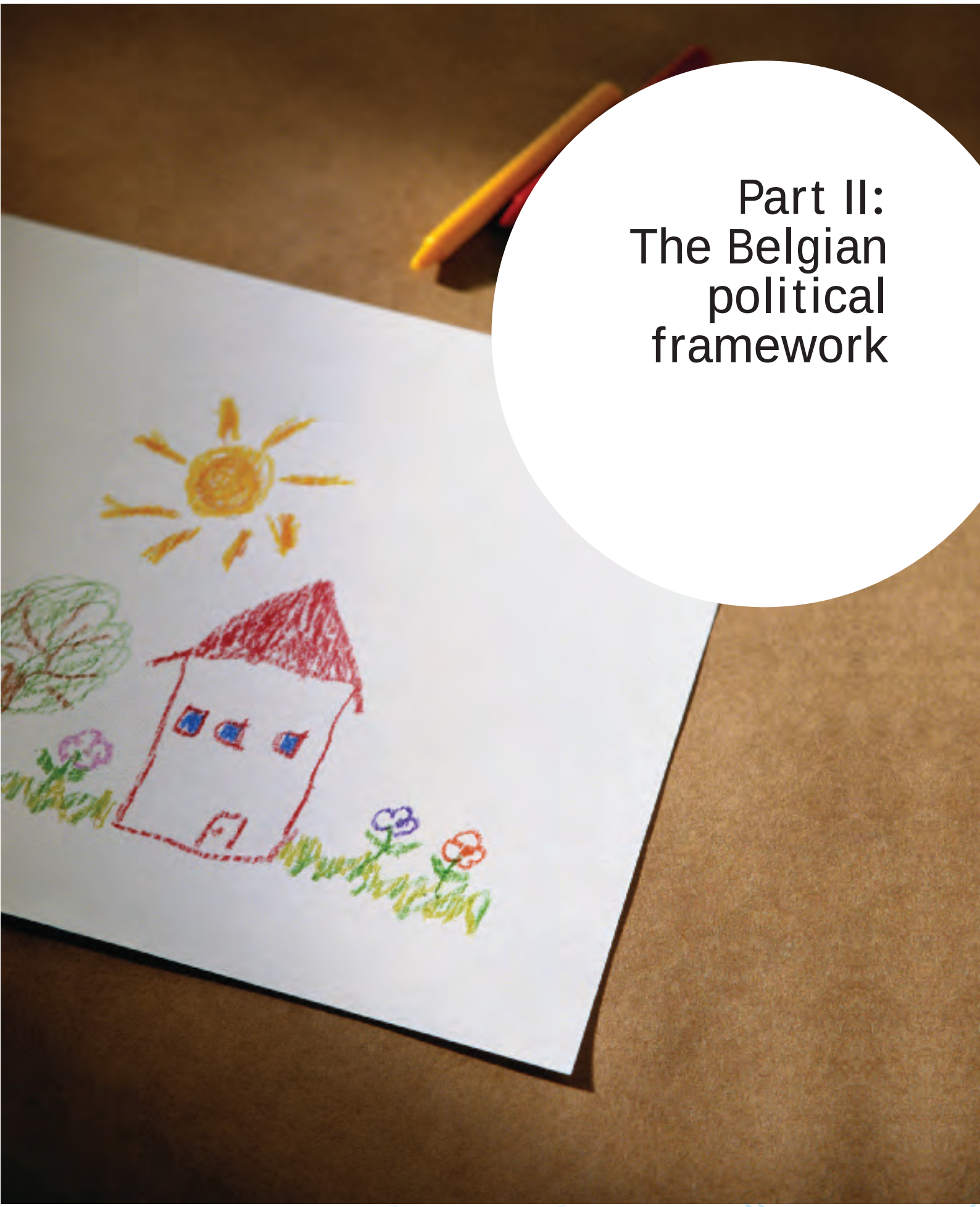


Figure 3. Percentages of threatened species in Belgium and other European countries among vascular plants, mammals, birds, fish, amphibians and reptiles (source: OECD (2012), "Threatened species", OECD Environment Statistics (database). doi: 10.1787/data-00605-en (accessed on 23 September 2013). [14]

[14] See: http://stats.oecd.org/



Part II: The Belgian political framework

II.1. International environmental agreements ratified by Belgium

Belgium has signed up to a range of legally binding agreements that demonstrate its willingness to protect biodiversity and its commitment to doing this.

The Convention on Biological Diversity (CBD) is the first international instrument to target biodiversity in a global and comprehensive context[15]. Its three objectives are (1) *the conservation of biodiversity,* (2) *the sustainable use of its components* and (3) *the fair and equitable sharing of the benefits arising out of the utilisation of genetic resource*s. The CBD is recognised as an overarching instrument to address biodiversity issues. It is a framework convention that provides overall goals and policies. Given its broad scope, the CBD acts as an umbrella for several more focused international and European conventions and agreements. For this reason, the present Strategy has been primarily centred on the CBD and related decisions taken by the Conference of the Parties (COP), while also taking into account other relevant biodiversity-related international agreements.

Appendix 2 gives more information on international agreements directly relevant for biodiversity.

II.2. Competent authorities in Belgium

Belgium has evolved into a Federal state. There are nowadays three complementary levels of government authorities: the Federal Government, the Regional Governments (the Flemish Region, the Brussels-Capital Region and the Walloon Region) and the Communities (the French, the Flemish and the German-speaking Communities), each with their own parliament and government. For more information, an overview of the main Belgian actors is given in Appendix 1.

Belgium's Federal Government, Communities and Regions are equal from the legal viewpoint, but have powers and competences in different fields.

As the Regions have authority in territorial matters including the environment and nature conservation, implementation of nature and biodiversity conservation measures within Belgium is therefore essentially a Regional competence. The Federal level is involved in the external dimension of the Biodiversity agreements and ensures the coordination of the preparation of Belgian positions at the international level. The Federal level has specific environmental competences (CITES, trade of non-indigenous species, product standards) and other competences related to the environment and biodiversity (development cooperation, finance, economy etc.) at its disposal as well as action levers (public procurements, taxation, etc.). For North Sea matters including the environment, the competent authority is the Federal Government, while for fisheries the competence lies with the Flemish Region. The Communities are in charge of culture and education, but the Regions and the Federal level can also play an important role in raising public awareness in their own fields of competence.

The distribution of competences in Belgium and its implication for biodiversity issues are summarised in table 2.

II.3. Place of the Strategy in the political context of Belgium

The Regions and the Federal Government have developed biodiversity strategies and/or plans and numerous actions have already been undertaken. The National Biodiversity Strategy should therefore be considered as a framework document that mainly builds on these existing plans. It gives strategic political orientation in order to improve implementation of biodiversity commitments as well as create more coherence, fill gaps where initiatives

[15] Belgium signed the Convention on 5 June 1992 in Rio de Janeiro and ratified it on 22 November 1996.

Distribution of competences	General description	Competences[16]	Main links with biodiversity issues
Federal Government	Powers connected with "common heritage" and public interest in the broadest sense	Public finances, defence, Federal aspects of economic policy and energy, the federal police, justice, foreign affairs and development aid, science policy, substantial parts of public health and home affairs, social affairs, social security (unemployment, pensions, child benefit, health insurance), monetary policy, prices and incomes policy, customs, protection of savings, nuclear energy, State-owned enterprises, Federal aspects of the environment, protection of the North Sea including marine areas, obligations of Belgium to the international institutions including the European Union and NATO. The Federal state is also competent for the fields that are not expressly competences of the Regions or Communities.	Coordination of Belgian positions at the international level, access and benefit sharing, integration into sectoral policies, scientific and technical cooperation in its fields of competence, research and education in Federal institutions, importation - exportation and transit of non-indigenous species (including CITES), biotechnology (for example field trials, deliberate release, import and export of GMOs), conditions for putting products on the market, conservation and sustainable use of biodiversity in territories of Federal competence, *ex situ* conservation for instance in Federal scientific institutions, exchange of information and public awareness in fields of competence, support to developing countries, for example for the implementation of the CBD and other MEAs.
Regional Governments	Powers in fields that are connected with their region or territory in the broadest sense of the term	Economic policy, employment, agriculture, water policy, housing, public works, energy, transport (except Belgian Railways), the environment, nature conservation (including forests), town and country planning, rural renewal, the regional aspect of credit policy and foreign trade, supervision of the provinces, communes and intercommunal utility companies. Also powers relating to scientific research, development aid, and international relations in these fields.	Measures for conservation and sustainable use within Belgium, inventory and monitoring, *in* and *ex situ* conservation, applied research, scientific and technical cooperation in fields of competence, incentive measures, environmental impact assessment, information exchange, input for Belgian positions at international level, integration into sectoral policies, authorisations for limited use of GMOs.
Community Governments	Powers of the Communities are based on the concept of "language" and language is "dependent on the individual"	Culture (theatres, libraries, audiovisual media, etc.), education, the use of languages, matters relating to the individual that concern on the one hand health policy (curative and preventive medicine) and on the other hand assistance to individuals (protection of youth, social welfare, aid to families, immigrant assistance services, etc.). Also powers relating to scientific research, development aid, and international relations in those fields	Education, public awareness, fundamental research, scientific and technical cooperation in fields of competence.

Table 2. The distribution of competences in Belgium and its implication for biodiversity issues.

[16] Based on information provided on the Belgian Federal portal (http://www.belgium.be).

are not implemented to their full potential or fail to achieve desired objectives and optimise integration of biodiversity concern at the national and international levels. Its overarching goal is to reach the target of halting the loss of biodiversity by 2020.

The different plans and programmes developed by the Regional and Federal Governments are briefly described below.

THE FLEMISH REGION

The **Flemish Environmental Policy Plan 2011-2015**[17]**,** abbreviated MINA-4, was adopted by the Flemish Government on 27 May 2011 and outlines the environmental policy that must be carried out by the Flemish Region, the provinces and the local authorities. An environmental policy plan is drawn up every 5 years as based on the General Environmental Policy Provisions Decree of the Flemish Government (GEPPD, 1995). The Environmental Policy Plan 2011-2015 succeeds the MINA plan 3(+), which ended in 2010. The most important principle of the successive MINA plans is consistency. The environmental policy plan is not an isolated effort: it is based on documents such as the environmental and nature reports. This plan is followed up and refined in the environmental programmes.

The plan contains eight challenges which guide the environmental and energy policy in the long term, one of which is “Conserving biodiversity and ecosystem integrity”. In every theme there is a description of the environmental problems, the recent trends and the objectives linked to the necessary measures and projects.

The objective of the Flemish nature policy is to conserve, restore and strengthen the biodiversity within species, between species and of ecosystems. The following short-term (within plan period) operational objectives are mentioned:

- By 2020, sufficient habitat will have been established, re-designated, improved or demarcated to achieve 70 % of the conservation objectives of the species and habitats to be protected in Europe.

- By 2015, the condition of endangered and protected groups of species will have improved.

- By 2015, more quality nature under conservation management will have been achieved.

- By 2020, the forested area will have been extended and its quality improved.

Besides the overall environment plan specific objectives, targets and actions for nature, forests and green spaces are described in the yearly Operational Plan of the Agency for Nature and Forests. In this plan focus is given to Natura 2000, green spaces in and around cities, management and public access of nature and forest areas

The Flemish Government publishes every year an environmental year programme that describes specific actions for the implementation of the strategic choices of the plan.

The plan also includes the action for the 2-yearly Nature Report published by the Institute of Nature Conservation, describing the status and trends of biodiversity and an evaluation of the implementation of the set objectives; and the 2-yearly Environment Report that is either a Thematic (including

[17] See: http://www.lne.be/themas/beleid/mina4/leeswijzer/publicaties/Milieubeleidsplan2011-2015.pdf and http://www.lne.be/themas/beleid/mina4/leeswijzer/publicaties/boek_EN_-voor_website-%20def.pdf (in English).

[8] The complete Flemish Sustainable Development Strategy can be accessed in Dutch via the website http://do.vlaanderen.be/sites/default/files/VSDO2_0.pdf. For a brochure in English, see: http://do.vlaanderen.be/sites/default/files/Vision2050_Flemish%20sustainable%20development%20strategy%20brochure_1.pdf

biodiversity) or a Scenario-based evaluation. Both reports deliver information for review of policies. The evaluation of the status of biodiversity in Flanders and the follow-up of the implementation of the environmental policy plan are carried out by means of 21 biodiversity indicators, which are closely linked to the SEBI European biodiversity indicators. The indicators are published and regularly updated on the biodiversity indicators website (www.biodiversityindicators.be), on the website of the plan (http://www.milieubeleidsplan.be) and on the environment indicators website (www.milieurapport.be). The second Flemish Sustainable Development Strategy 2010-2014 (VSDO)[18] was approved by the Flemish Government on 29 April 2011 as a successor to the first strategy of 2006. The strategy, constructed around a central vision for 2050, provides the framework for Flemish sustainable development policy.

THE BRUSSELS-CAPITAL REGION

Priority actions for the environment and green spaces in the Brussels-Capital Region are highlighted in the Second Regional Development Plan, abbreviated PRD-GewOP (2002). This general framework is complemented by a number of more specific plans and programmes (for instance the management plan for the Sonian Forest), which have as objectives the protection and development of biodiversity by a management that is more respectful of nature and its cycles.

The **Green Network Programme** intends to gradually build a network of green spaces (parks, woods, forests and gardens) linked together by green corridors (green avenues, road and railway embankments, etc). The programme emphasises the cohesion and continuity of green spaces and semi-natural areas in the urban environment. Its purpose is to integrate the scenic, aesthetic, social, recreational and ecological functions of green spaces and develop their interconnectivity. One of the prime objectives of the Green Network Programme is to increase biodiversity.

The **Blue Network Programme** aims to have an integrated, durable and ecologically justified management of open waterways in Brussels. The "blue network" is made up of small rivers, ponds and marshes. It is dedicated to the enhancement of natural values and biodiversity while maintaining the access of the public to the areas concerned.

A Brussels-Capital Region's Sustainable Regional Development Plan (SRPD)[19] is being elaborated. The pre-project was adopted on 26 September 2013 by the Government of the Brussels-Capital Region.

A new **coordinated regional law on nature**[20] was adopted in March 2012, consisting of 119 articles and 8 annexes, with the general aim of contributing to the conservation and sustainable use of components of biodiversity. Measures taken under this nature law are intended to:

- maintain or restore to a favourable conservation status natural habitats and species of fauna and flora of community and regional interest;

- contribute to the establishment of an ecological network in Brussels;

- contribute to the integration of biodiversity in an urban context.

This regional law requires the elaboration of a regional plan for nature, which should be adopted at the latest two years after the law comes into force (articles 6 and 8 to 11). The project of Regional Plan for Nature was adopted on 26 September 2013 by the Government of the Brussels-Capital Region.

THE WALLOON REGION

The declaration of the Walloon Regional Policy 2009-2014: "A shared energy for sustainable society, and human solidarity" aims transition to sustainable development.

The **Marshall Plan 2.Green**[21] mobilizes Wallonia and the Walloons to revitalize their economy in a sustainable development context. The Marshall Plan 2022 aims to develop a new regional development strategy that builds on the strengths of the Marshall Plan 2.Green and that innovates by also including education policies

[19] See: http://www.prdd-gpdo.be/

[20] See: http://www.bruxellesenvironnement.be/uploadedFiles/Contenu_du_site/News/Ord_Nature_Natuur_2012.website-%20def.pdf (in English).

[21] For more information, see: http://www.wallonie.be/fr/actualites/plan-marshall-2022

of the Federation Wallonia-Brussels and competences that will soon be transferred to Wallonia. It contains *i.a.* an objective of sustainable development, taking into account the rate of renewal of natural resources and the maintaining of biodiversity –as stated in the **Decree concerning the Walloon Sustainable Development Strategy** adopted by the Walloon parliament on 26 June 2013-, by continuing a transition process that mobilizes societal actors and ensures the optimal use of all types of immaterial, human, natural and financial resources and a continuous reduction in the use of non-renewable resources, while respecting the principles of efficiency, resilience, sufficiency, precaution and participation.

The **Environmental Plan for Sustainable Development** (PEDD) was adopted on 9 March 1995 by the Walloon Government. It contains a chapter devoted to the conservation of biodiversity.

The objectives for nature conservation defined in the plan are:

- The maintenance, restoration and development of potential hosts for wildlife over the whole region;
- The maintenance and restoration of natural elements of urban and rural landscapes;
- The generalisation of nature education

The administration in charge of agriculture, natural resources and the environment adopted its strategic plan for the period 2008-2013. The plan will be renewed in 2014. It contains four actions directly related to nature and biodiversity protection and foresees the elaboration of a Nature Action Plan.

Given the difficulty to realise a Nature Plan, Wallonia decided to create a progressive catalogue of concrete and realistic actions, whose implementation would bring tangible results. It was presented to the Walloon Government in July 2013, and will be submitted end 2013 for approval, after consultation with the advisory committees[22] and administrations concerned.

The **Walloon Environment Code** includes provisions concerning biodiversity; according to its first principle, the environment includes spaces, landscapes, natural resources and environment, air, soil, water, biological diversity and balance and states that the environmental policy of the region is based on the principle of preventive action. Its second principle states that the Region and other public authorities, are managers of the environment and guarantee its preservation and, if necessary, restoration. In addition, any person shall ensure the protection and contribute to the environmental protection. These requirements must be integrated into the definition and implementation of other policies in the region. The right of access to information on the environment is included in the Environment Code.

THE FEDERAL LEVEL

The first and second Federal Plans for Sustainable Development devote special attention to biodiversity[23]. The **First Federal Plan for Sustainable Development 2000-2004** mentions several strategies in the field of the conservation and the sustainable use of biodiversity and in the field of biosecurity. It refers also to national and international integration and coordination measures, to sensibilisation and to the need for scientific knowledge. This plan was the first strategic document endorsed by the federal government that referred to a biodiversity strategy and a national action plan. The **Second Federal Plan for Sustainable Development 2004-2008** (FPSD2) was adopted by the Federal Council of Ministers on 24 September 2004. Action 18 is devoted to biodiversity and actions 19 and 20 deal with forests and marine waters.

Action 18 foresees the integration of biodiversity issues into four key sectors (transport, the economy, development cooperation and research). For each sector, the Federal administrations concerned have to develop sectoral action plans. The **Federal Plan for the Sectoral Integration of Biodiversity in four key sectors** 2009-2013[24] (adopted on 27/11/2009) was drawn up in response to Action 18. The plan is also one of the Government's contributions to implementing Belgium's NBS. For each action, the plan identifies the actor responsible for implementation, a calendar of implementation as well as an implementation budget.

[22] It will be submitted to the following consultative bodies: CSWCN - the Walloon Senior Nature Conservation Council, CSVCP – the Higher Council for Towns, Cities and Provinces of the Walloon Region, CWEDD –the Walloon Council of the Environment for Sustainable Development, and CGT-General Commission for Tourism.

[23] The evolution on the implementation of the actions in the two federal plans can by consulted in the yearly reports of the members of the Interdepartmental Commission for Sustainable Development: (http://www.icdo.be/).

Action 19 deals with sustainable forest management and illegal logging, with the aim, among others, of enhancing sustainable forest management in countries exporting timber to Belgium, in order to bring about a decrease in the importation of illegally logged timber by Belgium and to encourage the acquisition of certified wood in Belgium.

Action 20 foresees the integrated management of the North Sea to better manage sea areas of high value for biodiversity and protect them against human pressure.

The FPSD2 was extended until the adoption of the next plan. A new 5-year Federal Plan for Sustainable Development is being prepared (FPSD3), which will include the long-term vision for sustainable development the government adopted in 2013, and will be based on the outcomes of the federal reports on sustainable development.

Belgium has a law on nature conservation (law of 12 July 2012 – modifying the law of 12 July 1973 on the Conservation of Nature) . This law aims to safeguard the character, diversity and integrity of the natural environment by measures to protect the flora and the fauna, their communities and their habitats, as well as the soil, the subsoil, the water and the air, including through (regulatory) measures related to the import, export and transit of non-indigenous plant species and non-indigenous animal species and their remains.

The law of 27 December 2012 is an act with various provisions for animal welfare, CITES, animal health and the protection of consumers health. It highlights measures to be taken in order to implement the Convention on International Trade in Endangered Species of wild fauna and flora (CITES) and the Appendices, decided on 3 March 1973 in Washington, as well as the Amendment to the Convention, adopted on 22 June 1979 in Bonn.

Belgium has a law on the protection of the marine environment in the areas under Belgian jurisdiction (law of 20 January 1999). The law's main aim is to conserve the characteristics, biodiversity and integrity of the marine environment through measures for its protection and, if necessary, restoration. Specific actions are directed at combating pollution, protection of species and habitats (designation of protected zones for the conservation of species and habitats), etc. The sustainable management of human activities at sea falls under the umbrella of a **"Master Plan" for the North Sea**. In the setting up of the planning and management measures for human activities at sea, stakeholder involvement plays a central role. This political option has the advantage of closely involving the different users of the sea and ensuring a "buy in" of the overall process.

In Belgium, the Marine Environment Service of the Federal Public Service for Public Health, Food Chain Safety and Environment is responsible for supporting the national implementation of the EU Marine Strategy Framework Directive (MSFD - 2008/56/EC). The Belgian transposition of the Marine Strategy Framework Directive took effect in the Royal Decree of 23/06/2010 concerning the marine strategy for the Belgian sea grounds. The definition of good ecological status and environmental objectives for the Belgian marine waters was defined in 2012, in response to Articles 9 and 10 of the MSFD. For each of the 11 descriptors defined by the Directive, among which descriptor 1 on biodiversity and descriptor 2 on exotic species, indicators and objectives are defined to achieve the good ecological status.

On 5 October 2012, the Council of Ministers approved the launch of the first phase (2012-2017) of the recurrent framework programme for research, **BRAIN-be (Belgian Research Action through Interdisciplinary Networks)**. Via the funding of research projects based on scientific excellence and European and international anchorage, this framework programme caters for the federal departments' need for scientific knowledge and supports the scientific potential of the Federal Scientific Institutions (FSIs 1).

The framework programme is structured around 6 thematic areas:

- Ecosystems, biodiversity, evolution
- Geosystems, universe and climate
- Cultural, historical and scientific heritage
- Federal public strategies
- Major societal challenges
- Management of collections

[24] See: http://www.health.belgium.be/internet2Prd/groups/public/@public/@mixednews/documents/ie2divers/17964756_fr.pdf

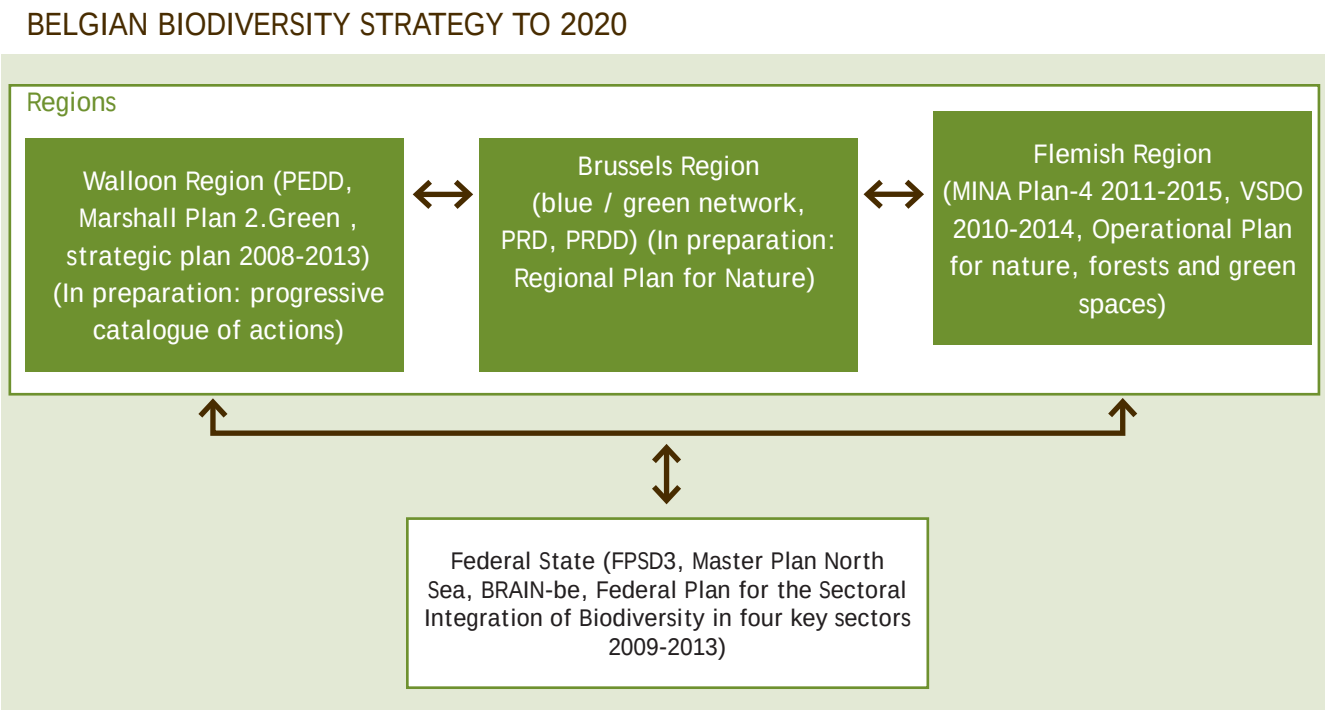


Figure 4. Political framework for biodiversity in Belgium: Interactions between existing adopted plans related to biodiversity at Regional and Federal levels.

Part III: Guiding principles, concepts and approaches

The principles, concepts and approaches mentioned here, are seen as the most relevant guiding principles for the interpretation and the implementation of the Strategy.

1. PRINCIPLE OF PREVENTIVE ACTION

Conservation of biodiversity is better achieved by preventing environmental harm than by endeavouring to remedy or compensate for such harm.

Example:
when there is a reasonable alternative for the localisation of a project threatening a high natural value site, this alternative should be chosen instead of compensating for the destruction of the site.

2. PRECAUTIONARY PRINCIPLE

Where there is a threat of significant reduction or loss of biodiversity, lack of complete scientific certainty should not be used as a reason for postponing cost-effective measures to avoid or minimise such a threat.

Example:
There is as yet no scientific consensus on the causes and consequences of global warming. Nevertheless most countries want to start taking measures now (Convention on Climate Change and Kyoto Protocol) to reduce the emission of greenhouse gases.

3. POLLUTER PAYS PRINCIPLE

Those who cause damage to biodiversity should bear the costs of preventing it, removing it or reducing it.

Example:
Many municipalities in Belgium apply the DIFTAR (**dif**ferentiated **tar**iff for waste removal) system, based on the Polluter Pays principle. With this system, citizens pay on the basis of the amount of waste produced.

4. PUBLIC PARTICIPATION AND PUBLIC ACCESS TO INFORMATION AND JUSTICE IN ENVIRONMENTAL MATTERS

The public should have access to environmental information and the right to participate in the environmental decision-making process and to have that participation taken into account in the decision-making process. Effective judicial mechanisms should be accessible to the public, including organisations, so that it can challenge acts and omissions by private persons and public authorities that contravene provisions of law relating to the environment.

These principles are central to the UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus, 1998), to which Belgium is a Party.

A participative environment policy must ensure that a balanced “bottom up” / “top down” environment policy is developed. The use of participatory techniques (Vandenabeele & Goorden, 2004) is recommended.

“Public” must be understood in the broad sense; it includes individuals and their associations, organisations or groups as well as governments, regional and local authorities and professionals. Participation in environmental policy making and implementation must be open to the public in general, even where they are not directly or legally involved.

Examples:
Information sessions and website access have been organised by the Regions to inform the public about the objectives and implications of Natura 2000.
Information sessions and a public consultation were organised to inform and consult the public during the elaboration of the Second Federal Plan for Sustainable Development.

5. GOOD GOVERNANCE

Governance is the process of decision-making and the process by which decisions are implemented. Good governance has eight major characteristics[25]. It is participatory, consensus-oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive and follows the rule of law. It ensures that corruption is minimised, the views of minorities are taken into account and that the voices of the most vulnerable in society are heard in decision-making. It is also responsive to the present and future needs of society.

6. SECTORAL INTEGRATION

Biodiversity conservation and sustainable use concerns are taken into account in relevant decision-making processes in sectoral or cross-sectoral development policies, including the legislative process, plans, programmes and individual decisions.

Examples:

The Second Federal Plan for Sustainable Development foresees the integration of all aspects of biodiversity into four action plans within four major Federal sectors: the economy, development cooperation, transport and science policy.

The Flemish Environment and Nature Policy Plan 2003-2007 includes a specific chapter on the integration of environmental issues including biodiversity into four sectors: spatial planning, agriculture, mobility, economy and energy.

7. ECOSYSTEM APPROACH

The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. An ecosystem approach is based on the application of appropriate scientific methodologies focused on levels of biological organisation, which encompass the essential structure, processes, functions and interaction between organisms and their environment. It recognises that humans, with their cultural diversity, are an integral component of many ecosystems. The ecosystem approach requires adaptive management (CBD Decision V/6)

Example:

The BALANS project (2002-2006) stands for "Balancing impacts of human activities in the Belgian part of the North Sea". It brings together five partners (the Maritime Institute, the Sea Fisheries Department of the Flemish Community, Laboratory Ecotoxicology and the Section of Marine Biology of the University of Ghent, and the Management Unit of the North Sea Mathematical Models (MUMM) in an attempt to develop a conceptual policy model for fisheries and sand and gravel extraction, in which ecological, economic and social indicators will be balanced in an integrated approach. In its operational phase, the model will help policy-makers take informed decisions in order to achieve a sustainable management of the North Sea[26].

8. ECOLOGICAL NETWORKS

An ecological network is a coherent system of representative core areas, corridors, stepping stones and buffer zones designed and managed in such a way as to preserve biodiversity, maintain or restore ecosystem services* and allow a suitable and sustainable use of natural resources through interconnectivity of its physical elements with the landscape and existing social/institutional structures. Protected areas usually form the core areas of ecological networks although they can also consist of areas that are under management agreements with farmers or other land use sectors. National and regional systems of protected areas are integrated into a global network of protected areas, meaning that such multi-country coordination mechanisms as are appropriate to supporting the establishment and effective long-term management of such a network are established (based on SBSTTA 9).

9. SUBSIDIARITY PRINCIPLE

The principle of subsidiarity regulates the exercise of powers. According to this principle, matters should be handled by the lowest appropriate level (local, regional or national) that are best placed to take efficient and effective action.

[25] Source: http://www.unescap.org/huset/gg/governance.htm

[26] http://www.vliz.be/projects/balans/

Example:
According to the subsidiarity principle, the European Directive on Strategic Environment Assessment provides for a framework of broad principles for environmental assessment systems and leaves the details to Member States.

10. COMPENSATION PRINCIPLE

If, in spite of a negative assessment of the implications for biodiversity and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, public authorities should take all compensatory measures necessary to ensure that no net loss* of biodiversity will occur when the plan or project is implemented or executed.

Part IV: The updated strategy to 2020

IV.1. Our ambition

This National Biodiversity Strategy (NBS) is aimed at ensuring a more effective and coherent implementation of the objectives of the Convention on Biological Diversity (CBD), while taking the commitments under the other biodiversity agreements into account. The three objectives of the CBD are: the conservation of biodiversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources, through, among other things, appropriate access to genetic resources, transfer of relevant technologies, and funding.

While revising the NBS it appeared important to frame its objectives into a vision for the future because we want to halt the decline of biodiversity for the benefit of present and future generations. To help communicate the aim of the SNB, a general objective achievable by 2020 is adopted.

VISION TO 2050

By 2050, our Biodiversity and the ecosystem services it provides - our natural capital - are valued, conserved, appropriately restored and wisely used for their intrinsic value and for their essential contribution to human well-being and economic prosperity, and so that catastrophic changes caused by the loss of biodiversity are avoided.

GENERAL OBJECTIVE OF THE STRATEGY UNTIL 2020

The general objective of the Strategy is to contribute nationally and internationally to the achievement of the 2020 target of halting the loss of biodiversity and the degradation of ecosystem services, and restoring them in so far as feasible, while stepping up our contribution to averting global biodiversity loss.

To achieve the general objective, the current Belgian and EU legislative framework on biodiversity is fully implemented and enforced, pressures on biodiversity are reduced, ecosystems are restored, biological resources are used sustainably and benefits arising from the utilization of genetic resources are shared in a fair and equitable manner, relevant technologies are transferred, adequate financial resources are provided, capacities are enhanced, biodiversity issues and values are mainstreamed, appropriate policies are effectively implemented, and decision-making is based on sound science and the precautionary approach.

Ensuring that, by 2020, ecosystems are resilient and continue to provide essential services will secure the planet's variety of life, and contribute to human well-being and poverty eradication.

IV.2. Strategic and operational objectives

In order to achieve the general objective of this Strategy, strategic objectives and operational objectives have been identified.

Most of the 15 strategic objectives identified in Belgium's National Biodiversity Strategy 2006-2016[27] remain unchanged as they encompass the necessary steps towards the 2020 Target. They aim to achieve the general objective of the Strategy and to contribute to its vision. Thus, their lifetime was extended until 2020 as approved by the Interministerial Conference for the Environment in March 2012. One additional strategic objective has been added to promote the commitment of the provinces, cities and other local authorities (objective 14). The one on promoting sustainable forest management in other countries has been merged with objectives 11 and 13.

The strategic objectives cover both biodiversity in Belgium and the impact of our activities in the rest of the world, including through international cooperation and our economic activities.They are listed in ascending order of their international dimension. All the strategic objectives are considered to have high priority. There is no link between the place of an objective and its importance/urgency with regard to another. Each body will have the power to determine the degree of priority given to the different strategic objectives identified in this document. Some specific

[27] The strategy 2006-2016 is available online http://www.biodiv.be/implementation/docs/stratactplan

issues (such as GMOs, biofuels, climate change, invasive alien species) are dealt with horizontally through the different objectives of the Strategy.

Eight operational objectives were added in 2013 while others were only slightly amended. The updated strategy spells out a range of **85 operational objectives.** They will help the stakeholders and competent regional and federal authorities to take priority actions in terms of building a future of living in harmony with nature. **All operational objectives have to be implemented by 2020 at the latest, unless otherwise stated.**

Where necessary, implementation measures are taken in a coordinated way by the Regional and Federal Governments and other relevant actors. Examples of achievements between 2006 and the end of 2011 are available in the mid-term state of play[28] of the implementation of the Strategy. When implementing the Strategy, the federal and regional authorities pay specific attention to stakeholders' information, involvement and participation. This implies consultation and collaboration between the different stakeholders, which will increase the support for and thus give a boost to the implementation of the Strategy. Collaboration and partnerships with stakeholders on concrete projects associated with the objectives of the strategy also help raise their interest (e.g. legal framework on thematic issues, common Life+ project, common studies, common CEPA activities towards stakeholders and the public). **We want to inspire stakeholder action at all levels**.

A non-exhaustive list of the main stakeholders concerned by the implementation is mentioned for each strategic objective. The institutional actors for biodiversity in Belgium are presented in annexe 1.

Belgium's National Biodiversity Strategy is not only the Belgian answer to the formal obligation under the CBD but it is also a necessary tool to confirm priority and voluntary themes and goals of and for Belgian policy-makers. It is most useful in terms of supporting the integration and the fine-tuning of the Regional and Federal action plans. It pays special attention to the need for the integration of the conservation and sustainable use of biological diversity into the different relevant sectors of society including social and economic sectors.

The updated Strategy reflects the new priorities for action that were identified as being the ones that will contribute best to the newly adopted EU Vision to 2050 and EU 2020 Target. It takes into account the new commitments made by Belgium in the field of biodiversity at international and EU level and the results of international processes such as The Economics of Ecosystems and Biodiversity (TEEB reports on mainstreaming the Economics of Nature presented at the CBD COP-10[29]) and the newly created Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES).

OBJECTIVE 1: IDENTIFY AND MONITOR PRIORITY COMPONENTS OF BIODIVERSITY IN BELGIUM

In principle, the entire wealth of biodiversity should be subject to protection. It is however not feasible to concentrate efforts on all the elements of biodiversity. The Strategy will therefore focus the efforts where they are most needed, *i.e.* on components of biodiversity that are most at risk, or could be subject to high risks in the near future. Priority components of biodiversity requiring the most urgent protective measures must be identified and their status monitored.

Priority components of biodiversity include (1) ecosystems and habitats that are unique, rare, in danger of disappearance, or that play a crucial role for priority species; (2) species that are rare, endangered, vulnerable, or that are endemic or live in specific habitats; (3) genomes and genes of particular social, scientific or economic importance; and (4) functional components of biodiversity that are essential for the provision of ecosystem services.

Adaptive management[30] is concerned with the complex and dynamic nature of ecosystems and their uses and the absence of complete knowledge of their functioning. Because circumstances change and uncertainties are inherent in all managed uses of components of biodiversity, adaptive management is able to respond to uncertainties and it contains elements of "learning-by-doing" or research

[28] http://www.biodiv.be/implementation/docs/stratactplan

[29] http://www.teebweb.org

[30] The concept is explained in document UNEP/CBD/SBSTTA/9/INF/8 (2003)

feedback. Monitoring is a key component of adaptive management.

Adequate monitoring, followed by regular reporting on status and trends of priority biodiversity components, is important. It allows adaptive management and decision-makers to develop adequate policy responses. It is also a prerequisite to communicate progress towards the 2020 targets to the public and stakeholders. Furthermore, it contributes to enhancing public awareness and participation. In order to avoid an additional reporting burden, the format of such reports should be streamlined in accordance with existing reporting obligations on biodiversity at European and CBD level.

A set of biodiversity indicators has already been adopted by the CBD to follow the implementation of the 2020 target (see box below). Several of these indicators have been tested and standardised at EU level by the European Environment Agency (set of EU headline biodiversity indicators, SEBI 2020 project) to monitor the state of biodiversity in Europe. The Member States are therefore asked to report annually to the EEA on these indicators.

Monitoring and reporting on the status of biodiversity in Belgium will need the development of suitable monitoring tools and indicators in line with the outcomes of the SEBI 2020 project (see also objective 7.3).

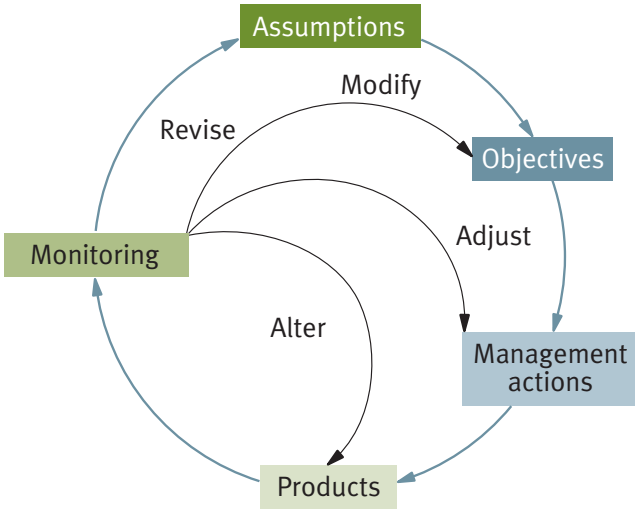


Figure 5. Feedback loop associated with adaptive management (UNEP, 2003) Figure 3. Feedback loop associated with adaptive management (UNEP, 2003)

Furthermore, Belgian authorities need to argue for an effective use of other existing European biodiversity indicators in policy on, for example, agriculture or structural funds.

The stakeholders involved in the implementation of this objective are: the federal and regional authorities, the relevant sectors (agriculture, fishery, forestry), nature conservation agencies, universities, nature conservation NGOs, the Belgian Biodiversity Research Platform and any association working towards the same goal as the NBS [31].

• CBD Instrument

To achieve a significant reduction of biodiversity loss at a global, regional and national level, the CBD adopted a revised and updated Strategic Plan for Biodiversity, including the Aichi Biodiversity Targets, for the 2011-2020 period. It aims (1) to promote the effective implementation of the Convention through a strategic approach, comprising a shared vision, a mission, and strategic goals and targets ("the Aichi Biodiversity Targets"), (2) to provide a flexible framework for the establishment of national and regional targets and for enhancing coherence in the implementation of the provisions of the Convention and the decisions of the COP, (3) to serve as a basis for the development of communication tools capable of attracting the attention of and engaging stakeholders. Five focal areas with strategic goals, sub-targets and indicators have been proposed in CBD Decision X/2: (1) the underlying causes of biodiversity loss, (2) direct pressures on biodiversity, (3) safeguarding and restoring biodiversity, (4) the continued provision of and access to ecosystem services, (5) capacity-building; the generation, use and sharing of knowledge; and access to the necessary financial and other resources.

[31] Appendix 1 provides a list of institutional biodiversity actors in Belgium.

Operational objectives

1.1 Define a common Belgian methodology for the identification and monitoring of priority components of biodiversity according to EU guidelines

So far, no methodology to identify priority elements of Belgian biodiversity is available at national level. The Regions manage biodiversity according to their own criteria and priorities. Nevertheless common standards can be developed and therefore it is useful to compare the monitoring methods of the different Regions. The methodology could consider conducting the identification of priority components of biodiversity on the basis of a bioregional approach,* deciding to choose components of biodiversity which are most at threat of disappearing, or species that are of particular importance for the functioning of vulnerable ecosystems, together with a number of flagship* species for Belgium.

Common standards for biodiversity inventories and monitoring should also be defined and applied for the evaluation of biodiversity status taking into account existing guidelines for monitoring and obligations for reporting at EU and CBD level. A short set of common indicators and evaluation criteria (cf. EU headline indicators and related indicators developed by the Regions[32]) would enable the evaluation of progress towards the 2020 target at national level and greatly help reporting to international bodies (*i.e.* the European Commission and EEA, PEBLDS, OECD, CBD, OSPAR and other conventions). The categories and criteria used by the IUCN Red List of Threatened Species could also be considered. Synthetic and cost-efficient direct and indirect indicators could be developed (for example territory fragmentation, rate of fertilisation). The monitoring system could apply the method "Pressure - State - Response" prescribed by the CBD or the "Driving forces, Pressures, States, Impacts, Responses (DPSIR) method*" adopted by the EEA.

1.2 Identify and monitor priority species, habitats, genetic and functional components of biodiversity

Once a common methodology to identify components of biodiversity that need urgent protective measures has been agreed, lists of priority habitats, species and genetic components will be drawn up. Threatened species and ecosystems should benefit from adequate long-term policy, and the restoration of degraded habitats should favour the protection of threatened and rare species as well as the re-establishment of species that had disappeared from our country. Particular attention will be paid to wetlands that are under serious threat.

