Fourth National Report of Belgium
to the Convention on Biological Diversity

2009

Contents

Executive Summary

The present report is the fourth National Report on the implementation of the Convention on Biological Diversity in and by Belgium. The previous Belgian National Reports were published in 1998, 2001 and 2005. The report is organised as follows:

Chapter I provides an overview of the status and trends of biodiversity in Belgium, at the species and habitat levels, and focuses on threats such as pollution, alien species and climate change. Information is provided for the Flemish, Brussels-Capital and Walloon Regions as well as for the Belgian part of the North Sea.

The geography and geology of Belgium, together with long-standing human impact in land use, resulted in an amazing diversity of habitat types for a rather small territory. Not less than 58 of them are listed in the EU Habitats Directive. Around 36,300 species of micro-organisms, plants, fungi and animals have been recorded in Belgium and expert extrapolations suggest that the actual number should range between 52,000 and 55,000 species.

In Flanders, at least 7% of formerly recorded species are extinct, 19% are endangered and 28% are vulnerable to near threatened. A similar situation exists in Wallonia, as, depending on the taxonomic group, between 40% and 83% of the species show an obvious population decline. In the Brussels-Capital Region, 80 higher plant species, 12 bird species and half of the amphibian species have disappeared. The Belgian marine area suffers from severe declines in fish and crustaceans, notably in commercial species.

Chapter II provides an overview of the country's strategic documents and action plans. The National Biodiversity Strategy 2006-2016 is briefly described and its status of implementation is discussed. This strategy complements the strategic documents developed at the regional level.

In the Flemish Region, the Policy Plan for Environment and Nature 2003-2007 has been extended to 2010. Its major objectives and instruments for implementation are summarised. In the Walloon Region, the administration for agriculture, natural resources and the environment has adopted a strategic plan with targets and indicators for the period 2008-2013. In the Brussels-Capital Region, the biodiversity policy is partially guided by the part on the green and blue network within the Regional Development Plan. The elaboration of a regional plan for nature and biodiversity is the Brussels commitment for Countdown 2010. New legislation and 13 action plans are also foreseen.

A note on action 18 of the second Federal Plan for Sustainable Development 2004-2008, promoting the integration of biodiversity in four key sectors (transport, economy, development cooperation, scientific policy), closes this chapter.

Chapter III starts by describing the sectoral and cross-sectoral integration of biodiversity enhanced and supported at the regional level. It focuses on the initiatives in various themes and sectors such as water management, land use planning, construction, agriculture and forestry, and in relation to stakeholders such as business, local authorities, etc. The second part of the chapter focuses more in detail on the above-mentioned federal plan for the sectoral integration of biodiversity in four key sectors.

The first part of **chapter IV** reviews the progress made by Belgium towards the 2010 Target. It provides a non exhaustive overview of programs and actions in relation to key issues such as biodiversity conservation, sustainable use, threats to biodiversity, ecosystem services, traditional knowledge, benefit sharing and financial resources.

The second part of the chapter reviews the country's progress towards the goals and objectives of the Strategic Plan of the Convention. Information is provided on cooperation and collaboration, improving capacities, strategies and action plans, CEPA.

The chapter concludes with a ray of hope but states that efforts are not sufficient to stop biodiversity loss in Belgium and that the European target of halting the loss of biodiversity by 2010 will not be reached. Some suggestions are put forward to remediate to this situation.

After the report, **appendices** are presented with:
- party and report contact information;
- overview of the Belgian Regional and Thematic Focal Points;
- information on the elaboration process of the report;
- list of contributing experts;
- further sources of information;
- progress in implementing the Global Strategy for Plant Conservation;
- progress in implementing the Programme of Work on Protected Areas.

Preamble

Belgium is a federal state, composed of communities and regions. The power to make decisions is not the exclusive preserve of the federal government and the federal parliament. The leadership of the country is in the hands of various partners, who independently exercise their authority within their domains.

The implementation of the Convention on Biological Diversity is carried out by the federal government, the regions, the communities and the local authorities (provinces and municipalities).