From the species conservation point of view, the loss of local populations implies a loss of genetic diversity, which in turn may result in a loss of resilience to environmental change, *i.e.* the ability to offer resistance to, or recover from, natural and human-induced pressures.

Lists of most sensitive (threatened, vulnerable and rare) species and ecosystems which need particular attention (included in Natura 2000 at EU level) will be used and adapted to the Belgian context. It is also important to take the specificity of Belgian ecosystems/species into account and to identify the elements of biodiversity that are rare, particularly threatened with extinction, vulnerable or of particular importance (for ecosystem functioning; symbolic importance; cultural importance) at the Belgian level. Belgian regional red lists of threatened species already exist and could be used for this compilation of priority species. For the marine environment, a list of priority species and habitats has been developed in an international framework (OSPAR). National red lists would be very useful for example for reporting to the EU, OECD and IUCN and other organisations.

Monitoring of priority components of biodiversity (see also operational objective 7.2) is very important, as it is the key to adaptive management and for improving management policies and practices by learning from the outcomes of operational programmes.

[32] See http://www.natuurindicatoren.be

OBJECTIVE 2: INVESTIGATE AND MONITOR THE EFFECTS OF THREATENING PROCESSES AND ACTIVITIES AND THEIR CAUSES

The major processes that constitute a threat to, or are likely to have significant adverse impacts on, biodiversity are identified in part I.4. These processes and the activities impacting directly on biodiversity must be further investigated and their effects monitored through sampling and other techniques. Their causes must be identified and monitored on a regular basis (see also operational objective 7.3).

The stakeholders involved in the implementation of this objective are: the federal and regional authorities, nature conservation agencies, the Belgian Biodiversity Research Platform, universities, market actors (including business and import sectors, consumers and other members of civil society), and any association working towards the same goal as the NBS [33].

• CBD instrument

CBD indicators for communicating and assessing progress towards the 2020 target at the global level include indicators for the monitoring of threatening processes (such as trends in invasive alien species, connectivity/fragmentation of ecosystems). In CBD Decision XI/3 on monitoring progress in implementation of the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets, the Parties are invited to prioritize the application at national level of those indicators that are ready for use at global level where feasible and appropriate, and to use the flexible framework and the indicative list of indicators, inter alia in their updated national biodiversity strategies and action plans and in reporting. The parties are also encouraged to contribute to, update, verify and maintain relevant national data in regional and global data sets, as a means of optimizing and coordinating the production of indicators, and to promote the public availability of the data.

Operational objective

2.1 Investigate and monitor the effects and causes of activities and processes, including new and emerging risks, that threaten components of biodiversity in Belgium

Identifying new and emerging risks as early as possible is a precondition for early action.

Much can be done to avert loss of biodiversity if adequate information on potential threats is available. It is necessary to further investigate the impact on biodiversity of human activities and of threats arising from natural causes, as well as relations between those processes and activities in order to take the most appropriate measures to minimise their impacts. Particular attention must be paid to the potential risks to biodiversity posed by the development and use of new technologies, their processes and products. For instance, attention should be paid to the potentially negative impacts of nanotechnologies on biodiversity, to the use of GMOs in agriculture, forestry and fishery - detailed in Objective 4 - as well as other GMOs developed as bioindicators or bioremediators, GM cattle, domestic animals, decorative plants, or GM microorganisms and viruses used as pest regulators in agriculture, etc.). Among their potential negative impacts: the spread of invasive alien species, the threat to non-target organisms by GMOs producing specific pesticides, unforeseen interactions with biodiversity, or the ecosystem disequilibrium caused by the large-scale diffusion of such organisms. The development of new, not yet marketed genetic transformation techniques, like synthetic biology, should be carefully accompanied by, a. o., thorough EIA procedures and the elaboration and implementation of adequate regulations by the community involved in biodiversity preservation. The biodiversity research community has a role to play in identifying emerging issues and delivering relevant biodiversity policy information.

When considering the various potential impacts of these emerging risks, attention should be paid not only to impacts on specific components of biodiversity but also to community structures and global ecosystem functions and services and to the links between biodiversity and health, in particular to risks to health.

Appropriate monitoring will involve taking physical

[33] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

measurements/observations of the chosen biodiversity and activities indicators year on year for comparison with the current status of biodiversity and pressures from threatening activities. This comparison together with a study of the causes of threatening processes will be most useful for an adaptive management of threatening activities. Key questions to be addressed in the monitoring process can be based on the proposed indicator framework for the Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets (CDB Decision XI/3) and the EU headline indicators to 2020 developed by the European Environment Agency (SEBI 2020).

2.2 Investigate and monitor the effects of climate change on biodiversity and ecosystem services

As highlighted in Part I, some effects of climate change on biodiversity are already obvious. They are likely to increase further because of the projected rise in temperature. Climate change constitutes a direct threat to biodiversity and the provision of ecosystem services as it disrupts ecological relations, unbalancing ecosystem functioning; it increases the impact of invasive alien species, causes disturbance to the lifecycle of some species and migration or disappearance of others, and can affect specific ecosystem services such as water regulation, nutrient cycling, food provision. Populations of Northern species tend to move northwards or disappear altogether (e.g. plant species), not having been able to adapt to climate change. Terrestrial ecosystems are mainly affected in terms of plant phenology and distribution of plant and animal species, with specialist species being most at risk.

Even if society substantially reduces its emissions of greenhouse gases over the coming decades, the climate system is projected to continue to change in centuries to come. We therefore have to prepare for and adapt to the consequences of some inevitable climate change, in addition to mitigation measures.

To prevent or limit severe damage to the environment, society and economies, adaptation strategies for affected systems must be developed at national, regional and local level. In 2010, Belgium adopted its national climate adaptation strategy[34]. It has 3 objectives:
-to improve the coherence between existing adaptation activities in Belgium (assessing the impacts of climate change, vulnerability to climate change and adaptation measures already implemented);

- to improve communication at national, European and international levels;
- to initiate a process to develop a national action plan.

The Strategy summarizes the expected impacts of climate change in Belgium in several areas including biodiversity and gives an overview of the adaptation measures that have already been made in these areas as well as two cross-cutting areas: research and international cooperation. This strategy has initiated the process of developing a National Adaptation Plan. In this context, the different levels of government (Federal Government, Wallonia, Flanders and Brussels-Capital) have carried out studies in order to prepare future Federal/Regional adaptation plans that will provide the baseline for the national adaptation plan.

Regional studies have led to the development of regional climate projections and to provide information on sectoral vulnerability to future climate conditions.

The Flemish Region has published in 2013 the regional plan for adaptation to climate change (Het Vlaams Klimaatbeleidsplan 2013-2020[35]). The Walloon Region adopted in 2007 the Walloon Plan 'Air-Climate'[36]. Brussels-Capital Region approved in September 2013 the proposal of pre-project for the regional plan air-climate-energy.

The European Commission adopted an EU strategy on adaptation to climate change in April 2013[37].

2.3 Investigate the potential impact on biodiversity of the internal trade (legal and illegal) of live animals and plants at a Belgian level and potentially adapt relevant regulations, including market regulation when appropriate

[34] See: http://www.lne.be/themas/klimaatverandering/adaptatie/bestandenmap/nationale-adaptatiestrategie

[35] See: http://www.lne.be/themas/klimaatverandering/klimaattips/klimaattips/wat-doet-de-vlaamse-overheid/vlaams-klimaatbeleidsplan

[36] See: http://airclimat.wallonie.be/spip/-Plan-Air-Climat-.html

[37] More information on the European Climate Adaptation Platform http://climate-adapt.eea.europa.eu/web/guest/biodiversity

Sending out the right market signals, particularly to final consumers, for biodiversity conservation is crucial. While the potential impact on global biodiversity of international trade with Belgium is covered under objectives 5.6 and 5.7, it appeared necessary to also consider, in a holistic way, the potential impact of the internal trade (legal and illegal) of live animals and plants on biodiversity. Animal welfare and public/animal health issues should be taken into account in this context. Relevant regulations, including market regulation, as well as consumer behaviour should be adapted where necessary. This can be done for example by implementing CITES Regulation or other relevant EU legislation.

In considering the internal trade of species, particular attention will be devoted to the numerous exotic species deliberately introduced into Belgium (import of ornamental plants, pets, species for breeding, fishing, hunting, used as biological controls or for biomass production, etc.).

OBJECTIVE 3: MAINTAIN OR RESTORE BIODIVERSITY AND ECOSYSTEM SERVICES IN BELGIUM TO A FAVOURABLE CONSERVATION STATUS

Healthy ecosystems are needed if we want to halt the loss of biodiversity and benefit from the many valuable services they provide. Despite the initiatives already put in place, habitats in Belgium are becoming increasingly fragmented and degraded. This affects biodiversity directly and indirectly as it makes the ecosystems vulnerable to other threats, such as biological invasions. It also undermines the many services that healthy ecosystems provide to society, such as clean water and protection against flooding and erosion.

In 2010, the Parties to the CBD agreed to make concerted efforts to achieve Aichi Target 9 (the introduction and establishment of invasive alien species is prevented), Target 11 (17 % of terrestrial and inland water areas and 10 % of coastal and marine areas have been conserved), Target 14 (ecosystems and essential services have been safeguarded) and Target 15 (ecosystems are restored and their resilience has been enhanced). These global targets are reflected in EU Biodiversity Strategy to 2020 under target 1 (implementation of the Birds and Habitats Directives), target 2 (maintenance and restoration of ecosystems and their services) and target 5 (combating invasive alien species). It is therefore important to adapt the NBS accordingly.

Nature conservation activities across Belgium, in, among others, marine areas as well as rural and urbanised areas, need to be strengthened through optimal protection, management and restoration measures. The measures to be taken will depend greatly on the priority components of biodiversity selected in Objective 1 and on threatening processes and activities identified in Objective 2. Measures could be, for instance, the extension of a forest or grassland in a specific area, restoration of a degraded habitat of particular importance (e.g. wetlands) or establishment of a protected area.

The measures will have to be taken in cooperation with the different stakeholders in order to define ways that both conserve biodiversity and meet other stakeholders' interests. In this context, the application of the ecosystem approach and the implementation of the programme of work on Protected Areas (CBD Decision VII/28), as appropriate, will be of particular relevance.

The concept of *favourable conservation status** (see box below) provides an objective concept that will be scientifically defined for the purpose of Objective 1, together with the identification of appropriate indicators to allow for the monitoring of the status of the priority components of biodiversity.

• Concept of favourable conservation status (EU Habitats and Birds Directive)

The conservation status of a natural *habitat* is "favourable" when (i) its natural range and areas it covers within that range are stable or increasing, and (ii) the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and the conservation status of its typical species is favourable as defined below.

The conservation status of a *species* is "favourable" when (i) population dynamics data on the species concerned indicate that it is maintaining itself

on a long-term basis as a viable component of its natural habitats, (ii) the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and (iii) there is, and will probably continue to be, a sufficiently large habitat to maintain its population on a long-term basis.

Protected areas, ecological networks and green infrastructure in Belgium -Protected areas in Belgium represent many different types of ecosystems: forests, wetlands, pastures, calcareous grasslands, heath lands, caves, marine areas, etc. Their sizes range from a few ares to thousands of hectares. Protected areas include: nature reserves (public and private), Natura 2000 sites, forest reserves, forest protection areas, caves, natural parks, Ramsar and other wetlands of biological interest, protected dunes and zones of high biological value. Different protection statuses have sometimes been attributed to the same site. For example, a nature reserve can also be a Natura 2000 site.

The ecological network is a coherent ecological structure of areas in which nature conservation policy is the main objective to be developed. The objective is to create a coherent and functional network of ecosystems that are (inter)nationally important and should be preserved in a sustainable way. It aims to merge the fragmented nature and forest reserves into larger and interconnected units of nature. It is composed of core areas of natural interest (protected or not) connected by buffer and corridor zones as small biotopes and natural linear features in the landscape (hedgerows, ditches, field margins, footpaths, small streams, narrow valleys, etc.). Zones under other effective area-based conservation measures are part of this network, such as some Agri-Environment Measures, late mowing of road banks, sustainable forestry management measures.

The green infrastructure encompasses the ecological networks but it also takes into account areas providing specific ecosystem goods and services. Its added value comes from broader investments in natural capital with a view to 'greening' existing infrastructure and strengthening the functionality of ecosystems that provide goods and services as well as mitigating and adapting to the effects of climate change, and enhancing the quality of life (health, tourism, conserving historic and cultural heritage). It addresses the spatial structure of natural and semi-natural areas but also other artificial and environmental features (such as "green roofs" or trails) which enable citizens to benefit from its multiple services. The underlying principle of Green Infrastructure is that the same area of land can frequently offer multiple benefits if its ecosystems are in a healthy state. Green Infrastructure investments are generally characterized by a high level of return over time, provide job opportunities, and can be a cost-effective alternative or be complementary to 'grey' infrastructure and intensive land use change.

The stakeholders involved in the implementation of this objective are: land use planning departments, nature conservation agencies, managers, the federal and regional authorities (including the provinces and municipalities), various sectors (including the horticultural sector, agriculture, aquaculture, forestry, fisheries, the pet industry, hunting, mobility, tourism, public health, research), professional federations involved in the sectors concerned, teachers in the academic system including in the field of horticultural qualifications, consumers, environmental NGOs, land owners, the general public and any association working towards the same goal as the NBS[38].

Operational objectives

3.1 At least 17 per cent of terrestrial and inland water areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through the development of effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and are integrated into the wider landscapes

The aim of this operational objective is to enhance existing terrestrial[39] networks of protected areas and other effective area-based conservation measures over

[38] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

[39] The word "terrestrial" includes inland waters

the three Regions and to promote interconnectivity between them and with neighbouring countries. The target of 17 % was chosen to align with international commitments (Aichi target 11 and EU Target 1- see Appendix 4: concordance table of SNB objectives with Aichi and EU targets). The objective is based on the concept of *ecological network**, and will include the ecological requirements of the priority components of biodiversity in order to ensure their maintenance or rehabilitation in a favourable conservation status. As small landscape elements play a key role in ensuring connectivity between networks, their conservation and/or rehabilitation will be promoted.

In accordance with Objectives 1 and 2, the integrated management of protected areas should apply the ecosystem approach. The network of protected areas should also be integrated into its socio-economic context and wider environment to enable adequate buffering of external influences on the network elements. Measures taken in the framework of Objectives 4 and 5 should particularly take into account the network of protected areas.

The Natura 2000 network currently covers up to 12,77 % of the Belgian terrestrial territory with an ecologically representative system of protected areas. Additionally to this network, other surfaces are effectively conserved through other conservation measures such as some Agri-Environment Measures, late mowing of road banks, sustainable forest management measures.

This is why the target of 17 % of effectively managed protected areas at land and other areas of particular importance to biodiversity is deemed to be an ambitious yet realistic target for Belgium. Besides the importance of extending the network of protected areas on paper, its effective management is crucial and has to be ensured. Attention will be paid to implementing coherent transboundary and transregional conservation measures within Natura 2000. For the time being, only a limited number of sites at land are effectively managed and it is vital that appropriate management plans are adopted and implemented as a matter of urgency.

For a large number of wild species, crop species and varieties and domestic animal breeds, the establishment of a system of protected areas alone is not sufficient. Existing measures taken to protect wildlife outside protected areas will be enhanced in several ecosystems (for example, urban, freshwater, humid, rocky/caved, marine, coastal, forest and agricultural ecosystems) and integrated into land use planning. Such measures can include buffer zones playing the role of a transition, the ecological management of railway sides and road- and riversides, ecological management of parks and green areas in urban areas, municipal nature development plans, hosting wild fauna in attics and belfries, etc. Several documents produced by the Regions can be used as guidance for implementing this strategic objective (for example, Codes for Good Nature Practices, Codes for Good Agriculture Practices, Vademecum for nature-oriented management of road verges and river borders, Management standards to favour biodiversity in woods under a forest regime, etc.)[40].

It is also crucial to promote the protection of biodiversity in private domains and in green areas surrounding companies (see “Nature and Companies: Operating instructions, “Qualité et développement durable des zones d’activité économique: Le cahier des charges urbanistique et environnemental”). Furthermore, partnerships with the private sector should be developed.

The quality of nature in urban and peri-urban areas (cities and municipalities) is of particular importance not only for biodiversity but also for the quality of life and human health. The quality of nature can be enhanced by integrated planning and harmonious management of urban and peri-urban green areas (for example Vademecum for harmonised park management of the Flemish Region).

3.2 At least 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through the development of effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and are integrated into the wider seascapes

The Belgian part of the North Sea is a sensitive ecosystem and is one of the most densely used marine areas in the world with important pressures from sea-based activities (e.g. fishing, coastal defence,

[40] These documents are included in the list of references.

sand and gravel extraction, shipping, oil and gas extraction, off-shore energy, tourism) and land-based activities (agriculture, urbanization, harbours, industry).

Addressing the pressures resulting from these activities within a complex state structure is an important overarching management issue. The implementation of the policy Plans adopted in 2009 for the Marine Protected areas in the Belgian Part of the North Sea as well as the Good Environmental Status objectives (to be reached by 2020) and related measures as part of the EU-Marine Strategy Framework Directive [2008/56/EC] (MSFD) will contribute to this challenge.

Coastal and Marine Protected Areas (MPAs) are an important means of safeguarding the ocean's rich diversity of life. They may support local economies by providing a refuge from fishing pressure for commercial fish stocks. If properly located and managed, MPAs may act as refuge habitats and lead to reduction in fishing mortality and bycatch.

The establishment of ecologically significant MPAs in the Belgian marine zone, complemented by the Natura 2000 network (35.85% of the area of the Belgian Part of the North Sea), has been an important step. The Royal Decree, that establishes these MPAs forbids a number of human activities in the Natura 2000 areas (e.g. industrial activities).

The designation of the MPAs will be backed up by a legally binding Marine Spatial Planning (MSP) which takes into account the views of the socio-economic sectors and the Integrated Coastal Zone Management strategy. The draft MSP (2013) includes fishery measures to reduce the effect of fishing on the sea-bottom in ca. 8% of the Belgian Waters (or 25% of the Special Area of Conservation Vlaamse Banken) and measures to reduce the impact of the sand and gravel extraction.

Additionally, a programme of measures conform with the Marine Strategy Framework Directive is currently in preparation and will be submitted to the European Commission in 2015. This programme of measures will address all relevant pressures and (socio-) economic sectors to allow the recovery of degraded habitats and populations to achieve the Good Environmental Status (GES) and/or Favourable State of Conservation (FSC) by 2020. This programme of measures will allow the transition from human activities (including fishery) with a current adverse effect on species and habitatsto human activities that allow the achievement of the GES or FSC. At present it is impossible to indicate which percentage of the Belgian part of the North Sea is "effectively managed". The aim is that, once the MSFD "programme of measures" will be adopted, the entire Belgian part of the North Sea will be effectively managed.

3.3 Ecosystems, their resilience and their services are maintained and enhanced by establishing, inter alia, a green infrastructure and restoring at least 15 % of degraded ecosystems

Protected areas are necessary but not sufficient to rehabilitate biodiversity to a favourable conservation status across the country and to maintain the provision of ecosystem services. Reaching the 2020 target implies, inter alia, the development of a green infrastructure with a focus on representativeness and management effectiveness at land and at sea, the restoration of degraded areas and ultimately the compensation of new degradations if not avoidable (see operational objective 3.8).

The *Green infrastructure* is defined as a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to provide a wide range of ecosystem services. It incorporates green spaces (or blue if it concerns aquatic ecosystems) and other physical features in terrestrial (including coastal) and marine areas. On land, GI is present in rural and urban settings (EU Commission, May 2013[41]). More information on GI is provided in the box page 45.

As small landscape elements play a key role in ensuring connectivity of a green infrastructure network, their conservation and/or rehabilitation will be promoted. The management of the green infrastructure should apply the *ecosystem approach* and be integrated into its socio-economic context. Indeed, it is necessary

[41] See EU communication on Green Infrastructure (GI) — Enhancing Europe's Natural Capital (2013): http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2013:0249:FIN:EN:HTML

to step up efforts to integrate biodiversity into the development and implementation of other policies, taking into account the objectives of all policies concerned, in particular those national and EU policies on natural resources management, such as agriculture, food security, forestry, fisheries, and energy, as well as spatial planning, transport, tourism, trade, and development. Measures taken within the framework of Objectives 4 (sustainable use) and 5 (sectoral integration of biodiversity) of the NBS should particularly take these green infrastructure elements into account.

Building a green infrastructure can help overcome many of these challenges. It can reconnect fragmented natural areas and improve their functional connectivity and resilience within the wider countryside. Connectivity, restoration and conservation measures need to be mainstreamed throughout the entire territory and not limited to specific areas, to contribute to an ecologically coherent green infrastructure for the benefit of all, people as well as nature. Furthermore, the restoration of degraded ecosystems can contribute to climate change mitigation and adaptation.

Belgium currently works with the European Commission on the common understanding and operationalisation of the terms "restoration" and "degradation" and the nature of the 15 % target. The baseline (reference point) against which the 15 % restoration target is to be assessed is the EU 2010 Biodiversity Baseline Study produced by the EEA and supplemented by additional information to be generated through the MAES work programme. At the core of the concept is the idea that restoration should be regarded as a process rather than as a binary (restored vs. degraded) description of the state of play. If restoration is regarded as a process then this allows for the possibility of identifying different stages in the process. It also means that all significant efforts to improve the abiotic and biotic condition of a site can, in principle, be counted as a contribution to restoration even if the site is not fully restored to its "original/natural state". The approach also has the advantage that significant efforts to improve the ecological condition of a site that has been completely transformed (e.g. intensively farmed land) can also be taken into account.

In order to ensure resilience, evolving factors such as climate change will be taken into account when restoring ecosystems. Attention must be paid to the slow changing processes. Climate change or deposition of nitrogen, for instance, can have an irreversible effect on the "natural" population, the "natural" range of the species and on the "sufficiently large" area, which are factors that determine whether a species or habitat has a *favourable conservation status* (see box, Objective 3). Applying an adaptive management process is a good way of getting management to take such processes[42] into account.

3.4. Develop and implement action plans so as to ensure the maintenance or rehabilitation of our most threatened species to a favourable conservation status

The maintenance of biodiversity in a favourable conservation status implies maintaining a sufficient quantity, quality, and connectivity of habitats for terrestrial, freshwater, and marine species, with a focus on priority species as to be defined by Objective 1. The rehabilitation of species and restoration of ecosystems is done mostly by recreating habitats that resemble the target communities in terms of composition of plant, animal and microbial communities, ecosystem function and stability.

The Strategy will capitalise on both new and existing conservation and restoration efforts, by the development and implementation of specific action plans for species, habitats or local areas (for instance protected areas) as appropriate.

3.5 Adopt an integrated strategy for *ex situ* conservation of biodiversity together with measures for its implementation

Belgium houses extensive *ex situ* collections of endangered varieties, breeds and species originating both from within the country and worldwide. They are preserved in seed banks, gene banks, zoos, aquariums, botanic gardens and collections of museums and various research institutes. Belgium also takes part in several international initiatives aiming to cooperate in the area of *ex situ* conservation (*i.e.* Belgian Coordinated Collections of Micro-organisms, the International Association of

[42] See EU guidelines on Climate Change and Natura 2000 (2013): http://ec.europa.eu/environment/nature/climatechange/pdf/Guidance%20document.pdf

Zoos, Botanic Gardens Conservation International, the International Treaty on Plant Genetic Resources for Food and Agriculture and the Global Strategy for Plant Conservation).

The development of an integrated strategy will provide a framework to facilitate harmony between existing initiatives aimed at *ex situ* conservation, to identify gaps where new initiatives are required, and to promote mobilisation of the necessary resources. Among other things, research and management capability of *ex situ* conservation facilities should be enhanced. In developing such a strategy, the guidance of various international commitments initiatives should be taken into consideration (CBD Art. 9, the targets for 2020 of the consolidated update of the Global Strategy for Plant Conservation in CBD Decision X/17, the International Treaty on Plant Genetic Resources for Food and Agriculture, Botanic Gardens Conservation International, etc.).

3.6 Take measures to minimise the impact of the identified processes and activities threatening biodiversity and ecosystem services

Measures should be taken to reduce the impact of processes and activities threatening biodiversity and ecosystem services as identified by and monitored according to Objective 2, including at least habitat destruction and degradation, pollution, overexploitation, the spread of invasive alien species, the spread of some GMOs, and climate change. For example, air, soil and water pollution and water eutrophication and acidification can be reduced by the integration of biodiversity concerns into all relevant environmental policies (for example, product policy, water management policies). Land use planning should seek to limit land conversion (whether for urban, industrial, agricultural, transport or tourism purposes), which induces the drainage of wet ecosystems and the destruction, degradation and fragmentation of habitats.

As far as GMOs are concerned, the scrupulous respect of EU regulations relating to GMO evaluations, authorisations and the development of good risk management procedures, monitoring and urgency plans, the development of adequate coexistence rules, should help minimise or prevent the potential threatening impacts in Belgium and in Europe. At the international level, Belgium's strong involvement in the Cartagena Protocol and other related forums should help minimise potential negative impacts of GMOs on world biodiversity.

Particular attention should be paid to an integrated control (including trade control) of chemicals, pesticides, GMOs and alien species released into the environment. As an example, control and reduction of pollution-inducing eutrophication should be promoted. Another step could be made by implementing an integrated water management, including the North Sea coasts (cf. Directive 2000/60/EC in the field of water policy; Gland convention on rivers), and an integrated coastal zone management (EU Recommendation 2002/413/EC on ICZM), etc.

3.7 Invasive alien species (IAS) 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

Biological invasions are the second most important cause of the extinction of species worldwide (and in Belgium) after the loss of natural habitats. Organisms can be introduced beyond their natural range, either intentionally or unintentionally. Those include disease-causing viruses, bacteria, fungi, algae, mosses, ferns, flowering plants, invertebrates and vertebrates. When invasive, they can cause environmental damage and can have a detrimental impact on health, the economy and safety.

IAS have an adverse impact on indigenous species and can have a profound negative effect on the functioning of ecosystems. At economic level, they can among others negatively affect crop yields, obstruct waterways, and generate public health problems (they can be vectors for parasites and diseases or produce allergenic substances and toxins). Often, they result in significant management costs in order to restrict their development, to limit their damage or to restore the ecosystems.

The threat caused by IAS to biodiversity in Belgium is addressed in the NBS via operational objective 3.7 but also via other operational objectives (2.3, 5.7, 7, 8.3) dealing with internal and external trade and whose implementation is guided by ten principles, including the precautionary approach and the polluter pays principle (see part III of the NBS).

This target is in line with article 8h of the CBD (1992) supplemented by Aichi Target 9 (2010) as well as with the EU Biodiversity Strategy Target 5 (2011). At international level, the CBD has developed guiding principles in order to help Parties to prevent the introduction of IAS, to detect early new introduced IAS and to undertake mitigation measures for established IAS (CBD Decision VI/23).

At EU level, the Commission submitted a proposal for a Regulation of the European Parliament and of the Council on the prevention and management of the introduction and spread of invasive alien species [COM (2013) 620 final] on 10 September 2013. This proposal seeks to attain these objectives through measures that address the intentional introduction of IAS into the EU and their intentional release into the environment, the unintentional introduction and release of IAS, the need to set up an early warning and rapid response system, and the need to manage the IAS spread throughout the Union. Once the regulation will have been adopted, Belgium should ensure that the planned measures are implemented.

The Commission will also be considering how to better integrate additional biodiversity concerns into the new Plant and Animal Health Regimes.

As a Party to the Bern Convention (Council of Europe), Belgium should implement the specific Bern recommendations on IAS issues including article 11, 2 b) which states that each Party should take measures to strictly control the introduction of non-native species. In order to implement this provision, the Standing Committee adopted a Pan-European Strategy on Invasive Alien Species which inter alia recommends drawing up and implementing national strategies on IAS taking into account the above-mentioned pan-European strategy (Recommendation No. 99/2003).

Tackling the IAS issue in an integrated way is a particular challenge in Belgium due to its complex institutional framework resulting in a division and fragmentation of competences on issues dealing with different aspects of IAS (e.g. environment, health and agriculture). In order to address this problem and meet the various commitments regarding alien species under treaties to which Belgium is a Party, concrete steps must be urgently taken and coordinated action plans developed when necessary by and between all the competent authorities. The following operational recommendations could form a suitable base for defining further actions at BE level. They are based on the guiding principles of the CBD and on the Pan-European Strategy on Invasive Species, and were formulated by the Belgian Forum on Invasive Species within the framework of the SOS invasion conference (Brussels 09 and 10 March 2006) in order to limit the ecological and economic impact of invasive non-native species in Belgium:

1. Designate or create a single lead structure to co-ordinate and ensure consistency of application of non-native species policies in relevant fields (phytosanitary controls, animal health and welfare, trade in non-native species, biosecurity initiatives, etc.).

2. Conduct comprehensive and widely accepted risk assessment procedures for intentional introduction of non-native species in the wild.

3. Develop action plans addressing the main introduction pathways to help prevent intentional and unintentional introductions for all relevant sectors.

4. Revise, enlarge and update the existing legislation to improve handling of invasive non-native species issues.

5. Establish early detection and control mechanisms of detrimental non-native species in the wild.

6. Build up and maintain scientific capacity.

7. Raise awareness of all relevant sectors to ensure a good understanding of invasive species issues including introduction pathways, economic and ecological impacts.

3.8 Define the framework and the conditions to ensure no net loss of biodiversity and ecosystem services

The compensation principle is included in the ten guiding principles for implementation of the NBS (see Part III). Whereas compensation for deteriorated habitats is a legal requirement of the EU Birds and Habitats Directives in the case of damage to Natura 2000, there is no explicit EU requirement for

compensation of unavoidable residual impacts on species, habitats and ecosystem services that are not covered by Natura 2000, which leads to net losses. Environmental Liability Directive does not cover damage to protected species, habitats and related services when it has been authorized by a plan or a license in accordance to EU or national nature conservation law. Further action should therefore be taken to promote a wider *no net loss* approach to biodiversity and ecosystem services when damage is caused by an authorized plan or project (EU Biodiversity Strategy, Action 7).

Belgium will closely follow the work of the Commission (under the EU Common Implementation Framework) to clearly define the principle of "no net loss", its range, ensuring that sufficient safeguards are put in place to preserve biodiversity and ecosystem services whilst avoiding any drift/abuse, and make proposals for its implementation in the country. In order to ensure real equivalence between ecosystems and services, Belgium will review and take the literature recommendations into account when defining the guidelines for the implementation of the "no net loss" principle in the country.

According to Born et al. (2012)[43], compensation or offset mechanisms should among others respect the following principles:

- principle of ecological equivalence: compensation measures and offset mechanisms should ensure the re-creation or the restoration of ecosystems similar in size, composition, structure and functioning to the deteriorated ecosystems;

- principle of ecological continuity: the compensation measures should be located as close as possible to the damaged site and should also be implemented and effective before the damage is caused;

- principle of additionality: should be excluded as compensation those measures that do not provide a significant improvement in the status of biodiversity after the occurrence of the damage, in order to ensure that this damage is effectively repaired. The restoration should be based on the best available scientific knowledge

In any case, according to the principle of preventive action (see Part III), the damage and its compensation should be authorized only if no other reasonable alternative can be found to reach the objectives of the damaging plan or project, and after having applied the appropriate mitigation measures. The authorities should therefore select the measures to be taken according to the following hierarchy: in priority, avoidance measures, then mitigation measures (minimization), and finally, as a last resort, necessary compensation measures.

OBJECTIVE 4: ENSURE AND PROMOTE THE SUSTAINABLE USE OF COMPONENTS OF BIODIVERSITY

The *sustainable use of biodiversity* refers to "the use of components of biodiversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations" (CBD art. 2). This concept is based on the assumption that it is possible to use biodiversity in a manner in which ecological processes, species and genetic variability remain above the thresholds needed for long-term viability, and that therefore all resource managers and users have the responsibility to ensure that that use does not exceed these capacities.

Non-sustainable activities with a negative impact on biodiversity must be identified (see Operational objective 2.1) and options developed in order to minimise these impacts. Synergies between economic growth, social progress and ecological balance in the long run should be created, with quality of life as the central factor. A well-thought equitable and fair management of our natural resources will be a key element for the sustainable use of our biodiversity. It is crucial to ensure that ecosystems are capable of sustaining the ecological services on which both biodiversity and the human population depend.

The Ecological Footprint tries to face this challenge. It measures how much land and water area a human

[43] Charles-Hubert Born, Valérie Dupont et Charles Poncelet, "La compensation écologique des dommages causés à la biodiversité: un mal nécessaire?", Amén.-Env., NS 2012, pp. 12-40.

population requires to produce the resources it consumes and to absorb its wastes under prevailing technology, and it enables people to track progress towards sustainability.

Calculated footprints are estimations based on assumptions which are used as a communication tool to help individuals, organisations, and governments formulate policies, set targets and track progress towards sustainability (WWF, 2005).

The Belgian Ecological Footprint is about 4.9 ha per inhabitant (WWF, 2004), when the earth's carrying biocapacity is only 1.8 ha per person. This means that surface used by the average Belgian is over 170 % larger than that which the planet can regenerate. This finding indicates that Belgium's ecological stocks are being depleted faster than nature can regenerate them.

• CBD instrument

The Addis Ababa principles and guidelines for the sustainable use of biodiversity were adopted in 2004 (CBD Decision VII/12). The 14 principles and 7 guidelines adopted take into account requirements related to: (1) policies, laws and regulations on biological diversity; (2) adaptive management of biodiversity; (3) socio-economic conditions; and (4) information, research and education.

Operational objectives

4a) General

4a.1 Identify and promote good practices involving the sustainable use of biodiversity

Existing good practices involving sustainable use of biodiversity in various areas of activity (agriculture, fishery, forestry, hunting, tourism, etc.) must be identified, compiled and made widely accessible. Furthermore, bad practices (and lessons learnt) also need to be highlighted and publicised widely.

The establishment of such compilation documents will be compulsory for the stakeholders (farmers, fishermen, hunters, etc.) and will represent a significant step forward towards sustainable use of our biodiversity.

4b) Sustainable products, consumption and production policies

Not only consumption patterns but also the production processes for many products may adversely impact on biodiversity (unsustainable use of natural resources, overexploitation, use of harmful substances, habitat destruction, impacts of surface water pollution on biodiversity, etc.)[44]. These impacts are rarely apparent at the point of purchase or use so that we continue to use products that destroy our biodiversity, even when alternatives exist.

The stakeholders involved in the implementation of this objective are: the federal and regional authorities, producers, consumers, various sectors (including agri-food, energy, industry...), NGOs, the general public and any association working towards the same goal as the NBS.

4b.1 Avoid or minimise the risk to biodiversity posed by production and consumption, products and services

Products and good practices that have a positive impact on biodiversity have to be promoted to the entire chain from producers to consumers.

Unsustainable production and consumption patterns (food, energy, water, travel, waste, etc.) need to be changed, for example through eco-design, eco-performance and appropriate product standardisation. Consumers can impact on biodiversity by adapting their consumption patterns (for example by opting for certified products, by consuming local and diversified products or by deciding not to consume specific products).

There is a need to identify and evaluate negative impacts of unsustainable patterns on biodiversity and to ensure that markets reflect environmental costs. The lifecycle approach should be used to reduce environmental impacts along the production chain.

A consistent message also needs to be given to

[44] The impact on biodiversity through the use of primary products can be illustrated for example by the extraction of Coltan (Colombo Tantalite) in the Wildlife Reserve in eastern Democratic Republic of Congo. Coltan is an ore used in mobile phones, computers and gaming devices. The growing demand for this ore has led to drastic increase in the poaching of wildlife (such as great apes).

consumers so as to guide them to take sustainable consumption decisions. For example, the world's growing demand for biomass energy or meat creates pressure to extend industrial crop cultivation area, threatening not only agricultural biodiversity but also wild ecosystems. Public awareness of consumption behaviours increasing such threats should be raised.

Furthermore, there is a need to influence suppliers to provide biodiversity-friendly products.

4b.2 Adopt biodiversity criteria in public procurement policies to prevent biodiversity loss

Public authorities are major consumers. In Europe, for example, they spend 16 % of the EU's gross domestic product. By using their purchasing power to purchase goods and services that also respect the environment and biodiversity, they can make an important contribution towards sustainable development. Public authorities can also show citizens, enterprises and organisations how they can really change their attitudes by making the right consumer choices.

Green public procurement can have a positive direct or indirect impact on biodiversity. It covers areas such as transport and construction, office equipment, recyclable paper, organic food in canteens and activities in developing countries with support from Belgian authorities.

Initiatives have already been taken in Belgium to use green procurement policies in order to promote goods that are less harmful to the environment (for instance, promotion of the use of wood products originating from sustainable forests or inclusion of environmental - including biodiversity - criteria in the procurement procedure for Clean Development Mechanism and Joint Implementation).

In 2006, the Belgian Parliament passed a new law on public procurement that provides some opportunities to integrate sustainable (biodiversity) criteria in public procurement procedures.

4c) Agriculture

The importance of agriculture for the natural environment and for biodiversity is emphasised by the fact that nearly half the land surface in Belgium is farmed. Farming is an activity which goes beyond simple food production, affecting and using natural resources such as soil and water. Over the centuries, farming has contributed to the creation and maintenance of a large variety of agricultural landscapes (fields, pastures, quickset hedges, mixed woodland and pasture, etc.) which provide important semi-natural habitats for wildlife. Furthermore, the agricultural sector plays a multi-functional role as a food producer, biodiversity manager, motor for the economy in rural areas and guarantor of *in situ* conservation of local species, varieties and domestic animal breeds. However, in recent decades, intensification and specialisation of agriculture, and at the same time marginalisation of land, have resulted in significant biodiversity loss in and around farmland. Farmland bird populations in particular have shown a decline over last decades.

The Common Agricultural Policy (CAP), together with broader developmental dynamics of the agricultural sector has only gradually taken on concerns regarding biodiversity loss. The CAP has its roots in 1950s Western Europe, whose societies had been damaged by years of war, and where agriculture had been crippled and food supplies could not be guaranteed. The emphasis of the early CAP was on encouraging better productivity in the food chain so that consumers had a stable supply of affordable food. The CAP offered subsidies and guaranteed prices to farmers, thus providing them with incentives to produce, and a viable income. Financial assistance was provided for the restructuring of farming, for example by aiding farm investment, aiming to ensure that farms increased in size and that farmers developed management and technology skills so that they were adapted to the economic and social climate of the day. Although successful in reaching its original objectives, this policy also lead to reducing high nature value farmlands, the removal of hedgerows and the draining of wetlands, and intensification exerted a variety of pressures on ecosystems (high fertilizer and chemicals inputs, drainage, increasing cutting frequencies, grazing pressures, early mowing, over sizing of agricultural parcels).

Since 1992, however, the CAP has been adapted to better integrate biodiversity needs. Increasing use of agri-environment measures, Good Farming Practice, organic farming and the support of Less Favoured Areas have favoured farmland biodiversity. The 2003 CAP reform promotes these and other pro-

[45] http://statbel.fgov.be/fr/modules/publications/statistiques/chiffres-cles_de_l_agriculture_2013.jsp

biodiversity measures. Measures under market and income policy, including mandatory cross-compliance, the single farm payment (decoupling) and modulation, should have provided indirect benefits to biodiversity. These measures have been implemented at EU level since 2005. The on-going reform of the CAP (2013) goes a step further in this direction by introducing a Greening Payment as an essential part of the direct payments to farmers.

Reducing pressure on biodiversity from agriculture is a big challenge for farmers in Belgium because our agriculture is one of the most intensive, specialised and productive in Europe. Furthermore, farmers are currently facing serious challenges with regard to the continuation of their profession. The number of farmers is decreasing every year. They leave the profession for various reasons, including competitive pressures from the market, compensation for the drop in prices by a rise in the cultivated area and risks posed by the move towards energetic crops. Between 2000 and 2010, 19,072 farms ceased their activities (30.8 per cent of Belgian farmers) with the total agricultural area decreasing only slightly (decrease of 2.6 per cent), so that the average area per farm is growing (FPS Economy - Directorate-general Statistics Belgium, agriculture census 2000 and 2010[45]).

• CBD Instrument

A multi-year Programme of Work on Agricultural Biodiversity was adopted in 2000 (CBD Decision V/5). The programme of work focuses on assessing the status and trends of the world's agricultural biodiversity and pays attention to identifying and promoting adaptive-management practices, technologies, policies and incentives. In addition, it promotes the conservation and sustainable use of genetic resources that are of actual or potential value for food and agriculture. The programme of work focuses on various technical aspects of new technologies, such as Genetic Use of Restriction Technologies (GURT), and the potential implications of these technologies for agricultural biodiversity, biosecurity, farming and the economy. It also has as crosscutting initiatives the International Initiative for the Conservation and Sustainable Use of Pollinators and an International Initiative for the Conservation and Sustainable Use of Soil Biodiversity. The programme also supports cooperation with the International Treaty on Plant Genetic Resources for Food and Agriculture which entered into force in 2004.

The stakeholders involved in the implementation of this objective are: the regional and federal authorities, farmers, agricultural research bodies, various sectors (including public health, food chain safety, agro-food, bioenergy…), universities and any association working towards the same goal as the NBS[46].

Operational objectives

4c.1 Promote measures favourable to biodiversity under the implementation of the Common Agricultural Policy (CAP)

The ongoing CAP reform provides for the introduction of a payment for agricultural practices that are beneficial to the climate and the environment within the direct payment scheme, the Greening Payment. From 1/1/2015, 30 % of the budgetary envelope for direct payments will be assigned to this kind of mandatory measures. The payment will reward the delivery of environmental public goods that go beyond cross-compliance and promote sustainable production. Farmers who receive first-pillar payments will receive the Greening payment (except for organic farms and small scale farms) when they respect the 3 basic measures[47]:

- maintaining permanent grassland
- crop diversification
- maintaining an "ecological focus area" of at least 5 % of the arable area of the holding for farms with an arable area larger than 15 hectares. The Commission can propose to increase this figure to 7 %, on the basis of a Commission report in 2017, by presenting a new legislative proposal. This measure can contribute to the establishement of the green infrastructure.

During the mid-term interim review of the CAP in

[46] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

[47] See http://europa.eu/rapid/press-release_MEMO-13-621_en.htm

2002, it was decided that the whole-farm payments made by the CAP would be backed up by a compulsory set of cross-compliance requirements, covering environmental, food safety, plant and animal health and animal welfare standards. Farmers should observe a minimum level of environmental standards and have to maintain agricultural land in good agricultural and environmental condition as a condition for the full granting of the CAP direct payments. With the on-going CAP-reform the list has been simplified to exclude rules where there are no clear and controllable obligations for farmers. The CAP imposes the framework of cross-compliance criteria. As a Member State, Belgium only has limited freedom in defining its minimum requirements for a good agricultural and environmental condition.

Environmental cross-compliance criteria address the conservation of habitats through ecologically

managed Natura 2000 areas, and protection of waters against pollution caused by nitrates from agricultural sources. These cross-compliance criteria are based on articles emanating from specific European directives, such as the Habitat Directive 92/43/EEC and the Directive on the conservation of wild birds 2009/147. The requirements for good agricultural and environmental condition include inter alia the retention of landscape features.

This operational objective aims to stimulate authorities and farmers to implement the Greening payment and cross-compliance in a way that delivers a real profit to biodiversity.

4c.2 Enhance and encourage the role of farmers as biodiversity actors

The role of farmers as actors for biodiversity protection through implementation of good farming practices and technologies should be encouraged. Farmers play a key role in agro-ecosystems, protecting and enhancing the environment, biodiversity, natural resources, soil and genetic diversity (for instance, crop rotation, organic farming and set-aside of small land parcels) and maintaining the landscape and the countryside (for instance, maintenance of open environments, management of linear and small landscape features, ecological compensation areas*). In several areas, semi-natural habitats can be preserved only if appropriate farming activities are continued.

Apart from the principle that farmers should observe a minimum level of environmental standards (cross-compliance) as a condition for the full granting of the CAP direct payments, the CAP provides financial incentives called “agri-environmental measures” within the framework of the rural development policy (see also 4c.4). These measures support specific farming practices that go beyond the baseline level set by the cross-compliance obligations and help to protect the environment and maintain the countryside.

Farmers who commit themselves, for a five-year minimum period, to adopt environmentally-friendly farming techniques that go beyond cross-compliance obligations, receive in return payments that compensate for additional costs and loss of income that arise as a result of altered farming practices. Examples of commitments covered by regional agri-environmental schemes are: environmentally favourable extensification of farming; management of low-intensity pasture systems; integrated farm management; preservation of landscape and historical features such as hedgerows, ditches and woods; conservation of high-value habitats and their associated biodiversity.

This operational objective complements the previous one, by targeting the development of clear and detailed guidance at exactly what farmers should do to implement cross-compliance criteria and agri-environmental measures. This could be achieved for example through the establishment of guidelines that will provide an easy and understandable way of getting information across given that the wording of CAP reform is rather complex. Continuous appropriate education of and the provision of information to farmers, farm contractors, agriculture advisers and teachers in agricultural colleges are crucial. For instance, guidebooks, workshops, conferences, publications and information campaigns could address the following issues: soil management best practices, impacts of pesticides on wild fauna, the establishment of set-aside strips and their appropriate management for fauna and flora preservation, soil erosion control or landscape improvement, importance of the preservation of notable indigenous farmland trees and other small landscape elements, the protection of breeding

wildlife and nests in pasture and fields, the protection of ponds and rivers from pollution from manure, etc.

4c.3 Promote agricultural diversification

Agricultural diversification can be defined as all gainful activities by farmers outside agricultural core activities, i.e. outside production zones. This operational objective aims to encourage agricultural diversification that specifically benefits biodiversity and to support creative research into new diversification possibilities that can stimulate the conservation of local biodiversity, including traditional varieties. The system of advisory councils could provide guidance to farmers interested in diversification. Diversification is promoted in the Rural Development Policy and can be further promoted by the Regional Rural Development Plans.

Agricultural diversification can meet the demand for varied quality products as well as rural recreation activities and at the same time stimulate public interest in biodiversity conservation. It can lead to an increase in a product's added value and farms' profitability and to an improvement in the image of agriculture. Creative solutions could also seek to meet sanitary constraints of neighbourhood production, promote the interests of consumers and ensure access of the products concerned to the market.

Examples of such diversification activities in rural areas are (i) assisting in the management of nature reserves, (ii) the development of agricultural and nature tourism which arouse the interest of the public in biodiversity conservation, (iii) organic production of fruit and vegetables or organically reared chickens, (iv) neighbourhood production such as farm cheese, ancient varieties of fruit and vegetables, snails, and (v) other initiatives that reduce standardisation of agricultural production.

4c.4 Promote the integration of biodiversity into rural development

Agricultural and environmental policies must give farmers complementary signals if environmentally sound agricultural practices are to be applied to a sufficient extent. A new policy for rural development was introduced in 1999 as the second pillar of the CAP. This second pillar of the CAP aims to accompany market and income policy ("first pillar") by providing financial aid to farmers in order to influence rural structures. In its revised version for the period 2014-2020, the Rural Development Policy still includes important biodiversity-friendly measures, like agri-environmental measures, compensatory schemes in Natura 2000 sites, ecological forest-management aid, etc. They have to be scheduled by a national (regional) rural development programme and are co-financed by the EU. These measures can be a useful financial instrument for farmers who face a drop in income as they comply with the set regulations.

One of the six Union priorities for rural development in the period 2014-2020 is restoring, preserving and enhancing ecosystems related to agriculture and forestry with one focus area on "restoring, and preserving and enhancing biodiversity, including in Natura 2000 areas, areas facing natural or other specific constraints and high nature value farming, and the state of European landscapes ". Besides, at least 30 % of the rural development programmes' budget will have to be allocated to agri-environmental measures, support for organic farming, forestry measures or projects associated with environmentally friendly investment or innovation measures. Agri-environmental measures are obligatory for all programmes and will be stepped up to complement greening practices. These measures will have to set and meet higher environmental protection targets (guarantee against double funding).

Another important tool in rural development regulation for promoting the integration of biodiversity that the Member states may chose to use is the "non-productive investments " support. Support could be granted to investments linked to the achievement of agri-environment-climate objectives including biodiversity conservation status of species and habitat as well as enhancing the public amenity value of a Natura 2000 area or other high nature value systems to be defined in the programme.

Therefore, one priority of this Strategy is to integrate biodiversity aspects better and more clearly in current and future rural development plans.

In particular, the elaboration of rural development plans for the period 2014-2020 will be an occasion to streamline integration of biodiversity in these plans at Belgian level.

Furthermore, policies for nature conservation and rural development must take into account the commitments of the Kiev Resolution on biodiversity (2003) which foresees (i) the identification, using agreed common criteria, of all high nature value (HNV) areas in agricultural ecosystems in the pan-European region and (ii) their biodiversity-friendly management through appropriate measures (e.g. instruments of rural development). Designation of HNV and integration of ad hoc protection tools should be fully implemented in the Rural Development Plans.

4c.5 Promote the sustainable use of genetic resources for food, and agriculture

Humans' age-old agricultural activities have contributed, in the course of history, to the creation of a large pool of biodiversity. Since the 1950s, however, due to economic pressure and intensive urbanisation, drastic genetic erosion of old landraces and cultivars took place and actions for collecting, evaluating and conserving them became, and still are, urgently needed. Data show that about 50 per cent of the main native livestock breeds (cattle, pig, sheep, goat and poultry) in the EU-15 countries are either extinct or classed as endangered or critical (EEA, 2006).

Biological and genetic diversity in agriculture is essential for the sustainable development of agricultural production and of rural areas. Genetically poorly diversified agricultural areas are indeed more threatened by environmental stresses and disasters; besides, genetically diversified food offers a greater variety of nutrients useful for good general health and resistance to disease. The necessary measures should be taken to collect, conserve, characterise and utilise the potential of that biodiversity in a sustainable way to promote the global aims of the CAP. The conservation and sustainable use of genetic resources in agriculture is one of the objectives of the CBD. It is also a major objective of the FAO's Global Plan of Action for the Conservation and Sustainable Utilisation of Plant Genetic Resources for Food and Agriculture and it is a key topic of the International Treaty on Plant Genetic Resources for Food and Agriculture.

Coordinated actions at Belgian level (including regional level) must be set up for a better, safe conservation strategy for the genetic diversity that is essential for food and agriculture. The conservation of agricultural genetic diversity is to be achieved through *in situ* conservation of local species, varieties, domestic animal breeds and microbial life forms with actual or potential value. Actions should also be taken to improve the development of adequate gene banks useful for the *ex situ* conservation of genetic resources for food and agriculture. Such conservation requires an adequate system of economic and social incentives, combined with increased consumer awareness. The Regions take the conservation of breeds and varieties into consideration in their agri-environment measures. Ongoing initiatives cover, among other things, the establishment of private orchards, the safeguarding of poultry varieties and a programme to promote the rearing of the "Blanc-Bleu mixte" breed of cattle and the "mouton ardennais roux" breed of sheep in Wallonia (*in situ* conservation) and the establishment of cryo-banks for ruminant rearing in Wallonia (*ex situ* conservation).

A specific national strategy focusing on the management of agricultural biodiversity should be developed in the first place for coordinating the diverse actions already going on and to promote new ones. All the actions will contribute to the implementation of both the FAO's Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture (PGRFA) and the International Treaty on Plant Genetic Resources for Food and Agriculture that stipulate clearly the implementation of a National Strategy and a National Inventory of plant genetic resources for agriculture.

Furthermore, the importance of biodiversity for food and nutrition should be taken more into account by public health and food chain safety policies and their scientific bodies.

4c.6 Reduce the impacts of pesticides on biodiversity and ecosystem services

Pesticides are used to combat organisms considered to be harmful to crops and have therefore a detrimental effect on biodiversity. It is nevertheless possible to reduce the impacts of pesticides on biodiversity and ecosystem services by lessening their impacts on non-target organisms. A range of measures, if correctly applied, can contribute to reducing these impacts; they are either related to the choice of the pesticide or to the way it is spread into the environment (for example, organic agriculture, integrated agriculture,

biological control, prohibition of pesticides with long-term repercussions for the abundance and diversity of non-target species; and application of risk mitigation measures such as buffer zones in order to protect aquatic organisms).

From 2013, the NAPAN (Nationaal Actie Plan d'Action National) has been established as the Belgian national action plan for pesticide reduction as requested by the EU directive 2009/128. It includes the Federal Reduction Plan for Pesticides 2013-2017 (FRPP)[48], and the plans from the three Regions[49]. Each of these plans comprises both specific actions and actions carried out jointly with the other members of the NAPAN Task Force. It aims to reach the objectives of reducing risks linked to pesticides as defined in EU Directive 2009/128/CE establishing a framework for Community action to achieve the sustainable use of pesticides.

The FRPP is coordinated by the federal agencies in charge of the standardization of products, which allows to take many structural changes related to pesticides issues through legislative changes[50].

Examples of the measures foreseen in the federal and regional plans to be implemented at the national level are (i) the harmonization of methods, standards and reports on water contamination by pesticides, (ii) ensuring balanced information for non-professional users of products at the point of sale regarding the right conditions of use, the risks to public health and the environment, including biodiversity and ecosystem services.

4c.7 Prevent cultivated GMOs from leading to the loss, displacement or genetic introgression into local agricultural varieties and related wild flora and prevent them from affecting the surrounding natural biodiversity

The use of genetically modified organisms (GMOs) in agriculture for food or feed crops and their release into the environment *per se* are issues of growing importance. This importance increases in line with the technological progress made in this area, as the use of GMOs can potentially have negative impacts on the biodiversity of the environment. One risk is the escape of newly introduced genes into the surrounding environment (especially through pollen) so that the genetic material of local agricultural varieties or wild related flora can become contaminated. This can be prejudicial for instance if the newly introduced gene (transgene), aimed at agricultural purposes, has adverse effects if spread into the wild nature. Since the purpose of genetic modification will often be acceleration of the growth of cultivated plants or growth in adverse environmental conditions, cross-pollination could lead to mutations in wild plants that make such plants more invasive. Depending on the new character conferred by the transgenes, the impact of genetically modified plants should be carefully evaluated with regard to various components of biodiversity, representative of the various functions of the ecosystem, not only in the agricultural ecosystem itself but also with regard to the related vicinal wild terrestrial and aquatic ecosystems.

There is also a risk that GM standardised cultivated varieties will supplant locally adapted agricultural varieties, mainly for economical and marketing reasons and generally as large monocultures, and would therefore counteract Objectives 4c 2. to c.5. and Objective 5.8.

Moreover, with GM varieties being covered by patents generally owned by multinationals, efforts must be made to prevent that their release in the environment would alter traditional agricultural practices, thus counteracting Objectives 5.10 and 6.

We must also prevent marketing, economic forces and consumption habits from threatening and contaminating wild ecosystems. Public awareness of consumption behaviours increasing such threats should be raised (cf. obj. 4b.1 and 4g.1).

On the other hand, GM plants are developed for industrial purposes (to make pharmaceuticals,

[48] For more information, see : http://www.health.belgium.be/eportal/Environment/Chemicalsubstances/PRPB/index.htm

[49] For more information, see: http://www.wallonie-reductionpesticides.be (Wallonia)
http://www.bruxellesenvironnement.be/Templates/news.aspx?id=36615 (Brussels)
http://www.lne.be/themas/beleid/actieplanpesticiden (Flanders)

[50] This valuable asset has led to significant advances, such as the Phytolicence (certificate of required knowledge for users, vendors and professional advisors of plant protection products) or splitting the market of plant protection products in a market for professionals and a market for non-professionals.

bioplastics and other biomaterials), and industrial crops take over the area previously used for food crops. Once again, it is extremely important to carefully monitor the ecological consequences of the spreading of those transgenes as well as the ethical and social consequences, and decisions must be taken to avoid negative impacts.

Some GM cultures are resistant to herbicides or insecticides. Cultivation of these plants could lead to adjustments in agricultural practices (a change in the amount and type of herbicides/insecticides used) that have a direct impact on the environment and on biodiversity in particular.

In order to pursue the operational objective mentioned above, case-by-case studies on environmental risks for biodiversity and on socio-economic considerations of introduction of GMO cultures in Belgium are needed. Such studies would provide a scientific background to facilitate cooperative discussions between the Regional and Federal authorities and between the various stakeholders in Belgium when deciding to import and/or cultivate GMOs. These studies should be coordinated with the implementation of Objective 7.8 aimed at promoting research on and assessing the effects of GMOs on biodiversity and socio-economic aspects.

Finally, such environmental and socio-economic impact studies would have to be based on a good knowledge of the existing agricultural biodiversity of our country. The establishment of complete "living" (adaptable) catalogues covering this should therefore be encouraged.

4c.8 Ensure that the production of plants, inter alia non indigenous plants, for renewable energy does not negatively impact on biodiversity

Biomass[51] energy and biofuels* are set to cover an ever-increasing share of the EU's future transport and heating needs. The EU is supporting biofuels with the aim of reducing greenhouse gas emissions, boosting the decarbonisation of transport fuels, diversifying fuel supply sources, offering new income opportunities in rural areas and developing long-term replacements for fossil fuel.

In 2003, the Biofuels Directive on the promotion of the use of biofuels and other renewable fuels for transport set out indicative targets for Member States.

In December 2005: the European Commission adopted an Action Plan designed to increase the use of energy from forestry, agriculture and waste materials.

With regard to CAP, the decoupling of income support from production introduced in 2003 by the reformed CAP helps to facilitate the supply of energy crops. In particular, crops that were eligible for direct payments only under the non-food regime on set-aside areas may now be cultivated on any area without loss of income support.

Under Rural development policy, investments on or near farms, for example in biomass processing, as well as the mobilisation of unused biomass by forest holders, can also be supported. The Commission has proposed Community strategic guidelines for rural development that emphasise renewable energy, including biofuels. It is also proposing a specific ad hoc group to consider biomass and biofuel opportunities within national rural development programmes.

EU Directive 2009/28/EC on the promotion of the (sustainable) use of energy from renewable sources raises the share of renewable energy to 20 % by 2020 and the share of renewable energy in the transport sector specifically to 10 %. This directive is challenging, especially because a large number of plants grown to produce renewable energy are non-indigenous. As demonstrated by numerous studies on biofuels[52], imports to meet our need for renewable resources have dramatic

[51] In the NBS, the terminology refers to any material derived from biomass (plant, algae, animal or fungi) used for energy purposes. It has an important role to play as feedstock material for renewable energy generation whether for electricity, heating and cooling or for transport fuels, but also as raw material for other uses.

[52] Two studies on the impacts of biofuels production on Biodiversity were carried out by Belgium:
• Evaluation de l'impact sur la biodiversité du développement de cultures pour biocarburants, notamment de plantes génétiquement modifiées, en Belgique (FPS Health, Food Chain Safety and Environment, 2009), see: http://health.belgium.be/eportal/Environment/Environnement/17466531_FR?ie2Term=biocarburants&ie2section=9128#.UhNo7Uodd-1
• Impact de l'expansion des cultures pour biocarburants dans les pays en développement (CETRI, 2010), see: http://www.health.belgium.be/eportal/Environment/19067348#.UhNrykodd-1

consequences for the fight against climate change or the protection of biodiversity, as they indirectly lead to land use changes: they contribute to accelerate the destruction or degradation of natural habitats and increase the introduction of non-indigenous plants for that production. Intensive production of any form of biomass has serious negative impacts on biodiversity as a result of the use of fertilizers, pesticides, monoculture and forest clearing. In order to meet the growing demand for biomass and biofuels, the EU already imports large quantities of crops with substantial environmental impacts, such as palm oil or sugar cane. This must not lead to unacceptable pressures on biodiversity and food production in the exporting countries. This is not only an issue for biofuels, but biofuels will increase the pressure.

It is necessary to consider carefully how policies in Belgium can best increase the use of biomass and biofuels without damaging biodiversity. However, current attribution criteria in Belgium (established until 2013) only take into account the limitation in the use of fertilizers and pesticides, yet there are no specific criteria related to biodiversity. As a follow-up to the two studies on the impacts of biofuel production on biodiversity carried out in 2009 and 2010, Belgium will defend a position aiming at the compulsory inclusion of new environmental criteria within the framework of the revision of Renewable Energy Directive 2009/28/EC. Incentives should be restricted to the promotion of biofuels produced from feedstock that do not create an additional demand for land and do not compete with other uses like food, materials, biodiversity.

4d) Fishery in marine and inland waters

Marine waters

Belgium has a limited coastline and the country's professional marine fishing fleet is relatively small. Its ships only land 1 % of total landings of the countries bordering the North Sea. About 30,000 tons of fish[53] (mostly flat fish and cod) are brought ashore by Belgian fishermen each year. Other marine products (oysters) and the aquaculture* production in marine waters and freshwaters are currently not exploited. Taking into account that the state of the commercially exploited fishery resources is assessed at the European level and not at the level of the individual member states, marine biodiversity is particularly threatened in our coastal zone and shelf sea, where direct and indirect disturbances are concentrated. Two important threats are the overexploitation of marine resources and the adverse effects of certain fishing methods (in particular bottom-affecting gear) employed not only by Belgian fisheries but also by fishing vessels from foreign countries active in Belgium waters. Despite the creation of several international instruments to regulate fishery and its impact on the environment, the pressure on the marine ecosystem and fish populations is still present. Besides professional fishermen, also recreational fishermen are active at sea.

Fishery and aquaculture in the North Sea are governed by the EU's Common Fisheries Policy (CFP), established in 1983 and reviewed in 1992, 2002, and 2013. The new CFP is due to come into effect from 2014 with the objective of an ecological sustainable fishery and aquaculture (see art.1 of the CFP) and to achieve Maximum Sustainable Yield by 2020. The CFP takes into account the biological, economic and social dimensions of fishing. The CFP addresses four main areas, dealing with (1) conservation of fish stocks (such as establishment of total allowable catches (TACs) of sea fish that can safely be caught every year to allow for renewal of fish stock), (2) structures (such as vessels, port facilities and fish-processing plants), (3) the common organisation of the market and (4) an external fisheries policy which includes fishing agreements with non-Community members and negotiations in international organisations.

EU Marine Strategy Framework Directive (2008/56/EC)[54] on the protection and conservation of the marine environment establishes a framework for Member states to take the necessary measures to achieve Good Environmental Status of the marine environment by 2020 at the latest. For that purpose, marine strategies shall be developed and implemented in order to (a) protect and preserve the marine environment, prevent its deterioration, or, where practicable, restore marine ecosystems in areas where they have been adversely affected and (b) to prevent and reduce inputs in the marine environment, with a view to phasing out pollution so as to ensure that there are no significant impacts on or risks to marine biodiversity,

[53] From Earth Trends Country Profile (http://earthtrends.wri.org)

[54] See: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:164:0019:0040:EN:PDFdans les pays en développement (CETRI, 2010), see: http://www.health.belgium.be/eportal/Environment/19067348#.UhNrykodd-1

marine ecosystems, human health or legitimate uses of the sea.

An important national instrument is the Law of 20 January 1999 on the protection of the marine environment in the areas under Belgian jurisdiction. This foresees the identification and designation of marine protected areas (MPA) (among others in application of the EU Habitat and Birds Directives). Work on MPAs and threatened and declining species is also ongoing under OSPAR. Measures for MPAs to reduce the impact of bottom-affecting gear are currently being negotiated as part of the Marine Spatial Planning. An impact analysis of human activities (including fisheries) and measures in view of achieving the objective of Good Environmental Status (Marine Strategy Framework Directive) will be included in the programme of measures which is currently being prepared (to be submitted to the European Commission in 2015).

For CITES-listed marine species, the permitting procedure with regards to the commercialisation of species caught in the high sea was approved at CITES CoP16 (March 2013). This way there is a common understanding of the provisions of the Convention relating to the introduction of sea specimens taken in the marine environment not under the jurisdiction of any State in order to facilitate the standard implementation of trade controls for such specimens introduced from the sea and to improve the accuracy of CITES trade data.

Inland waters

In Belgium, inland water fishery can be considered to be a leisure activity or a sport. It is practised mostly for entertainment and on a limited basis for food, both in artificial areas specially managed for fishing (private ponds, fishing grounds) and in the public hydrographic network of rivers and canals. Belgium's current legislation only covers the management of the public hydrographical network. Several improvements in the management of standing waters by fishermen should be promoted both to ensure an ecological management of the aquatic ecosystems and improve the quality of the local fish populations.

Belgium is a Party to the Ramsar Convention on the protection of wetlands (*i.e.* inland waters and marine waters) established in 1971 which provides the framework for conservation and sustainable utilisation of wetlands.

The ICES Code of Practice on the Introductions and Transfers of Marine Organisms sets forth recommended procedures and practices to diminish the risks of detrimental effects from the intentional introduction and transfer of marine (including brackish water) organisms (ICES, 2005).

- CBD instruments

The Programme of Work on Marine and Coastal biodiversity adopted in 1998 (CBD Decision IV/5) aims to assist the implementation of the Jakarta Mandate, the CBD's general framework for action on marine and coastal biodiversity, at the national, regional and global levels. It identifies key operational objectives and priority activities (implementation of integrated marine and coastal area management, marine and coastal living resources, marine and coastal protected areas, mariculture and alien species and genotypes).

The Programme of Work on Inland Waters adopted the same year (CBD Decision IV/4) promotes the ecosystem approach, including integrated watershed management, as the best way to reconcile competing demands for dwindling supplies of inland waters.

The stakeholders involved in the implementation of this objective are: fishery management bodies; owners, managers and charters of fishing vessels; the federations of fishermen, as well as fishermen, the general public and any association working towards the same goal as the NBS[55]

Operational objectives

4d.1 Promote the implementation of good fishing practices in the North Sea, favourable to fish protection and their habitats, including the implementation of the Common Fishery Policy

Belgium will promote the implementation of the FAO Code of Conduct for Responsible Fisheries to ensure the long-term sustainability of living marine resources and protection of their habitat. To help implement the

[55] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

provisions regarding fishing operations (Article 8 of the Code), Technical Guidelines are addressed to the individual states, international organisations, fishery management bodies, owners, managers and charters of fishing vessels as well as fishermen and the general public. They provide practical advice to ensure all fishing operations are conducted responsibly. Particular attention will be paid to minimising bycatch. Implementation of this objective should be in accordance with the management of marine protected areas and an Integrated Coastal Zone Management strategy (see Operational objective 3.2), as well as with the future European Marine Strategy. The CFP will be the instrument (legal basis) to implement the fishery-related measures.

4d.2 Ensure that recreational and sport fishing practices at sea and inland waters respond to ecological management objectives to avoid adverse impacts on biodiversity

The impact of recreational fishing at sea on fish stocks or on other elements of the marine biodiversity has not been assessed yet. At present, recreational gill-net fishing at sea is prohibited to limit the bycatch of birds and sea mammals and recreational bottom trawling is only allowed beyond 3 nautical miles.

Wherever it takes place, inland water fisheries should respect the ecosystem quality by avoiding unnecessary, inefficient or harmful fish stocking (overstocking, ponds connected to other water bodies, etc.). When necessary, the planting of indigenous fish should respect local genetic strains and the populations structure. Populations of species of no fishing interest should be respected. Stocking of non-indigenous species should be avoided in order to prevent the introduction and spread of invasive alien species. Introgression[56] of wild fish populations by domestic strains of fish should be avoided. Exaggerated baiting and consequent dystrophication must be avoided, especially in lakes and reservoirs. Furthermore, the monitoring of these activities should be strengthened.

Planning and restoration of inland water systems should be promoted: through biomanipulation[57], fisheries may contribute to rehabilitation of clear water systems with macrophytes and high species richness instead of poor and banal turbid water systems characterised by algal blooms. Stocking of fish should achieve a balance between the carrying capacity of aquatic ecosystems and the size and structure of fish populations in order to promote clear water systems, so preventing turbid water systems with poor species diversity. Stocking of pools should be avoided: they are too small to carry populations of large fish. Furthermore, maintenance and creation of fish-free ponds should be promoted for specific biota, for example amphibians.

4d.3 Prevent GM fish from threatening marine and freshwater biodiversity and populations

GM varieties of fish have already been commercialised in some parts of the world, intended including to grow faster and reach a bigger size. This practice is not applied in Belgium yet. Whereas those fish are supposed to be raised in confined areas, drastic measures should be taken to prevent those varieties from escaping into the wild. After all, some GM varieties of fish have already been shown to threaten the future of the species when they come into reproductive contact with the wild related members. Furthermore, GM fish could threaten local species and ecosystems through their invasive behaviour.

Similarly for other marine GM products, the consequences of interbreeding and competitive behaviour with wild relatives should be carefully investigated and, as a rule, should be avoided at all cost. The Belgian Marine Environmental law prohibits the deliberate introduction of genetically modified organisms.

Specific attention needs to be given to side effects of genetic manipulations aimed at increasing the size of commercial species (amplification of growth hormone gene).

(see also Objective 7.7.)

4e) Wise use of wetlands

Wetlands are essential components of Belgian

[56] Introgression: the introduction of genes from the gene pool of one species into that of another during hybridization.

[57] Biomanipulation (of lakes): (Lake) restoration technique by top-down management, mainly by reducing and/or restructuring the fish populations, in order to enhance grazing by herbivorous zooplankton to control phytoplankton biomass and, consequently, to obtain and maintain a clear water system with high species diversity.

biodiversity which are under severe threat. They provide for useful ecosystem services such as water retention, water purification, recreational areas, wildfowl habitats and more.

The Convention requires that "The Contracting Parties shall formulate and implement their planning so as to promote the conservation of the wetlands included in the List, and as far as possible the wise use of wetlands in their territory" (art. 3.1). Wise use of wetlands has been defined by the COP of the convention as "the maintenance of their ecological character, achieved through the implementation of ecosystem approaches, within the context of sustainable development". "Ecological character" is "the combination of the ecosystem components, processes and benefits/services that characterise the wetland at a given point in time" (Rés. XI.1. Annex A COP Ramsar Convention, 2005).

Nine Ramsar sites are designated in Belgium (4 in Flanders and 4 in Wallonia).

The Water Framework Directive (Directive 2000/60/CE) sets a framework for a Community policy in the field of water. It establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater in order, among other things, to prevent further deterioration and protect and enhance the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems.

The wise use provisions of the Convention apply, as far as possible, to all wetland ecosystems. Societal choice is inherent in advancing human well-being and poverty alleviation, which depends on the maintenance of ecosystem benefits/services. Within the context of ecosystem approaches, planning processes for promoting the delivery of wetland ecosystem benefits/services should be formulated and implemented in the context of the maintenance or enhancement, as appropriate, of wetland ecological character at appropriate spatial and temporal scales. (Rés. XI.1. Annex A COP Ramsar Convention, 2005).

The stakeholders involved in the implementation of this objective are: the federal and regional authorities competent for wetlands management or wetlands related issues, the Belgian Ramsar Committee, wetland site managers, key business sectors (water and sanitation, irrigation and water supply, agriculture, waste disposal, fishing...)[58] and any association working towards the same goal as the NBS.

4e.1 Apply Ramsar Convention guidelines on Wise use of Wetlands Concept as far as relevant

The COP of Ramsar Convention has published detailed guidelines on various issues of wetlands use. Main guidelines are about: Integrated Coastal Zone Management; Inventory; Laws and institutions; Management planning; National wetland policies; Participation in management; Restoration; Risk assessment; River basin management; Water and water allocation; Wise Use concept. Those Guidelines should be implemented through relevant public authorities competent with wetlands management or wetlands related uses.

4f) Forestry

The forestry sector plays a multi-functional role as a producer of a renewable natural resource, provider of income and employment, biodiversity manager, guarantor of *in situ* conservation of local tree varieties and provider of environmental services (like soil and water protection) and of recreational activities.

The biodiversity of Belgian forests is threatened locally, among other things by intensive management, pollution, changes in groundwater levels, fragmentation, recreational activities and high population densities of big game species (ongulates). Indirectly, they also pose a threat to the forest as a productive resource. To ensure that the biodiversity in Belgian forests is maintained, it is necessary to work on quantitative aspects (for instance, halt deforestation and fragmentation) and qualitative aspects, and to focus on "internal measures" within the forest and nature conservation policies and practices, as well as external measures lying outside the forest sector (for example environmental quality, land-use planning). The guiding principle should be the promotion of sustainable forest management. Sustainable forest management (SFM) is defined as "the stewardship and use of forests and forest

[58] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfil, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and that does not cause damage to other ecosystems" (Ministerial Conferences on the Protection of Forests in Europe, 1993). In this context, the Flemish Government approved the Act of the Flemish government concerning the determination of criteria for sustainable forest management for forests in the Flemish Region (Decree of the Flemish Government of 27/06/03, Belgian Official Gazette 10/09/2003). Management standards for the promotion of sustainable forest management have been proposed in Flanders ("Beheervisie") and Wallonia ("Walloon Biodiversity Guidelines" - Branquart & Liégeois 2005).

The improved pan-European criteria and indicators for sustainable forest management are taken into account in regional forest inventories.

Forest certification is seen as one of the most important initiatives from the last decade to promote sustainable forest management and since 1994, work on certification has been carried out in Belgium. Several different certification schemes exist world-wide; the best-known initiatives are the "Forest Stewardship Council" (FSC)[59] and the "Programme for the Endorsement of Forest Certification schemes" (PEFC)[60]. The Flemish Region and Brussels-Capital Region actively encourage the use of FSC-certified wood in public works, while the PEFC is mainly favoured by, and is fully operational in, the Walloon Region. The Federal Government supports all certification systems that prove that the timber comes from sustainable managed forests, for example through its public procurement policy.

• CBD Instrument

The Programme of Work on Forest Biodiversity adopted by the CBD (CBD Decision VI/22 and VII/6) consists of three elements. The first covers largely biophysical aspects, such as the reduction of threats to forest biodiversity through restoration, agroforestry, and watershed management, and the establishment of protected areas. The second element deals with the institutional and socio-economic environment that in turn enables the conservation and sustainable use of forest biodiversity. The third element covers assessment and monitoring. Parties should implement the expanded Programme of Work on Forest Biodiversity to suit their national priorities and needs.

The stakeholders involved in the implementation of this objective are: the federal and regional authorities, foresters, public and private forest owners, forest industries, forest groups, public procurements actors, NGOs, research institutes, universities and any association working towards the same goal as the NBS[61].

Operational objectives

4f.1 Promote the conservation of forest biodiversity through independent credible forest certification systems that provide a guarantee for sustainable forest management

This operational objective supports the use of sustainable (certified) timber products and the promotion of credible certification systems. This can be achieved, for example, by actions in several fields such as public procurements policy or public and forest owner's awareness activities.

4f.2 Promote nature-oriented forestry that provides a guarantee for sustainable forest management, including forest conservation

The declining health of forests, new insights in forest ecology as well as the increased interest of society in the protection of the environment demand a change in forest-management priorities, with a greater emphasis needing to be laid on close-to-nature forest-management practices. Nature-oriented forest management means the use of management forms where self-regulating natural processes are used and promoted to regulate the required functional efficiency of forests.

[59] http://www.fsc.org/

[60] http://www.pefc.org/

[61] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

[62] http://www.bosgroepen.be/

Besides the adoption of close-to-nature forest management systems, it is also of vital importance to promote the development of a representative network of protected forest areas (see objective 3.1.).

Nature-oriented forestry has to be understood as a flexible system to maintain the natural characteristics of forests, via adequate planning, harvesting methods, origins of plant material and management practices that take into account the ecological requirements of all the natural values of the forest. This system should provide options rather than strict rules. Its promotion needs to be based on a better knowledge of its economic benefits (for instance, through innovative research) and a better illustration of its advantages for biodiversity (for instance through demonstration areas). Belgian public forests are progressively applying nature-oriented forestry, and it should be promoted for the private forest owners too. In Flanders, voluntary associations (forest groups) offer different services to help the small-scale forest owners with the management of their forests[62].

Positive incentives need to be enhanced to promote sustainable forestry. In Flanders, subsidies are given for afforestation of farmland and pilot projects are receiving financial and technical support for the development and implementation of forest management plans.

In Wallonia, both public and private owners must meet sustainable forest management (SFM) criteria in order to obtain financial incentives for forest operations.

4f.3 Protection of forest genetic diversity

Genetic diversity has become one of the keywords for the scientists and managers who are concerned with the sustainable management of forests. Scientific evidence suggests that high levels of genetic diversity provide a guarantee for perennial forests. Biodiversity in forests is therefore not only important for its economic potential, but also because the genetic variation within species influences growth and resistance to stresses such as harsh weather, disease and plagues.

For the reasons mentioned above, Belgium needs to protect its forest genetic resources in order to ensure healthy tree populations and to preserve all the potentials of the forests. It is to be achieved through a better knowledge of the conservation of forest genetic resources, in parallel with the adoption of practical measures for conservation. The "Technical Guidelines for genetic conservation and use" that are being produced by the EUFORGEN network can be used as a basis for such work in Belgium.

4f.4 Prevent GM trees from having a negative impact on forest and general biodiversity

Genetically modified trees are currently in development in various countries worldwide mostly for industrial uses, to speed up the growth of the plant, to make them more resistant to various environmental stresses, to enhance the photosynthesis process, to reduce lignin content (reducing the need for toxic chlorinated organic compounds as bleaching method in the paper industry), etc. As for GMOs in agriculture, not only the ecological consequences of the transgenic trait itself and of the spreading of the transgenes into nature should be carefully looked at, but also the impact that economic forces can have on the spreading of those patented GM forests area, leading possibly to loss in forestry biodiversity and to negative social consequences (see also Objective 7.8).

It is also noted that GMO forest trees are not allowed in certified forests.

4g) Hunting

Hunting is a leisure activity for about 23,000 hunters in Belgium. It generates a societal debate with discussions on the pro and cons, and compromises always have to be reached. There has been an evolution over the last 20 years, with cooperation between hunters, foresters, farmers and conservationists improving. Important progress has been made in putting new wildlife management insights into practice and in recognising the ecological interactions between hunting and biodiversity.

Belgian hunting was regulated by a law of 1882 but is now a full competence of the Regions, with different regulations in Flanders, Wallonia, and Brussels-Capital Region. These laws differ between the Regions to

[63] Flanders: Flemish Parliament Act on Hunting of 24 July 1991; Wallonia: Act of 1882 revised by act of 14 July 1994; Brussels: Order of 29 August related to the conservation of wild fauna and to hunting.

better fit the respective game situations. The law of 1882 was first revised by the Regions in the 1990s[63] in order to obtain a sustainable use of wild species and their habitats. In Brussels-Capital Region, hunting is completely prohibited since 1991. Since the 1990s, modifications of Walloon and Flemish laws on hunting, along with efforts from hunters, aim to a sustainable use of wild species and their habitats.

In Flanders, management plans for the game management units are controlled, and if necessary amended, by the responsible Minister on a 6 years basis. In Flanders and in Wallonia, cull plans in general are drawn up every year for the most part by game management units for certain big game (red deer in Wallonia and roe deer in Flanders) and approved by the Regions in order to guarantee a coordinated management of these types of game.

Since 1978, both in Flanders and in Wallonia, a compulsory hunting exam aims to guarantee best safety practices, ethics, and good knowledge of game species and their habitats.

For birds, the Council Directive 79/409/EEC provides the framework for the management of bird-hunting in the EU. The *Guidance document on hunting under Council Directive 79/409/EEC on the conservation of wild birds* published by the European Commission in 2004 accepts hunting activity in accordance with the general objectives of the Birds Directive. The AEWA action plan and Bern Convention foresee the phasing out of the use of lead shot for hunting in order to prevent saturnism. The use of leadshot in wetlands is prohibited since 1993 in Flanders and since 2006 in Wallonia[64t]. Since 2008, there has been an absolute ban on the use of leadshot anywhere in Flanders[65].

Historically, hunters have played an important role in the conservation of habitats. More recently, through their commitment in game management units, hunters took management measures with a positive influence on biodiversity, for instance management of field edges, promotion of agro-environmental methods, planting of indigenous shrubs and trees, infrastructural actions such as roe deer-reflectors along roads.

Hunters' behaviour has changed significantly given they have to take courses and pass an exam on theory and practice to gain a hunting permit. The creation and approval of game management units has had a major impact on vision and attitudes of hunters in Belgium. However, specific efforts need to be done to avoid harmful behaviour that can have an impact on biodiversity by individual hunters and landowners. The hunting sector still needs proactive policy initiatives with a vision on the long term to contribute to the objective of halting the loss of biodiversity in Belgium.

The stakeholders involved in the implementation of this objective are: the federal and regional authorities, farmers, foresters, hunters, hunting organizations, environmental NGOs, land owners, landscape and land use planning departments and any association working towards the same goal as the NBS[66].

Operational objectives

4g.1 Promote integrated management of hunting grounds in cooperation with farmers, foresters and environmental NGOs and the application of good hunting practices

Game habitats should be managed in an integrated manner fully compatible with maintenance and rehabilitation of biodiversity (Objective 3) and in cooperation with farmers, foresters, other users of the countryside and environmental NGOs. For instance, attention should be paid to create and maintain refuge areas for small game, in particular in agricultural habitats. Hunters should participate to semi-natural habitats restoration and small landscape elements conservation in open lands taking into account that today farmers and land owners are the key role players for landscape management. To achieve this goal, legislative initiatives, such as modification of set-aside regulation, should be taken by the competent governments.

In the long term, game management units should be stimulated and plans should be extended to all native game species in all Regions.

[64] Arrêté du Gouvernement wallon du 22 septembre 2005 règlementant l'emploi des armes à feu et de leurs munitions en vue de l'exercice de la chasse, ainsi que certains procédés ou techniques de chasse

[65] Flemish Government Decree 19 September 2003

[66] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

Hunters should be aware of the carrying capacity of habitats. Total achievement of annual big game cull plans and game management plans will help restore the equilibrium between economic, ecological and social functions of forest and countryside. High densities of ungulates are locally a problem for foresters that can be managed in partnership with hunters. Populations of big game have increased over the last 20 years due to a lack of severe winter periods for several years, the positive effect of storms on forests' nutritional potential (CEEW, 2000), but also due to the absence of natural predators since more than 150 years and hunters' tendency to protect females of big game and the feeding of wild boar (CEEW, 2005). This phenomenon has led to an over-density of total population of wild boar, roe deer and red deer in Wallonia (a similar evolution is observed in neighbouring regions) which locally cause damages to trees, hamper forest regeneration, threat several species and sensitive habitats, and cause other problems, including in suburban zones.

It is important to develop legal instruments in order to enable taking concrete measures for field management on favour of biodiversity. Several field measures still miss a legal framework or lack financial incentives (for instance, wildlife set-aside measures).

Some current legislation even has adverse effects on biodiversity (a.o. in Flanders, the berm Decree still allows mowing before 15 July and this hampers the breeding success of partridge and other species; in Wallonia, farmers are obliged to cut some set-aside covers in May-July during the main period of wildlife reproduction).

4g.2 Promote the involvement of hunters as biodiversity actors

Sustainable hunting should be widely promoted. The use of wild species may not have a significant impact on the long term viability of all species populations in their natural habitats. Several practices could be improved in order to limit pressure on biodiversity. The breeding and introduction of non-indigenous stocks of small game should be strictly controlled[67] and avoided in order to limit genetic pollution. In Flanders the introduction of wildfowl is prohibited since 2001; illegal introduction nevertheless remains a concern. Excessive feeding of game should be avoided. As to the control of predators, hunters should strictly follow legislation as predators play an essential role in the natural control of populations.

The issue of alien species detrimental to indigenous biodiversity can partly be dealt with in cooperation with hunters as they could help contain certain species or even be responsible for their systematic elimination.

4g.3 Promote stability within the hunting sector

For their investment in long-term biodiversity protection, hunters must be assured to some extent of their hunting rights in a given area and of a more stable legislative environment. This can stimulate their investment in the preservation and management of hedgerows, edges of woods and fields, game crops, and ponds or wetlands.

4h) Tourism and leisure

Many people regularly visit parks, green areas, forests and other natural areas, including Belgian protected areas and natural reserves to enjoy nature and observe wildlife. Some of our most attractive destinations encompass the sea coast and the polders (for example the Zwin and the Westhoek), heaths and peat bogs (for example Kalmthout, the Hautes-Fagnes and the Ziepbeek Valley), ponds and marshes (for example the Zwarte Beek Valley, the Haine Valley, Harchies and Virelles), limestone hills (for example the Meuse escarpments and the Viroin Valley), natural caves and caverns (for example Han-sur-Lesse, Remouchamps, La Merveilleuse and Hotton), and woods and forests (for example the Meerdaelwoud, the Hertogenwald, the Sonian Forest and the Anlier-Rulles Forest).

The development of tourism in natural and protected areas and other nature-based destinations is a source of increasing stress on fragile ecosystems. Its social, economic and environmental impacts are immense and complex. In the absence of appropriate policies and plans, tourism to natural areas may have a negative impact on biodiversity.