The **regions** are in charge of territorial matters. They have therefore the greatest amount of responsibilities on biodiversity-related issues: nature conservation, forest management, agriculture, exploitation of natural resources, land use and spatial planning, hunting, fisheries, etc. They are also in charge of tourism, which is a competence that has been delegated to them by the communities.

The **federal government** is more specifically involved in the international dimension, the external relations and in matters related to the North Sea. It is the federal government that undertakes the follow-up of trade in threatened species and that takes measures relating to the trade of exotic species.

The **communities** take care of issues linked to culture, research, education and public awareness. The regions and the federal government can also raise public awareness in their own fields of competence.

The **provinces and the municipalities** play an important role at the local level, in accordance with regional policy.

The coherence of international environmental policy at national level is ensured by a coordination mechanism composed of representatives from the federal government, the regions and the communities. It is called the **Coordinating Committee for International Environment Policy** (CCIEP). This body functions under the high level authority of the Inter-ministerial Conference for the Environment (ICE). Under the CCIEP different convention related or thematic committees have been established, such as for Biodiversity, Climate Change, Forests, Nature, etc.

Chapter I - Overview of Biodiversity Status, Trends and Threats

1. Status of biodiversity

1.1. Species status

The Belgian diversity of life forms comprises 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 supposed 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 occur 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. This figure exceeds all previous estimates.

Our knowledge of the taxa is unbalanced. 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. Yet they represent less than 4% of the species living in Belgium. Obviously, expanding our knowledge of the remaining 96% of organisms would improve, refine and optimise Belgian conservation policies and actions.

Table 1. Overview of animal species numbers in Belgium (Biodiversity in Belgium, 2003) as an example of the discrepancy between observed and expected numbers of species.

Animals	**Number of observed species in Belgium**	**Total species number expected in Belgium**
sponges, cnidarians, …	77	250
flatworms	670	1 500
nematodes	545	2 500
annelids	330	600
other worm groups	81	240
arachnids and pycnogonids	1 713	2 000
insects	17 295	25 000
myriapods	97	160
crustaceans	774	1 250
molluscs	311	370
other invertebrates	429	1 300
vertebrates	449	460

1.2. Habitats status

The geographical and geological characteristics of Belgium, together with long-standing human impact in land use, resulted in an amazing diversity of habitats for such a small territory, many of which are of European importance (no less than 58 of them are listed in the EU Habitats Directive).

The main vegetation types found in Belgium are deciduous and conifer 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.

It is difficult to give precise numbers on the vegetation cover at the national level. More precise data is available for those habitats listed under the European Union's Habitats Directive. In Belgium, 58 habitats types are protected under the Habitats Directive. The table below presents the 15 most frequent ones, based on the total area and the number of occurrences in the country. The sign * indicates priority habitat types for conservation.

Table 2. Fifteen most frequent habitats in Belgium following the EU Habitats Directive (Biodiversity in Belgium, 2003).

Code	**Habitat**
1110	Sandbanks which are slightly covered by sea water all the time
4010	Northern Atlantic wet heaths with *Erica tetralix*
4030	European dry heaths
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
6510	Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*)
9110	Luzulo-Fagetum beech forests
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)
9130	Asperulo-Fagetum beech forests
9150	Medio-European limestone beech forests of the Cephalanthero-Fagion
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*
9180	* Tilio-Acerion forests of slopes, screes and ravines
9190	Old acidophilous oak woods with *Quercus robur* on sandy plains
91D0	* Bog woodland
91E0	* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, *Alnion incanae*, *Salicion albae*)

1.3. Protected areas: the Natura 2000 network in Belgium

Natura 2000 supports an ecosystem approach for biodiversity conservation, i.e. the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. The Natura 2000 network comprises the 'Special Protection Areas' designated under the EU Birds Directive and the 'Sites of Community Importance' under the EU Habitats Directive. Designating the sites is just the first stage in setting up the Natura 2000 network. Each site will be the subject of a designation order which specifies the following, backed up by maps: (i) the perimeters of the sites, (ii) the intended species or habitats which are present there, (iii) the objectives of the active management system to be put in place, and (iv) the means suggested to reach them.

In Belgium, these amount to the following:

- Special Protection Areas under Birds Directive: 234 sites, total area of 328,200 ha, covers 9,7% of land surface; 3 marine sites with total area of 30,576 ha;
- Sites of Community Importance under Habitats Directive: 280 sites, total area of 323,900 ha, covers 10% of land surface; 1 marine site with total area of 18,120 ha.

1.3.1. Flemish Region

In 2005 a 24th Special Protection Area under the Birds Directive was designated in the port area of Zeebrugge: Baai van Heist, bringing the total surface to 98,243 ha (ca 7,3% of surface of Flanders). On 15 February 2008 the Flemish Government approved 2 additional zones under the Habitats Directive: the water zone of the estuary of the IJzer and of the estuary of the Schelde. These additions are now also included in the updated list of community sites as additions in the existing designations of both estuaries - to be approved by the European Union before end of 2009. Taking into account these additions the 38 SCI sites under the Habitats Directive cover now a surface of 104,888 ha (7,8% of the surface of the Flemish region). The total surface of Natura 2000 in Flanders covers 166,187 ha or 12,3% of the surface.

An Executive Law of 2004 on site-based management stipulates general measures for Natura 2000 sites concerning conservation, management aspects and derogation issues. For each of the sites a Nature Objectives Plan has to be developed highlighting the objectives for the habitats and species concerned and indicating possible measures for restoration and management. The development of the sites is carried out in consultation with landowners and users and relevant local authorities. Draft plans are also put in public consultation before final approval. Based on the experience the procedure is shown to be too complex and is now being revised. A new Executive Law giving the procedures for the formal designation of the sites and the development and adoption of the site specific conservation objectives has been approved in May 2009.

1.3.2. Walloon Region

There are 240 Natura 2000 sites in the Walloon Region, covering 220,944 ha, equivalent to 13 % of the Region. The network is based on the hydrological network and is nearly 70 % forest (31 % of Walloon forests). Grassland, fallow land and orchards on the one hand, and crops on the other, occupy 16 % and 2 % respectively of the total network, but represent less than 5 % of agricultural land. The Walloon Region hosts 44 habitat types, of which 10 priority types, 101 bird species and 31 other animal and plant species listed in the annexes of the directives.

All of the Natura 2000 sites covered by a designation order will be subject to general measures (AGW dated 23/10/2008). Furthermore, as far as each site is concerned, this order will provide specific measures according to the characteristics of the habitats and species. The designation orders have been approved for an initial batch of 8 sites covering just over 3,600 ha. A new adoption process for designation orders has started for second batch of 82 sites covering 39,000 ha.
http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p112.

1.3.3. Brussels-Capital Region

The EU Commission has approved the list of Natura 2000 sites proposed for the Brussels-Capital Region in December 2004, covering 2,432 ha (14 % of the region area). Brussels is currently working on a better integration of the Habitats Directive in the regional legislation (new and better coordinated law). Management plans are on the point to be finalised and the next step consists in the field implementation.

1.3.4. Belgian part of the North Sea

As mentioned above, the Federal authorities are competent for the environmental policy in the Belgian part of the North Sea.

In 2005 (Royal Decree of 14 October 2005) three Special Protection Areas (SPAs) were designated in the Belgian part of the North Sea: SBZ1 (in front of the coast of Koksijde): 110,1 km², SBZ2 (in front of the

coast of Oostende): 144,80 km² and SBZ3 (in front of Zeebrugge): 50,95 km², as well as two Special Areas of Conservation (SACs): Trapegeer Stroombank, 181,20 km² and Vlakte van de Raan, 19,17 km². By Royal Decree of 6 March 2006, a strict marine reserve (*Gericht marien reservaat)* Baai van Heist, was designated. The marine SPAs and the Trapegeer Stroombank site were selected on the basis of a scientific study carried out by the MUMM (Royal Belgian Institute of Natural Sciences, RBINS) and the Research Institute for Nature and Forest (INBO). Following a complaint against the designation of the Vlakte van de Raan as SAC, on the ground that the designation of the site was not scientifically underpinned, the Council of State nullified in 2008 the designation of the Vlakte van de Raan as SAC. However, the site is still on the European list of Sites of Community Importance. Policy plans for the marine protected areas have been drawn up by the competent authority and have been approved by the State Secretary in charge of the marine environment.