The challenge is to ensure that tourism is developed in harmony with environmental considerations. Sustainable tourism can generate employment and

[67] Introduction of small game is prohibited in the Flemish Region.

income, thus providing an incentive for conservation. Tourism policies should therefore be formulated and implemented in a way that generates incentives and revenues to cover a share of the costs of managing and protecting marine and terrestrial protected areas. Sustainable tourism can also raise public awareness of the many goods and services provided by biodiversity.

Worth mentioning here is the EU expert meeting 'Natura 2000 and Leisure' in 2004 where the participants shared their experiences and approaches to nature and recreation. The report 'Jewels in the crown - Good practices Natura 2000 and leisure' illustrates the synergies existing between recreation and protected Natura 2000 areas.

Another challenge is the development of knowledge on carrying capacity and the raising of consciousness among Belgian tourists abroad and foreign tourists in Belgium.

The Commission has published in 2003 a communication laying down basic orientations for the sustainability of European tourism (COM/2003/0716)[68]. This communication addresses current and future possibilities of community intervention in tourism, makes an analysis of the European situation and its difficulties and establishes orientations for the future.

• CBD instrument

The Guidelines on Biodiversity and Tourism Development[69] were adopted in 2004 to help Parties in the promotion of sustainable tourism (CBD Decision VII/14). They were conceived as a practical tool providing technical guidance to policy-makers, decision-makers and managers with responsibilities covering tourism and/or biodiversity, whether in national or local government, the private sector, local communities, non-governmental organisations or other organisations, as to ways of working together with key stakeholders involved in tourism and biodiversity. The implementation of the guidelines will help make tourism and biodiversity more mutually supportive, engage the private sector and local communities, and promote infrastructure and land-use planning based on the principles of conservation and sustainable use of biodiversity.

The stakeholders involved in the implementation of this objective are: the regional and municipal authorities, recreation and tourism organizations, guides and interpreters, sports/adventure associations, transportation and other service providers, environmental NGOs, the general public and any association working towards the same goal as the NBS[70].

Operational objective

4h.1 Apply CBD tools to monitor and control the impact of tourism on biodiversity, in particular in protected areas

Ideally, the conception of tourism in protected areas should be one of environmentally responsible travel to and visiting of natural areas, promoting conservation, having a low visitor impact, and providing for positive active socio-economic involvement on the part of local populations.

As protected habitats with high biodiversity value are becoming popular tourism destinations, tools (such as environmental impact assessments) and methods (such as the Recreation Opportunity Spectrum* and the Limits of Acceptable Change*) should be used in order to balance the frequency and (possible) impacts of the visits in protected areas against the carrying capacity of the area. In vulnerable ecosystems, based on these methodologies, relevant background information and application of the ecosystem approach, tourism should be restricted and where necessary prevented. These tools and methods should be equally applicable to any tourism activities and development that may have an impact on biodiversity in geographical locations and tourist destinations at all levels (including areas that are neither protected nor vulnerable).

[68] http://eur-lex.europa.eu/LexUriServ/site/en/com/2003/com2003_0716en01.pdf (not published in the Official Journal)

[69] http://www.cbd.int/doc/programmes/tourism/tourism-manual-en.pdf

[70] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

OBJECTIVE 5: IMPROVE THE INTEGRATION OF BIODIVERSITY CONCERNS INTO ALL RELEVANT SECTORAL POLICIES

As biodiversity touches upon almost all economic sectors, the protection of biodiversity cannot be achieved only through environmental policies. Biodiversity must become the base of an integrated economic and social development. The link between social policies (like job creation) and biodiversity needs to be emphasized too, as well as the impact of biodiversity loss on human well-being and health in particular. A major cause of biodiversity loss is the implementation of a number of sectoral and horizontal policies that affect ecosystems and species (cf. Part I.4 Threats to biodiversity).

The necessity of incorporating into other policies the objective of halting the loss of biodiversity between now and 2020, given the importance of biodiversity for certain economic sectors, was underlined by the Council Conclusions of the European Council in March 2005.

The Belgian Biodiversity Strategy needs to be clearly articulated with the future national Strategy on Sustainable Development as the protection of biodiversity is an essential condition for sustainable development as well as with the actual Belgian programme of structural reform (Lisbon Strategy 2005-2008).

The impact of sectoral activities on biodiversity must be taken into consideration and biodiversity actors should be consulted. This implies that biodiversity concerns must be taken into account during the development and implementation of all relevant sectoral plans, programmes, legislation and policies that may have an impact on biodiversity.

There is also a need to assist administrations and different departments in developing competence and expertise in dealing with biodiversity issues in their own area of influence. Biodiversity is an important socio-economic asset and integration of biodiversity concerns in sectoral policies also benefits the sector as it encourages a more sustainable use of this resource.

Several sectors are particularly important with regard to biodiversity: spatial planning has a major impact on biodiversity, as it can play a major role in habitat fragmentation and can cause uncontrolled development pressures on biodiversity; industry, transport and energy sectors can have global and regional impacts on biodiversity through climate change and acidification, and furthermore can have a local impact through habitat fragmentation, destruction of habitats and disturbance of wildlife; etc. The 2020 objective will only be achieved when all the relevant sectors integrate consideration for biodiversity in their plans and policy.

Specific attention also needs to be given to the involvement of the private sector in biodiversity issues. Furthermore, companies and industries possess relevant knowledge, technological resources and research and communication skills, which, if mobilised, could play an important role in the protection of biodiversity.

According to the subsidiarity principle, the lowest appropriate level has to take efficient and effective action. Therefore, regional and local authorities should be involved in coordinating and facilitating such actions where possible. The use of participative approaches can here be helpful.

Fundamental social and economic processes in society are the key underlying drivers of environmental change. Demographics, consumption and production patterns, scientific and technological innovation, economic demand, markets and trade, institutional and sociopolitical frameworks and value systems all play a part in determining the impact that humans have on the natural world. This impact is expressed through a number of direct and indirect drivers of biodiversity loss, the most important of which are habitat degradation and land use change, overexploitation, pollution, invasive alien species and climate change.

Objective 5 of the NBS is the backbone of achieving sectoral integration of biodiversity concerns and engaging stakeholders in the delivery of the NBS. Important updates have been done hereunder.

[71] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

The stakeholders involved in the implementation of this objective are: the federal public services, the regional and local authorities, the various social and economic sectors, the professional federations involved in the sectors concerned (agriculture, fisheries, forestry, mining, energy, tourism, transport, the chemical industry, finances, sciences policy, the pet trade, imports/exports), farmers, fishermen, conservationists, natural resource managers, foresters, the private sector, researchers, NGOs, the Belgian CITES service, business, civil society, the general public and any association working towards the same goal as the NBS [71].

Operational objectives

5.1 Promote and support stakeholders involvement inter alia through partnerships at all levels of decision-making relating to biodiversity

Stakeholders (Regional, Federal and local authorities, farmers, fishermen, conservationists, natural resource managers, foresters, the private sector, researchers, non-governmental organisations, etc.) must all be able to have a say in the decisions affecting biodiversity. The Aarhus Convention (Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters) grants rights to the public and imposes obligations on public authorities regarding access to information and public participation and access to justice. Belgium signed this convention on 25 June 1998 and ratified it on 23 January 2003.

Individual behaviours need to be addressed, as individuals are biodiversity actors that need to be responsabilised. Specific methodology needs therefore to be developed.

Partnerships that actively link stakeholders should be developed in order to share information and expertise and promote positive linkages between biodiversity and other sectors. This implies consultation and collaboration between and within the different authorities and stakeholders in the field. Participation by the different stakeholders will increase their cooperation and involvement. This will increase the support for biodiversity protection and so stimulate the carrying out of actions in this area.

Furthermore, collaboration in a complementary and integrated way between administrations, both from different sectors as from different policy levels (federal, regional and local levels), on the basis of the subsidiary principle, is crucial to protect biodiversity.

Several initiatives to involve stakeholders have already been taken; there are 'Plan Communaux pour le développement de la Nature, PCDN', which are municipal initiatives based on local partnership on nature development aiming for the preservation and development of biodiversity by taking account of the ecological network; and also River Contracts that brings together all the actors of a river valley with the aim to reach a consensus on an action programme for the restoration of the water course, the river banks and surroundings and the water resources. Invited are representatives of the political, administrative, socio-economic, educational, scientific and associative worlds.

5.2 Encourage the involvement of the private sector in the protection of biodiversity, as an integral part of business planning and operations

Companies are more and more scrutinized on their impacts on biodiversity by stakeholders (investors, employees, consumers, etc.). Many businesses own and manage land, their activities therefore directly affect biodiversity (companies active in sectors such as agriculture, water, woodlands and forestry, tourism and transport for example). Other companies can have indirect impacts, such as financial services companies through loan or investment policies, and retailers, through the purchase of intensively produced agricultural products.

Therefore it is important to consult private sector and ask their advice on the best way to apply enterprise's instruments, such as environmental reports, labels, integrating biodiversity requirements into company management systems, green purchases, etc., to improve their environmental performance and engage more fully in managing and reporting on biodiversity.

The establishment of Company Biodiversity Action Plans to manage the company's overall impacts on biodiversity (including management of sites

in its ownership or control) can be an appropriate instrument to manage biodiversity impacts and contribute to biodiversity protection.

Furthermore, the private sector needs to understand the importance of biodiversity and be aware of the legislations protecting it and the opportunities to take actions to preserve it.

State aids to private sector operators are an important instrument to promote activities that take biodiversity concerns into account (see operational Objective 5.5.).

5.3 Ensure that this Strategy is taken into account in decision-making and policy discussions and encourage the development and use of guidelines for the integration of biodiversity into all relevant sectoral policies

The Belgian Biodiversity Strategy should play a part in decision-making processes and be considered at the decision-making and planning levels. Biodiversity concerns should be considered from the early stages of the drafting process when developing new plans, programs, legislative and regulatory frameworks.

The biodiversity policy should not be seen as independent of sectoral policies, but both should be mutually supportive: sectoral policies should support the implementation of national biodiversity goals while integration of biodiversity goals should be beneficial to the sectoral policies.

The sectoral integration of biodiversity, or its "mainstreaming", means the integration of the conservation and sustainable use of biodiversity in both cross-sectoral plans such as sustainable development, climate change adaptation/ mitigation, trade, international cooperation and poverty reduction, and in sector-specific plans such as agriculture, fisheries, forestry, mining, energy, tourism, transport, the chemical industry, finances, sciences policy and others. It implies changes in development models, strategies and thought patterns.

To operationalize the integration of biodiversity concerns into decision-making and policy discussions in sectors other than nature conservation, the application of sectoral guidelines on biodiversity mainstreaming will be promoted. The work will build on existing tools (such as the CBD's Capacity Building module on Biodiversity Mainstreaming) and adapt them for Belgium if necessary. It is also extremely important to continually review the adequacy of legislation in furthering the objectives of the Belgian Biodiversity Strategy. The use of participative approaches can here be helpful.

5.4 Identify in strategic planning the negative and positive effects of the different sectoral policies (land-use planning, transport, energy) on priority elements of biodiversity, and take measures to correct or strengthen these effects

Activities with potential negative impacts must be identified and investigated in order to determine the exact causes and effects of those activities on biodiversity. These analyses will allow solutions (including better alternatives) to be identified that avoid or minimise the impacts of sectoral policies on biodiversity.

Activities must be boosted that have a potentially positive effect on the conservation and sustainable use of biodiversity. Early discussions between the sectors and biodiversity experts could help identify such 'win-win' situations and improve the positive interactions.

Through clear and legally binding rules, competent authorities should not approve projects and plans that would lead to irreversible damage for the priority elements of biodiversity, unless justified by imperative reasons of major public interest.

Therefore environmental impact assessment (EIA) and strategic environmental assessment (SEA) procedures must include biodiversity criteria and should refer to relevant national policy documents such as the Belgian Biodiversity Strategy, the CBD and biodiversity-related conventions and agreements. In this context, the guidance documents on integrating climate change and biodiversity into EIA[72] and SEA[73] issued by the European Commission (2013) under the EIA and SEA Directives (see below) should be implemented.

[72] http://ec.europa.eu/environment/eia/pdf/EIA%20Guidance.pdf

[73] http://ec.europa.eu/environment/eia/pdf/SEA%20Guidance.pdf

In order to promote a participative environmental policy, it is important to link the strategic planification (evaluation of impacts of plans and programmes related to environment) with public participation, as required by the European Directives.

The Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 1991) and its protocol and amendments set out the obligations of Parties to assess the environmental impact of certain activities at an early stage of the planning process. It also lays down the general obligation of individual states to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across national boundaries.

The assessment of impacts caused on biodiversity by projects and plans is already provided for by the European legislative framework:

- Environmental Impact Assessment Directive 85/337/EEC has been amended three times and is codified by Directive 2011/92/EU. It requires Member States to ensure that projects likely to have significant effects on the environment because of their nature, size or location are subject to an assessment of their environmental effects.

- Article 6 of the Habitats Directive requires that an appropriate assessment be undertaken for any plan or project which, either alone or in combination with other plans or projects, would be likely to have a significant effect on a Natura 2000 site.

- The Strategic Environmental Assessment Directive (2001/42/EC) requires that certain plans and programmes from the public sector be made subject to systematic environment assessment. The SEA directive specifically mentions biodiversity as one issue that has to be reported on in the environmental report.

These dispositions have been transposed into the Belgian Federal and Regional legal framework. However, there is a need to provide guidance to the initiators of relevant projects, plans and programmes to assess whether their projects, plans and programmes would be likely to cause any significant effects on biodiversity and if so, whether they should be subject to an SEA (for example, development of guidelines or establishment of an advisory committee including biodiversity experts). Furthermore, a set of criteria on biodiversity aspects to be taken into consideration during the environmental assessment, *i.e.* in the evaluation report, could also be useful in this regard.

5.5 Eliminate, phase out or reform incentives, including subsidies, harmful to biodiversity in order to minimize or avoid negative impacts on biodiversity and encourage the development and application of incentives favourable to the conservation and sustainable use of biodiversity, including economic, fiscal and financial instruments

It is crucial to provide the right market signals for biodiversity conservation. Since 2006, the NBS has been planning to combine market-based instruments in addition to normative instruments and processes (regulations, access and market restrictions, management plans, etc.), in order to provide positive incentives for biodiversity conservation and the sustainable use of biodiversity and ecosystem services. Such instruments are core elements for the application of the 'polluter pays' principle through the establishment of environmental liability regimes.

There is a need to make greater and more consistent use of domestic economic instruments with respect to biodiversity protection.

The adoption of socially and economically sound measures (like subsidies, state aid, grants-in-aid, and measures prescribed in the tax system) that act as incentives for biodiversity is of central importance to the realisation of the three objectives of the CBD.

Public authorities should promote companies that have a responsible investments policy that take biodiversity into account.

State aids should take a more holistic approach to promote environment. In particular, state aids to operators must be better used to promote and avoid any negative effects on biodiversity.

Internalisation (the incorporation of external costs and benefits) should be considered to be one of the guiding principles for selecting appropriate

incentive measures to prevent, stop or reverse the loss of biodiversity.

Some Regional initiatives, co-financed by the EU, have already been taken in Belgium: subsidies are granted for activities which take biodiversity into account such as private sustainable management of nature reserves, environmental measures in farming (for example enlargement and maintenance of natural borders, and use of manual or mechanised systems instead of chemicals), sustainable forestry (forest owners receiving subsidies for the development and implementation of forest-management plans that are based on sustainable forest management, for example conservation of indigenous tree species, and use of endemic species in re-afforestation projects), exemption from succession rights for private forests and exemption from succession rights and a levy for real property for land in the Flemish Ecological Network, exemption from death duties and real-estate deductions for land property situated in Natura 2000 Walloon sites, exemption of succession rights for non-profit associations that make natural area accessible for the public, etc.

Economic incentives measures must be further promoted to encourage the protection of biodiversity in Belgium. For example, imposing a higher cost on products using virgin resources, promoting products obtained from sustainable managed resources (like wood products certified as being harvested in sustainable conditions), creating positive financial incentive for biodiversity friendly products, or providing payment to farmers who maintain biodiversity on their land, could be used as incentives to make sustainable use of biodiversity more attractive than unsustainable activities.

Alongside the introduction of incentives to support conservation and sustainable use of biodiversity, consideration must be given to removing or redirecting perverse economic incentives that accelerate the loss of biodiversity (these range from public subsidies that support unsustainable farming and fisheries to projects that erode or destroy biodiversity). It is a critical and necessary step in terms of preserving biodiversity that would also generate broader net socio-economic benefits. This also includes work to reform, phase out and eliminate harmful subsidies (Aichi target 3; EU Target 6). The work done at EU level to eliminate the adverse impacts of sectoral EU policies (such as commercial fishing, agriculture, forestry development cooperation) will be complemented by appropriate measures at national level, including the possible reform of economic, fiscal and financial instruments.

As single measures will often not suffice to address the complexities involved in decisions on biodiversity protection or sustainable use, a mix of measures may be needed. It is also important that the different instruments (at the different levels) are linked, that they are efficiently used and that shortcomings are followed up.

Furthermore, the 'value' of biodiversity needs to be addressed (link with Objective 7.6. 'Improve our knowledge of the socio-economic benefits of biodiversity and ecosystem services') in order to integrate market and non-market aspects of biodiversity into economic and social decisions. Indeed, the pressures to reduce biodiversity are so great that to demonstrate the value of biodiversity, we need to encourage the introduction of incentives.

• CBD instrument

CBD has made proposals for the design and implementation of incentive measures. The proposals (endorsed at COP-6) highlight the key elements to be taken into consideration when designing and implementing incentive measures and also provide guidelines for selecting appropriate complementary measures.

5.6 Take biodiversity concerns into account in national export credit policy

Export Credit Agencies provide financial support (loans, guarantees, insurance) for projects in southern and eastern Europe. They aim to help national industries abroad. Export credit policies may have very significant impacts on environment and biodiversity in particular (for example by supporting construction projects of dams, pipelines, etc.).

The impact on biodiversity needs to be fully incorporated in the procedures for evaluation of projects applying for support by export credit agencies. It is important to examine the environmental criteria used to assess investments by Export Credit Agencies

and other publicly funded financial institutions and to ensure that these criteria take biodiversity into consideration. Project screening procedures must ensure that activities that lead to irreversible damage to biodiversity are not promoted.

Export Credit Agencies need to be more transparent in the eligibility criteria used and indicate which international obligation and engagements subscribed by Belgium they take into account. The following actions could also help credit export agencies to take biodiversity concern into account in national export credit policy:

- Implement a harmonised procedure to check whether a project respond to the international biodiversity related obligations and engagements subscribed by Belgium.

- Organise training for credit export agencies staff Belgium's international obligations and engagements related to biodiversity. Another measure to promote integration of biodiversity in credit export policies is to ask companies to sign a declaration of intent setting out the commitments of the companies to meet the objectives of the national biodiversity strategy.

5.7 Consider the potential impact on biodiversity, and in particular the invasiveness of species, in making import and export decisions

The international trade may adversely impact biodiversity by introducing new species such as invasive alien species (IAS), GMOs or diseases that affect related species.

Many alien species enter Belgium unintentionally, for example through wood imports, or they are imported intentionally for use in many areas (agriculture, horticulture, pet trade, etc.).

It is crucial to consider the potential impacts on biodiversity when developing national legislation and regulations that deal with the trade in live animals or plants.

Besides biodiversity-related conventions, several international conventions and organisations are relevant when taking import/exports decision in order to avoid damages on biodiversity. For example, the issue of IAS is dealt by the following forums:

- The World Trade Organisation (WTO) was invited by the CBD, through its committee on trade and the environment, to take invasive alien species issues into account when considering the impacts of trade and trade liberalisation.

- The International Plant Protection Convention (IPPC) is a multilateral treaty deposited with the Director-General of the FAO. Its purpose is to ensure common and effective actions to prevent the spread and introduction of pests and plants and plant products and to promote measures for their control.

- The FAO has compiled codes of practices to deal with alien species and has developed products such as the FAO Database on Introductions of Aquatic Species.

- The IMO International Convention for the Control and Management of Ships' Ballast Water and Sediments (adopted in 2004) addresses the introduction of invasive marine species into new environments through ballast water, hull-fouling and other vectors.

- The CITES convention aims to prevent trade from having an impact on species by controlling movements of certain categories of endangered species. The CITES Animals and Plants Committees are working in collaboration with the CBD on the preparation of a list of potentially invasive animal and plant species to be included in the CITES appendices. The EC Regulation for the implementation of CITES within the EU provides a basis for controlling imports of certain species that are recognised as being invasive (Regulation 338/97, Article 4.6(d)).

- The ICES Code of Practice on the Introductions and Transfers of Marine Organisms sets forth recommended procedures and practices to diminish the risks of detrimental effects from the intentional introduction and transfer of marine (including brackish water) organisms (ICES, 2005).

There are opportunities for synergies between several forums and the CBD in dealing with the

introductions of species that are potentially harmful for biodiversity.

On the other hand, experience gained (for example, experience gained under CITES in wildlife trade controls) could contribute to national and international efforts to avoid negative impacts on biodiversity.

5.8 Maximalise the advantages for health arising from biodiversity and ecosystem services and expand the collaboration between the interested organisations / public services

Inadequate attention is being paid to the important contributions biodiversity can make to human health. The links between biodiversity and human health are complex because they are often indirect, displaced in space and time, and dependent on a number of modifying forces. Human health ultimately depends on ecosystem products and services which are requisite for good human health and productive livelihoods, such as water and air purification, the provision of food and medicines, pest and disease control, medical research.

Many species provide invaluable information for human medicine. By losing species, we lose the anatomical, physiological, behavioural information's they contain.

Plants and microbes have long been, and remain today, an important basis for the development of medicines such as quinine, morphine, penicillin, etc. (approximately a quarter of all prescriptions are taken directly from plants or are chemically modified versions of plant substances and more than half of them are modelled on natural compounds). More recently, great attention has been paid to the potential development of important drugs from animals, some of which are often threatened by extinction.

By ensuring the sustainable productivity of soils and providing genetic resources for crops, livestock and marine species harvested for food, biodiversity also plays a crucial role in world food production and ensures a balanced diet (diversified agricultural agents maintain adequate food supply and prevent malnutrition). Furthermore, genetically diversified agricultural surfaces present a better resistance to environmental stresses, thus providing populations with greater nutritional safety.

Finally, accelerated biodiversity perturbations can have very negative impacts on the propagation of pre-existing transmissible diseases or even on the emergence of new ones, through modifications in vectors and/or target populations and in host-pathogen relationships. Studies of such relationships between biodiversity perturbation and increase in disease diffusion are starting to produce convincing results, as can be seen in the cases of malaria, schistosomiasis and also Lyme disease epidemiology.

There is a need to improve our understanding of the very strong existing link between human health and biodiversity, and consequently development. There should be particular support given to interdisciplinary research around these connected issues. The awareness of this link should be raised through educational programmes. Furthermore, collaboration between health and environment organisations and ministries should be improved to ensure that these issues are considered together when planning and implementing policies.

5.9 Encourage the implementation of CITES with the aim of supporting conservation and the sustainable use of biodiversity

The aim of the CITES Convention is to ensure that international trade in specimens of wild animals and plants does not threaten their survival. Species that are, or in the future might be, endangered by trade, are listed in one of the three CITES annexes. If a species is placed on these lists, the trade in that particular species is subject to strict regulations. By continuous follow-up of the status of the population, trade in specific species-country combinations may be prohibited.

Belgium, as a Member State of the European Community, implements the CITES legislation through two EC Regulations together with the Belgian CITES Act of 1981. Different goals will be prioritised, with the goal of improving the implementation of CITES in Belgium in the short to medium term.In this way, Belgium has and will continue to explore innovative means of increasing capacity and improving enforcement for example by assisting in the exchange of knowledge and expertise at national and EU level.

In line with the exploration of innovative means to improve the implementation of the CITES

Convention, the reporting requirements and enhanced enforcement, a new database system will be created. This new system will allow clients to make an online application for their permits and certificates, which will streamline the flow of applications. It will become easier for the EU to fulfil the reporting requirements for the annual and biannual report and enhance the follow-up of trade trends. Fraudulent use of the permitting system and fraud in applications for captive bred specimens will become more visible, thus improving CITES implementation in Belgium.

5.10 Maintain and reinforce the social function of biodiversity

Human beings are dependent on fundamental biological systems and processes for their well-being and enjoyment of life. Until now, there is insufficient recognition (and understanding) of the important connection between biodiversity and social well-being (health, educational attainment, procurement of goods demanded by society, job creation and preservation, relaxation, etc.). The aesthetic values of natural ecosystems and landscapes often contribute to the inspirational, emotional and spiritual well-being of a highly urbanised population.

For all these reasons it is necessary to maintain and learn more about the social benefits of biodiversity and the benefits arising from social variety with a view to reinforcing synergies and reducing social inequalities and the avoidable pressures and negative impacts they exert on biodiversity.

In connection with Objectives 5.8 and 7.5, the social and cultural diversity in Belgium will be duly taken into account when elaborating and implementing biodiversity policies with a view to mobilising in an efficient and equitable way the various publics and actors in society.

5.11 Integrate biodiversity values into national (federal and regional) policies, programmes, planning processes and reporting systems, and develop an approach to support incorporation into national accounting if needed

Decision-making in spatial planning and development projects takes the values of biodiversity into account. Where appropriate, payments for ecosystem services are considered a useful policy tool, notably when it promotes measures that go beyond the scope of the sustainable management of natural resources or in the framework of restoration.

As far as national accounts are concerned, the UN System of Environmental-Economic Accounting[74] (SEEA) already provides a methodology for some aspects of natural capital accounting. But much work remains to be done, especially on accounting for regulating ecosystem services. Belgium contributes to the related international endeavours. Work on adequate means to integrate natural capital considerations into private sector accounting is stimulated.

OBJECTIVE 6: PROMOTE AND CONTRIBUTE TO AN EQUITABLE ACCESS TO AND SHARING OF BENEFITS ARISING FROM THE USE OF GENETIC RESOURCES - ABS

The fair and equitable sharing of benefits arising out of the use of genetic resources forms the third objective of the CBD and is as important as the other two for the purpose of achieving the goal of halting biodiversity loss by 2020.

As access to GRs usually only involves taking small samples of material, its impact on biodiversity as such is relatively limited. However, respect for the ABS dispositions of the CBD and the provisions of the newly adopted Nagoya Protocol once it comes into force, is of paramount importance to biodiversity as it could provide a direct incentive for the conservation and sustainable use of biodiversity, in particular in the world's biologically richer (but often economically poorer) countries.

[74] http://unstats.un.org/unsd/envaccounting/seea.asp

• The Bonn Guidelines

In 2002, the Parties to the CBD adopted the Bonn Guidelines on access to genetic resources and the fair and equitable sharing of the benefits arising from their utilisation. These guidelines were developed to assist Parties when establishing legislative, administrative or policy measures on access and benefit-sharing and contracts and other arrangements under mutually agreed terms for access and benefit-sharing.

The Guidelines identify the steps in the access and benefit-sharing process, with an emphasis on the obligation for users to seek the prior informed consent of providers. They also identify the basic requirements for mutually agreed terms and define the main roles and responsibilities of users and providers and stress the importance of the involvement of all stakeholders.

The Bonn Guidelines are a non-legally binding instrument recognized as a useful first step of an evolutionary process in the implementation of relevant provisions of the Convention related to access to genetic resources and benefit-sharing (decision VII/19). However, the same COP decision decided to "mandate the Ad Hoc Open-ended Working Group on Access and Benefit-sharing (...) to elaborate and negotiate an international regime on access to genetic resources and benefit-sharing with the aim of adopting an instrument\instruments to effectively implement the provisions in Article 15 and Article 8(j) of the Convention and the three objectives of the Convention". This process led to the adoption of the Nagoya Protocol in 2010.

Between 2004 and 2010, Belgium actively took part in the negotiations and development of a transparent International Regime on Access and Benefit-Sharing according to the mandate adopted at the 7th Conference of the Parties to the CBD. The adoption of the ABS Protocol in Nagoya at the 10th Conference of the Parties to the CBD on 30 October 2010, under the Belgian Presidency of the EU, was an essential part of the package that made this Conference a success (together with the adoption of an ambitious Strategic Plan until 2020 and of a Resource Mobilization Strategy) but it is also just the first step.

• The Nagoya Protocol

In 2010, the Parties to the CBD adopted **the Nagoya Protocol** on access to genetic resources and the fair and equitable sharing arising from their utilization. The Protocol aims to share the benefits arising from the utilization of genetic resources in a fair and equitable way, including by appropriate access to genetic resources and the appropriate transfer of relevant technologies, taking into account all rights to those resources and technologies, and by appropriate funding, thereby contributing to the conservation of biological diversity and the sustainable use of its components.

The Nagoya Protocol is a complementary Protocol to the CBD which aims to provide a transparent legal framework for the effective implementation of the third objective of the CBD thereby contributing to the conservation and sustainable use of biodiversity. The Nagoya Protocol will enter into force internationally 90 days after the date of deposit of the fiftieth instrument of ratification.

In the meantime, other instruments dealing with Access and Benefit-Sharing have also been negotiated and / or have entered into force, and are mutually supportive, as stated in the recitals and Article 4 of the Nagoya Protocol. Some of these are directly relevant to Belgium. For instance, Belgium ratified the International Treaty on Plant Genetic Resources for Food and Agriculture in 2007. Its objectives are the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of benefits derived from their use, in harmony with the Convention on Biological Diversity for sustainable agriculture and food security. The core of the Treaty is a 'multilateral system' to facilitate access to the genetic resources of 64 major crops and forages and share the benefits in a fair and equitable way. The Treaty recognizes Farmers' Rights, which include the protection of traditional knowledge, and the right to participate equitably in benefit-sharing and in national decision-making about the conservation and the sustainable use of plant genetic resources.

Belgium is bound by the relevant ABS provisions of the CBD, which provides the general framework for

the implementation of the Nagoya Protocol, and has already taken several initiatives to implement the ABS dispositions of the CBD. This is done through its patent legislation and by developing a voluntary code of conduct to help countries comply with the requirements on Access and Benefit-Sharing for transferring microbial genetic resources ('*Micro-organisms Sustainable Use and Access Regulation International Code of Conduct, MOSAICC*'). Furthermore, the Royal Botanic Garden of Belgium is a member of the International Plant Exchange Network (IPEN) programme of various EU botanic gardens for the exchange of plant material. IPEN allows participating gardens to exchange material for non-commercial purposes in accordance with the objectives of the CBD.

The stakeholders involved in the implementation of this objective are: the federal, regional and municipal authorities and institutions, the regional nature agencies, various sectors active in Research and Development (including healthcare, biotechnology…), universities, professional federations involved in the sectors concerned, the general public, TK holders, the CBD Secretariat, users of GRs, and any association working towards the same goal as the NBS[75].

Operational objectives

6.1 By 2014, raise awareness about the concept of ABS in the context of the CBD and the Nagoya Protocol, and widely disseminate information on ABS

It is important to raise the level of awareness of users and providers of genetic resources on the CBD and related ABS provisions, including the Nagoya Protocol, as well as on 'best practices'. As the ABS provisions of the CBD and the Nagoya Protocol are insufficiently known and can be ambiguous and difficult to understand for practitioners, it is important that more efforts are made to promote their understanding, explain their relevance and implications, and build capacities.

A first step towards an information campaign on ABS issues has been taken by Belgium by launching an analysis of Belgian stakeholders' awareness of the ABS provisions, and the impact of these provisions on their policy towards the implementation of ABS principles[76]. Following this assessment, Belgium has included several awareness-raising and capacity building activities in the Federal Plan for the integration of biodiversity in four key sectors (2009-2013).

Within the context of the national study on the implementation of the Nagoya Protocol, two stakeholder workshops took place in 2012. These stakeholder workshops had a dual purpose: raising awareness among stakeholders about the provisions of the Nagoya Protocol; and providing stakeholders with an opportunity to comment on the study and feed these back into the process of implementation.

An important supporting tool to exchange information on the CBD and its related Protocols is the Belgian Clearing-House Mechanism of the Convention of Biological Diversity (CBD CHM) which is part of an international network of CBD CHMs. It was set up to illustrate what Belgium is doing within the framework and the implementation of the CBD (Belgian CBD CHM).

In the Belgian development cooperation programmes related to biodiversity, which are implemented in the southern partner countries, support for the implementation of the national CBD clearing houses is a priority.

- CBD instrument

To facilitate and support the development and strengthening of capacities of individuals, institutions and communities for the effective implementation of the provisions of the CBD relating to access and benefit-sharing and the Bonn Guidelines in particular, the CBD adopted the 'Action Plan on Capacity-Building for Access to Genetic Resources and Benefit-Sharing' at its 7th meeting. The action plan identifies key areas that require capacity-building initiatives and mechanisms to implement capacity-building in these areas.

[75] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

[76] Christine Frison, Tom Dedeurwaerdere. July 2006. Belgian federal survey: "Public infrastructure and regulations on access to genetic resources and the sharing of benefits arising out of their utilisation for innovation in life sciences research. Access to, conservation of and use of biological diversity in the general interest."

6.2 By 2014, ratify and implement the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization

Belgium signed the Nagoya Protocol on 20 September 2011. On 27 October 2011, the Interministerial Conference on the Environment confirmed that the "speedy ratification of the ABS protocol is a high priority for Belgium". By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization should be in force and operational, consistent with national legislation (Aichi Target 16). However in 2014, the first meeting of the Parties to the NP is expected to take place concurrently with CBD COP12. Given the long-term involvement of Belgium in the development of the Protocol, and its role as EU representative (2010-2014), it will be politically important for Belgium to be able to partictipate as a Party to the first COP/MOP. It is therefore necessary to ratify the NP by 2014. Belgium will continue to actively take part in ongoing European and international discussions on the implementation of the Protocol, in particular through its participation in the Intergovernmental Committee for the Nagoya Protocol (ICNP), as a member of the ICPN Bureau and as an EU representative.

In order to implement and ratify the Nagoya Protocol, Belgium needs to take further measures to translate the dispositions of the Nagoya Protocol into practice. Since the adoption of the Nagoya Protocol at COP-10, the first actions to prepare for the implementation of the Protocol in Belgium were taken by the ABS Contact Group ABS under the Steering Committee CBD, with the participation of all the administrations concerned. An impact study on the Protocol ratification at Belgian level began at the end of 2011 and provided its conclusions in the spring of 2013. In the course of the study, two stakeholder meetings were organized.

The results of the impact study (winter 2013) will be used as a basis for (further) implementation of the Protocol in Belgium that will take place in close cooperation with the implementation at EU level.

6.3 By 2020, have mechanisms in place to enhance national and global cooperation on ABS issues

Access and benefit-sharing is a major CBD issue, but the issue of access, exchange and use of genetic resources is also of concern for other forums.

Some of the most important international forums addressing ABS issues are:

- The Food and Agriculture Organisation (International Treaty on Plant Genetic Resources for Food and Agriculture, Phytosanitary agreements)

- The World Trade Organisation (Trade-Related Aspects of Intellectual Property Rights – TRIPS – agreement)

- The World Intellectual Property Organisation and in particular its Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore.

- The World Health Organization and more specifically, the Pandemic Influenza Preparedness Framework for the sharing of influenza viruses and access to vaccines and other benefits

Better cooperation between CBD and these forums is necessary to improve effective implementation and ensure coherent and consistent positions in these forums.

There might also be a link between CBD and CITES on ABS issues where it could be relevant for CITES implementation authorities and CBD-related authorities to have a full understanding of ABS issues and how they might be affected by CITES implementation and vice versa. A better understanding of ABS issues could ensure that decisions taken under CITES and CBD are coherent so as to avoid misunderstandings or misinterpretations.

At Belgian level, coordination mechanisms under the Coordination Committee for the International Environment Policy should be further refined to ensure cooperation between focal points for the coherent national implementation of ABS related provisions under the different relevant processes.

6.4 By 2020, create operational mechanisms to protect the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant to the conservation and sustainable use of biodiversity

Indigenous and local communities are closely linked with biodiversity and contribute to its protection. Traditional knowledge possessed by indigenous and local communities on the possible uses of the biodiversity that surrounds them forms an important basis for the conservation of biodiversity and its sustainable use. It is an important resource, particularly in the search for genetic resources of potential value. This age-old knowledge needs to be preserved and maintained.

Holders of traditional knowledge are key stakeholders in ABS agreements and initiatives. Article 8j of the CBD addresses specifically the respect, preservation and maintenance of the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity. It also encourages the wider application of this knowledge, with the approval and involvement of those holding it, on the understanding that any benefits that arise from the use of such traditional knowledge associated with GRs will be shared.

Moreover, the Nagoya Protocol reinforces Article 8j of the CBD by requiring Parties to take measures, as appropriate, in order that the benefits arising from the utilization of traditional knowledge associated with genetic resources and of genetic resources that are held by indigenous and local communities (in accordance with domestic legislation regarding the established rights of these indigenous and local communities over these genetic resources) are shared in a fair and equitable way with indigenous and local communities (ILCs) holding such knowledge or such genetic resources (Article 5). Similarly, Articles 6 and 7 of the Nagoya Protocol require that Parties shall take measures with the aim of ensuring that Prior Inform Consent or approval and involvement of ILC is obtained (in accordance with domestic law) to access to genetic resources and traditional knowledge associated with genetic resources held by those ILCs.

Article 15.1 of ILO Convention 169 specifically recognizes the rights of indigenous and local communities to the natural resources on their territories, including the right to participate in the use, management and conservation of these resources[77].

Belgium participates in relevant international discussions and has subscribed to several processes concerning traditional knowledge. Traditional knowledge, innovations and practices should be recognised in access and benefit-sharing arrangements. The participation of representatives of indigenous and local communities in appropriate forums should be supported. Furthermore, the preservation and sharing of traditional knowledge will be integrated into those Belgian development cooperation or scientific cooperation projects that target indigenous and local communities as primary stakeholders.

Considering GMOs in agriculture covered by patents owned by multinationals, special care should be taken to avoid that their use would alter or eliminate traditional agricultural practices, leading to biodiversity as well as to social threats (cf. obj. 4c.7; 4d.3 and 4f.4). Moreover, transgenes being sometimes possibly issued from living organisms traditionally known for their interesting properties, equitable sharing of benefits arising from those genes should be promoted.

• CBD instrument

At COP10, the Parties to the Convention adopted the "Tkarihwaié:ri Code of Ethical Conduct on Respect for the Cultural and Intellectual Heritage of Indigenous and Local Communities Relevant for the Conservation and Sustainable Use of Biological Diversity". These voluntary guidelines are intended to provide a collaborative framework ensuring the full involvement of indigenous and local communities in the assessment of cultural, environmental and social concerns and interests of indigenous and local communities with regard to proposed developments which take place or are likely to impact on sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities. Moreover, guidance is provided on how to take into account traditional knowledge, innovations and practices as part of the impact-assessment processes and promote the use of appropriate technologies.

[77] The UN Declaration on the Rights of Indigenous Peoples (document A/61/L.67) was adopted by the General Assembly on 13 September 2007 during its 61st regular session.

6.5 By 2015, have a functional Access and Benefit Sharing Clearing House in place

The Nagoya Protocol in particular establishes an Access and Benefit-sharing Clearing House (ABS-CH) as part of the CBD CHM. The ABS CH should serve as a means for sharing information related to access and benefit sharing (art.14 of the Protocol). Moreover it has a role to play in awareness-raising including about the importance of genetic resources and traditional knowledge associated with genetic resources and is seen as an important tool to promote and enhance legal certainty, clarity and transparency in the implementation of the Nagoya Protocol. In this respect, one of the main goals of the CH should be to support compliance by contributing to clearness, transparency and certainty.

Although the modalities of operation of the ABS CH shall be considered and decided upon by the first COP/MOP meeting, Belgium intends to ensure that the experiences from the national CHM and BCH are included while developing and operationalizing the new ABS Clearing House.

To ensure consistency, Belgium will also follow up the developments on an international level and in particular the implementation and lessons learned from the pilot phase of the ABS CH (launched by the CBD Secretariat early 2012).

OBJECTIVE 7: IMPROVE AND COMMUNICATE SCIENTIFIC KNOWLEDGE ON BIODIVERSITY AND ECOSYSTEM SERVICES

Effective conservation and sustainable use of biodiversity requires the correct identification and spatio-temporal monitoring of all its components at all its levels of organisation, *i.e.* from genes to ecosystems. Adequate knowledge of the status and trends of biodiversity and of the services it provides is a prerequisite for an adaptive management of the ecosystems. Yet we are faced with many gaps in our knowledge on biodiversity primary data and on the role of taxa in ecosystem functioning.

The consequences of present and future biodiversity loss, both for ecosystem health and for human well-being, are poorly understood, while the effectiveness of policy responses remains largely undocumented. Impacts of alien invasive species have been insufficiently addressed. Creating synergy between policy responses and research depends largely on our ability to improve and communicate our existing knowledge as well as the necessary additional knowledge on biodiversity.

Addressing the gaps will require (i) more investment and capacity-building in key biological disciplines such as taxonomy and ecology, (ii) easy and open access to biodiversity data and research information[78], and (iii) improvement of the coordination and communication between policy and research.

The aforementioned gaps are particularly prevalent in developing countries. The Belgian Government provides increasing support and funding to research and training, with the aim of improving knowledge of and capacity-building for biodiversity in these countries. These efforts will in turn contribute to improve the implementation of the multilateral environmental agreements ratified by these countries.

The operational objectives in this National Biodiversity Strategy draw on the research objectives in the Message from Malahide (Duke, 2005), in particular on Objective 16, the Killarney Declaration and Recommendations, and on the European Action Plan for Biodiversity Research (www.epbrs.org).

• CBD instruments and articles and global reports on biodiversity

Article 12 of the Convention on Biological Diversity deals specifically with 'research and training' and emphasises the special needs of developing countries.

Several decisions by the Conference of the Parties (COP) request enhancing biodiversity research with an emphasis on generating primary biodiversity data that will enable a better implementation of the CBD thematic programmes and crosscutting issues. Recommendations and advice for assessing taxonomic capacity were contained in the 'Darwin Declaration' that was endorsed by COP-4 and led to the

[78] See the Brussels Declaration on Open Access: http://openaccessbelgium.files.wordpress.com/2012/11/signedbrussels-declaration-on-open-access.pdf

Global Taxonomy Initiative (GTI).