As the EU-Habitats Directive also applies to the Exclusive Economic Zone and as until now no Natura 2000 sites were proposed in the EEZ, the federal administration has launched a scientific study to establish a list of potential Sites of Community Importance (pSCIs) for the Belgian part of the North Sea (territorial waters and EEZ).

2. Trends in biodiversity

2.1. Trends in species

Detailed monitoring and thorough comparisons of old collection and observation data with more recent ones show that many species are in decline or even have disappeared. It can be estimated roughly that between 20% and 70% of the species are threatened per main group of organism, depending on the group and the region of the country:

- In Flanders, at least 7% of formerly recorded species are extinct, 19% are endangered and 28% are vulnerable to near threatened; only 42% are considered safe or at low risk.
- A similar situation exists in Wallonia, as, depending on the taxonomic group, between 40% and 83% of the species show an obvious population decline.
- In the Brussels-Capital Region, 80 higher plant species (out of the ca. 580 indigenous ones recorded before 1950), 12 bird species (out of 103) and half of the six or seven amphibian species have disappeared.
- The Belgian marine areas suffer from severe declines in fish and crustacean populations, notably in commercial species.

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 2001-2006, (see also http://cdr.eionet.europa.eu/be/eu/art17/envrf6cg). The main goal of the Habitats Directive is to maintain a 'favourable' conservation status of selected species that are assumed to be endangered or rare and Europe should play an important role in their conservation. The evaluation of the conservation status is based on four criteria set down by Europe. These are the range of the species, its distribution, the size of its population and its future prospects.
The overall results for the habitats of European interest show that 79% of the habitat types are in unfavourable conservation status, 13% in inadequate status and only 6% in favourable condition. For 2% of the habitat types there is not enough information.

More detailed and more precise information is available for each region of Belgium and the North Sea. For all of them, nature and environment reports are compiled using European headline biodiversity indicators.

2.1.1. Flemish Region

Figure 1 illustrates the **species status** in the Flemish Region. The conservation status of 3,451 (9% of the total) of the species occurring in Flanders has currently been documented. Knowledge on the status of Flemish biodiversity is strongly biased toward vertebrates and vascular plants, the status of which has been described for 100% and 58-70% respectively. The status of fungi and invertebrates remains largely undocumented, with the status descriptions only available for 10% and 5-6% of species respectively. From the species assessed, 6% have recently become regionally extinct and 29% have been listed as 'critically endangered', 'endangered' or 'vulnerable' so-called Red List species. Butterflies are among the most affected with 25% extinct and 33% on the Flemish Red List. Empidids (no extinctions and 15% on the Red List) and Dolichopodids (9% extinct and 18% on the Flemish Red List) prove to be the most robust species groups.