Key areas of the CBD to support knowledge and communication needs are:

a) identification and monitoring of biodiversity and threatening processes (Article 7),
b) research and training in the identification of biodiversity (Article 12),
c) development of educational and public awareness programmes (Article 13),
d) facilitation of the exchange of information on biodiversity (Article 17),
e) stimulation of scientific and technical cooperation (Article 18).

The Global Biodiversity Outlook (GBO, 2001, 2006, 2010) is a periodic report prepared by the Secretariat of the Convention on Biological Diversity. The GBO provides a summary of the status of biological diversity and an analysis of the steps being taken by the global community to ensure that biodiversity is conserved and used sustainably, and that benefits arising from the use of genetic resources are shared equitably.

The Millennium Ecosystem Assessment (MA) is an international project launched by the UN in 2001 and completed in 2005 (www.MAweb.org). It was designed to meet the needs of decision makers and the public for scientific information concerning the consequences of ecosystem change for human well-being and options for responding to those changes. One of the reports specifically addresses biodiversity: "Ecosystems & Human Well-being: Biodiversity Synthesis" (2006).

The Economics of Ecosystems and Biodiversity (TEEB, 2010) Study is a major international initiative to draw attention to the economic benefits of biodiversity, to highlight the growing cost of biodiversity loss and ecosystem degradation, and to draw together expertise from the fields of science, economics and policy. Initiated in 2007, a preliminary interim report was presented at the High-Level Segment of the Ninth Conference of the Parties to the Convention on Biological Diversity (CBD COP-9) in Bonn, Germany, in May 2008. Sections of Phase II of the study were released from autumn 2009 onwards to the final synthesis and presentation in October 2010. Phase III (ongoing) focuses on the facilitation and support for national, regional, local and sectoral studies being initiated around the world.

Through the recent (2012) establishment of an Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, governments have created an additional, potentially highly significant body to compile, assess and legitimize scientific expertise in support of biodiversity-related policy development and implementation, with capacity building integrated into all its activities.

The stakeholders involved in the implementation of this objective are: the federal authority and regional authorities for environment and agriculture, educational establishments, national networks of scientific and policy experts in support of the IPBES, universities, Federal Research Institutes, NGOs, sectors, The National Biosafety Council, researchers, the Belgian Development Agency, the general public and any association working towards the same goal as the NBS[79].

Operational objectives

7.1 Compile and synthesise existing data and information and disseminate this knowledge to a wider audience

The book '*Biodiversity in Belgium, a country study*' (Peeters *et al.*, 2003) presents a detailed overview of existing knowledge on Belgium's biodiversity (status, trends and threats). In addition, this country study also emphasises the urgent need to extend and deepen our understanding of all components of our biodiversity.

Further compilations and synthesis of existing data and (meta) information, making full use of electronic tools, will provide an even more solid background for detecting gaps in research needs and policy-relevant priorities, and could serve as an essential catalogue to support the access to genetic resources. The development of a web portal, in accordance with obligations in the framework of the

[79] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

Global Biodiversity Information Facility (GBIF), could serve as a basis for a national register of species.

The dissemination of scientific data and information on biodiversity should not only be aimed at the scientific community, but should reach the widest audience possible in an adapted language, including decision-makers, teachers, students and the general public. The development of databases to access ongoing and past studies and research could be a very useful tool to this end. This will require the primary scientific data and conclusions to be presented in a format and language accessible for a non-specialist audience. This will be particularly important when biodiversity themes are incorporated in educational and public awareness programmes.

7.2 Promote and encourage research that contributes to the knowledge and understanding of Belgium's biodiversity and ecosystem services and their values

Full and effective implementation of many of the actions identified in the Belgian Biodiversity Strategy requires a considerable improvement in the knowledge and understanding of Belgium's biodiversity and ecosystem services provided. Methodologies to value biodiversity and ecosystem services, including the ecological aspects related to ecosystem structure and functions, the socio-economic aspects and the monetary aspects, are being developed, notably in support of operational objective 5.11. More research is also needed on biodiversity at the genetic, species and ecosystem levels, while the peer-reviewed output of this research must be disseminated rapidly, in order to allow for adaptive management.

Obviously, several issues in the Belgian Biodiversity Strategy need immediate action, for instance to remedy imminent threats for which there is insufficient time to allow for in-depth research to underpin rescue actions. On the other hand, in the absence of extensive research data, such immediate actions risk failure or producing negative, unexpected side effects. It is therefore essential to design research projects in such a way that the expected results can guide and underpin immediate actions, and also generate data that may help to plan and achieve biodiversity conservation and management in the long term.

Major research impulses are required in the areas of taxonomy and ecology, including inventory projects, protocols for rapid biodiversity assessment, and programmes for long-term monitoring, as well as in detailed *ad hoc* conservation initiatives (for example in nature reserves and other protected areas). The establishment of thematic inventories (agricultural biodiversity, medicinal plants biodiversity) should be promoted as well as the establishment of a precise cartography of plants related to potentially imminent GMO cultures.

Specific research should also focus on the links between, inter alia, biodiversity and health, biodiversity and climate change, in terms of potential and opportunity to conserve and sustainably use biodiversity.

7.3 Develop adequate monitoring methodologies and biodiversity indicators

Monitoring of biodiversity and remedying of the causes of threatening processes are inherent to all the objectives of Belgium's Biodiversity Strategy, and in particular to its Objectives 1 and 2. Hence more research should be carried out on monitoring methodologies and the development of biodiversity indicators. These research efforts should be conducted in agreement and, if possible, in collaboration with similar programmes carried out at a European and international level, and should take the Aichi biodiversity targets and SEBI-initiative into consideration.

The definition of national standards for biodiversity inventories and monitoring using an appropriate set of common indicators (see Objective 1) will enable the evaluation and communication of progress made by Belgium towards the 2020 target, and help fulfil reporting obligations to international bodies. It will also allow for an adaptive management of components of biodiversity (in particular with regard to climate change), and for strengthening policies related to activities and processes that threaten biodiversity.

7.4 Map and assess the state of ecosystems and their services and assess the values of such services

The EU "Mapping and Assessment of Ecosystems and their Services" (MAES) initiative aims to improve

knowledge of ecosystems and their services (EU Biodiversity Strategy target 2, action 5). This implies that Member States, with the assistance of the European Commission, map and assess the state of ecosystems and their services on their national territory (by 2014), and assess the values of such services and promote the integration of these values into accounting and reporting systems at EU and national levels (by 2020).

Research will be needed to attain these goals, and to come to a better understanding of ecosystem processes as well as of how humans use biodiversity, how these uses affect biodiversity and ecosystem services, and how this usage can be sustainable. Initiatives under the community of practice on Biodiversity and Ecosystem Services (BEES community) are being taken in this context. The Belgian MAES working group was initiated in 2012 and includes Belgian biodiversity and ecosystem services experts and stakeholders (see also operational objective 7.5 hereunder).

7.5 Evaluate the level of integration of biodiversity into sectoral policies and their impact on biodiversity

Biodiversity in Belgium is mainly threatened by anthropogenic activities, often governed by sectoral policies. Specific research should be developed both to increase current knowledge on the impact of sectoral policies on biodiversity, and to assess the level of integration of biodiversity into these sectoral policies.

The integration of biodiversity management into sectoral policies implies that biodiversity-related issues will be mainstreamed into all socio-economic sectors, such as agriculture, biotechnology, energy, fishery, forestry and tourism.

More research is needed to evaluate the level of integration of biodiversity and for example gain an idea of the effects of present day agrotechnology on both agricultural biodiversity and wild flora and fauna (for example pollinators). Research should also include the study of the effects of emerging technologies (for example GMOs and nanotechnologies) on biodiversity (see Operational Objective 2.1).

7.6 Improve our knowledge of the socio-economic benefits of biodiversity and ecosystem services

T integration of socio-economic sciences into the field of biodiversity research is of major importance in order to slow down and halt the continuing human-mediated loss of biodiversity. This should include the analysis of public awareness and perceptions, and consumers' attitudes and preferences with regard to biodiversity, and then how both of these factors relate to behaviour and public policy.

To influence policy-making and stimulate public awareness, increased knowledge of the values of biodiversity (not limited to pure economic value) is needed, for instance by improving methods for their valuation and by conducting high-profile studies on the values of biodiversity and ecosystem services in ecosystems of topical interest. In the valuation process, the relationships between health (physical and mental well-being) and biodiversity should also be investigated. More research should be dedicated to the link between changes in biodiversity and the rise in incidence of some already existing human and animal diseases or in the emergence of new ones.

7.7 Improve the Science-Policy interface in biodiversity and promote actor participation

- Science-policy interfaces

Science-policy interfaces (SPIs) are processes that manage the intersection between science and policy, encompassing relations between scientists and other actors in the policy process. They allow for exchanges, co-evolution and joint knowledge-building with the aim of enriching decision-making and strengthening scientific knowledge. They involve not only science and policy actors, but also other actors such as sector representatives, land managers and NGOs. Diverse approaches for such interfaces exist, from the very formal such as the recently established Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) at international level, to less prominent approaches to interface science with policy such as research projects directly linked to decision-makers, or informal contact groups on specific topical issues.

Crucial attributes of SPIs are their credibility, relevance and legitimacy:

[80] See Belgium Ecosystem Services website: http://www.beescommunity.be/en/

- Credibility is the perceived quality, validity and scientific adequacy of the people, processes and knowledge exchanged at the interface;
- Relevance is the salience and responsiveness of the SPI to policy and societal needs;
- Legitimacy is the perceived fairness and balance of the SPI processes to all stakeholders in the dialogue.

The existing interfaces between policy and research, with not enough research being policy-relevant, and insufficient application of existing knowledge in policy-making, should be strengthened. This will require efforts at different levels: not only from the scientific to the policy level, but also the other way round.

The recent establishment of an Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) creates an appropriate stage for the improvement of the science-policy interface. Belgium plays an active role in the operationalization of the Platform through its membership and through national networks of scientific and policy experts in support of the IPBES, such as the BEES Community of Practice or the one on Biodiversity and public health.

Previous and ongoing research and science communication programmes could be valorised as useful models for bringing together different experts, generalists, and other stakeholders driven by the need to deliver a response to a complex problem. They could also contribute to translating research outcomes into policy advice, developing policy support tools, and promoting policy-relevant research.

Innovative solutions and methodologies are required to optimise the links between research and policy and promote actor's participation in the development and implementation of new policies. The fragmentation of the institutional framework in Belgium often brings many people together in discussions on biodiversity, which does not always lead to an efficient work. Creative solutions should be proposed to install a mechanism and institutional arrangements aiming to simplify procedures and ensure participation (a.o. participation and consultation methods, effective communication models, etc.). The positive and negative impacts of socio-cultural and economic factors (a.o. recreation) must also be assessed.

An important aspect of linking research to policy is effective communication. Training courses and materials could be developed to help researchers communicate more effectively, not only the results of their research but also the process of research, in order to better highlight the way research is planned and executed. Decision-makers could also beneficiate from training in using and requesting scientific advice (*e.g.* how to ask the right questions) and in the identification of suitable sources of information.

The ability of administrations to make use of scientific information could be enhanced by encouraging secondments from universities and scientific institutions, into government. Secondments the other way – of officials taking a sabbatical in a university or in a scientific institution – might also help develop expertise and networks.

7.8 Promote research on the effects of GMOs and products of synthetic biology on biodiversity and on related socio-economic aspects, and on methodologies to assess these

Methods are needed to predict and prevent potential invasive behaviour of GMOs released into the environment, especially for new types of GMOs, and if already relevant, for products ensuing from synthetic biology or other new genetic modification techniques. In order to allow coexistence of different forms of culture and to avoid potential negative effects of transgenes on the wild environment, research is also needed to develop reliable methods to predict and reduce the probability of transfers of genetic material from transgenic organisms.

There is also a need to adapt and, if necessary develop methodologies in order to monitor and coordinate data on potential unforeseen effects of GMOs, not only on individual species but also on community structures of the ecosystem, after their deliberated release and commercialisation. In order to pursue objective 4c.7, case-by-case monitoring of potentially adverse effects on biodiversity as a result of the introduction of GMO cultures in Belgium should be undertaken. If risk evaluation and monitoring methods are already suggested by the guidelines of the strongest world biosafety regulations like those of

the EU, the implementation of such guidelines should be seriously and completely pursued in a professional and transparent way.

As such GMO risk evaluations need to consider different ecosystems and agro- ecosystems as well as various species, including non-targets species, and especially those that are of particular relevance such as biological indicator species, or that play a specific role in the ecosystem (earthworms, mycorrhizal fungi associated with roots, etc.). Better risk assessments on GMOs and avoidance of negative impacts on human health and the environment must be ensured to contribute to the Aichi objectives.

Furthermore, as encouraged by Article 26 of the Cartagena Protocol on Biosafety, extensive socio-economic studies on the impacts of GMO cultures introduction in Belgium and elsewhere in the world should in particular be undertaken (link with Objectives 4c.7, 4d.3, 4f.4, 5.8 and 6). Capacity building on biosecurity can and should be integrated into development plans with partner countries.

OBJECTIVE 8: INVOLVE THE COMMUNITY THROUGH COMMUNICATION, EDUCATION, PUBLIC AWARENESS AND TRAINING

As for many measures related to sustainable development, the success of the implementation of the National Biodiversity Strategy will depend on the understanding by civil society, private organisations and the public authorities of the importance of, and the measures required for the protection of biodiversity.

Several initiatives have already been taken, in different forms at different levels, by the different bodies involved in nature education activities. Local plans ('Plan Communaux pour le développement de la Nature', 'Gemeentelijke en provinciale milieubeleidsplannen', river contracts, etc.) have been developed to communicate and involve stakeholders. The primary and secondary education programmes have included some basic education on nature issues. Some initiatives have also been taken at the higher-education level. Volunteer associations are involved in nature and environmental education. Administrations and scientific institutions are also involved in communication activities (publication of brochures, articles, etc.). However, the work done has been fragmented and not sufficiently complementary. Furthermore, groups having a greater impact on nature are not targeted enough and should receive specialised education.

In communication, it is crucial to link biodiversity to culture and to make use of the new and traditional media to raise awareness on the problems encountered by biodiversity (a.o. games, theatre, press, radio, video, TV, internet).

Belgium can also draw on the results of existing programmes of Communication, Education and Public Awareness (CEPA) that proved to be successful in a similar context. CEPA programmes were developed by the Ramsar Convention and by the EU for Natura 2000.

• CBD and UN instruments

UNESCO was designated by the United Nations General Assembly as the lead agency for the promotion of the United Nations Decade of Education for Sustainable Development (2005-2014), which aims to integrate biodiversity into all levels of formal education.

The Programme of Work for the Global Initiative on Communication, Education and Public Awareness (CEPA) adopted in 2002 (CBD Decision VI/19) recognises the importance of CEPA as a central instrument to ensure effective implementation of the CBD at the national level. The Global Initiative on CEPA intends to strengthen cooperation with other conventions and global initiatives (MDGs, ESD, WSSD), and to better communicate status and trends of biodiversity in view of the 2010 target reported for example in the Millennium Ecosystem Assessment in 2005 and the Global Biodiversity Outlook in 2001 and 2006. The involvement of key actors and stakeholders, including the private sector, is also sought.

The stakeholders involved in the implementation of this objective are: the federal, regional and municipal authorities, media organizations,

[81] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

associations of teachers and educational establishments, naturalist associations, youth organisations, educational institutions and museums, research institutions, government agencies, NGOs, the general public and any association working towards the same goal as the NBS[81].

Operational objectives

8.1 Strive to include biodiversity and ecosystem services as well as the ecosystem approach in educational programmes

Many students place environmental issues, and even biodiversity protection, high on their list of concerns. Unfortunately, few are aware either of the threats to their immediate surroundings or of the opportunities for taking concrete steps in their everyday life. The education system has an essential role to play in this regard.

Teaching and training should focus on the development of skills that will enhance understanding and acceptance of the need for biodiversity conservation and sustainable use. Information should be presented not simply as science, but in a social, economic and political context, so that students can better understand which complex circumstances form the background for the making of decisions on biodiversity conservation. The practical knowledge, such as the recognition of plants and animals should also be promoted. Courses addressing the values attached to biodiversity and ecosystem services, and planning programmes applying the ecosystem approach should be proposed throughout the educational system, from primary and secondary school to technical colleges and universities as well as outside the school system (youth organisations, continuous training). For example, awareness campaigns for youth organisations and particularly scouts would be very useful to explain how they can cause damages to natural areas, directly or indirectly.

There are at present several environmental and sustainable development education programmes in the formal education system in Belgium, particularly at the primary school level. Biodiversity conservation and ecosystem services must be systematically included in the executive terms* of all school programmes at the different school and higher education levels. To this end, better educational support must be provided to schools and teachers (for example, development of educative packages and publications on biodiversity aimed at the students).

8.2 Promote understanding of the importance of biodiversity and improve knowledge of Belgium's biodiversity and ecosystem services

It is necessary to encourage a greater understanding and appreciation of the value of biodiversity and its functions in ecosystems for human well-being at all levels of decision-making and among enterprises, the general public, etc. The public must understand how it impacts on nature and biodiversity and what it can do to limit this. Belgian household consumption and production patterns have a significant impact on the environment and on biodiversity. It is crucial to convince people of the necessity to evolve towards sustainable production, consumption, land use and mobility patterns.

There are plentiful proposals to help make of nature and biodiversity a citizen stake[82]. Modern technologies and expanding access to electronic communication bring innovative possibilities for promoting and encouraging understanding of the importance of, and measures required for its conservation. Nevertheless, the importance of traditional communication systems must not be neglected (public media, local press, weekly TV and radio programmes on nature and biodiversity, thematic exhibitions, round-table discussions, etc.). Besides, the meaning of biodiversity, and the ecosystem services it provides, and the consequences of its decline should be communicated in terms that are tailored to the specific audience concerned.

NGOs, naturalist associations, youth organisations, educational institutions and museums, research institutions, government agencies and the media play a key role in raising public awareness and communicating the importance of local and global biodiversity protection. They should be encouraged by Federal, Regional or municipality bodies to ensure the continued availability of accurate and persuasive

[82] See also the initiative advice from the Walloon Council of the Environment for Sustainable Development (2005) "Propositions pour faire de la biodiversité un enjeu citoyen" (CWEDD/05/AV.01).

information about the benefits, costs and means of biodiversity protection. Specific yearly programmes and fairs organized by these organisations (such as the International Biodiversity Day on 22 May and events related to specific sites or species) should also be supported.

Several local participatory instruments aiming, among other things, at raising public awareness (for instance Communal Plans for Nature Development, River Contracts and Natural Parks) and local initiatives providing a public service on environmental information and awareness (for instance Nature Education Centres for visitors near the main natural reserves, CRIE) must be supported and developed further. The importance and the value of biodiversity and ecosystem services, as well as the richness of our natural patrimony, should be explained to all the citizens.

8.3 Raise awareness among, and provide thematic training courses for the sectors that impact directly or indirectly on biodiversity, including the private sector, using language tailored to the specific nature of the target sector

Several sectors that have quite a considerable (direct or indirect) impact on biodiversity and which should integrate biodiversity consideration (conservation and sustainable use) into their practices must be the target audience for awareness-raising activities. Communication strategies and adapted training cycles must be set up to explain how the respective sectors can improve their practices to help meet the 2020 target of halting the loss of biodiversity. These sectors must be made to commit themselves to adopting and promoting good practice.

Specific communication strategies also must be developed to address the private sector as the activities of business and industry have major impacts on biodiversity. The private sector has the potential to make a significant contribution towards achieving the 2020 target by adopting and promoting good biodiversity practice, sharing relevant expertise and technologies with the public sector, and helping to mainstream biodiversity.

OBJECTIVE 9: STRENGTHEN THE BIODIVERSITY-RELATED REGULATORY FRAMEWORK AND ENSURE THE IMPLEMENTATION OF, COMPLIANCE WITH AND ENFORCEMENT OF BIODIVERSITY RELATED LEGISLATIONS

Legislation is an important tool that can contribute to achieving the conservation of biodiversity and the sustainable use of its components.

The regulatory framework needs to be clear and precise. It must be respected by everybody and adapted where necessary.

As many people will not comply with the law unless there are clear consequences for noncompliance, enforcement is essential to ensure compliance with existing legislations aiming at protecting biodiversity. Penalties have to be proportional, deterrent and effective.

The stakeholders involved in the implementation of this objective are: the federal and regional authorities, the judiciary, the law enforcement departments, customs, the police, and any association working towards the same goal as the NBS[83].

Operational objectives

9.1 Ensure that the National Strategy is supported by effective legislation and improve its enforcement

Belgium needs to review existing legislative framework with respect to the goals of this Strategy, and take the necessary steps to improve it where necessary.

Besides, authorities must make sure that the relevant legislation is duly implemented and enforced.

The “National Security Plan 2012-2015” (Federale Politie – Police Fédérale, 2012) aims at helping police forces address security issues on a global and integrated way and enhance the cohesion of their action. It identifies ten priority criminal areas for 2012-2015, which includes the environment, restricted to waste traffic.

[83] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

Within the customs and excise administration (FPS Finances), emphasis is currently put on security in the broad sense, including several areas such as the protection of the fauna and flora (CITES). In this optic, a CITES target group has been established; its purpose is to analyse risks in this field. All enforcement actors related to CITES are united in the Belgian Enforcement Group which regularly interacts with the federal CITES team to ensure adequate enforcement of CITES in Belgium.

Belgium should make sure that biodiversity is included in priority security areas. In addition, the various aspects of biodiversity must be included in legal information processing tools, such as FEEDIS (Feeding Information System) or the national databank.

The staff responsible for checking compliance with biodiversity related regulations must be strengthened, both in term of capacity and organisation, in order to make the presence of these services more effective on the ground and to be able to effectively implement prosecution policy and execute penalties related to biodiversity offences.

A proactive approach and the use of specific investigation methods could also be developed since tracking offences related to biodiversity regulations proves to be very difficult.

As a result of the division of powers in Belgium, most biodiversity-related offences are recorded by the regional authorities while the prosecution policy falls within the scope of the Federal State. Therefore, cooperation and coordination at the national level among all the actors involved (including inspection services, administrations and customs services) need to be enhanced in order to ensure coherent and compatible measures and methodologies. International information exchange mechanisms also need to be optimised (Interpol, Europol, etc.).

Finally, given the complex nature of the issue, specific training need to be set up for the actors involved in combating biodiversity-related crime (police and control services, customs, etc.). In this respect, the needs relate in particular to improving legal as well as technical and scientific knowledge.

9.2 Ensure full implementation and improve enforcement of biodiversity-related legislations, including the Birds and Habitats Directives, through inter alia training programmes for the relevant authorities, in particular judges, prosecutors, inspectors and custom officials

As foreseen by the EU Biodiversity Strategy to 2020 (Action 3c), Belgium will facilitate enforcement of the Birds and Habitats Directives by providing specific training programmes on Natura 2000 for judges and public prosecutors, and by developing better compliance promotion capacities.

9.3 Ensure full compliance with and enforcement of the environmental liability regime (i.e. Directive 2004/35 CE on environmental liability) towards biodiversity offences

Environmental liability aims at making the person or organization that caused the environmental damage (the polluter) pay for remedying the damage that he has caused (the “polluter pays” principle).

Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 establish a framework of environmental liability based on the ‘polluter-pays’ principle, to prevent and remedy environmental damage. The fundamental principle of this Directive is that an operator whose activity has caused environmental damages or imminent threat of such damage is to be held financially liable for preventing or remedying this damage. It is expected this regulation will induce operators to adopt measures and develop practices to minimize the risks of environmental damage so that their exposure to financial liabilities is reduced.

The Directive puts in place a comprehensive liability regime for damage to the environment. In particular, it introduces a comprehensive regime for damage to valuable elements of biodiversity - protected species and natural habitats, to water and land, and to services provided by these natural resources.

A permanent working group gathering regional and federal authorities has been established to ensure, to a certain extent and in respect of the share of competences between the different authorities, adequate and coherent implementation of the Directive.

National laws on liability for damage caused by

activities that are hazardous to the environment will be thus different from the common civil liability regime as they will not concern the classical range of damages (human health or property) but will cover biodiversity and ecosystem services damage as well as land damage or water damage. This will encourage parties concerned to take more precautions towards biodiversity.

Nevertheless, one of the major difficulties when implementing the directive concerns the evaluation of damage caused to biodiversity and this has to be done taking account of the cost of restoration or the cost of alternative solutions if restoration is not possible.

This should be taken into account when transposing the EU directive into national legislations.

OBJECTIVE 10: ENSURE A COHERENT IMPLEMENTATION OF / AND BETWEEN BIODIVERSITY-RELATED COMMITMENTS AND AGREEMENTS

There are five global "biodiversity-related conventions": the Convention on Biological Diversity (CBD), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention on the Conservation of Migratory Species of Wild Animals (CMS), the Convention on Wetlands (Ramsar), and the World Heritage Convention (WHC). The two other Rio conventions (the UN Convention to Combat Desertification and the UN Framework Convention on Climate Change) are also relevant to biodiversity.

All these conventions overlap in regard to requirements for the Parties in the field of research, reporting, education and public awareness, the need for capacity-building, synthesising scientific data, the involvement of stakeholders, etc.

Furthermore, some specific biodiversity-related issues are dealt with under several conventions (for example, invasive alien species are tackled by the CBD, CITES, CMS, Ramsar and UNFCCC).

Besides these international commitments and agreements, several regional conventions and agreements relevant to biodiversity also have to be implemented (Bern Convention, Birds and Habitats Directives, AEWA, EUROBATS, etc.).

This underlines the strong need for synergies in the national implementation of these commitments to guarantee complementary and mutual reinforcement. Stronger synergies at national level will decrease duplication of effort, avoid contradiction and mean more efficient use of the available resources.

The stakeholders involved in the implementation of this objective are: the national focal points of biodiversity-related conventions, steering groups within the CCIEP, the Belgian Development Agency, universities, and any association working towards the same goal as the NBS[84].

Operational objectives

10.1 Ensure a coherent implementation of biodiversity-related agreements to which Belgium is a Party

Belgium is a Party to most major international and regional agreements related to biodiversity. It is necessary for Belgium to ensure its continued involvement with these agreements. To this end, Belgium needs to review the status of implementation of all international agreements relevant to the protection of biodiversity and take the necessary steps to ensure their full implementation where needed. Belgium will also continue to adopt other relevant agreements when appropriate.

10.2 Reduce overlaps, duplications or contradictions in the implementation of different biodiversity-related conventions

The decisions of biodiversity-related conventions must be implemented in a coherent and harmonised way. To this end, Belgium needs in the first place a global view of the package of decisions related to issues crosscutting different biodiversity-related conventions (such as deforestation, sustainable use of natural resources, inland waters, climate change, etc.) in order to use and distribute its resources in an optimal fashion. This overview will also help to identify mutual obligatory actions (projects can be designed jointly) and possible conflicting actions between the different biodiversity-related conventions.

[84] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

One issue particularly relevant in this context is the issue of national reporting. National reports are useful tools to evaluate the degree of implementation of international agreements and to improve implementation. However, reports rarely meet these objectives.

As the national reporting exercises for several conventions are mainly based on similar environmental data, it is important to streamline and harmonise reporting processes across different biodiversity-related conventions to allow countries to meet their reporting requirements and avoid duplication of work.

Furthermore, more communication is needed between the national focal points of biodiversity-related conventions to ensure a more coherent implementation of biodiversity-related commitments and optimise opportunities for synergies. This can be facilitated within existing institutional structures (such as steering groups within the CCIEP) but implies also the development of means at national level to enhance coordination and collaboration between biodiversity-related conventions' focal points on planning, capacity-building, research, reporting, information systems, etc., *i.e.* through more sharing of information and experiences.

10.3 All climate change, biodiversity and desertification cooperation projects funded by Belgium should be assessed to ensure that they are mutually supportive of the objectives of the three Rio conventions

The three Rio conventions address a number of common substantive and procedural issues. For example, measures to reduce negative impacts from deforestation are relevant to the implementation of the three conventions. Each of these conventions calls for capacity-building, scientific and technical cooperation, the development of specific national plans and strategies, periodic reporting, etc.

The rising impact of climate change on biodiversity as well as the effects of some actions to combat climate change may be relevant to the objectives of the CBD. On the other hand, protection of biodiversity can contribute to climate change mitigation (healthy forests, peat lands and other habitats can limit atmospheric greenhouse gas concentrations by storing carbon) and can protect against natural hazards aggravated by climate change.

Desertification has significant impacts on biodiversity. It leads to decreasing soil productivity, has an impact on the hydrological cycle, has the potential to cause local extinction of wild species, etc.

It is important to check that projects initiated by Belgium are in line with the objectives and recommendations of the three Rio conventions. Indeed, numerous climate change, biodiversity or desertification projects face challenges beyond those of a single sector project.

For example, initiatives such as reforestation, adaptation and Clean Development Mechanism projects, as foreseen in the Kyoto Protocol in the framework of the United Nations Framework Convention on Climate Change, may have significant impacts on biodiversity and should be designed to enhance biodiversity or, at least, avoid negative impacts on biodiversity (for example by planting multiple species of native trees rather than monospecific plantations of exotic species). Supporting biodiversity to adapt to climate change is fundamental as well as enhancing positive effects of climate change mitigation measures to strengthen biodiversity's resilience. But preventing and minimising potential negative impacts from certain climate change mitigation measures are as important, such as promotion and development of bio fuels and other forms of renewable energy sources. The external dimension of the relation between climate change and biodiversity should therefore be emphasised.

Therefore, Belgium will develop mechanisms to assess that projects initiated in the framework of one of the Rio conventions are in line with the requirements of the other two.

OBJECTIVE 11: ENSURE CONTINUED AND EFFECTIVE INTERNATIONAL COOPERATION FOR THE PROTECTION OF BIODIVERSITY

The protection of biodiversity is a global issue and is best tackled through multilateral cooperation. This is underlined by the CBD stressing the need for countries to cooperate in order to ensure the protection of Earth's biodiversity.

The Millennium Development Goals provide the framework for the entire United Nations system to combat poverty, hunger, disease, illiteracy, environmental degradation and discrimination against women. Biodiversity plays an important role in ensuring that the targets of the Millennium Development Goals (and in goal 1 'Combating poverty and hunger', Goal 6 'Combating HIV/AIDS, malaria and other diseases', and goal 7 'Ensuring environmental sustainability') for sustainable development are successfully achieved.

The Clearing-House Mechanism is an important tool for the exchange of information and for promoting and facilitating scientific and technical cooperation.

Belgium has developed interregional and bilateral cooperation with countries in its immediate vicinity for an integrated management of transboundary ecosystems.

Also through its development cooperation, Belgium promotes the sustainability of the environment as a crosscutting issue, in which biodiversity is considered.

Biodiversity loss has direct effects on economic development and especially on the livelihood of people in developing countries. The Millennium Ecosystem Assessment Report (2006) has shown that negative impacts of biodiversity loss and diminution of the benefits arising out of ecosystem services will mainly harm the world's poorest people, who are the least able to adjust to these changes. Intact ecosystems in protected areas provide clean water, food security, and medicine and help prevent natural disasters.

Tackling the loss of biodiversity in those countries will be essential to achieving poverty reduction and sustainable development. Furthermore most developing countries play a crucial role in the conservation of global biodiversity, as they still possess areas with a natural environment and a high biodiversity. All partner countries of Belgian Development Cooperation have also signed the Convention on Biological Diversity as well as many other biodiversity-related agreements. Belgium needs to continue supporting their efforts to respect and implement their commitments under these conventions.

Belgium has already taken some initiatives through its development cooperation policy to improve synergies between MEAs in general and for their synergetic implementation in partner countries.

The stakeholders involved in the implementation of this objective are: the federal and regional authorities, universities, NGOs, institutions, etc. involved in research, environment and/or development cooperation, CHM national focal point, and any association working towards thesame goal as the NBS[85].

Operational objectives

11.1 Gain a comprehensive view of all cooperation and interregional projects supported by Belgium

Belgium is cooperating with developing countries in a broad range of activities and is also involved in several interregional projects. For the moment, no instrument can give an overview of all the projects supported by Belgium. As some of these projects can and will have an impact on biodiversity, it would be helpful to develop a mechanism where information about these initiatives is collected. This would enable the various authorities to have an overview of all the initiatives supported by the different authorities in Belgium and their potential impact on biodiversity. Furthermore, there is need to evaluate whether environment criteria have effectively been taken into account in cooperation projects.

11.2 All programmes and projects funded in partner countries have an ex ante environmental assessment procedure, ranging, as appropriate, from environmental screening to full environmental impact assessment* or strategic environmental assessment*

All Belgium's development cooperation projects will be more systematically assessed prior to the decision to allocate funds so that potential negative impacts on the biodiversity of recipient countries can be identified at an early stage and be avoided or mitigated. A screening procedure should be systematically applied and, when it proves necessary, a full Environmental Impact Assessment* (EIA) carried out.

Broader strategic approaches, such as "Indicative Cooperation Programmes, "Country Strategic Papers"

[85] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

or "Sector-Wide Approaches" (SWAP), etc., should be subject to a Strategic Environmental Assessment* (SEA) that includes biodiversity considerations.

Both EIAs and SEAs should be performed by using the existing assessment systems of the recipient country as much as possible. Joint EIAs or SEAs by several donors will be encouraged whenever possible.
Furthermore, ex post evaluations of development cooperation programmes or projects should also integrate biodiversity considerations, even in projects/programmes that are not related to natural resources.

11.3 Make best use of Belgian expertise to support implementation of the Convention in developing countries

A stronger commitment of developing countries to the Convention will not only contribute to a more successful sustainable development at the global level, but will also allow them to meet the ultimate challenge posed by the 2020 Aichi targets.

Through its multilateral and bilateral activities with developing countries, Belgium will offer its expertise to support institutional and individual capacity-building for the development of effective policies towards the conservation and sustainable use of biodiversity, including for the identification and monitoring of biodiversity and the development of appropriate science-based policy tools. Scientific and technical cooperation will be promoted, including by facilitating access to biodiversity data stored in Belgian repositories, by transferring relevant technologies, by promoting the further development and use of the CBD Clearing House Mechanism at national level and by supporting the development of ABS relevant legislation. Belgian actors are further encouraged to support this objective through adequate educational and public awareness programmes both in Belgium and in the developing country.

Enhancing and streamlining capacity-building for biodiversity management is a prerequisite for developing countries to improve their scientific capacity in key areas of the Convention, and thus to achieve a better implementation of the obligations imposed by the Convention. Belgium should make full use of its scientific expertise, in universities, institutes and NGOs, to assist developing countries, which are often rich in biodiversity but poor in resources, to make further progress in their implementation of the objectives of the Convention.

11.4 Promote integration of biodiversity and biosafety into the development plans of partner countries

The loss of biodiversity threatens the livelihood of the poorest people in the world, as they depend the most on biodiversity for their subsistence. It has previously been the case that there has been little interest in the integration of biodiversity screening mechanisms into partner countries' own development plans. Such plans tend to set out broad goals and include projects and activities to improve the direct economic development of the country. However, in order to achieve lasting poverty reduction and sustainable development, the environmental dimension and biodiversity in particular should be fully taken into account in these plans. Therefore, Belgium (for example, through the EU or other multi-donor partnerships) will encourage partner countries to integrate biodiversity and biosafety into their Poverty Reduction Strategies and/or National Strategies for Sustainable Development, as well as in their Health programmes and any other of their development initiatives they undertake.

Direct budget support, whether general or sectoral, is an emerging trend in development cooperation. Attention will be focused on this new form of aid, so that policy dialogues leading to budget support decisions are used as opportunities to promote such integration.

Awareness of the concept of the ecological footprint* should also be raised.

11.5 Enhance international coordination and effective exchange of information between *ex situ* conservation centres (zoos, botanic gardens)

Gene banks, zoos, plant nurseries, botanic gardens, aquariums, etc. contribute to the *ex situ* conservation of wild plant and animal species of foreign origin by securing the long-term conservation of species outside their natural habitat *(ex situ)*.

For species and varieties of crops and for domesticated animal races, *ex situ* conservation centres allow a broad genetic pool to be maintained to ensure the

viability and the improvement of quality in the future. On the basis of scientific knowledge, *ex situ* conservation centres will be encouraged to keep species, varieties and domesticated animal races in a manner that guarantees their conservation. Due to the wide diversity of collections, there is a need to reinforce coordination between *ex situ* conservation centres, for instance through information-sharing and facilitated access to data of foreign origin for the countries of origin, in order to ensure long-term conservation and facilitated access to information and collections.

11.6. Contribute to the creation of an enabling environment for biodiversity in partner countries, based on national priorities, in particular in support of the development of National Protected Area programmes, National Forest Programmes, integrated coastal and marine programmes, or other equivalent instruments, as well as their integration into relevant policy instruments

Belgium, through its development cooperation policy, will promote and support participatory income-generating activities that are based on the sustainable use of biodiversity and that benefit local populations. In particular the role of farmers as actors for biodiversity protection through implementation of good farming practices and technologies should be encouraged and supported by Belgian development cooperation.

The Belgian DC will also support, on a sustainable way, other biodiversity-based income-generating activities or mechanisms with a potential of local benefits, such as ecotourism, community-managed hunting, fishing and gathering, and maintenance of ecosystem services with collective benefits.

Biosafety capacity building projects, aimed at helping in various ways developing countries to avoid potential negative impacts of GMOs on biodiversity and health, will also be undertaken by Belgian development cooperation policy.

Through policy dialogues with partner countries and other donors, Belgium will also seek to enhance the promotion of access rights, property rights and shared responsibility of indigenous and local communities on biodiversity assets. This policy dialogue will be carried out in accordance with existing international agreements and processes.

The creation of an enabling environment for biodiversity in partner countries needs to be based on their national priorities. However, with due regard for the global Aichi Targets, it is also important that key areas for biodiversity are supported. In particular protected areas, forests and the marine environment have been frequently highlighted as priorities by partner countries during bilateral and multilateral discussions.

Specific attention needs also to be given in development cooperation policy to the establishment of a worldwide representative network of protected areas. National Protected area programmes are the base for achieving numerous Aichi targets in a sustainable way. Protected areas have been in place for many decades; however, their management has not always been as optimal as it might in terms of stopping the loss of biodiversity by 2020. To ensure that the existing and additional to be created protected areas support the implementation of the CBD, Belgium will, based on demands of the partner countries and their national priorities, in its bilateral and multilateral efforts, actively promote the development of National Protected area programmes and the integration of different policy instruments to enhance coordination and coherence of policies aimed at the national protected areas and their biodiversity.

Biodiversity in forests is the richest of all terrestrial ecosystems. Along with the protection of forest areas of high conservation value, Sustainable Forest Management (SFM) will play a crucial role in stopping the loss of biodiversity by 2020. There is an urgent need to enhance the conservation of forest biodiversity by improving forest management and planning practices that incorporate socio-economic and cultural values.

Many wood-producing countries need financial, technical and legislative assistance to prepare and implement national forest programmes for the management, conservation and sustainable development of forests, develop good governance practices, review and implement forest related regulations, tenure and planning systems, promote transparency, combat corruption and strengthen civil society involvement, to provide a basis for sustainable use of forest biodiversity.

National Forest Programmes (NFPs) for the management, conservation and sustainable development of forests are understood as country-led, broadly participative

processes to formulate and implement policies and instruments that effectively promote the development of the sector in the context of broader policies and strategies for sustainable development. The goal of NFPs is to promote the conservation and sustainable use of forest resources to meet local, national and global needs, through fostering national and international partnerships to manage, protect and restore forest resources and land, for the benefit of present and future generations. The main objectives are to:

- introduce intersectoral planning approaches involving all relevant partners, in order to resolve conflicts and generate effective policies and programmes to address problems;
- raise awareness and mobilise commitments at all levels in order to address the issues related to sustainable forestry development;
- increase the efficiency and effectiveness of both public and private actions for sustainable forestry development;
- foster local, national, regional and international partnerships;
- mobilise and organise national and (if necessary) international resources and catalyse action to implement programmes/plans in a coordinated manner;
- plan and implement how forests and the forestry sector could contribute to national and global initiatives, for example the Environmental Action Plans and the actions agreed upon to implement the Forest Principles, Chapter 11 of Agenda 21, the Conventions on Biodiversity, on Climate Change and on Desertification.

In its bilateral and multilateral efforts, Belgium will actively promote the development of national forestry programmes and the integration of different policy instruments to enhance coordination and coherence of policies aimed at the promotion of sustainable forest management and the conservation and sustainable use of forest biological diversity.

Today, integrated coastal management (ICM), also known as integrated coastal zone management (ICZM), has become the preferred approach to sustainable development and resource use of coastal areas. Given the dependence of many developing countries on the marine environment for food security, supporting integrated coastal and marine programmes will largely benefit both the partner countries and biodiversity.

It will be important to support the partner country to develop the necessary knowledge and capacity (including of the relevant institutions) in order to create the enabling environment to integrate concerns for marine and coastal biodiversity into the relevant sectoral plans.

In its bilateral and multilateral efforts, Belgium will, based on demands of the partner countries and their national priorities, actively promote the development of ICZM to support the partner countries in enhancing coordination and coherence of policies aimed at the conservation and sustainable use of coastal and marine biodiversity.

OBJECTIVE 12: INFLUENCE THE INTERNATIONAL AGENDA WITHIN BIODIVERSITY-RELATED CONVENTIONS

The protection of biodiversity is a common task that cannot be tackled by one country. In the international and European forums where Belgium is represented, Belgium will actively emphasise the paramount role of biodiversity and promote international involvement.

Belgium can also enhance its contribution to the protection of global biodiversity through the promotion of better coherence and cooperation between biodiversity-related conventions. The promotion of synergies must not result in diluting the content of biodiversity-related conventions. On the contrary, it will ensure their mutual supportiveness while respecting their different characters. Strengthening of synergies and cooperation will make it possible to use the existing resources in a more efficient way and will make the pressures of implementation and reporting more manageable.

The stakeholders involved in the implementation of this objective are: the regional and federal authorities, biodiversity-related conventions national focal points[86].

Operational objectives

12.1 Enhance Belgium's contribution to the protection of global biodiversity

[86t] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

Through active participation in international meetings and, when relevant, in the various bureaus and task forces, Belgium will strive for ambitious multilateral goals, targets and actions. Belgium will also contribute better to financial and technical support for their implementation.

12.2 Keep up our leading role in different international and EU forums to strengthen and ensure coherence, within the framework of the CBD Strategic Plan 2011-2020 and its Aichi Targets, between biodiversity related conventions

When participating in international agreements, Belgium will continue its efforts to ensure the coherence of the provisions of biodiversity-related conventions in order to promote policy consistency, enhance synergies and increase the efficiency of implementing measures. In particular, Belgium will support the establishment of a global partnership on biodiversity in order to enhance implementation through improved cooperation between all the conventions, organisations and bodies, and continue to cooperate in the process of harmonisation and streamlining of reporting on biodiversity.