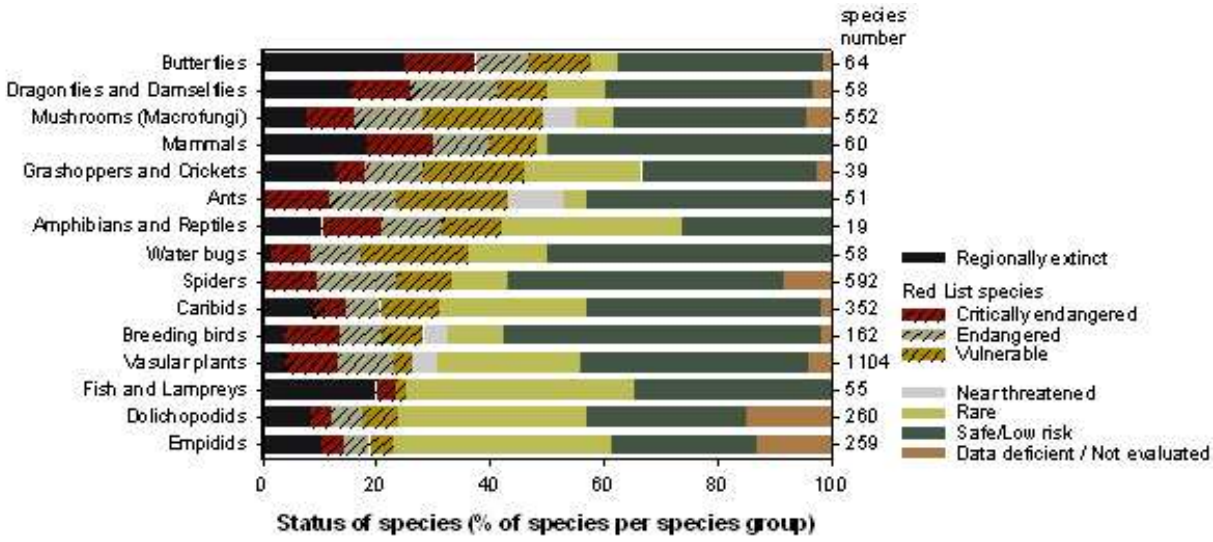

Figure 1. Species status in the Flemish Region in 2008 (Source: Research Institute for Nature and Forest, http://indicatoren.milieuinfo.be/indicatorenportal.cgi?lang=en&detail=657&id_structuur=71).

The '**Common birds index'** is calculated as the trend abundance of forest, farmland and other common birds in Flanders (1990 to 2007-2008). The trend is calculated as annual median over species. Farmland birds in Flanders declined markedly during the last decade (e.g. Skylark, Barn Swallow) due to intensification and scale consolidation of agriculture, while the state of woodland birds improved (e.g. woodpeckers). The latter might be explained by several factors, such as increased afforestation, a more natural composition and structure of woodlands and forests, and the maturing of trees. Other common birds, usually generalists, have also shown an overall increase (e.g. Magpie and Carrion Crow). (http://indicatoren.milieuinfo.be/indicatorenportal.cgi?lang=en&detail=676&id_structuur=71).

The **conservation status of 'species of European interest'** has been evaluated as part of the reporting requirements for the EU Habitats Directive, under the Article 17 Report (2001-2006). The main goal of the directive is to maintain a 'favourable' conservation status of selected species. These species are assumed to be endangered and Europe should play an important role in their conservation. Generally these are species living in specific habitats. The evaluation of the conservation status is based on four criteria: the population of the species, its distribution, the state of its habitat and its future prospects. In Flanders, slightly more than a quarter of the species (16 species, 27 %) have a favourable conservation status. For 12 species (20 %) the conservation status is inadequate and for 22 species (37 %) the status is poor. For

nine species there was insufficient data to evaluate the status. The status of aquatic species gives the greatest cause for concern, with only one of the 10 species being considered as having a favourable status. Water pollution and eutrophication are the main threats reported for most species. (http://indicatoren.milieuinfo.be/indicatorenportal.cgi?lang=en&detail=700&id_structuur=23)

Other species-based indicators for Flanders can be consulted on-line (in English) at the following URL: http://indicatoren.milieuinfo.be/indicatorenportal.cgi?lang=en&id_structuur=71&id_categorie.

2.1.2 Walloon Region

In Wallonia, the **species conservation status** is poor for 2/5 of the species in the monitored groups (mammals, birds, reptiles, amphibians, fishes, dragonflies, butterflies, ladybirds, beetles, vascular plants and non vascular cryptogamous). Combining all the groups, 32 % of the species which have been studied run the risk of disappearing. Furthermore, nearly 9 % have already disappeared. Among bats, fish, reptiles, butterflies, dragonflies and damselflies, more than half of species are in an unfavorable situation.

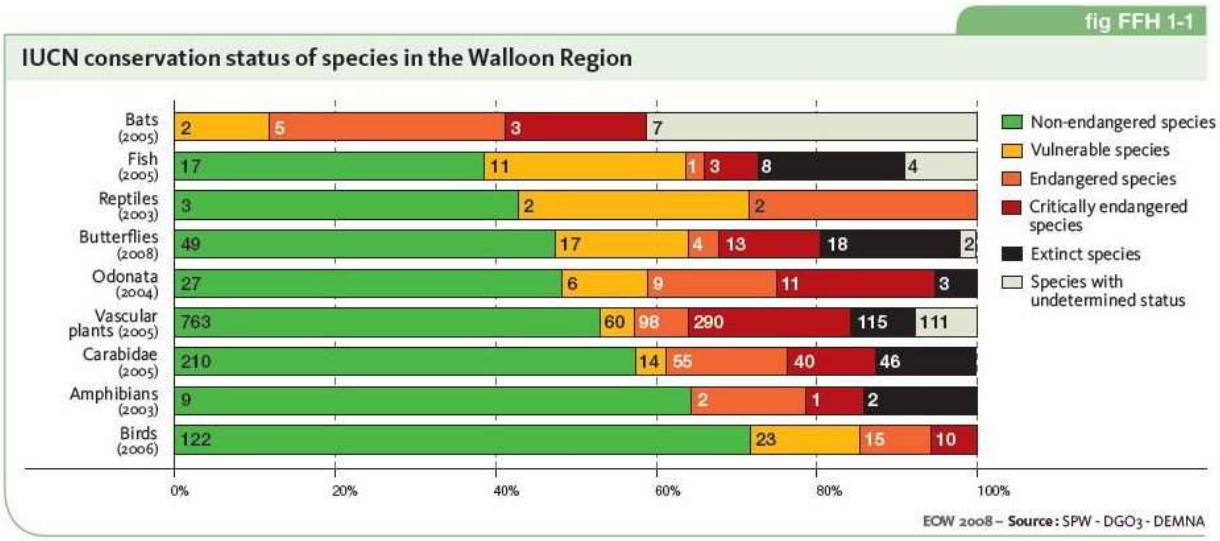

Figure 2. Species status in the Walloon Region in 2008 (Source: Département de l'Etude du Milieu naturel et agricole, http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p105).

In Wallonia, one third of the **nesting bird species** are threatened. Threatened species are particularly encountered in wetlands, moors, and in agricultural ecosystems. Forests birds tend to have a more favorable status (http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p055).

According to the Article 17 Report for the Habitats Directive, the **conservation status of 'species of European interest'** was deemed to be unfavourable for 73 % of the species in the Continental Region. 67 taxa or groups of taxa were studied. Among them, superior plants and butterflies had the largest number of taxons whose conservation status was unfavourable. As for vertebrates with a very unfavourable status, there were in particular: the great crested newt (*Triturus cristatus*) and the natterjack toad (*Bufo calamita*); the sand lizard (*Lacerta agilis*); 3 species of bats; the European hamster (*Cricetus cricetus*) and the European otter (*Lutra lutra*).

Other species-based data for Wallonia can be consulted on-line at the following URL (in French): http://environnement.wallonie.be/eew/rapportchapitre.aspx?id=ch12.

2.1.3. Brussels-Capital Region

In the Brussels-Capital Region, the **species status** is highlighted in table 3. About 50% of the mammals are threatened or vulnerable; 30% of the birds species and 75% of the reptiles & amphibians. For the plants, 66 species (out of 793 recorded) are listed under a red list category. The number of "neophytes" (plants arrived under human influence) rises rapidly.

Table 3. Number of species for the most important groups in the Brussels-Capital Region (estimation).

Groups	Total	Native	Exotic	Endangered	Vulnerable	Decline	Extinct
mammals	44 (+6?)	39 (+6?)	3	7	11		2
birds	103	92	11	8	4		12
amphibians	7 (8?)	6 (7?)	1	1	5		3 (4?)
reptiles	3 (1?)	3 (4?)	1	1	1	2	
butterflies	29 (+26)	54	1	?	?	?	14
orthoptera	26	24	1			9	5
dragonflies	23 (+4)	27	0	9			12
superior plants	+/- 793	+/- 578	215	66	?	?	80
mosses	223	223	?	49	67	?	40
macrofungi	+/- 913	+/- 912	1	+/- 748 (rare)	?	?	?
lichens	36	?	?	?	?	?	?

Common birds are also monitored in Brussels. Thirteen species have been expanding during the period 1992-2008, two of which are exotic species. Eleven species are declining, while 9 species are considered as stable.

More information on species-based data for the Brussels-Capital Region can be found at: http://www.bruxellesenvironnement.be/Templates/etat/informer.aspx?id=3040&langtype=2060 (French) http://www.leefmilieubrussel.be/Templates/etat/informer.aspx?id=3040&langtype=2067 (Dutch).