12.3 Enhance synergies between CBD and the bodies of the Antarctic Treaty System and UNCLOS

Biodiversity is a key issue in the Antarctic region. The Antarctic's biodiversity is of unique value due to its relatively pristine state, with its high rate of endemic species with a highly adapted character. The Antarctic Treaty area is of particular interest due to the high level of scientific cooperation between countries.

Biodiversity in the high seas and Antarctica needs to be protected through the establishment of marine protected areas beyond national jurisdiction, which should become key elements of a global representative network of MPAs[87]. Furthermore, climate change, increased tourism and unregulated bioprospection[88] activities in the marine and terrestrial parts of Antarctica are creating rising concern.

Those issues need to be addressed in a coherent and coordinated way within the CBD, UNCLOS and the bodies of the Antarctic Treaty System (Committee for Environmental Protection, Commission for the Conservation of Antarctic Marine Living Resources - CCAMLR), in particular regarding marine protected areas and ABS. Particular attention will also be devoted to human impacts on cetacean populations in the Antarctic region and to, in this regard, the work of the International Whaling Commission.

OBJECTIVE 13: ENHANCE BELGIUM'S EFFORTS TO INTEGRATE BIODIVERSITY CONCERNS INTO RELEVANT INTERNATIONAL ORGANISATIONS AND PROGRAMMES

Specific CBD issues are undoubtedly linked with discussions within other organisations and programmes such as FAO, UNDP, WTO, WHO, WIPO, ITTO, etc. whose mandates cover issues relevant to the implementation of the CBD. However, links between agreements directly relevant to biodiversity (see Appendix 2) and the other relevant international organisations (see Appendix 3) remain weak. It is therefore important to enhance synergies and coherence both at national and international level given the positive impacts that the protection of biodiversity can have on the implementation of several of those programmes.

An interesting tool to achieve this objective is the Green Diplomacy Network (GDN)[89], an initiative aimed at promoting the integration of environment into external relations of EU-25 through the creation of an informal network of experts as an information exchange mechanism between the designated environmental focal points of the Member State Ministries of Foreign Affairs.

Special efforts should for example ensure greater coherence and consistency between trade and economic agreements and the objectives of the Convention on Biological Diversity. This is of the utmost importance given the major impact that other institutions and programmes can have on the implementation of the CBD.

[87] The target of establishing a global representative network of marine protected areas by 2012 was endorsed by the global community at the 2002 United Nations World Summit on Sustainable Development.

[88] According to a study carried out by the Institute of Advanced Studies of the United Nations University (UNU/IAS), "An increasing amount of the scientific research on the flora and fauna of Antarctic is underway with a view to identifying commercially useful genetic and biochemical resources. This is likely to increase".

[89] The GDN initiative was endorsed by the European Council in June 2003.

The stakeholders involved in the implementation of this objective are: the federal and regional authorities, the judiciary, the law enforcement departments, the ministry of foreign affairs, the Belgian CITES service, the private sector[90].

Operational objectives

13.1 Integrate biodiversity concerns into all international organisations and programmes that are relevant to biodiversity

Belgium will continue and strengthen its participation in international and European conventions, agreements and programmes relevant to biodiversity, and will ensure that positions taken are in line with and supportive of the three objectives of the CBD. This will promote compatibility and mutual supportiveness between institutions and programmes. This implies improved coordination and sharing of information at national level to ensure that Belgian delegations to meetings of different but related bodies present consistent and mutually reinforcing positions.

13.2 Support efforts of developing countries to combat illegal logging and associated illegal trade as well as their efforts to Reducing Emissions from Deforestation and Forest Degradation and the role of conservation, sustainable management of forests and the enhancement of forest carbon stocks in developing countries (REDD+)

A first step in contributing to SFM is to help developing countries restrict and impede illegal logging activities.

Illegal logging and its associated trade not only threaten biodiversity in timber-producing countries (through overexploitation, depletion of scarce natural resources, destruction of ecosystems, etc.) but also have serious economic and social consequences (loss of revenue for local governments, corruption, impoverishment of rural communities that depend on forest products, etc.).

Belgium will consider support for regional intergovernmental initiatives to combat illegal logging, such as the Africa Forest Law Enforcement and Governance (AFLEG) or the Europe and North Asia Forest Law Enforcement and Governance (ENAFLEG).

In 2003, the EU adopted an Action Plan for Forest Law Enforcement, Governance and Trade (FLEGT) to combat illegal logging and associated illegal trade. This plan emphasises governance reform and capacity-building in producer countries to control illegal logging. The plan also underlines demand-side measures to reduce the consumption of illegal timber within the EU.

Belgium actively supports the implementation of the FLEGT Action Plan, for example through the development of public procurement policies to promote legally produced timber products, the inclusion of the issue of illegal logging in bilateral aid for forestry projects, the analysis of possibilities to apply national legislation (such as money-laundering) to prosecute crimes related to illegal logging, the promotion of private-sector initiatives that encourage companies to use voluntary codes of conducts for the legal harvesting and purchasing of timber, etc.

The FLEGT Action Plan also provides for the development of Voluntary Partnership Agreements between the EU and timber-producing countries. The aim of these agreements is to set up a licensing scheme in partner countries in order to ensure that only legally produced timber (identified by means of licenses issued in those producer countries) is exported to the EU. The framework has been set up by means of the FLEGT Regulations[91].

Belgium should continue to supporting this initiative on the ground by initiating projects in timber-producing countries to prepare for the establishment of voluntary partnership agreements, as has been the case in the DRC.

In addition Belgium supported and actively contributed to the efforts at EU level to complement this voluntary approach by exploring options to develop legislation to control imports of illegally harvested timber into the EU. In this context,

[90] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

[91] Council Regulation (EC) No 2173/2005 of 20 December 2005 on the establishment of a FLEGT licensing scheme for imports of timber into the European Community; and Commission Regulation (EC) No 1024/2008 of 17 October 2008 laying down detailed measures for the implementation of Council Regulation (EC) No 2173/2005 on the establishment of a FLEGT licensing scheme for imports of timber into the European Community.

the EU adopted "Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market" in 2010. This Regulation, together with its Implementing Regulation[92], Delegated Act[93] and Guidelines[94], prohibits the placing on the EU market of illegal timber and timber products from any origin as of 3 March 2013. In other words, this Regulation no longer limits the battle against illegal timber (products) to partner countries.

For CITES-listed wood, Belgium will work closely with the countries of origin to ensure that CITES permits are only issued when a clear non-detriment-finding has been carried out and the legality and sustainability of the tropical wood is proven. In case of seizures of large quantities of CITES-listed wood, and, where possible, the subsequent public sale of this timber, revenue will be invested in local projects to enhance local sustainable use of forests.

OBJECTIVE 14: PROMOTE THE COMMITMENT OF CITIES, PROVINCES AND OTHER LOCAL AUTHORITIES IN THE IMPLEMENTATION OF THE BIODIVERSITY STRATEGY 2020

The stakeholders involved in the implementation of this objective are: the regional and local authorities (including the provinces and municipalities), the nature conservation agencies, actors involved in local Agenda 21 programmes and other local programmes and plans, professional federations active in the sector, the general public and any association working towards the same goal as the NBS[95].

14.1 Encourage local authorities to develop and implement local biodiversity strategies and related action plans

The commitment of cities, provinces and other local authorities is crucial to the achievement of the objectives of the National Biodiversity Strategy at all levels. Local action could be facilitated through the enhancement and dissemination of appropriate policy tools and guidelines, and the diffusion of best practices supporting the multifunctional use of natural spaces. In particular, biodiversity concerns should be integrated into existing local action plans, like the Local Agendas 21, communal plans for rural development, as well as in plans that are being developed. Capacity-building programmes and exchange platforms can provide appropriate technical assistance and/or guidance. Awareness-raising campaigns for local residents on the importance of biodiversity and ecosystem services, and appropriate subsidies for local authorities should be put in place to stimulate and support local commitment to biodiversity. The importance of a bottom- up information flow is crucial as residents are good reporters of their environment. This can be promoted for example through the organization of events or above-mentioned exchange platforms to collect observations on specific themes related to biodiversity. Cities and local authorities are encouraged to monitor and report on their progress by means of standardized biodiversity indices, such as the city biodiversity index (CBI).

Biodiversity must keep or regain its place in the urban space as it performs important natural functions while contributing to physical and mental health, recreation, education and public awareness. To this end, it is important to better preserve and connect green spaces and open spaces around and within urbanized areas by developing a green infrastructure[96]. Most importantly, their quality needs to be improved to facilitate their multifunctional use. Historically, we note that, despite heavy land use and dense urbanization, urban areas often host an important natural heritage for the same historical

[92] Commission Implementing Regulation (EU) No 607/2012 of 6 July 2012 on the detailed rules concerning the due diligence system and the frequency and nature of the checks on monitoring organisations as provided for in Regulation (EU) No 995/2010 of the European Parliament and of the Council laying down the obligations of operators who place timber and timber products on the market.

[93] Commission Delegated Regulation (EU) No 363/2012 of 23 February 2012 on the procedural rules for the recognition and withdrawal of recognition of monitoring organisations as provided for in Regulation (EU) No 995/2010 of the European Parliament and of the Council laying down the obligations of operators who place timber and timber products on the market.

[94] Issues relating to the EU Timber Regulation legal framework for which guidance should be developed (http://ec.europa.eu/environment/forests/pdf/Issue%20list%20for%20the%20EUTR%20Guidelines.pdf).

[95] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

[96] See definition in the operational objective 3.3.

reasons that led to the human presence and economic development in this location. This is notably the case in the Brussels-Capital Region.

OBJECTIVE 15: ENSURE THE PROVISION OF ADEQUATE RESOURCES FOR BIODIVERSITY

Belgium has committed itself at international and European level to the implementation of the Convention on Biodiversity and its Strategic Plan for Biodiversity 2011-2020 (SP). This includes financial support both with regard to adequately financing our own national efforts as well as supporting developing countries to implement the CBD.

Objectives 15.1-15.4 of the updated NSB express this national and global engagement and need to be seen in light of CBD Article 20 (§1-4) as well as several subsequent COP decisions (COP9/11-COP10/2-COP11/4). Furthermore UNGA resolutions 65/161 and 67/212 also expressed political commitment to the implementation of the Strategic Plan for Biodiversity. Finally, this was internalized at EU level through several Council Conclusions (in particular December 2010 and June 2011) and in the EU Biodiversity Strategy.

Resource mobilization under the CBD relates to increasing funding for biodiversity-related activities, both nationally and globally to reach the Aichi Targets in line with CBD Article 20. However, the overall picture must be kept in mind when addressing SNB Objective 15, since this is not just about 'flows' of funding but also about engaging the private sector, reducing costs, increasing sectoral integration, enhancing effectiveness of funding (both nationally & in developing countries), etc. Therefore many actions have already been taken by and remain still available to the relevant administrations and other actors to contribute to Objectives 15.1 – 15.4 in line with their own capacities and/or competences and are not limited to increasing net funding flows towards third countries.

The set of 4 objectives 15.1-15.4 covers a whole range of ways to mobilize biodiversity resources which are mutually supportive. Several of these are directly related to other SNB Objectives, in particular Objectives 5-11-12 and 13. Just like Aichi Target 20 will contribute to and also benefit from the proper implementation of the other Aichi Targets, this Objective 15 will both contribute to and benefit from progress under the other NSB Objectives, depending on how those are implemented.

To carry out the present National Biodiversity Strategy, there is a need to carry out further actions in key areas. Investments in coherent and integrated biodiversity activities should be substantially increased. Financing will be supported by Regional and Federal environmental administrations, other relevant administrations and funding bodies, including the private sector.

The stakeholders involved in the implementation of this objective are: the federal and regional finance, economy, development cooperation and environment authorities, the provincial and municipal authorities, the private sector and markets, NGOs, and any association working towards the same goal as the NBS [97].

15.1 By 2020 at the latest, the mobilization of financial resources for biodiversity from all sources (including possible innovative financial mechanisms) should increase substantially compared to the average annual biodiversity funding for the years 2006-2010

This objective covers both national and global financing for biodiversity and is based on Articles 20.1 – 20.4 of the CBD. It is close to the wording of Aichi Target 20 which was based on Article 20 and which is globally the politically most recognized commitment. The implementation of the Strategic Plan with its Aichi Targets is guiding all biodiversity efforts during the UN Decade, as decided by the United Nations General Assembly in resolutions 65/161 and 67/212. Target 20 was confirmed at EU level through the Council Conclusions of December 2010 (§9) and of June 2011 (§16) and also referred to the need to deliver on the CBD Strategy for Resource Mobilisation. The Strategic Plan and Aichi Targets became the basis for the EU Biodiversity Strategy and in particular Targets 1 (Act. 2 - financing Natura 2000) and 6 (Act. 18 - link to CBD COP-11) directly support Operational Objective 15.1.

[97] Appendix 1 provides a list of institutional actors for biodiversity in Belgium.

Belgium needs to ensure, adequate financing of biodiversity from all sources. Therefore it is important to investigate financing possibilities at national level such as the establishment of specific funds for biodiversity, the integration of biodiversity in sectoral budgets and programmes (in particular in Research and Development plans and programs), the establishment of partnerships with the finance and business sectors, etc. Other innovative financial mechanisms should be investigated, such as partnerships with the private sector.

In Flanders, a specific funds (Minafonds) has been established to deals with financial aspects of investments in the field of environment.

The federal level should investigate possibilities to use the Raw Material Funds for biodiversity.

Belgium will investigate and mobilise additional financial resources from all sources to effectively implement the NBS and to contribute to averting global biodiversity loss. In accordance with the CBD Strategy for Resource Mobilization, it should substantially increase from the levels of 2010. In CBD Decision XI/4, it is agreed to use the average annual biodiversity funding between 2006 and 2010 as a baseline.

The existing financial institutions will be strengthened and, the replication and scaling-up of successful financial mechanisms and instruments will be promoted (Resource Mobilization Strategy Goal 3). Enabling conditions will be established to encourage private sector involvement in supporting the Convention's three objectives, including the financial sector.

15.2 Fully use existing EU financing instruments to promote biodiversity

This objective supports Aichi Targets 2, 3 and 20. At EU level, again Targets 1 (Act. 2) and 6 (Act 18) are directly linked. The EU CCs of June 2011 (§13) stressed the need to mobilise additional resources from all possible sources and ensure adequate funding through, *inter alia*, the future EU financial framework, national sources and innovative financial mechanisms, as appropriate, for the effective implementation of the EU Biodiversity Strategy, including predictable, adequate and regular financing for the Natura 2000 network.

This objective in itself contributes to Objectives 15.1 and 15.4 and at EU and national level, several initiatives are already ongoing. For example Belgium is already engaged in several efforts to use existing EU financial mechanisms to promote support for biodiversity (cf. EU Council Conclusions of December 2010 (§5, §13, §19) regarding rural development, CAP, CFP, etc.).

Co-financing opportunities through European financing programmes will be promoted, for instance through specific programmes of the forthcoming EU Multiannual Financial framework 2014-2020 including LIFE+, the European Fisheries Fund (EFF), the Cohesion Fund, the Structural Funds (the European Regional Development Fund and European Social Fund), and the European Agricultural Fund for Rural Development (EAFRD).

Belgium will support financing biodiversity in European Financing Funds.

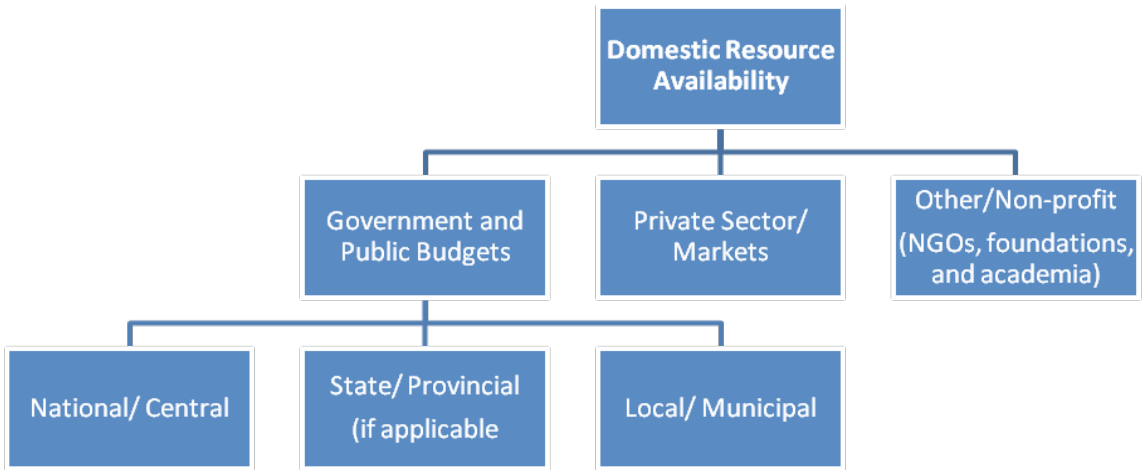


Figure 6. Source of domestic funding for biodiversity (Source: UNEP/CBD/COP/11/14/ADD1).

15.3 By 2015, contribute towards the doubling of the total biodiversity-related financial resource flows to developing countries and at least maintain this level until 2020, including through a country-driven prioritization of biodiversity within development plans in recipient countries, using as preliminary baseline the average annual biodiversity funding to developing countries for the years 2006–2010

The justification for this kind of target is in CBD Article 20, paragraphs 1 to 4. At COP-11 (Hyderabad, October 2012), the Parties decided to add this specific target to implement their commitments under CBD Article 20, the Resource Mobilization Strategy and Aichi Target 20 (COP-11/4, §7).

International flows of financial resources originate from several sources (see figure 7). Official development assistance (ODA) is one of these sources. ODA can be either bilateral (directly from a donor country to a recipient country) or multilateral (resources channelled through international financial institutions and the United Nations organization, funds and programmes). International financial flows can also include non-ODA public funding such as economic cooperation, through private companies and through international not-for-profit organizations. This can be both North-South and South-South cooperation.

Belgium will adopt a methodology and calculate its baseline of international financial flow to developing countries devoted to CBD implementation and biodiversity activities. The baseline will be the annual biodiversity funding for the years 2006–2010. This will contribute to the implementation of the provisions of the Monterrey Consensus on mobilizing international and domestic funding as related to biodiversity

A strategy to double this baseline will be developed and implemented by 2015 with the actors involved (the federal and regional authorities, the private sector, NGOs, foundations and academia). In the context of this process, the term "biodiversity activity" refers to all activities that have a positive impact on biodiversity regardless of whether they take the form of direct benefits or indirect benefits. A proposed categorization of biodiversity resources is provided for in the CBD reporting framework to assist Parties in accounting for the various types of information which should be considered.

In the context of this objective, Belgium will provide support to strengthen existing financial institutions and promote replication and scaling-up of successful financial mechanisms and instruments. This may take the form of enhanced efforts to mobilize co-financing and other modes of project financing for biological diversity or the promotion of biological diversity in debt relief and conversion initiatives, including debt-for-nature swaps. The development and implementation of economic incentives that are supportive of the Convention's three objectives at local and national level and consistent and in harmony with the other relevant international obligations could be considered.

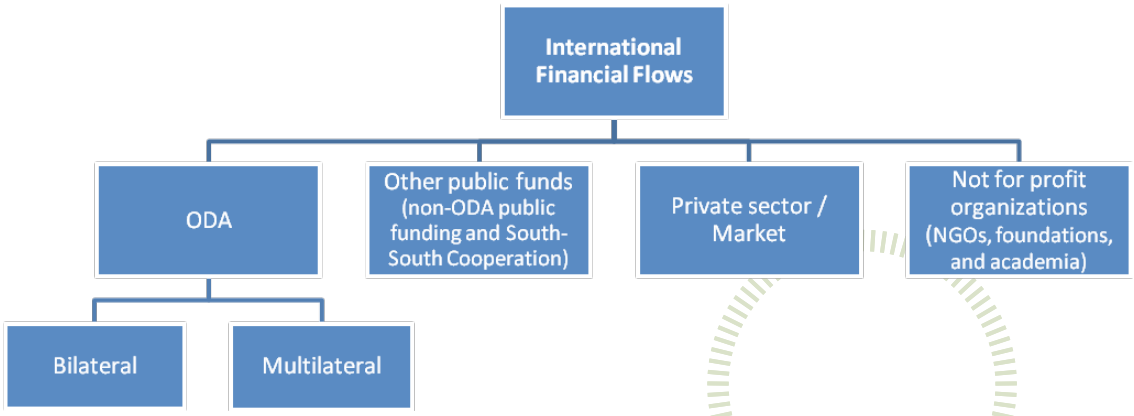


Figure 7. Types of international financial flows (Source: UNEP/CBD/COP/11/14/ADD1)

15.4 By 2020, support, as appropriate, developing countries to enhance institutional, national, administrative and managerial capacities, in order to increase the effectiveness and sustainability of international and national financial flows for biodiversity

This objective was already included in the CBD Resource Mobilisation Strategy COP9/11 (§6) and repeated in paragraph 14 of decision COP-11/4 in order to create the enabling environment to mobilize private and public-sector investments in biological diversity and its associated ecosystem services.

This objective is essential in terms of reaching the objectives to implement the CBD as not only the amount of funding but also its management and the absorption capacity of the recipient countries are key. In particular Operational Objectives 11.3 and 11.6 directly support Operational Objective 15.4.

In its bilateral and multilateral interactions with partner countries, Belgium will provide support, inter alia:

- to strengthen institutional capacities for effective resource mobilization and utilization, including strengthening the capacities of the relevant ministries and agencies to make a case for including biodiversity and its associated ecosystem services in discussions with donors and relevant financial institutions;

- to strengthen the capacity for the integration of biodiversity issues and associated ecosystem services into national and sectoral planning, and promote budgetary allocations for biological diversity and its associated ecosystem services in national and relevant sectoral budgets.

- to strive to increase official development assistance associated with biological diversity, where biodiversity is identified as a priority by developing country Parties in poverty reduction strategies, national development strategies, United Nations development assistance frameworks and other development assistance strategies and in accordance with priorities identified in national biodiversity strategies and action plans.

Part V:

Implementation and follow-up of the Strategy

The Strategic and operational objectives of the updated Belgium's National Biodiversity Strategy are considered to be key elements to ensure a coherent implementation of the Convention on Biological Diversity and biodiversity-related conventions by Belgium until 2020.

The Strategy also identified 85 operational objectives; many of them are already included in Regional and/or Federal biodiversity plans and are being implemented or being prepared to be implemented. The mid-term state of play of the implementation of the Strategy (2006-2011) provided an overview of the actions taken so far to avert biodiversity loss and formulated recommendations to update the strategy. The necessary complementary measures to implement the operational objectives will be undertaken where necessary in a coordinated way by the Regional and Federal Governments and other relevant actors. Where necessary, a coherent legal framework will be adopted to allow for efficient and effective implementation of the strategic and operational objectives. There should be conformity between objectives, measures and allocated means.

The objectives formulated in the Strategy in 2006 and updated in 2013 should not merely be good intentions but rather considered to be a specific impetus towards the 2020 target of halting the loss of biodiversity and the degradation of ecosystem services. As far as possible, decision makers will take concrete decisions that specify targets, measures, schedules, budget, responsible actors and possibly specific target groups in order to guarantee implementation. For specific issues, appropriate thematic and sectoral action plans will need to be designed or updated.

V.1 - Governance

When implementing the Strategy, specific attention will be paid to stakeholders' information, involvement and participation. This implies consultation and collaboration between the different stakeholders, which will increase the support for and thus give a boost to the carrying out of Belgium's National Biodiversity Strategy. Collaboration with stakeholders on concrete projects associated to priority objective of the strategy will also help to raise their interest.

It is crucial to ensure that Belgium's National Biodiversity Strategy is taken into account and considered at the decision-making and environmental planning levels.

The progress made towards the 2020 target and the objectives of the Strategy need to be periodically assessed. Once the Strategy has been adopted, it is crucial to ensure that appropriate arrangements are made by the Federal, Regional and Community Governments for its implementation and to evaluate their effectiveness. Timetables will have to be drawn up for efficient and effective implementation of the complementary measures that have been identified.

V.2 - Monitoring and support mechanisms

SM1. By 2015, adopt, apply and publish indicators to measure progress against the strategic objectives of the NBS

Stakeholders: the federal and regional authorities, Steering Committee CBD and its experts and NGOs

The implementation of the strategy and progress towards the 2020 target will be monitored and assessed using indicators in order to provide guidance as to further actions needed. The Steering Committee Biodiversity Convention will develop the appropriate

milestones and indicators for the follow-up of the implementation.

The EU Baseline on the state of biodiversity and ecosystems in Europe produced a country study for Belgium in 2010. In 2011, a mid-term state of play of the implementation of the NBS 2006-2016 was prepared. The EU Baseline for Belgium and the mid-term state of play of the NBS form the baseline for monitoring progress towards the 2020 targets.

Furthermore, Belgium will contribute to the efforts to develop biodiversity indicators at CBD and European level (CBD Headline indicators, SEBI-initiative). The SEBI indicators are used to report to the European Commission on the Member States' common implementation of the EU Biodiversity Strategy to 2020. The mid-term report of the EU strategy is expected in 2015.

These outcome indicators will be used for the future national reports to the CBD.

SM2. By 2015, implement the EU reporting tool for NBSs on the CHM website

Stakeholders: CHM National Focal Point, the federal and regional authorities, Steering Committee CBD

In 2013, the EU portable toolkit for the CHM developed a module for online integrated reporting on the Aichi Targets, the EU Biodiversity Strategy and the national biodiversity strategies. The Belgian CHM website will integrate this module into its website. This will facilitate the sharing of and access to information related to the Aichi Targets, the EU Biodiversity Strategy and the national strategy.

The information in the tool will be updated periodically based on the results of SM1. Belgium will be involved in further developing the tool, through a special working group of the EU, to ensure that the tool will allow implementation information between national and EU reporting cycles to be added.

SM3. By 2015, have a functional Clearing-House Mechanism in place for the Convention and its protocols, including a network of practitioners

Stakeholders: CHM, BCH and ABS-CH National Focal Points, the federal and regional authorities, Steering Committee CBD, CBD National Focal Point, the Belgian Biodiversity Platform, universities, nature agencies, NGOs, the public and private sector.

Collectively those involved in implementing the NBS have a wealth of experience and have developed many useful good practice cases, tools and guidance. There is additional useful information beyond this community. The global CHM work programme asks for parties to develop a biodiversity knowledge network, including a database and network of practitioners, to bring together this knowledge and experience and to make it available through the clearing-house mechanism to facilitate and support enhanced implementation of the CBD, including its various programmes and the national biodiversity strategies and action plans. It also asks for a sustained national CHM so that in each Party, all have access to the information, expertise and experience required to implement the Convention. National clearing-house mechanism nodes should also be linked to the central clearing-house mechanism managed by the Secretariat of the Convention, and information exchange between these should be facilitated.

The national CHM should be adapted and be able to play the role it was mandated to perform by Strategic Plan 2011 – 2020 of the Convention. It should be actively used by the biodiversity community in Belgium to add and update information relevant to the follow-up of the implementation of the national strategy. Regional information on biodiversity and the implementation of the Convention should be linked to the national CHM, if available on a regional website, or posted to the national CHM website by the relevant region if no specific website is available.

The Belgian partnering role for the CHM should continue to assist national CHMs in developing countries and elsewhere to enlarge the community of users and its networks.

SM4. By 2015, functional Clearing-Houses for implementation and technology transfer are in place for the CBD and its Protocols (BCH, ABS-CH)

Stakeholders: CHM, ABS and BCH Focal Points, federal and regional authorities

The Convention on Biological Diversity asks the Parties to the Convention to establish a national Clearing-House Mechanism (CHM) to enable both information exchange on biodiversity and scientific and technical cooperation. During COP-10 the mandate for the CHM was enlarged and it should also be a tool to follow up the implementation of the national strategies and action plans. The Cartagena Protocol on Biosafety establishes a Biosafety Clearing House (BCH) to assist Parties to implement with the implementation of the Protocol and to facilitate the exchange of scientific, technical, environmental and legal information on, and experience with, genetically modified organisms (GMOs). The Nagoya Protocol on Access and Benefit sharing (ABS) also requires the establishment of an ABS-CH.

Belgium should ensure that the different Clearing Houses are functional and fulfil their mandates under the Convention and its Protocols. As biodiversity in Belgium is mainly a regional competence, the Regions should also ensure that, if no regional Clearing Houses are established, the relevant information is added to the national Clearing-House or that references to relevant information sources are available.

Technology transfer has taken place since the entry into force of the Convention by different Belgian stakeholders at the request of partners in developing and other countries. The national CHM, in collaboration with the BCH and the Belgian Biodiversity Platform, will develop a special section on the website to highlight technology transfer activities related to biodiversity that have taken place. This can be used as an information source for interested parties in search of biodiversity technology. The Secretariat of the Convention has been asked to compile information on technology transfer and the needs of Parties to Decision XI/2 article 17. Belgium should ensure that the information on technology transfer by Belgian stakeholders is exchanged on a regular basis with the Secretariat. Demands for technology transfer by Parties will be posted on the CHM and to the stakeholders.

V.3 - Duration, reporting, evaluation and review

Initially, the duration of the first national Strategy was for 10 years, until 2016. The conclusions of the mid-term state of play of the strategy (2012) recommended that the text be updated. It was decided to align the objectives and duration of the strategy with the 2020 Aichi Targets and the EU Biodiversity Strategy to 2020.

The implementation of the strategy will be monitored and assessed using strategic indicators (cf. Support Measure 1 above).

Evaluation will address environmental as well as socio economic impacts. Evaluation and reporting on progress made and obstacles for implementing the National Biodiversity Strategy will be made available on the CHM website and published every 4 years through the national reporting procedure for the CBD (every 4 years). This will allow for the Steering Committee “Biodiversity Convention” to review the effectiveness of the measures taken and identify priorities to guide further actions.

An independent review of the outcome of the NBS has been scheduled for the end of its extended validity, in 2020. It will address environmental as well as socio-economic impacts.

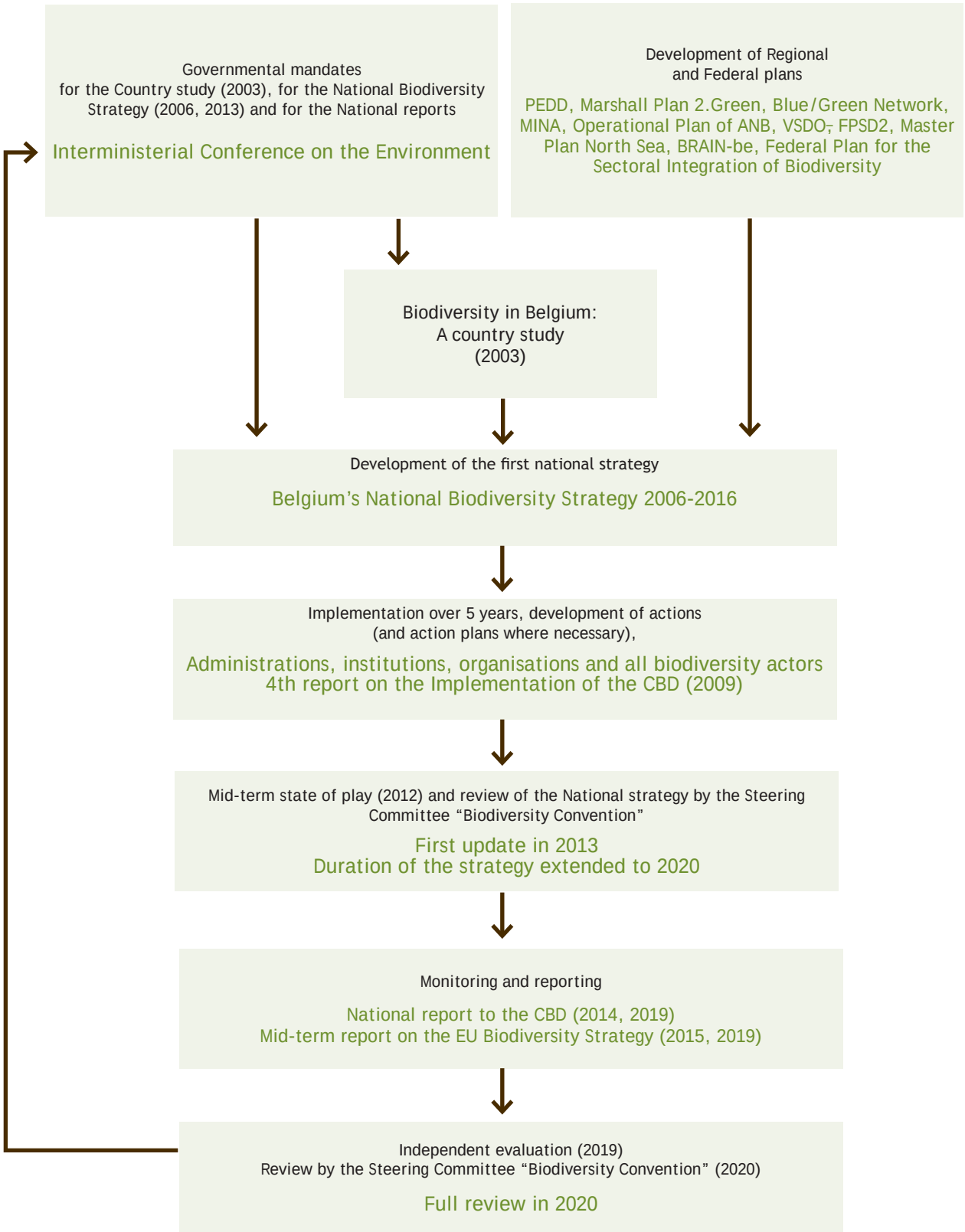


Figure 8. Steps for the development and implementation of Belgium's National Biodiversity Strategy.

List of abbreviations

ABS	Access and Benefit-Sharing
ABS-CH	Access and Benefit Sharing Clearing-House
AEWA	African-Eurasian Waterbird Agreement
AFLEG	Africa Forest Law Enforcement and Governance
ANB	Flemish Government, Ministry of Environment, Nature and Energy, Agentschap voor Nature en Bos or in English 'Agency for Nature and Forests'
BALANS	Balancing impacts of human activities in the Belgian part of the North Sea (research project)
BBP	Belgian Biodiversity Platform
BCH	Biosafety Clearing-House
BEES	Biodiversity and Ecosystem Services
Belspo	Belgian Federal Science Policy Office
BIM	Leefmilieu Brussel - Brussels Institute for Management of the Environment
Bt GMO	Genetically modified organism with a gene of Bacillus thuringiensis (Bt)
CAP	Common Agricultural Policy
CBD	or UNCBD, United Nations Convention on Biological Diversity
CBD NFP	National Focal Point of the Convenion on Biological Diversity
CCAMLR	Convention on the Conservation of Antarctic Marine Living Resources
CCIEP	Committee for International Environment Policy
CEP	Committee for Environmental Protection (under the Antarctic Treaty)
CEPA	Communication, Education and Public Awareness
CESRW	'Conseil Economic et Social de la Région Wallonne'or in English 'Economic and Social Council of the Walloon Region'
CFDD	Belgian Federal Council for Sustainable Development
CFP	Common Fishery Policy
CGRFA	FAO Commission on Genetic Resources for Food and Agriculture
CHM	Clearing-House Mechanism
CIDD	Interdepartmental Commission for Sustainable Development
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CLO	'Centrum voor Landbouwkundig Onderzoek' of in English 'Agricultural Research Center'
CMS	Convention on Migratory Species
COP	Conference of the Parties
COP/MOP	Conference of the Parties serving as the Meeting of the Parties
CPB NFP	Primary National Focal Point to the Cartagena Protocol on Biosafety
CRA-W	Walloon Agricultural Research Centre
CRIE	'Centres Régional d'Initiation à l'Environnement' or in English 'Nature Education Center in Wallonia'
CRNFB	Research Centre for Nature, Forests and Wood
DEMNA	'Département de l'étude du Milieu Naturel et Agricole' of the Walloon Region
CSD	Commission on Sustainable Development

CSWCN	'Conseil Supérieur Wallon de la Conservation de la Nature' or in English 'Walloon Senior Nature Conservation Council'
CWEDD	'Conseil Wallon pour l'Environnement et le Développement Durable' or in English 'Walloon Council of the Environment for Sustainable Development'
DGA	Ministry of the Walloon Region, Direction générale de l'Agriculture
DGARNE - DNF	Ministry of the Walloon Region, Directorate-General for Agriculture, Natural Resources and the Environment, Department of Nature and Forests
DGDC	Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation Belgium, Belgian Development Cooperation
DIFTAR	System of differentiated tariff for waste removal
DPSIR	Driving forces, Pressures, States, Impacts, Responses method
EAFRD	European Agricultural Fund for Rural Development
EEA	European Environment Agency
EFF	European Fisheries Fund
EIA	Environmental Impact Assessment
ENAFLEG	Europe and North Asia Forest Law Enforcement and Governance
ESD	Education for Sustainable Development
EU	European Union
EUFORGEN	European Forest Genetic Resources Programme
EUROBAT	Agreement on the Conservation of Bats in Europe
FAO	Food and Agriculture Organisation
FEEDIS	Feeding Information System
FLEGT	Forest Law Enforcement, Governance and Trade
FPS	Federal Public Service
FPS DG Env.	Federal Public Service for Health, Food Chain Safety and Environment, Directorate
FPSD	Federal Plan for Sustainable Development
FRDO	Belgian Federal Council for Sustainable Development
FRPP	Federal Reduction Plan for Pesticides
FSC	Forest Stewardship Council
GBIF	Global Biodiversity Information Facility
GBO	Global Biodiversity Outlook
GDN	Green Diplomacy Network
GEF	Global Environment Facility
GES	Good Environmental Status
GFP	Good Farming Practice
GM	Genetically modified
GMO	Genetically Modified Organism
GSPC NFP	National Focal Points to the Global Strategy for Plant Conservation
GURT	Genetic Use of Restriction Technologies
GTI	Global Taxonomy Initiative
HNV	High Nature Value
HVV	Hubertus Vereniging Vlaanderen vzw

IAS	Invasive Alien Species
IBGE	Bruxelles Environnement - Brussels Institute for Management of the Environment
ICDO	Interdepartmental Commission for Sustainable Development
ICES	International Council for the Exploration of the Sea
ICZM	Integrated Coastal Zone Management
IEW	Inter-Environnement Wallonie asbl
ILC	Indigenous and Local Communities
ILO	International Labor Organization
IMO	International Maritime Organisation
INBO	'Instituut voor Natuur- en Bos Onderzoek' or in English 'Institute for Nature and Forest Research' of the Flemish Region
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPEN	International Plant Exchange Network
IPPC	International Plant Protection Convention
ITTO	International Tropical Timber Organisation
IUCN	World Conservation Union
IVON	'Integraal Verwevings- en Ondersteunend Netwerk' or in English 'Integrated Natural Interweaving and Support Network'
IUCN	International Union for the Conservation of Nature
IWC	International Whaling Commission
KWIA	Support group for indigenous peoples
LAC	Limits of Acceptable Change
LIFE	EU Financial Instrument for the Environment
LMOs	Living Modified Organisms
LNE	'Leefmilieu, Natuur en Energie'
LV	Flemish Government - Landbouw en visserij
MA	Millennium Ecosystem Assessment
MAES	European project «Mapping and Assessment of Ecosystems and their Services»
MDGs	Millennium Development Goals
MEAs	Multilateral Environment Agreements
MFWB	Ministère de la Communauté française Wallonie Bruxelles
MINA	Flemish Environment and Nature Policy Plan
MOSAICC	Micro-organisms Sustainable Use and Access Regulation International Code of Conduct
MPAs	Marine Protected Areas
MSFD	Marine Strategy Framework Directive
MSP	Marine Spatial Planning
MUMM	Management Unit of the North Sea Mathematical ModelsNATO
NAPAN	Nationaal Actie Plan d'Action National
NBG	National Botanical Garden of Belgium
NBS	National Biodiversity Strategy
NFPs	National Forest Programmes

NGO	Non-Governmental Organisation
OECD	Organisation for Economic Cooperation and Development
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
PCDN	'Plan Communaux pour le Développement de la Nature' or in English 'Communal Plans for Nature Development'
PDOV	'Plan Duurzame Ontwikkeling voor Vlaanderen' or in English 'Plan for Sustainable Development for the Flemish Region'
PEBLDS	Pan-European Biodiversity and Landscape Strategy
PEDD	'Plan d'Environnement pour le Développement Durable de la Wallonie' or in English 'Environmental Plan for Sustainable Development of Wallonia'
PEFC	Programme for the Endorsement of Forest Certification schemes
PGRFA	Plant Genetic Resources for Food and Agriculture
PNC	Provincie Limburg, Provinciaal Natuurcentrum – Provincial Nature Centre
PRIBEL	Pesticide Risk Index Belgium
PRD-GewOP	'Plan regional de développement / Gewestelijk Ontwikkelingsplan' or in English 'Regional Development Plan of Brussels-Capital Region'
PRDD	Plan régional de développement durable
PRPB	The federal Programme for the Reduction of Pesticides and Biocides
RBINS	Royal Belgian Institute of Natural Sciences
RMCA	Royal Museum for Central Africa
ROS	Recreation Opportunity Spectrum
SAC	Special Areas for Conservation
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice
SEA	Strategic Environmental Assessment
SEBI	Streamlining European Biodiversity Indicators
SEEA	System of Environmental-Economic Accounting
SFM	Sustainable Forest Management
SIA	Strategic Impact Assessment
SPA	Special Protection Areas
SPI	Science-Policy Interface
SRPD	Sustainable Regional Development Plan
SSD	Science for a Sustainable Development
SWAP	Secto-Wide Approaches
TBEW	'Tableau de bord de l'environnement wallon' or in English 'Scoreboard of the Walloon environment'
TAC	Total Allowable Catches (for fishery)
TRIPS	Trade-Related Intellectual Property Rights
UA	Universiteit Antwerpen
UCL	Université Catholique de Louvain
UNCBD	United Nations Convention on Biological Diversity (or CBD)
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNCTAD	United Nations Conference on Trade and Development

UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention of Climate Change
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UPOV	International Union for the Protection of New Varieties of Plants
VEN	'Vlaams Ecologisch Netwerk' or in English 'Flemish Ecological Network'
VITO	Flemish RTO - research and technology organisation
VLIZ	'Vlaams Instituut voor de Zee' or in English 'Flanders Marine Institute'
VO LNE	Flemish Government, Ministry of Environment, Nature and Energy, Department LNE
VSDO	Vlaamse Strategie Duurzame Ontwikkeling – Flemish Sustainable development Strategy
WCO	World Custom's Organisation
WHC	World Heritage Convention
WIPO	World Intellectual Property Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organisation
WHO	World Health Organisation

Glossary

Adaptive management: Form of management concerned with the complex and dynamic nature of ecosystems and their uses and the absence of complete knowledge of their functioning. Because circumstances change and uncertainties are inherent in all managed uses of components of biodiversity, adaptive management is able to respond to uncertainties and it contains elements of "learning-by-doing" or research feedback. Monitoring is a key component of adaptive management. The concept is explained in document UNEP/CBD/SBSTTA/9/INF/8 (2003).

Agricultural biodiversity is a broad term that includes all the components of biodiversity relevant to food and agriculture, and all the components of biodiversity that constitute the agro-ecosystem: the variety and variability of animals, plants and micro-organisms, at the genetic, species and ecosystem levels, which are necessary to sustain key functions of the agro-ecosystem, its structure and processes.

Aquaculture is defined by the FAO as "the farming of aquatic organisms, including fish, molluscs, crustaceans, and aquatic plants. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc. It also implies ownership of the stock being cultivated."

Biofuels are transport fuels produced from biomass feed-stocks (*i.e.* organic material).

Biomass includes non-food products for various purposes derived from plants, algae, animals or fungi. It has an important role to play as feedstock material for renewable energy generation whether for electricity, heating and cooling or for transport fuels, but also as raw material for other uses.

Biological diversity (biodiversity): The variability among living organisms from all sources, including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they form part; this includes diversity within species, between species and of ecosystems.

Biomanipulation (of lakes): (Lake) restoration technique by top-down management, mainly by reducing and/or restructuring the fish populations, in order to enhance grazing by herbivorous zooplankton to control phytoplankton biomass and, consequently, to obtain and maintain a clear water system with high species diversity.

Biotechnology: Any technological application that makes use of biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific uses and purposes. The scope of biotechnology thus ranges from 'classical' processes such as the brewing of beer and the making of yoghurt (fermentation) to genetic modification through methods that could not happen naturally through microbiological processes improved simply by natural selection, such as the synthesis of a natural material.

Bioregional approach: approach at the level of a bioregion, with this concept involving a territory defined by a combination of biological, social, and geographic criteria, rather than geopolitical considerations; a bioregion is generally a system of related, interconnected ecosystems.

Cryobank: A place of storage that uses very low temperatures to preserve seeds or other genetic material.

Driving forces, Pressures, States, Impacts, Responses (DPSIR) method: a feedback mechanism based on a chain of causal links from Driving forces, to Pressures, and changes in the State of the environment, leading to Impacts on ecosystems and society and finally prompting political Responses.

Ecological Compensation Areas: areas that provide a refuge for native flora and fauna (such as hedges, ditches, extensively used meadows, fallow land, etc.).

Ecological footprint: The ecological footprint tries to show the surface on Earth needed to meet the consumptive needs of a group of people or a person based on the life pattern of this group or person.

Ecological network: a coherent system of representative core areas, corridors, stepping stones and buffer zones designed and managed in such a way as to preserve biodiversity, maintain or restore ecosystem services and allow a suitable and sustainable use of natural resources through interconnectivity of its physical elements with the landscape and existing social/institutional structures.

Ecosystem: A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.

Ecosystem services are the benefits that people obtain from ecosystems. They include provisioning services, regulating services, cultural services and supporting services.

Ecotourism: Tourism activity aiming to discover protected or preserved natural areas, in the respect of local populations, patrimony, and environment protection (sustainable tourism). The concept of ecotourism is widely misunderstood and, in practice, is often simply used as a marketing tool to promote tourism that is related to nature.

Environmental Impact Assessment (EIA) is a process for evaluating the likely environmental impacts of a proposed project or development, taking into account interrelated socio-economic, cultural and human-health impacts, both beneficial and adverse.

Executive terms of school programmes: Executive terms of school programmes are the minimum objectives to be reached in the fields of knowledge, understanding, abilities and attitudes that the education authority considers to be necessary and useful for a given student population.

Ex situ conservation means the conservation of components of biodiversity outside their natural habitats.

Favourable conservation status is defined in the EU Habitats and Birds Directive by reference to factors such as species population dynamics, trends in the natural range of species and habitats, the area of habitat remaining and the proportion in a Member State.

Flagship species: Species that appeal to the public and have other features that make them suitable for communicating conservation concerns.

Gene: the functional unit of heredity; the part of the DNA molecule that encodes a single enzyme or structural protein unit.

Genetic resources: genetic resources are any material of actual or potential value of plant, animal and microbial origin; this includes genes and gene pools of species.

Green infrastructure is defined as a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services.

Introgression: the introduction of genes from the gene pool of one species into that of another during hybridization.

Limits of Acceptable Change (LAC): a procedure for planning recreation resources. It consists of a series of interrelated steps leading to development of a set of measurable objectives that define desired wilderness conditions. The planning process also identifies the management actions necessary to maintain or achieve these conditions.

Mutually Agreed Terms: The CBD (Article 15(4)) states that "Access, where granted, shall be on mutually agreed terms..." This means that there must be an agreement – formal or informal – that is acceptable to both the country or group giving access to their genetic resources and the group desiring access to these resources.

No net loss: the concept of no net loss is that conservation/biodiversity losses in one geographically or otherwise defined area are balanced by a gain elsewhere provided that this principle does not entail any impairment of existing biodiversity as protected by EU nature legislation.

Prior informed consent: The owners of knowledge or resources must be informed about the purpose of the collection or use of their knowledge or biodiversity and that their agreement must be obtained before the activity takes place.

Recreation Opportunity Spectrum (ROS) is a system for planning and managing recreation resources, such as visits to protected areas, that categorises recreation opportunities into three classes: semi-primitive, roaded natural, and rural.

Set-aside: area of land withdrawn from agricultural production - arable, horticultural or livestock, including grazing - for a certain given period.

Strategic Environmental Assessment (SEA) is the formalised, systematic and comprehensive process of identifying and evaluating the environmental consequences of proposed policies, plans or programmes to ensure that they are fully included and appropriately addressed at the earliest possible stage of decision-making on a par with economic and social considerations. Strategic environmental assessment covers a wider range of activities, over a wider area, and often over a longer time span, than the environmental impact assessment of projects.

References

ALT, 2002. Code van goede landbouwpraktijken - Natuur. Ministerie van de Vlaamse Gemeenschap, Brussel: 90 pp. (http://www2.vlaanderen.be/ned/sites/landbouw/downloads/codenatuur.pdf)

B.I.M., 2012. Natuur rapport: Rapport over de staat van de natuur in het Brussels Hoofdstedelijk gewest. 158 pp. (http://documentatie.leefmilieubrussel.be/documents/NARABRU_20121004_NL_150dpi.PDF)

Branquart, E., Baus, E., Pieret, N., Vanderhoeven, S. & Desmet, P. (eds), 2006. SOS invasions! Abstract book of the conference held on 09-10.03.2006 in Brussels. Belgian Federal Science Policy Office, Brussels: 76 pp. (http://www.biodiversity.be/static/thematic_forums/invasive_species/invasions/doc/SOS_Invasions_-_Abstract_book.pdf)

Branquart, E. & Liégeois, S. (coord.), 2005. Normes de gestion pour favoriser la biodiversité dans les bois soumis au régime forestier. MRW, DGRNE, Jambes: 86 pp. (http://www.biodiversity.be/static/thematic_forums/forest/doc/Normes.pdf)

Cellule Etat de l'Environnement Wallon, 2000. L'environnement wallon à l'aube du XXIe siècle. Approche évolutive. MRW, DGRNE, Namur: 420 pp.

Cellule Etat de l'Environnement Wallon, 2005. Tableau de bord de l'environnement wallon 2005. MRW, DGRNE, Namur: 160 pp. (http://mrw.wallonie.be/dgrne/eew/index.asp)

Cellule Etat de l'Environnement Wallon, 2010. Environmental Outlook for Wallonia – Digest 2010. SPW-DGARNE-DEMNA-DEE, Namur : 66pp. (http://etat.environnement.wallonie.be/index.php?page=environmental-outlook-2010)

CETRI (Centre tricontinental), 2010. Impact de l'expansion des cultures pour biocarburants dans les pays en développement. 150pp. (http://www.health.belgium.be/eportal/Environment/19067348#.Ujw__kodd-2)

Chivian, E., 2002. Biodiversity: Its Importance to Human Health - Interim Executive Summary. Center for Health and the Global Environment, Harvard Medical School: 56 pp. (http://www.med.harvard.edu/chge/Biodiversity_v2_screen.pdf)

Comité régional PHYTO, 2004. Guide de bonne pratique phytosanitaire. Partie générale. Louvain-la-Neuve: 77 pp.

Comité régional PHYTO, 2006. Guide de bonnes pratiques de désherbage. Espaces verts et voiries. Louvain-la-Neuve: 75 pp.

Cooney, R., 2004. The Precautionary Principle in Biodiversity Conservation and Natural Resource Management. An issues paper for policy-makers, researchers and practitioners. IUCN, Gland, Switzerland and Cambridge, UK: xi + 51 pp.

Costanza, R., d'Arge, R., de Groot, R., Farber, S., Grasso, M., Hannon, B., Limburg, K., Naeem, S., O'Neill, R.V., Paruelo, J., Raskin, R.G., Sutton, P. & van den Belt, M., 1997. The value of the world's ecosystem services and natural capital. Nature, 387: 253-260.

Costermans, D., Hanin, Y. & Xanthoulis, S., 2004. Qualité et développement durable des zones d'activité économique. Le cahier des charges urbanistique et environnemental. Conférence Permanente du Développement Territorial, MRW, DGATLP, Namur: 10 pp.

Council of Europe, UNEP & ECNC, 1996. The Pan-European Biological and Landscape Diversity Strategy - a vision for Europe's natural heritage. Amsterdam: 50 pp. (http://www.strategyguide.org/fulltext.html)

Council of Europe, 2003. Pan-European Strategy on Invasive Alien Species

Demeester, N. (ed), 2006. Statistiques agricoles 2005. SPF Economie, Direction générale statistique et information économique, Bruxelles: 98 pp.

Department of Arts, Heritage, Gaeltacht and the Islands, 2002. National Biodiversity Plan. Government of Ireland: 49 pp.

Department of the Environment and Heritage, 1996. National Strategy for the Conservation of Australia's Biological Diversity. Department of the Environment, Sport and Territories, Canberra: 80 pp. (www.deh.gov.au/biodiversity/publications/strategy/)

Born, Ch.-H. & de Sadeleer, N., 2004. Droit international et communautaire de la biodiversité. Dalloz, Paris: 780 pp.

Direction de l'Etat Environnemental, 2012. Key Environmental Indicators for Wallonia in 2012 (KEIW 2012). SPW - DGO3 - DEMNA – DEE, Namur : 164 pp. (http://etat.environnement.wallonie.be/download.php?file=uploads/rapports/KEIW2012_UK_03-09_v2.pdf)

Duke, G. (ed.), 2005. Biodiversity and the EU - Sustaining Life, Sustaining Livelihoods. Conference Report. Stakeholder Conference held under the Irish Presidency of the European Union in partnership with the European Commission, 25-27 May 2004, Malahide, Ireland: 255 pp. (http://europa.eu.int/comm/environment/nature/biodiversity/develop_biodiversity_policy/malahide_conference/pdf/conference_report.pdf)

Dumortier, M., De Bruyn, L., Hens, M., Peymen, J., Schneiders, A., Van Daele, T., Van Reeth, W., Weyembergh, G. & Kuijken, E. (red.), 2005. Natuurrapport 2005. Toestand van de natuur in Vlaanderen: cijfers voor het beleid. Mededeling van het Instituut voor Natuurbehoud, Brussel, nr. 24: 496 pp. (http://www.instnat.be/content/page.asp?pid=NARA_NARA2005download)

Dumortier M., De Bruyn L., Hens M., Peymen J., Schneiders A., Van Daele T., Van Reeth W. (red.), 2009. Natuurverkenning 2030. Natuurrapport Vlaanderen, NARA 2009. Mededeling van het Instituut voor Natuur- en Bosonderzoek, Brussel: 224 pp. (http://www.inbo.be/files/bibliotheek/26/185826.pdf)

EEA, 2004. Impacts of Europe's changing climate: An indicator-based assessment. EEA Report n°2/2004, Copenhagen: 100 pp. (http://reports.eea.europa.eu/climate_report_2_2004/en/impacts_of_europes_changing_climate.pdf)

EEA, 2005. Agriculture and environment in the EU-15 – the IRENA indicator report. EEA, Copenhagen: 128 pp.

EEA, 2006. Integration of environment into EU agriculture policy – the IRENA indicator-based assessment report. EEA, Copenhagen: 60 pp.

European Commission, 1998. Communication of the European Commission to the Council and to the Parliament on a European Community Biodiversity Strategy. Brussels: 21 pp. (http://europa.eu.int/comm/environment/docum/pdf/9842en.pdf)

European Commission, 2001. Biodiversity Action Plan for the Conservation of Natural Resources. Brussels: 40 pp. (http://europa.eu.int/eur-lex/en/com/pdf/2001/act0162en02/2.pdf)

European Commission, 2001. Biodiversity Action Plan for Agriculture. Brussels: 52 pp. (http://europa.eu.int/eur-lex/en/com/pdf/2001/act0162en02/3.pdf)

European Commission, 2001. Biodiversity Action Plan for Fisheries. Brussels: 36 pp. (http://europa.eu.int/eur-lex/en/com/pdf/2001/act0162en02/4.pdf)

European Commission, 2001. Biodiversity Action Plan for Economic and Development Cooperation. Brussels: 24 pp. (http://europa.eu.int/eur-lex/en/com/pdf/2001/act0162en02/5.pdf)

European Commission, 2003. Forest Law Enforcement, Governance and Trade (FLEGT), proposal for an EU action plan. Communication from the Commission COM (2003) 251 final, Brussels: 32 pp. (http://ec.europa.eu/comm/development/body/theme/forest/initiative/docs/Doc1-FLEGT_en.pdf#zoom=100)

European Commission, 2006. An EU Strategy for Biofuels. Communication from the Commission COM (2006) 34 final, Brussels: 29 pp. (http://ec.europa.eu/agriculture/biomass/biofuel/com2006_34_en.pdf#search=%22biofuel%20strategy%202006%22)

European Commission, 2006. Halting the loss of biodiversity by 2010 - and beyond. Sustaining ecosystem services for human well-being. Communication from the Commission COM (2006) 216 final, Brussels: 15 pp.

European Commission, 2013. Guidelines on climate change and Natura 2000. Technical Report - 2013 – 068: 105pp.
(http://ec.europa.eu/environment/nature/climatechange/pdf/Guidance%20document.pdf)

European Commission, 2013. Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment. 60 pp.
(http://ec.europa.eu/environment/eia/pdf/EIA%20Guidance.pdf)

European Commission, 2013. Guidance on Integrating Climate Change and Biodiversity into Strategic Environmental Assessment. 70 pp.
(http://ec.europa.eu/environment/eia/pdf/SEA%20Guidance.pdf)

European Food Safety Authority, 2006. Guidance document of the Scientific Panel on Genetically Modified Organisms for the risk assessment of genetically modified plants and derived food and feed. The EFSA Journal, 99: 1-94.
(http://www.efsa.europa.eu/etc/medialib/efsa/press_room/publications/scientific/1497.Par.0005.File.dat/efsa_guidance_may_061.pdf)

European Forest Genetic Resources Programme (EUFORGEN), Technical Guidelines for genetic conservation and use, 2003. 6pp.
(http://www.ipgri.cgiar.org/networks/euforgen/Technical_Guidelines.asp)

FAO, 1995. Code of Conduct for Responsible Fisheries. FAO, Rome: 41 pp.
(www.fao.org/documents/show_cdr.asp?url_file=/docrep/005/v9878e/v9878e00.htm)

FAO, 1996. Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture. International Technical Conference on Plant Genetic Resources, Leipzig, 17-23 June 1996: 63 pp.
(http://www.fao.org/ag/agp/agps/gpaen/gpatoc.htm)

Federal Public Service, Health, Food Chain Safety and Environment, 2009. The Federal Plan for the Sectoral Integration of Biodiversity in four key sectors 2009-2013. 175 pp.
(http://www.health.belgium.be/internet2Prd/groups/public/@public/@mixednews/documents/ie2divers/17964756_fr.pdf)

Federal Public Service, Health, Food Chain Safety and Environment, 2009. Evaluation de l'impact sur la biodiversité du développement de cultures pour biocarburants, notamment de plantes génétiquement modifiées, en Belgique. 159pp.
(http://health.belgium.be/eportal/Environment/Environnement/17466531_FR?ie2Term=biocarburants&ie2section=9128#.UhNo7Uodd-1)

Federale Politie, 2012. Nationaal Veiligheidsplan 2012-2015. Brussel: 39 pp.
(http://www.polfed-fedpol.be/pub/pdf/NVP2012-2015.pdf)

Gelauff, G.M.M. & Lejour, A.M., 2006. The new Lisbon Strategy. An estimation of the economic impact of reaching five Lisbon Targets. European Communities, Brussels: 122 pp.
(http://ec.europa.eu/enterprise/enterprise_policy/competitiveness/doc/industrial_policy_and_economic_reforms_papers_1.pdf)

Government of Flanders, 2012. Environmental Policy Plan 2011-2015 – Summary. Departement Leefmilieu, Natuur en Energie. Afdeling Milieu-, Natuur- en Energiebeleid: 59 pp.
(http://www.lne.be/themas/beleid/mina4/leeswijzer/publicaties/boek_EN_-voor_website-%20def.pdf)

Government of Flanders, 2012. Vision 2050: Flemish Sustainable Development Strategy 2010-2014. Departement Diensten voor het Algemeen Regeringsbeleid. Afdeling Stafdienst van de Vlaamse Regering. Duurzame Ontwikkeling: 60 pp.
(http://ebl.vlaanderen.be/publications/documents/34261)

Heal, G., 2005. The costs of inaction with respect to biodiversity loss: background paper. EPOC High-Level Special Session on the Costs of Inaction, OECD, Paris, 14 April 2005: 14 pp.
(http://www.oecd.org/dataoecd/37/3/34738405.pdf)

Heirman, J.-P. (ed.), 2003. Milieubeleidsplan 2003-2007. Ministerie van de Vlaamse Gemeenschap, Brussel: 378 pp.
(http://www.mina.be/uploads/MBP_milieubeleidsplan_20032007.pdf)

Hendrikx, C., Van den Berghe, J., Van Herzele, A. & Heyens, V. (red.), 2003. Beheerplanning Harmonisch Park- en Groenbeheer. Ministerie van de Vlaamse Gemeenschap, Brussel: 299 pp. (http://www.bosengroen.be/uploads/b102.pdf)

Heywood, V.H. (ed.), 1995. Global Biodiversity Assessment - Summary for Policy-Makers. United Nations Environment Programme. Cambridge University Press, Cambridge: 46 pp.

I.B.G.E., Division Espaces Verts, Département des Bois et Forêt, Cantonnement de Bruxelles, 2002. Projet de plan de gestion de la Forêt de Soignes partie de Bruxelles-Capitale (Projet modifié suite à la consultation publique). 156 pp. (http://www.ibgebim.be/francais/pdf/Espacesverts/Plan_gestionFds_Fr.pdf)

I.B.G.E., 2012. Rapport nature : Rapport sur l'état de la nature en Région de Bruxelles Capitale. 158 pp. (http://documentation.bruxellesenvironnement.be/documents/NARABRU_20120910_FR_150dpi.pdf)

ICES, 2005. ICES Code of Practice on the Introductions and Transfers of Marine Organisms. 30 pp.

Interdepartmental Commission for Sustainable Development, 2004. Federal Plan for Sustainable Development 2004-2008. Brussels: 94 pp. (http://www.cidd.fgov.be/pub/PL200401/PL200401en.pdf or www.plan2004.be)

Joint Nature Conservation Committee, 2004. Plant Diversity Challenge - The UK's response to the Global Strategy for Plant Conservation. Peterborough: 53 pp.
Legaye, N., Walot, T. & Melin, E., 2002. Nature et Entreprises: mode d'emploi. GIREA, GReMS, Ministère de la Région wallonne, brochure technique n° 9: 66 pp.

Marijnissen, C., Muraille, B., Gérard, N. & Thenard, E., 2003. Responsibility abroad: how export credit agencies impact biodiversity. In: Franklin, A., Peeters, M. & Van Goethem, J., 2003. Ten years after Rio. What future for biodiversity in Belgium? Proceedings of a symposium held on 22 May 2002 in Brussels. Bulletin of the Royal Belgian Institute of Natural Sciences, 73, suppl.: 65-69.

Martens, E., 2001. Overzicht van de belangrijkste internationale regelgeving en afspraken voor natuurbehoud, -herstel en -ontwikkeling. Ministerie van de Vlaamse Gemeenschap, Brussel: 20 pp.
Massart, S., 2004. Les ressources génétiques des animaux d'élevage en Belgique. Rapport national à la FAO: contribution de la Belgique au Premier Rapport sur l'Etat des Ressources Zoogénétiques dans le Monde. Direction de l'Agriculture au Ministère de la Région wallonne: 58 pp.

Millennium Ecosystem Assessment, 2005. Ecosystems and Human Well-being: Synthesis. Island Press, Washington, DC: 137 pp. (http://www.millenniumassessment.org/proxy/document.356.aspx)

Millennium Ecosystem Assessment, 2005. Ecosystems and Human Well-being: Biodiversity Synthesis. World Resources Institute, Washington, DC: 86 pp. (http://www.millenniumassessment.org/proxy/document.354.aspx)

Ministère de l'Environnement et de la Faune (Québec), 1996. Convention sur la diversité biologique - Stratégie de mise en oeuvre au Québec. Québec, 122 pp.

Ministry of the Environment (Poland), 2003. A National Strategy for the Conservation and Sustainable Use of Biological Diversity together with an Action Programme. Warsaw: 59 pp.

Ministry of Agriculture and Forestry (Finland), 2001. Strategy for Renewable Natural Resources in Finland. Publication 8b/2001: 94 pp.

National climate commission, 2010. Belgian national climate change adaptation strategy. Departement Leefmilieu, Natuur en Energie. Afdeling Milieu-, Natuur- en Energiebeleid, Brussel: 54pp. (http://www.lne.be/themas/klimaatverandering/adaptatie/bestandenmap/nationale-adaptatiestrategie)

OECD, 2002. Towards sustainable household consumption? Trends and policies in OECD countries. OECD Publishing: 164 pp.

OECD, 2003. Harnessing Markets for Biodiversity - Towards Conservation and Sustainable Use. OECD Publishing: 140 pp.

OECD, 2004. Handbook of Market Creation for Biodiversity - Issues in Implementation. OECD Publishing: 182 pp.

Pallemaerts, M. & Dejeant-Pons, M., 2002. Human Rights and the Environment. Compendium of instruments and other international texts on individual and collective rights relating to the environment in the international and European framework. Council of Europe Publishing, Strasbourg: 326 pp.

Peeters, M. (coord.), 2005. Third National Report of Belgium to the Convention on Biological Diversity. Royal Belgian Institute of Natural Sciences, Brussels: 198 pp. (http://www.biodiv.be/implementation/cbdinbe/docs/reports/nat_reports/nat_report_3)

Peeters, M. & Branquart, E., 2006. Biodiversiteit in België: de opmars van exoten. DG Leefmilieu van de Federale Overheidsdienst Volksgezondheid, Veiligheid van de Voedselketen en Leefmilieu, Brussel: waaier bestaande uit 15 steekkaarten. (https://portal.health.fgov.be/pls/portal/docs/page/internet_pg/homepage_menu/milieu1_menu/levenderijkdommen1_menu/biodiversiteit1_menu/bombylius9_menu/bombylius9_docs/waaier%20ned%20web.pdf)

Peeters, M. & Branquart, E., 2006. La biodiversité en Belgique: SOS Invasions. DG Environnement du Service public fédéral de la Santé publique, de la Sécurité de la Chaîne alimentaire et de l'Environnement, Bruxelles: éventail comprennant 15 fiches. (https://portal.health.fgov.be/pls/portal/docs/page/internet_pg/homepage_menu/milieu1_menu/levenderijkdommen1_menu/biodiversiteit1_menu/bombylius9_menu/bombylius9_docs/waaier%20fr%20web.pdf)

Peeters, M., Franklin, A. & Van Goethem, J. (eds), 2003. Biodiversity in Belgium. Royal Belgian Institute of Natural Sciences, Brussels: 416 pp.

Peeters, M., Schlesser, M., Réveillon, A., Franklin, A., Collin, Cl. & Van Goethem, J., 2004. La biodiversité en Belgique: un aperçu. Institut royal des Sciences naturelles de Belgique, Bruxelles: 20 pp. (www.sciencesnaturelles.be/biodiversity)

Peeters, M. & Van Goethem, J.L. (eds), 2002. Belgian Fauna and Alien Species. Proceedings of the symposium held on 14.12.2001 in Brussels. Bulletin of the Royal Belgian Institute of Natural Sciences, Biology, 72, suppl.: 297 pp.

Peeters, M., Van Goethem, J., Franklin, A., Schlesser, M. & de Koeijer, H., 2004. Biodiversiteit in België: een overzicht. Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussel: 20 pp. (www.natuurwetenschappen.be/biodiversity)

Police Fédérale, 2012. Plan National de Sécurité 20012-2015. Bruxelles: 40 pp. (http://www.polfed-fedpol.be/pub/pdf/PNS2012-2015.pdf)

Région Wallonne, Communauté française. Les actions prioritaires pour l'avenir wallon, 2005. 32 pp. (http://contratdavenir.wallonie.be/)

Secretariat of the Convention on Biological Diversity, 2001. Global Biodiversity Outlook. Montreal: 282 pp.

Secretariat of the Convention on Biological Diversity, 2002. Global Strategy for Plant Conservation. Montreal: 13 pp.

Secretariat of the Convention on Biological Diversity, 2002. Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization. Montreal: 20 pp. (http://www.biodiv.org/doc/publications/cbd-bonn-gdls-en.pdf)

Secretariat of the Convention on Biological Diversity, 2005. Handbook of the Convention on Biological Diversity including its Cartagena Protocol on Biosafety. Third edition. Montreal: 1493 pp.

Secretariat of the Convention on Biological Diversity, 2006. Global Biodiversity Outlook 2. Montreal: 81 + vii pages.

Secretariat of the Convention on Biological Diversity, 2007. Managing Tourism & Biodiversity, User's Manual on the CBD Guidelines on Biodiversity and Tourism Development. Montreal: 125 pp. (http://www.cbd.int/doc/programmes/tourism/tourism-manual-en.pdf)

Stolpe, G. & Fischer, W. (eds), 2004. Promoting CITES-CBD Cooperation and Synergy. Proceedings of the workshop held on the Isle of Vilm from 20 to 24 April 2004. BfN-Skripten 116: 241 pp. (http://www.bfn.de/09/skript116.pdf)

Sustainable Use Initiative, 2000. Sustainable Use within an Ecosystem Approach (document prepared for the Subsidiary Body for Scientific, Technical and Technological Advice to the Convention on Biological Diversity, 5th meeting). IUCN, Montréal, Canada: 12 pp.

Task force développement durable, 2005. Comprendre et gouverner le développement. Rapport fédéral sur le développement durable 2000-2004. Bureau fédéral du Plan, Bruxelles: 279 pp. (http://www.plan.be/fr/pub/other/OPSDREP07/OPSDREP07fr.pdf)

Task force développement durable, 2005. Tableau d'indicateurs de développement durable. Supplément au troisième Rapport fédéral sur le développement durable. Bureau fédéral du Plan, Bruxelles: 124 pp. (http://www.plan.be/fr/pub/other/OPSDREP08/OPSDREP08fr.pdf)

Task Force Duurzame Ontwikkeling, 2005. Ontwikkeling begrijpen en sturen. Federaal Rapport inzake Duurzame Ontwikkeling 2000-2004. Federaal Planbureau, Brussel: 273 pp. (http://www.plan.be/fr/pub/other/OPSDREP07/OPSDREP07nl.pdf)

Task Force Duurzame Ontwikkeling, 2005. Tabel met indicatoren van duurzame ontwikkeling. Supplement bij het derde Federaal Rapport inzake duurzame ontwikkeling. Federaal Planbureau, Brussel: 124 pp. (http://www.plan.be/fr/pub/other/OPSDREP08/OPSDREP08nl.pdf)

Vandenabeele, J. & Goorden, L., 2004. ABC van het participatief milieubeleid. Steunpunt Milieubeleidswetenschappen & Universiteit Antwerpen: 70 pp. (http://www.milieubeleidswetenschappen.be/exdocs/ABC%20Participatief%20Milieubeleid.pdf#search=%22abc%20participatief%20milieubeleid%22)

Vlaamse overheid, 2012. Milieubeleidsplan 2011-2015. Departement Leefmilieu, Natuur en Energie. Afdeling Milieu-, Natuur- en Energiebeleid, Brussel: 150 pp. (http://www.lne.be/themas/beleid/mina4/leeswijzer/publicaties/Milieubeleidsplan2011-2015.pdf)

Vlaamse overheid, 2012. Samen grenzen verleggen: Vlaamse strategie duurzame ontwikkeling. Departement Diensten voor het Algemeen Regeringsbeleid. Afdeling Stafdienst van de Vlaamse Regering. Duurzame Ontwikkeling: 149 pp. (http://do.vlaanderen.be/sites/default/files/VSDO2_0.pdf)

Vlaamse Regering, 1998. Code voor goede natuurpraktijk i.f.v. wijziging van vegetatie en van kleine landschapselementen. Omzendbrief LNW/98/01: 22 pp. (http://www.herselt.be/Code%20Goede%20Natuurpraktijk.doc)

WWF International, UNEP World Conservation Monitoring Centre and the Global Footprint Network, 2004. The Living Planet Report. Gland: 44 pp. (http://www.panda.org/downloads/general/lpr2004.pdf)

WWF European Policy Office, 2005. Europe 2005: The Ecological Footprint. Brussels: 28 pp. (http://www.footprintnetwork.org/download.php?id=6)

Appendices

Appendix 1: Actors for biodiversity in Belgium

Each level of the Belgian government, whether Federal, Regional, Community or local, has some responsibility for biodiversity issues. Nevertheless, the competences for biodiversity mostly lie with the three Regions - Flanders, Wallonia and Brussels. Many different actors will take an active part in the implementation of the Strategy: ministries and administrations, advisory and consultative bodies, research institutes, NGOs, information centres, individuals and community groups, etc.

An overview of responsibilities and contact details of the major actors for biodiversity in Belgium will be available on the CHM website (http://www.biodiv.be). This appendix elaborates specifically on (1) ministries and administrations, (2) advisory and consultative bodies, and (3) research institutes.

1.1. MINISTRIES AND ADMINISTRATIONS

Flemish Region:

All the services of the Flemish Region and the Flemish Community are concentrated in one ministry, which consists of several departments, divided into administrations and sections.

The tasks and competences of the Flemish Region and the Flemish Community are divided into 13 policy areas. The implementation of the CBD is mainly concentrated in the policy area Environment, Nature and Energy (LNE). The LNE department plays a central role by ensuring the coordination for the preparation and reporting of the Flemish environmental policy and for the management and the follow up of the policy implementation.

Divisions within the Ministry for Environment, Nature and Energy that are important for the implementation of the CBD are:

- the Department of Environment, Nature and Energy which gathers, i.a.:
    - The International environmental policy (coordination of the Flemish international environmental policy,
    - The Environment, nature and energy policy (coordination of the preparation, evaluation and argumentation of the policy),
    - Environmental permits (including authorisations for confined use of GMOs)

- Agency for Nature and Forest (ANB): has the competence for the legal framework related to the protection, conservation measures, communication and cooperation concerning nature, forests and green spaces. It promotes sustainable forest management and strengthens nature, forest and green facilities. It manages the green areas of the Flemish Region and its partners and is responsible for the delivery of permits and derogations, and for the enforcement of regulations related to protection of habitats and species.

- Institute for Nature and Forest Research (INBO): it performs scientific research on status and trends of biodiversity, and to the development and the sustainable use of nature and forests.

Furthermore there are three public agencies each dealing with one specific environmental theme: the Flemish Land Agency (VLM) for land-use planning, the Flemish Environmental Agency (VMM) for monitoring the quality of surface water and the air, and the Flemish Public Waste Agency (OVAM), concerned with the prevention and management of waste, soils and contamination.

Besides the Environment administrations mentioned above, there are also a number of other administrations and departments that play a role in maintaining biodiversity in Belgium, for instance for transport, fishery and agriculture, spatial planning, etc.

Walloon Region:

In the Walloon Region, the Directorate-General for Agriculture, Natural Resources and the Environment (DGARNE) of the Ministry of the Walloon Region is in charge of the conservation of nature, the environment (in particular waste), management and protection of the soil, as well as the exploitation of natural resources like water and forests in the Walloon Region. Within the DGARNE, various administrative

divisions take care of the different missions:

1. Department of Nature and Forests. This department is responsible for the ecological management of the natural environment, including the Walloon forests. This department also initiates innovative projects for nature protection outside protected areas (for example, ecological management of roadsides) and grant subsidies to encourage biodiversity-restoring actions (for example, the planting of hedgerows). Four directorates supervise the implementation of the mission mentioned above: the Directorate for General Matters, the Directorate for Forest Resources, the Directorate for Nature, and the Directorate for Hunting and Fishery.
2. Department for Permits and Authorisations (including delivery of authorisations for confined use of GMOs).
3. the Walloon Office for Waste. This office is working on the prevention, the valorisation and the elimination of wastes in order to protect the environment.
4. the Department for Water. This division works among other things on the implementation of the Water Framework Directive, river contracts, restoration of aquatic habitats and riverbanks.
5. the Department for Environmental Policy. This division investigates environmental criminal offences and follows the state of the environment (through indicators).
6. Scientific support is given by the DEMNA
7. the Département de la Ruralité et des Cours d'eau (dealing with agri-environmental measures)
8. Scientific support is also given through research agreements with several universities.

Besides the institutions above there are also several other departments and ministries that play a role in maintaining biodiversity in Belgium, for instance the 'Direction générale opérationnelle de l'Aménagement du territoire, du Logement, du Patrimoine et de l'Énergie (dealing with spatial planning), the Permanent Conference for Territorial Development (CPDT), the Direction générale opérationnelle de la Mobilité et des Voies hydrauliques (dealing with, for example, toad tunnels, tunnels for otters, fish ladders, management of the 'RAVeL' network).

Finally in this connection, we also need to mention the French and German Communities (dealing with environmental education).

Brussels-Capital Region:

The environmental competencies of the Brussels-Capital Region lie with the Brussels Institute for Management of the Environment (Brussels Environment), a para-regional institution that serves as the environmental administration of the Region. Since the BIME was set up in 1989, the institution has developed into an important point of contact for the local inhabitants regarding all aspects of the environment: air, green spaces, waste, water, soil pollution, etc. The Institute collects and analyses the environmental data, distributes the information, gives advice and draws up plans of action, defines strategies, intervenes in fieldwork, promotes environmental awareness, etc. Within the BIME, the Division Green Spaces, manages the public green spaces (parks, forests, semi-natural areas and nature reserves), develops the blue and green network, and is responsible for the regions' biodiversity (inventory, monitoring, strategy, management, etc.).

Besides the BIME, the Brussels administration has a Monuments and Sites Department, which manages 'heritage' dossiers and implements the Brussels Government's policy in these areas. This department, among others, is responsible for classifying monuments of architectural value and also plays a role in the field of biodiversity.

Furthermore there are also several other services that play a role in maintaining biodiversity in Brussels, for instance for transport (Administration of Equipment and Displacements - AED), spatial planning ("Administration de l'Aménagement du Territoire et du Logement" - AATL), etc.

Federal level:

The major Federal public services that play a role in realising the objectives of the convention are:

- the Federal Public Service for Public Health, Food Security and Environment:

The Directorate-General for the Environment, through the Co-ordinating Committee for International Environmental Policy (CCIEP), streamlines the

positions of the different administrations (Federal and Regional) to reach a coordinated national position. It also organises consultation processes to establish a coordinated implementation by Belgium of the decisions and recommendations made in international forums, sends delegates to these fora and gives advice on EU- and OCDE documents. The Steering Committees operating under the authority of the CCIEP that are directly relevant to biodiversity are the 'Biodiversity Convention', 'Nature', 'Forest' and 'North Sea and Oceans' Steering Committees. Other Steering Committees such as the Steering Committee on 'Climate Change', 'Climate adaptation' and on 'Sustainable Consumption and Production Patterns' are also relevant.

The *section Multilateral and Strategic Affairs* is engaged in the follow-up and implementation (at the Federal level) of the CBD and the Cartagena Protocol on Biosafety and CITES. This administration is also the national focal point for ABS and biosafety.

The *section Marine Environment* implements (for instance, implementation of international and European legislation, awareness raising actions, etc.), coordinates and defends the Belgian position on international and European meetings concerning the North Sea.

The Animal, Plant and Food Directorate-General of the Federal Department of Public Health, Safety of the Food Chain and the Environment is working on the trade of plants and animals through the protection against plant diseases, pesticides as well as authorizations for tests and commercialisation of GMOs and use in food and animal feed.

Besides the services above, there are also several other ministries that play a role in maintaining biodiversity in Belgium, for instance the Federal Public Service of Economy, SMEs, Self-employed and Energy follows up the commercial aspects of biodiversity. The Federal Public Service of Foreign Affairs, Foreign Trade and Development Cooperation follows up diplomatic and international aspects of the CBD. The Directorate-General for Development Cooperation (DGD) executes cooperation programmes on biodiversity. It contributes financial support to the GEF Trust Fund. The Federal Public Service of Mobility and Transport has a role to play in preventing the entrance of IAS by air, sea or land. The Ministry of Defence is also an important actor as landowner (military domains).

- Furthermore the federal authority is supervisory authority for the Belgian railway group.

The customs and excise administration (Federal Public Service Finances) is qualified to exercise its competences of controlling and/or determination of infringement in the domain of the CITES convention, hunting, FLEGT (Forest Law Enforcement Governance and Trade) and non-indigenous species (birds…). It also plays a part in maritime fishing matters.

Two Federal Planning Departments are also important:

- The Federal Planning Department for Sustainable Development is responsible for the preparation and the coordination of the implementation of the Sustainable Development Policy. The department organises, amongst other things, the activities of the Interdepartmental Commission for Sustainable Development (ICSD). This forum unites the representatives of all the members of the federal government and the experts from all the federal administrations. The ICSD is responsible for the editing of the Federal Plans for Sustainable Development and its public consultation. The first two plans, already partly implemented after the government's approval in 2000 and 2004, describe different actions on interdepartmental coordination in the field of biodiversity.

- The Belgian Federal Science Policy Office, responsible for the scientific support for the Federal policy concerning sustainable development. This administration assures the financing of research activities and makes funds available for CBD implementation, for example through its programmes Global Change, North Sea, Telsat and Antarctica. It finances ten Federal scientific institutions, two of which are directly involved with biodiversity-related matters: the Royal Museum for Central Africa and the Royal Belgian Institute of Natural Sciences. The secretariat of the national focal point for the CBD (based at the Royal Belgian Institute of Natural Sciences) receives financial support from the Federal Science Policy Office. The Belgian Biodiversity Platform is the advisory body of the Federal Science Policy Office for all issues in biodiversity research. It aims to facilitate

dialogue, collaboration and interdisciplinary research between people and institutions in Belgium and abroad that work in the field of biological diversity. Furthermore, the Federal Science Policy Office coordinates important *ex situ* collections of micro-organisms.

Community level:

The French, Flemish and German communities are dealing with cultural matters including culture and media, education, use of languages and ''person-related matters'' such as, for instance, some aspects of health policy, youth protection or sport. The communities have their own parliament and government, although the Flemish Community and the Flemish Region are the same entity.

Communities have also a role to play with regard to the implementation of the CBD through education and public awareness of citizens. The Communities can also stimulate scientific research for biodiversity within their competences. The cultural dimension is being recognized today as an essential part of biodiversity.

1.2. ADVISORY AND CONSULTATIVE BODIES

Both at the Federal and Regional levels, use is made of advisory bodies.

The main advisory and consultative bodies at the Federal level are the Belgian Federal Council for Sustainable Development and the Belgian Biosafety Advisory Council. Both councils are asked for advice on specific matters.

As far as the Walloon Region is concerned, the Walloon Senior Nature Conservation Council (Conseil Supérieur Wallon de la Conservation de la Nature - CSWCN) presides over the State Nature Reserve Management Consultative Commissions (Commissions Consultatives de Gestion des Réserves Naturelles Domaniales – CCGRND)

Furthermore there are several other councils like:

- the Superior Walloon Council for Hunting
- the Superior Walloon Council for Fishery
- the Superior Walloon Council for Forests and Woods sector
- the Walloon Council of the Environment for Sustainable Development (CWEDD)
- the Economic and Social Council of the Walloon Region (CESRW)

In the Flemish Region there are two important advisory bodies, namely the Flemish Environmental and Nature Council ("MINA-raad") and the Flemish Socio-Economic Council (SERV) and four sectoral advisory bodies: the Flemish High Council for Freshwater Fishing (VHRV), the Flemish High Council for Hunting (VHJ), the Flemish High Council for Nature Conservation (VHRN), and the Flemish High Council for Forestry (VHB)[98].

In the Brussels-Capital Region a prominent role is played by the Environmental Council (Conseil de l'Environnement, Raad van Leefmilieu). For nature conservation matters, this Council consults the Brussels Higher Council for Nature Conservation (Conseil Supérieur Bruxellois pour la Conservation de la Nature, Brusselse Hoge Raad voor het Natuurbehoud).

Its mission is to give advice about questions of nature conservation.

Besides these official advisory bodies, the Brussels-Capital Region has a number of associations for the environment in general, which are organised in the federative associations Inter-Environnement Bruxelles (IEB) and the 'Brusselse Raad voor het Leefmilieu' (BRAL or Brussels Environmental Association). BRAL is considered by the Regional and Federal Governments to be the official representative advocate of the active residents and residents' groups, and this is why BRAL is established in various official consultation bodies like the Environmental Council and the Regional Development Committee.