2.1.4. North Sea

As mentioned above, there has been a continuous decline in the number of fish species and crustaceans, primarily as a result of overfishing.

The trend of the marine bird species occurring in the Belgian part of the North Sea and listed in annex I of the EU Birds Directive is as follows: populations of little tern (*Sterna minor*) in decline, populations of Sandwich tern (*Sterna sandvicensis*) and common tern (*Sterna hirundo*) are stable or fluctuating (source: http://indicatoren.milieuinfo.be). Several reports describe the international importance of the Belgian part of the North Sea for marine bird species.

The trend for marine mammals is less clear; although it is certain that most species remain threatened. The art 17 reporting, in application of the Habitats Directive mentions for the Harbour porpoise (*Phocoena phocoena*) a positive trend (primarily due to a shift of the population in the North Sea), an increasing trend for the common seal (*Phoca vitulina*) and for the grey seal (*Halichoerus grypus*).

2.2. Trends in habitats

The trends in habitats have been evaluated within the framework of the Article 17 reporting of the EU Habitats Directive (2001-2006, see also http://cdr.eionet.europa.eu/be/eu/art17/envrf6cg). The main goal of the Habitats Directive is to maintain a 'favourable' conservation status of selected habitats. These habitats are assumed to be endangered and Europe should play an important role in their conservation. Generally they are very specific habitats. The evaluation of the conservation status is based on four criteria set down by Europe. These are the area of the habitat, its distribution, its quality related to structure and function and its future prospects.

The overall assessment of conservation status is the following: 6% of the Belgian habitats are in 'favourable' conservation status; 13% are in 'unfavourable inadequate', 79% 'unfavourable bad' and 2% are in 'unknown' status. Figure 3 show the assessment of conservation status by habitat category.

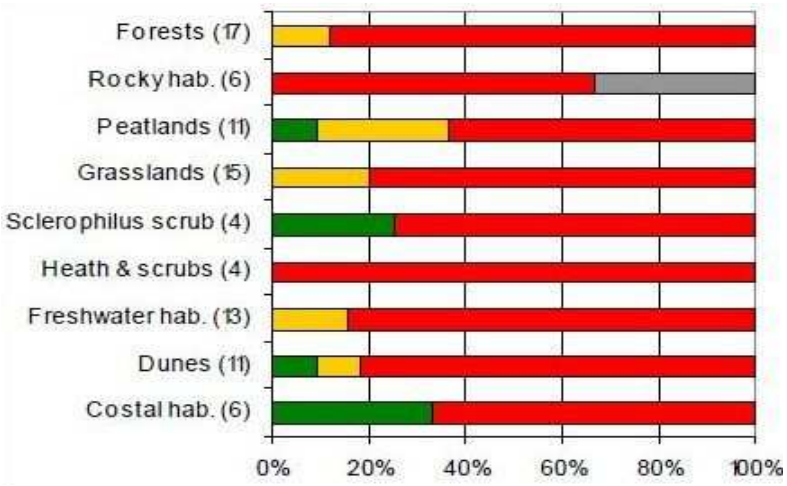

Figure 3. Overall assessment of conservation status by habitat category (%). Green (FV): favourable, yellow (U1): unfavourable inadequate, red (U2): unfavourable bad, grey (XX): unknown.
http://circa.europa.eu/Public/irc/env/monnat/library?l=/habitats_reporting/reporting_2001-2007/ms-reports_summaries/national_sumarypdf_1/_EN_1.0_&a=d

2.2.1. Flemish Region

Three-quarters of the habitats (37 habitats) are of poor conservation status and 15 % (7 habitats) have an inadequate conservation status. The latter comprise two peat and marsh habitats, one heathland, two grassland and two woodland habitats. Consequently, only two habitats have a favourable conservation status, these being one saline habitat (Mudflats and sandflats not covered by seawater at low tide) and one coastal dune habitat (Dunes with Sea Buckthorn). All aquatic habitats are of a poor conservation status. Water and air pollution pose the most serious threats for most habitats.
(http://indicatoren.milieuinfo.be/indicatorenportal.cgi?detail=694&lang=en&id_structuur=23&id_categorie)