1.3. RESEARCH INSTITUTES

Different research institutes exist that play an important role in gathering information about

[98] From 1/1/2006 these sectoral bodies are sub-commissions of the Mina-Raad.

biodiversity, but also in protecting biodiversity and educating the public.

At the Federal level the following institutes may be mentioned:

- Royal Belgian Institute of Natural Sciences (RBINS),
- Management Unit of the North Sea Mathematical Models and the Scheldt estuary (MUMM)
- Royal Museum for Central Africa (RMCA)
- Scientific Institute of Public Health
- National Botanic Garden of Belgium
- ...

At the Regional level the following institutes may be mentioned:

- The Institute for Nature and Forest Research (INBO) is involved in applied ecological research with a view to nature conservation, recovery and management, presenting science-based knowledge to policy-makers.
- the Walloon Agricultural Research Centre (CRAW, Gembloux)
- the 'Département de l'étude du Milieu Naturel et Agricole' (DEMNA, Wallonia)
- Brussels Research Unit for Environmental, Geochemical & Life Science Studies (BRUEGEL)
- Agricultural Research Centre - Ghent (CLO-Gent)
- VITO (Flemish RTO - research and technology organisation)
- Flanders Marine Institute (VLIZ)
- Universities play a key role in biodiversity research
- Masters schools
- ...

1.4. OTHER ACTORS

Other relevant actors include NGOs, local authorities, districts, private sector, etc.

Appendix 2: Main international agreements and instruments directly relevant for biodiversity

Major international agreements relevant for biodiversity to which Belgium is a Party:

Agreements	Ratifications
International agreements	
Convention for the Conservation of Antarctic Seals (1972)	09/02/1978
Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) (Canberra, 1980)	20/05/1982
Convention on International Trade in Endangered Species (CITES) (Washington, 1973)	03/10/1983
Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) (1980)	22/02/1984
Convention on Migratory Species (CMS or Bonn Convention) (Bonn, 1979)	27/04/1990
Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) (1992)	11/05/1995
United Nations Convention on Climate Change (UNCCC) (Rio, 1992)	16/01/1996
Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture (FAO) (Leipzig, 1996)	23/06/1996
Convention for the Protection of World Cultural and Natural Heritage (WHC) (1972)	24/07/1996
United Nations Convention on Biological Diversity (UNCBD) (Rio, 1992)	22/11/1996
United Nations Convention to Combat Desertification (UNCCD) (Rio, 1992)	30/06/1997
Convention on Wetlands (Ramsar, 1971)	
United Nations Convention on the Law of the Sea (UNCLOS) (1984)	13/11/1998
Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 1991)	09/06/1999
Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus, 1998)	21/01/2003
International Whaling Convention (IWC) (1946)	09/07/2004
Protocol on Biosafety (Cartagena, 2000)	15/04/2004
Pan-European and Council of Europe agreements	
Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) (Bern, 1979)	20/04/1990
European Landscape Convention - Council of Europe (Florence, 2000)	28/10/2004
Pan-European Biological and Landscape Diversity Strategy (PEBLDS), endorsed at the Ministerial Conference 'Environment for Europe' (Sofia, 23-25 October 1995) by the environment ministers of 55 European countries.	
The Ministerial Conferences on the Protection of Forests in Europe (Strasbourg 1990, Helsinki 1993, Lisbon 1998, Vienna 2003) are important. Sustainable forest management has been defined and the conferences gave the care for biodiversity a central position in forest policy and forest management.	
Kiev Resolution on Biodiversity (2003)	
Regional framework	
Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS) (1992) (under the auspices of the CMS)	14/05/1993

Agreement on the conservation of populations of European Bats (EUROBATS) (1994) (under the Bonn Convention)	14/05/2003
Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) (under the CMS)	13/04/2006
European framework	
Council Regulation on the protection of species of wild fauna and flora by regulating trade therein (338/97)	
The Birds Directive (79/409/EEC)	
The Habitats Directive (92/43/EEC)	
The Water Directive (2000/60/EC) t The Marine Strategy Framework Directive (2008/56/EC) Environmental liability Directive (2004/35/CE)	
Communication from the Commission to the Council and the European Parliament of 5 February 1998 on a European Community Biodiversity Strategy [COM(98) 42 final - not published in the Official Journal]. - Commission Communication of 27 March 2001 to the Council and the European Parliament: Biodiversity Action Plan for the Conservation of Natural Resources (Volume II) - Commission Communication of 27 March 2001 to the Council and the European Parliament: Biodiversity Action Plan for agriculture (Volume III) - Commission Communication of 27 March 2001 to the Council and the European Parliament: Biodiversity Action Plan for fisheries (Volume IV) - Commission Communication of 27 March 2001 to the Council and the European Parliament: Biodiversity Action Plan for economic and development cooperation (Volume V)	
- Commission Communication of 22 May 2006: «Halting Biodiversity Loss by 2010 – and Beyond: Sustaining ecosystem services for human well-being».[COM(2006) 216 final] - Commission Communication of 03 May 2011 to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: "**Our life insurance, our natural capital: an EU Biodiversity Strategy to 2020"** [COM(2011) 244 finalt] - Commission Communication of 20 September 2011 to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: "Roadmap to a Resource Efficient Europe» [COM(2011) 571 final]	
Benelux agreements	
Benelux Convention concerning hunting and the protection of birds (1970)	
Benelux Convention on nature conservation and landscape protection (1982)	

BELOW ARE SOME OF THE MAJOR AGREEMENTS RELATED TO THE PROTECTION OF BIODIVERSITY

CBD

The United Nations Convention on Biological Diversity (UNCBD or CBD) is the first binding convention under international law to focus on biodiversity in a global and comprehensive context.

The CBD entered into force on 29 December 1993. Belgium signed the Convention on 5 June 1992 in Rio de Janeiro and ratified it on 22 November 1996. The 3 objectives of the CBD are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources, for example by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding (art. 1 of the CBD).

In the framework of the CBD, the Cartagena Protocol on Biosafety (2000), ratified by Belgium in 2004, is the only international instrument dealing exclusively with GMOs, in particular in relation to their impacts on biodiversity. In order to avoid potential adverse effects on the conservation and sustainable use of biodiversity resulting from living modified organisms (LMOs), this protocol (pursuant to CBD Art. 8 g) establishes procedures for the safe transfer, handling and use of living modified organisms, mainly during their transboundary movements. It sets up a global mechanism of procedures for imports and exports of LMOs. The protocol foresees in particular a procedure for advanced informed agreement, based on a scientific risk evaluation for biodiversity and human health, providing a multilateral framework to help importing countries take evidence-based and legally defensible decisions. Moreover, the Protocol invites the Parties to take into account, when taking a decision on importation of LMOs, the socio-economic considerations of the impact of these LMOs on the conservation and sustainable use of biodiversity, especially with regard to the value of biodiversity to indigenous and local communities.

At the European level, in February 2001 the EU adopted new legislation (Directive 2001/18/EC) on the deliberate release into the environment of GMOs. Following this directive and in conformity with the Cartagena Protocol on Biosafety, authorisations for field trials or commercialisation of GMOs are dependent on procedures of risk assessment for the environment and human health. On the other hand, regulation 1946/2003 EC establishes the obligations of the EU as a GMO exporter consistently with the Cartagena Protocol.

Birds Directive, Habitats Directive and NATURA 2000

At European level, the implementation of the 1979 “Birds Directive” (Council Directive 79/409/EEC) and the 1992 “Habitats Directive” (Council Directive 92/43/EEC) and the establishment of the Natura 2000 network, constitutes a fundamental tool to carry out the objectives of the CBD.

The Birds Directive concerns the conservation of all species of naturally occurring birds in the wild within the territory of Member States and prescribes the designation of Special Protection Areas (SPA) to guarantee the survival and reproduction of sensitive species.

The Habitats Directive complements the Birds Directive and concerns the conservation of natural habitats and wild fauna and flora, with the exception of birds and their habitats. The Habitats Directive establishes a common framework for the conservation of wild animal and plant species and natural habitats of Community importance. This Directive covers both terrestrial and marine habitats and takes into account economic, cultural, social and recreational needs of local communities. Special Areas for Conservation (SAC) have to be designated for the conservation of habitats and species of Community importance.

Together, the SPAs and SACs form the Natura 2000 network.

CITES

CITES is a multilateral environmental agreement, created to make international trade in specimens of wild animals and plants sustainable and to ensure that it does not threaten their survival. Every species that is or in the future might be endangered by trade, is listed on one of the three CITES annexes. If a species is placed on these lists, the trade in that

particular species is subject to strict regulations. By continuous follow-up of the status of the population, trade in specific species-country combinations may be prohibited. The principle of sustainable use is a major factor in these decisions. CITES only allows trade in those species whose population status can cope with the loss of individual members captured for trade.

Belgium became a Contracting Party to the 1973 Washington Convention on International Trade in Endangered Species (CITES)[99] in 1984.

Ramsar

The 1971 Convention on the protection of wetlands, or Ramsar Convention, is an international treaty which provides the framework for local, regional and national actions and international cooperation for the conservation and sustainable utilisation of wetlands, i.e. to stop the progressive encroachment on and loss of wetlands now and in the future, recognising the fundamental ecological functions of wetlands and their economic, cultural, scientific and recreational value. The Ramsar Convention was ratified by Belgium in 1986.

CMS

The Convention on the Conservation of Migratory Species of Wild Animals (also known as the CMS or Bonn Convention) aims to conserve terrestrial, marine and avian migratory species throughout their range. It is an intergovernmental treaty concerned with the conservation of wildlife and habitats on a global scale. CMS Parties strive towards protecting migratory species threatened with extinction as well as migratory species that would significantly benefit from international cooperation, conserving or restoring the places where they live, mitigating obstacles to migration and controlling other factors that might endanger them.

Within the framework of CMS, regional agreements can be concluded for species included in Annex II. For Belgium the following agreements are important:

- The Agreement on the Conservation of Populations of European Bats (EUROBATS)

The Bat Agreement aims to protect all 45 species of bats identified in Europe, through legislation, education, conservation measures and international cooperation with Agreement members and with those who have not yet joined.

- The Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS)

The aim of the Agreement is to promote close cooperation among Parties with a view to achieving and maintaining a favourable conservation status for small cetaceans. A Conservation and Management Plan forming part of the Agreement obliges Parties to engage in habitat conservation and management, surveys and research, pollution mitigation and public information. To achieve its aim, ASCOBANS cooperates with Range States that have not (yet) acceded to the Agreement, relevant intergovernmental organisations and non-governmental organisations.

- The Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA)

AEWA covers 235 species of birds that are ecologically dependent on wetlands for at least part of their annual cycle. The geographical area covered by the AEWA stretches from the northern reaches of Canada and the Russian Federation to the southernmost tip of Africa. The Agreement provides for coordinated and concerted action to be taken by the Range States throughout the migration system of waterbirds to which it applies.

WHC

The Convention concerning the Protection of the World Cultural and Natural Heritage (the World Heritage Convention, WHC) was adopted by the General Conference of UNESCO in 1972 and is an important instrument of international cooperation to protect and transmit to future generations the world's outstanding natural and/or cultural heritage.

The Convention aims to encourage the identification, protection, and preservation of Earth's cultural and natural heritage. Cultural heritage refers to monuments, groups of buildings, and sites with historical, aesthetic, archaeological, scientific, ethnological, or anthropological value. Natural heritage covers outstanding physical, biological and geological formations, habitats of threatened species and areas with scientific, conservation or aesthetic value. The level of biodiversity within a given site is a

[99] http://www.cites.org/

key indicator of its importance as a natural property.

The Convention recognises that nations have a duty to ensure the identification, protection, conservation, presentation, and transmission to future generations of their cultural and natural heritage. By adhering to the Convention, nations pledge to conserve not only the World Heritage Site(s) situated within their territories, but also to improve the protection of their national heritage as a whole.

Bern Convention

The Convention on the Conservation of European Wildlife and Natural Habitats, or Bern Convention, is a binding international legal instrument in the field of nature conservation, which covers the whole of the natural heritage of the European continent and extends to some African states. The convention aims to conserve wild flora and fauna and their natural habitats and to promote European cooperation in that field. It was adopted and signed in Bern in September 1979, and came into force on 1 June 1982. The protection of migratory species lends the Convention a distinct dimension of North-South interdependence and cooperation.

UNCLOS

All marine legislation is situated under the "umbrella" of the United Nations Convention on the Law of the Sea (UNCLOS)[100], drawn up in Montego Bay on 10 December 1982 and ratified in Belgium by the law of 18 June 1998. This convention may justifiably be considered to be the (written) constitution defining the system governing the seas and the oceans at world level.

OSPAR

Belgium is a Party to the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR, 1992)[101]. Its Annex V deals with the protection and conservation of the marine ecosystem and its biological diversity. Tools to achieve this include the protection of certain species and habitats and the establishment of marine protected areas.

CCAMLR

Belgium is a member of the Commission, which manages the marine living resources of Antarctica. The Commission applies both the precautionary principle and the ecosystem approach. Given that the area covers 12 % of the oceans, the measures adopted potentially have a significant impact. The close institutional ties with the Committee for Environmental Protection instituted by the Madrid Protocol of the Antarctic Treaty and its leading role in the conservation of the Antarctic environment make it a unique player in the Antarctic region.

IWC

The International Whaling Commission (IWC) is a body that was created by the International Convention for the Regulation of Whaling (1946). It currently numbers 66 members. Since the 1987 moratorium on commercial whaling, its annual meetings have covered the setting up of a cetacean stock management scheme that addresses control and animal welfare considerations. Stock assessments are being conducted by the Scientific Committee. While the possible resumption of commercial whaling depends on the adoption of such a scheme, a conservation agenda is being developed with a view to tackling other pressures than commercial and scientific whaling: collisions, pollution, underwater noise, etc.

FAO

The Food and Agriculture Organisation (FAO) of the United Nations leads international efforts to raise levels of nutrition and standards of living. The FAO helps developing countries and countries with economies in transition to modernise and improve their agriculture, forestry and fisheries practices and ensure good nutrition for all.

Of particular relevance to the Convention is the FAO Commission on Genetic Resources for Food and Agriculture (CGRFA) and the International Treaty on Plant Genetic Resources for Food and Agriculture (PGRFA).

The CGRFA intends to ensure the conservation and sustainable utilisation of genetic resources for food and agriculture, as well as the fair and equitable

[100] http://www.un.org/Depts/los/index.htm/

[101] http://www.ospar.org/

sharing of benefits derived from their use, for present and future generations. The PGRFA addresses among other things access to *ex situ* collections not addressed by the Convention. It was adopted by the FAO Conference by consensus in November 2001 and entered into force on 29 June 2004. It is a legally binding instrument which has the following objectives: (1) The conservation and sustainable use of plant genetic resources for food and agriculture; (2) The fair and equitable sharing of benefits derived from their use for sustainable agriculture and food security, in harmony with the Convention on Biological Diversity. The Treaty covers all PGRFA but its original Multilateral System covers only a restricted list of PGRFA which are included in Annex 1 of the Treaty. Since June 2006 a standard Material Transfer Agreement (SMTA) has been adopted with the view to facilitate access and benefit sharing of PGRFA.

Another instrument of particular relevance to the implementation of the CBD is the Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture (1996) (formerly adopted during the FAO's Fourth International Technical Conference on Plant Genetic Resources). It has been endorsed by the Conference of Parties of the CBD and the World Food Summit and is recognized as a major contribution to the implementation of the CBD in the field of Agrobiodiversity. It consists of 20 activities concerned with *in situ* and *ex situ* conservation, sustainable use of Plant Genetic Resources and is a comprehensive framework for actions at community, national, regional and international levels. It emphasises as priority the necessity to build strong National Programmes for the safe conservation and the utilization of Plant Genetic Resources. The Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture (Second GPA) was prepared under the aegis of the CGRFA and adopted by the FAO Council at its 143rd Session in November 2011. It reaffirms the commitment of governments to the promotion of plant genetic resources as an essential component for food security through sustainable agriculture in the face of climate change.

Another important biodiversity-related action plan is the Global Plan of Action for Animal Genetic Resources, which was adopted at the International Technical Conference on Animal Genetic Resources for Food and Agriculture held in Switzerland, in September 2007, and which was subsequently endorsed by all FAO Member Nations at the Thirty-Fourth FAO Conference in

November 2007. It is the first internationally agreed framework for the management of biodiversity in the livestock sector. It calls for the development of technical guidelines to support countries in their implementation efforts. Guidelines on the preparation of national strategies and action plans for animal genetic resources were published in 2009 and are being complemented by a series of guideline publications addressing specific technical subjects.

Conservation of animal genetic resources – ensuring that these valuable resources remain available for future use by livestock breeders – is one of the four strategic priority areas of the Global Plan of Action. These guidelines focus on conservation "in vivo", i.e. maintaining live populations rather than storing frozen genetic material. They complement separate guidelines on Cryoconservation of animal genetic resources published in the same series. They have been endorsed by the CGRFA.

UNESCO

The United Nations programme for education, science and culture (UNESCO) was founded on 16 November 1945. The main objective of this specialised United Nations agency is to contribute to peace and security in the world by promoting collaboration between nations through education, science, culture and communication in order to further universal respect for justice, the rule of law, human rights and fundamental freedoms.

UNESCO's Programme on Man and the Biosphere (MAB) develops the basis, within the natural and the social sciences, for the sustainable use and conservation of biological diversity, and for the improvement on a global basis of the relationship between people and their environment.

OTHER IMPORTANT INSTRUMENTS

The Pan-European Biological and Landscape Diversity Strategy (endorsed at the 3rd Ministerial Conference 'Environment for Europe' in 1995) intends to stop and reverse the degradation of biological and

landscape diversity values in Europe. The Strategy reinforces the implementation of existing measures to ensure conservation and sustainable use of biological and landscape diversity and identifies additional actions that need to be taken over the next two decades. The Strategy also provides a 20-year (1996-2016) vision for Europe structured into four 5-year action plans. The first five-year action plan (1996-2000) specifically set out to remedy the deterioration in the state of the key biological and landscape systems, and to strengthen the coherence of these systems; particular focus was laid in this period on integrating pan-European priorities into national policy and initiatives based on the national biodiversity strategies, programmes and plans each government were to set up to implement the Convention on Biological Diversity. The Action Plan stimulated the development of national ecological networks and the realisation of a Pan-European Ecological Network in 10 years.

The Benelux Convention concerning hunting and the protection of birds (1970) contains regulations with regard to consultation concerning the dates for the opening and closing of the hunting season, minimum dimensions for land used for shooting, the use of arms and methods permitted for hunting, transport and marketing of game, etc.

The Benelux Convention on nature conservation and landscape protection (1982) aims at regulating concerted action and cooperation among the three Governments in the field of conservation, management and rehabilitation of the natural environment and landscapes. In practice, this means the harmonisation and coordination of relevant policy principles and instruments of each of the three countries with regard to transboundary natural areas and landscapes of value by means of the development of protection and management concepts, the establishment of an inventory, demarcation and granting of protective status to these areas and consultation on development projects which might adversely affect these areas.

Appendix 3: Main international organisations that have an impact on biodiversity

A wide range of organisations, working in different areas, is undertaking initiatives that are relevant to biodiversity.

UNDP (United Nations Development Programme)

UNDP is the UN's global development network, an organisation advocating change and connecting (poor) countries to knowledge, experience and resources to help people build a better life. A key UNDP area is energy and environment policy. Through capacity development, knowledge management, policy advice and advocacy, the UNDP helps countries to maintain biodiversity and assists them in its sustainable use.

UNEP (United Nations Environment Programme)

The mission of the UNEP is to provide leadership and encourage partnership in caring for the environment by inspiring, informing and enabling nations and peoples to improve their quality of life without compromising that of future generations. Biodiversity is one of the subjects on which it is working and finances studies.

CSD (Commission on Sustainable Development)

The Commission on Sustainable Development (CSD) was created in December 1992 to ensure effective follow-up of UNCED (United Nations Conference on Environment and Development) and to monitor and report on implementation of the Earth Summit agreements at the local, national, regional and international levels.

UNCTAD (United Nations Conference on Trade and Development)

UNCTAD is the principal organ of the United Nations General Assembly in the field of trade and development. UNCTAD's main goals are to

maximise the trade, investment and development opportunities of developing countries, and to help them face challenges arising from globalisation and integrate into an equitable position in the world economy. UNCTAD launched the BIOTRADE Initiative (1996 during COP3 of the CBD) with the goal of stimulating trade and investment in biological resources to further sustainable development in line with the three objectives of the CBD.

WIPO (World Intellectual Property Organisation)

WIPO is an international organisation dedicated to promoting the use and protection of works of intellectual property. Due to the strong links recognised by the CBD between conservation and sustainable use of biodiversity, and traditional knowledge, a need has arisen to create new ways of protecting traditional knowledge, and to establish access and benefit-sharing mechanisms. The Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore was created in October 2000 to this end.

WTO (World Trade Organisation)

The WTO is the international body dealing with the rules of trade between different nations.

Of particular relevance to the implementation of the CBD are the following agreements:

- the *General Agreement on Tariffs and Trade* (GATT)
- the *Agreement on Agriculture* (Agriculture Agreement)
- the *Agreement on Sanitary and Phytosanitary Measures* (SPS Agreement)
- the *Agreement on Technical Barriers to Trade* (TBT Agreement)
- the *Agreement on Trade-Related Intellectual Property Rights* (TRIPS Agreement).

WHO (World Health Organisation)

The World Health Organisation brings the potentially grave threats to human health to the attention of the international community and takes measures to reduce their impact. As most environmental factors affecting health are closely linked to underlying pressures on the environment, the WHO has increased its focus on supporting measures to incorporate health and environment initiatives into national programmes.

UPOV (International Union for the Protection of New Varieties of Plants)

The objective of the UPOV convention is to encourage innovation in plant breeding by providing exclusive rights for plant breeders in plant varieties that they have developed.

Appendix 4: Concordance of the Aichi Targets with the EU Biodiversity Strategy 2020 and Aichi Targets with Biodiversity 2020, Update of Belgium's National Strategy

Aichi Biodiversity Targets 2011 - 2020 · 5 Strategic Goals · 20 Targets	EU Biodiversity Strategy to 2020 - COM(2011) 244 - 6 Targets - 20 Actions	Belgium's updated NBS -15 Strategic Objectives - 85 Operational Objectives
Possible means, milestones and CBD indicators for the Aichi targets of the Strategic Plan 2011-2020 are containted in document UNEP/CBD/COP/27/Add1 (19/12/2010) (p. 11-20) http://www.cbd.int/doc/meetings/cop/cop-10/official/cop-10-27-add1-en.pdf	Chapter 9.4 of the Impact assessment of the COM contains few milestones (p. 82). Annex 15 to the Annexe to the Impact Assessment contains a list of relevant SEBI indicators for the targets (p. 68) http://ec.europa.eu/environment/nature/biodiversity/comm2006/2020.htm	Document of the Strategy in EN/ FR/NL/DE http://www.biodiv.be/implementation/docs/stratact-plan Milestones and strategic indicators yet to be developed (SM1)
Vision The vision of this Strategic Plan is a world of "Living in harmony with nature" where "By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."	2050 Vision By 2050, European Union biodiversity and the ecosystem services it provides — its natural capital — are protected, valued and appropriately restored for biodiversity's intrinsic value and for their essential contribution to human wellbeing and economic prosperity, and so that catastrophic changes caused by the loss of biodiversity are avoided.	Vision to 2050 By 2050, our Biodiversity and the ecosystem services it provides - our natural capital - are valued, conserved, appropriately restored and wisely used for their intrinsic value and for their essential contribution to human well-being and economic prosperity, and so that catastrophic changes caused by the loss of biodiversity are avoided
Mission The mission of the Strategic Plan is to "take effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services, thereby securing the planet's variety of life, and contributing to human well-being, and poverty eradication. To ensure this, pressures on biodiversity are reduced, ecosystems are restored, biological resources are sustainably used and benefits arising out of utilization of genetic resources are shared in a fair and equitable manner; adequate financial resources are provided, capacities are enhanced, biodiversity issues and values mainstreamed, appropriate policies are effectively implemented, and decision-making is based on sound science and the precautionary approach."	2020 headline target Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss.	General objective of the Strategy until 2020 The general objective of the Strategy is to contribute nationally and internationally to the achievement of the 2020 target of halting the loss of biodiversity and the degradation of ecosystem services, and restoring them in so far as feasible, while stepping up our contribution to averting global biodiversity loss Guiding principles for interpretation and implementation: 1. Principle of preventive action; 2. Precautionary principle; 3. Polluter Pays principle; 4. Public participation and public access to information and justice in environmental matters; 5. Good governance; 6. Sectoral integration; 7. Ecosystem approach; 8. Ecological networks; 9. Subsidiarity principle; 10. Compensation principle

· Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society · Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use · Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity · Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services · Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building	· EU Target 1 - Fully implement the Birds and Habitats Directives · EU Target 2 - Maintaining and enhancing ecosystems and their services · EU Target 3 - Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity · EU Target 4 - Ensure the sustainable use of fisheries resources · EU Target 5 - Combat invasive alien species · EU Target 6 - Help avert global biodiversity crisis	NBS 15 Strategic Objectives and 85 Operational objectives listed in ascending order of their international dimension; no priority ranking.

Aichi 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.	EU T1 - Fully implement the Birds and Habitats Directives EU Target 1 - To halt the deterioration in the status of all species and habitats covered by EU nature legislation and achieve a significant and measurable improvement in their status so that, by 2020, compared to current assessments: (i) 100 % more habitat assessments and 50 % more species assessments under the Habitats Directive show an improved conservation status; and (ii) 50 % more species assessments under the Birds Directive show a secure or improved status.	Op.obj 4c.2 Enhance and encourage the role of farmers as biodiversity actors Op.obj 4c.4 Promote the integration of biodiversity into rural development
		Op.obj 4d.1 Promote the implementation of good fishing practices in the North Sea, favourable to fish protection and their habitats, including the implementation of the Common Fishery Policy
		Op.obj 4f.1 Promote the conservation of forest biodiversity through independent credible forest certification systems that provide a guarantee for sustainable forest management
		Op.obj 4g.1 Promote integrated management of hunting grounds in cooperation with farmers, foresters and environmental NGOs and the application of good hunting practices
		Op.obj 4g.2 Promote the involvement of hunters as biodiversity actors
		Op.obj 5.3 Ensure that this Strategy is taken into account in decision-making and policy discussions and encourage the development and use of guidelines for the integration of biodiversity into all relevant sectoral policies
		Obj 8. Involve the community through communication, education, public awareness and training (all operational objectives)
		Op.obj 9.3. Ensure full compliance with and enforcement of the environmental liability regime (i.e. Directive 2004/35 CE on environmental liability) towards biodiversity offences
Aichi 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.	EU T2 - Maintaining and enhancing ecosystems and their services EU Target 2 - By 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15 % of degraded ecosystems. EU T6 - Help avert global biodiversity crisis EU Target 6 - By 2020, the EU has stepped up its contribution to averting global biodiversity loss.	Obj 5. Improve the integration of biodiversity concerns into all relevant sectoral policies. Op. obj 5.11 Integrate biodiversity values into national (federal and regional) policies, programmes, planning processes and reporting systems, and develop an approach to support incorporation into national accounting if needed.

Aichi 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.	EU T3 - Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity EU Target 3 A) - Agriculture: By 2020, maximise areas under agriculture across grasslands, arable land and permanent crops that are covered by biodiversity-related measures under the CAP so as to ensure the conservation of biodiversity and to bring about a measurable improvement in the conservation status of species and habitats that depend on or are affected by agriculture and in the provision of ecosystem services as compared to the EU2010 Baseline, thus contributing to enhance sustainable management. EU Target 3 B) - Forests: By 2020, Forest Management Plans or equivalent instruments, in line with Sustainable Forest Management (SFM)30, are in place for all forests that are publicly owned and for forest holdings above a certain size (to be defined by the Member States or regions and communicated in their Rural Development Programmes) that receive funding under the EU Rural Development Policy so as to bring about a measurable improvement in the conservation status of species and habitats that depend on or are affected by forestry and in the provision of related ecosystem services as compared to the EU 2010 Baseline. EU T4 - Ensure the sustainable use of fisheries resources EU Target 4 -Achieve Maximum Sustainable Yield (MSY) by 2015. Achieve a population age and size distribution indicative of a healthy stock, through fisheries management with no significant adverse impacts on other stocks, species and ecosystems, in support of achieving Good Environmental Status by 2020, as required under the Marine Strategy Framework Directive. EU T6 - Help avert global biodiversity crisis (See above, Aichi Target 2)	Obj 4: Ensure and promote the sustainable use of components of biodiversity. Several operational objectives are relevant, in particular: Op.obj 4a.1. Identify and promote good practices involving the sustainable use of biodiversity Op.obj 4b.1 Avoid or minimise the risk to biodiversity posed by production and consumption, products and services Op.obj 4b.2 Adopt biodiversity criteria in public procurement policies to prevent biodiversity loss Op.obj 4g.1 Promote integrated management of hunting grounds in cooperation with farmers, foresters and environmental NGOs and the application of good hunting practices Op.obj 5.5 Eliminate, phase out or reform incentives, including subsidies, harmful to biodiversity in order to minimize or avoid negative impacts on biodiversity and encourage the development and application of incentives favourable to the conservation and sustainable use of biodiversity, including economic, fiscal and financial instruments

Aichi 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.	EU T3 - Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity (See above, Aichi Target 3) EU T4 - Ensure the sustainable use of fisheries resources (See above, Aichi Target 3) EU T6 - Help avert global biodiversity crisis (See above, Aichi Target 2)	Op.obj 2.3 Investigate the potential impact on biodiversity of the internal trade (legal and illegal) of live animals and plants at a Belgian level and potentially adapt relevant regulations, including market regulation when appropriate Obj 4: Ensure and promote the sustainable use of components of biodiversity (including the 23 operational objectives under obj. 4) Op.obj 5.1 Promote and support stakeholders involvement inter alia through partnerships at all levels of decision-making relating to biodiversity Op.obj 5.3 Ensure that this Strategy is taken into account in decision-making and policy discussions and encourage the development and use of guidelines for the integration of biodiversity into all relevant sectoral policies
Aichi 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.	EU T1 - Fully implement the Birds and Habitats Directives (See above, Aichi Target 1) EU T2 - Maintaining and enhancing ecosystems and their services (See above, Aichi Target 2)	Op.obj 1.2. Identify and monitor priority species, habitats, genetic and functional components of biodiversity Obj 3: Maintain or restore biodiversity and ecosystem services in Belgium to a favourable conservation status (all operational objectives)
Aichi 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.	EU T2 - Maintaining and enhancing ecosystems and their services (See above, Aichi Target 2) EU T4 - Ensure the sustainable use of fisheries resources (See above, Aichi Target 3)	Op.obj 4b.1. Avoid or minimise the risk to biodiversity posed by production and consumption, products and services Op.obj 4c.1 Promote measures favourable to biodiversity under the implementation of the Common Agricultural Policy Op.obj 4d Fishery in marine and inland waters Op.obj 4d.1 Promote the implementation of good fishing practices in the North Sea, favourable to fish protection and their habitats, including the implementation of the Common Fishery Policy Op.obj 4d.2 Ensure that recreational and sport fishing practices at sea and inland waters respond to ecological management objectives to avoid adverse impacts on biodiversity Op.obj 4d.3 Prevent GM fish from threatening marine and freshwater biodiversity and populations

Aichi Target 7 - By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	EU T2 - Maintaining and enhancing ecosystems and their services (See above, Aichi Target 2) EU T3 - Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity (See above, Aichi Target 3)	Obj 4: Ensure and promote the sustainable use of components of biodiversity (includes objectives on agriculture, forestry, fishery in marine and inland waters) Op.obj 5.3 Ensure that this Strategy is taken into account in decision-making and policy discussions and encourage the development and use of guidelines for the integration of biodiversity into all relevant sectoral policies Op.obj 11.6. Contribute to the creation of an enabling environment for biodiversity in partner countries, based on national priorities, in particular in support of the development of National Protected Area programmes, National Forest Programmes, integrated coastal and marine programmes, or other equivalent instruments, as well as their integration into relevant policy instruments
Aichi Target 8 - By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.	EU T3 - Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity (See above, Aichi Target 3)	Op.obj 3.6 Take measures to minimise the impact of the identified processes and activities threatening biodiversity and ecosystem services Op.obj 4a.1. Identify and promote good practices involving the sustainable use of biodiversity Op.obj 4c.6 Reduce the impacts of pesticides on biodiversity and ecosystem services Op.obj 4f.1 Promote the conservation of forest biodiversity through independent credible forest certification systems that provide a guarantee for sustainable forest management Op.obj 4g.1 Promote integrated management of hunting grounds in cooperation with farmers, foresters and environmental NGOs and the application of good hunting practices

Aichi 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.	EU T 5 - Combat Invasive Alien Species EU Target 5 - By 2020, Invasive Alien Species and their pathways are identified and prioritised, priority species are controlled or eradicated, and pathways are managed to prevent the introduction and establishment of new IAS.	Op.obj 2.1 Investigate and monitor,the effects and causes of activities and processes, including new and emerging risks, that threaten components of biodiversity in Belgium Op.obj 3.7 Invasive alien species (IAS) 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 Op.obj 4c.8 Ensure that the production of plants, inter alia non indigenous plants, for renewable energy does not negatively impact on biodiversity Op.obj 5.7 Consider the potential impact on biodiversity, and in particular the invasiveness of species, in making import and export decisions
Aichi 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.	EU T2 - Maintaining and enhancing ecosystems and their services (See above, Aichi Target 2) EU T4 - Ensure the sustainable use of fisheries resources (See above, Aichi Target 3)	Op.obj 2.2 Investigate and monitor the effects of climate change on biodiversity Obj 3: Maintain or restore biodiversity and ecosystem services in Belgium to a favourable conservation status.
Aichi 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 seascapes.	EU T1 - Fully implement the Birds and Habitats Directives (See above, Aichi Target 1) EU T2 - Maintaining and enhancing ecosystems and their services (See above, Aichi Target 2)	Obj 3: Maintain or restore biodiversity and ecosystem services in Belgium to a favourable conservation status Op.obj 3.1 At least 17 per cent of terrestrial and inland water areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through the development of effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and are integrated into the wider landscapes Op.obj 3.2 At least 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 are integrated into the wider seascapes Op.obj 4h.1 Apply CBD tools to monitor and control the impact of tourism on biodiversity, in particular in protected areas

Aichi 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.	EU T1 - Fully implement the Birds and Habitats Directives (See above, Aichi Target 1)	Op.obj 3.4 Develop and implement action plans so as to ensure the maintenance or rehabilitation of our most threatened species to a favourable conservation status
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.	EU T3 - Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity (See above, Aichi Target 3)	Op.obj 4c.5 Promote the ustainable use of genetic resources for food, and agriculture
Aichi 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.	EU T2 - Maintaining and enhancing ecosystems and their services (See above, Aichi Target 2) EU T3 - Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity (See above, Aichi Target 3)	Obj 3: Maintain or restore biodiversity and ecosystem services in Belgium to a favourable conservation status. Op.obj 3.3 Ecosystems, their resilience and their services are maintained and enhanced by establishing, inter alia, a green infrastructure and restoring at least 15 % of degraded ecosystems. Op.obj 5.8 Maximalise the advantages for health arising from biodiversity and expand the collaboration between the interested organisations / public services
Aichi 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.	EU T3 - Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity (See above, Aichi Target 3)	Obj 3. Maintain or rehabilitate biodiversity in Belgium to a favourable conservation status. Op.obj 3.3 Ecosystems, their resilience and their services are maintained and enhanced by establishing, inter alia, a green infrastructure and restoring at least 15 % of degraded ecosystems.
Aichi Target 16 - ABS Protocol	EU T6 - Help avert global biodiversity crisis	Obj 6. Promote and contribute to an equitable access to and sharing of benefits arising from the use of genetic resources - ABS

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.	(See above, Aichi Target 2)	Op.obj 6.1 By 2014, raise awareness about the concept of ABS in the context of the CBD and the Nagoya Protocol, and widely disseminate information on ABS Op.obj 6.2 By 2014, ratify and implement the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization Op.obj 6.3 By 2020, have mechanisms in place to enhance national and global cooperation on ABS issues Op.obj 6.5 By 2015, have a functional Access and Benefit Sharing Clearing- House in place
Aichi 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.	EU T6 - Help avert global biodiversity crisis (See above, Aichi Target 2)	Belgium intends to revise its NBS by WGRI-6 in 2014
Aichi 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.	EU T6 - Help avert global biodiversity crisis (See above, Aichi Target 2)	Op.obj 6.4 By 2020, create operational mechanisms to protect the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biodiversity
Aichi 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	EU T2 - Maintaining and enhancing ecosystems and their services EU Target 2, Action 5 - Improve knowledge of ecosystems and their services in the EU	Obj 7. Improve and communicate scientific knowledge on biodiversity and ecosystem services (all operational objectives under obj.7)

Aichi 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.	EU T1 - Fully implement the Birds and Habitats Directives EU Target 1, Action 2- Ensure adequate financing of Natura 2000 sites EU T6 - Help avert global biodiversity crisis EU Target 6, Action 18- Mobilise additional resources for global biodiversity conservation:	Obj 15. Ensure the provision of adequate resources for biodiversity Op.obj 15.1. By 2020 at the latest, the mobilization of financial resources for biodiversity from all sources (including possible innovative financial mechanisms), should increase substantially compared to the average annual biodiversity funding for the years 2006-2010 Op.obj 15.2 Fully use existing EU financing instruments to promote biodiversity Op.obj 15.3 By 2015, contribute towards the doubling of the total biodiversity-related financial resource flows to developing countries and at least maintain this level until 2020, including through a country-driven prioritization of biodiversity within development plans in recipient countries, using as preliminary baseline the average annual biodiversity funding to developing countries for the years 2006–2010 Op.obj 15.4 By 2020 Support, as appropriate, developing countries to enhance institutional, national, administrative and managerial capacities, in order to increase the effectiveness and sustainability of international and national financial flows for biodiversity
Support Mechanisms · Capacity-building for effective national action · Clearing-house mechanism and technology transfer · Financial resources · Partnerships and initiatives to enhance cooperation · Support mechanisms for research, monitoring and assessment	We are all in this together · Partnerships for biodiversity · Mobilising resources to support biodiversity and ecosystem services · A common implementation strategy for the EU	Monitoring and support mechanisms SM1. By 2015, adopt, apply and publish indicators to measure progress against the strategic objectives of the NBS SM2. By 2015, implement the EU reporting tool for NBS's on the CHM website SM3. By 2015, have a functional Clearing-House Mechanism in place for the Convention and its Protocols, including a network of practitioners SM4. By 2015, functional Clearing-Houses for specific implementation and technology transfer are in place for the CBD and its Protocols (BCH, ABS-CH)

Contacts

For more information on the Strategy and possibilities of actions, do not hesitate to contact the following contact points:

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The Biodiversity National Focal Point is based at the Royal Belgian Institute of Natural Sciences (RBINS). It is Belgium's link to the Convention on Biological Diversity (CBD). The National Focal Point acts as the facilitator between the CBD Secretariat and all implementing actors in Belgium. The National Focal Point also cooperates with other countries, various organizations and informs the general public. It relies on a large network of collaborators in Belgium and abroad, who are essential partners for the execution of the wide range of activities generated by the various mandates: exchange of information, support to the policy process, education and training, public awareness, international collaboration, etc.

Regional and federal experts designated by the Interministerial Conference for the Environment to stimulate the proper implementation of the National Biodiversity Strategy, its follow-up and the participation in its revision of the various concerned sectors in the regional and federal authorities:

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- **CBD milestones in Belgium**

- **United Nations Convention on Biological Diversity (CBD)**

Endorsement of the CBD: 5 June 1992 (United Nations Conference on Environment and Development)
Ratification of the CBD: 22 November 1996
Entry into force: 20 February 1997
Establishment of the Coordination Committee for International Environment Policy (CCIEP):
5 April 1995, chaired by FPS Health, Food Chain Security and Environment – DG Environment
Set up of the Steering Committee "Biodiversity Convention" and "Nature": 1995
Designation of the CBD National Focal Point: July 1995, the Royal Belgian Institute of Natural Sciences.
Regional Focal Points: ANB (Flanders), Brussels Environment (Brussels), DGARNE (Wallonia).
Adoption of Belgium's National Biodiversity Strategy: October 2006, update in 2013
National reports on implementation of the CBD: 1998, 2001, 2005, 2009, 2014
Mid-term state of play of the NBS: 2012
Thematic reports: Indicators (2001), Forests (2002), Protected areas (2003, 2007, 2009), Global Taxonomy Initiative (2004), Marine and Coastal Biodiversity (2009)

The Clearing-House Mechanism (CHM) under the CBD is an information-sharing mechanism set up to promote and facilitate scientific and technical cooperation in relation to the three objectives of the Convention. It also plays an important role in developing public awareness on these three objectives. The CHM operates mainly, but not exclusively, through the Internet and has the form of a structurally decentralised and distributed network of Parties and partners working together to facilitate the implementation of the Convention. Belgium has been an active participant since 1996. The URL of the website is www.biodiv.be
Belgian species list (all things considered): www.species.be

- **Cartagena Protocol on Biosafety (CPB)**

Endorsement: 24 May 2000
Ratification: 15 April 2004
Entry into force: 14 July 2004
Designation of the Biosafety Focal Point: September 2004, the Federal Public Service of Health, Food Chain Safety and Environment
Endorsement of the Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety: 20 September 2011
The Biosafety Clearing-House under the CBD is the information sharing mechanism for the Cartagena Protocol on Biosafety (http://bch.cbd.int). Belgium has been an active participant since 2004. The URL of the website is http://www.biosafetyprotocol.be

- **Nagoya Protocol on ABS**

Endorsement of the Nagoya Protocol on ABS: 21 September 2011
Ratification: ongoing

Publications of the CBD National Focal Point:
The book 'Biodiversity in Belgium, a country study' (2003) presents a panorama of the status of knowledge and trends of biodiversity in Belgium (including prokaryotic, fungal, botanical and zoological diversity). The publication 'La biodiversité en Belgique, un aperçu / Biodiversiteit in België, een overzicht' (2013) presents an updated summary of the country study for the general public and is freely available upon request so as the publication 'La biodiversité en Belgique, une question vitale / Biodiversiteit in België, van vitaal belang' (2013) and '366 gestes pour la biodiversité / 366 tips voor biodiversiteit' (2010), information folder on the NBS (2014).
Contact to order publications: Biodiversity, 29 rue Vautierstraat, 1000 Brussels, tel: 02 627 45 45, e-mail: biodiversite@naturalsciences.be.