2.2.2. Walloon Region

Only one continental habitat is in favourable status. Overall, for the continental region, only boxwood xerothermic formations were deemed to be in favourable status. Rivers, megaphorbic areas and acidophilous beech forests with *Ilex* and *Taxus* were deemed to be in an inadequate status. The other habitats evaluated are in an unfavourable status. As far as forests are concerned, factors lowering the

status basically involve the presence of wide diameter-wood and dead wood (insufficient volume and number). No forest habitat in the continental region had a good evaluation as far as the vertical structure was concerned or the presence of natural regeneration. As well as various structural and functioning problems, the poor evaluation of other formations such as dry heaths, grasslands and screes comes from the reduced size of their distribution area in relation to the land area required for the good functioning of the habitat and its long term conservation.

2.2.3. Brussels-Capital Region

In the Brussels-Capital Region, the majority of the habitats are in an unfavourable conservation status. Only two habitats, namely the Hydrophilous tall herb fringe communities 6430 and the Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* 91E0, have a rather sufficient conservation status. Despite the small regional scale, that sometimes limits the quantitative potential for natural habitat development, it is mainly the habitat quality that causes the generally poor conservation status. Therefore, the future emphasis will lie on improving this habitat quality in order to attain a better conservation status for all habitat types.

2.2.4. North Sea

The Belgian part of the North Sea consists primarily of sandbanks, which are permanently covered by sea water although there are also areas of reef like biotopes consisting of coarse gravel beds with large pebbles qualifying under annex I of the EU-Habitats Directive. Although from a geomorphologic point of view these habitats are still largely present, they are significantly affected by bottom-trawl fishing and hence their typical assemblage of species has been altered over time and habitats such as biogenic oyster reefs that used to occur in those stony areas have disappeared completely.

3. Main threats to biodiversity

A summary of the main threats to biodiversity in Belgium is followed by a more in depth review of some of these threats, indicators at hand.

3.1. Overview

Proximate causes of biodiversity loss are mostly man-induced. **Land conversion** -whether for urban and industrial expansion, agriculture, infrastructure or tourism- is undoubtedly the main cause in our country. It results in the loss, degradation or fragmentation of habitats, and currently affects all habitat types.

In Flanders, Brussels and the marine area, changes in environmental quality due to **eutrophication** also impose a heavy pressure on the fauna and flora. This problem is probably less acute in Wallonia, but **pollution** (including eutrophication) is nevertheless considered as the second threat to biodiversity in the region.

The urban nature of the Brussels-Capital Region leads to specific problems, such as a very **high recreation pressure** on green areas. Cities are also important introduction points for alien species.

There is a growing attention to the issue of **invasive alien species**, especially given the rapid expansion of some introduced plants, fish, amphibians, reptiles, birds, and of invertebrates such as insects, crayfish, mussels, land slugs, etc.

Climate change is a growing concern. It already has a perceptible impact on biodiversity and notably on the geographical range, phenology and behavior of organisms such as migrating birds and insects. It also exacerbates other threats to biodiversity, such as habitat fragmentation and biological invasions.

3.2. Pollution and eutrophication

3.2.1. Flemish Region

Exceedance of critical load for eutrophication

The critical load for eutrophication corresponds to the level of atmospheric nitrogen inputs ecosystems can receive without negative long-term effects on soil nitrogen balance and biodiversity. Atmospheric deposition of nitrogen in Flanders amounted to an average of 37.0 kg N/ha in 2006, a reduction of 33 % compared to 1990. In 2006, nitrogen deposition exceeded the critical load in 100 % of forest, 100 % of heathland and 68 % of species rich grassland areas. Together, this amounts to 91 % of the nitrogen sensitive areas. The exceedance in 2006 averaged 17.6 kg N/ha. The mean exceedance is highest in forests (+23.4 kg N/ha in 2006), followed by heathlands and species rich grasslands (+13.4 and +5.8 kg N/ha respectively in 2006). The exceedance of the critical loads in Flanders is one of the highest in Europe (European Environment Agency, 2005). The average exceedance of the critical load has been decreasing since 1999 (trend 2000-2006: -1.7 kg N/ha/year). If this trend continues, there will be on average no more exceedance of the critical load by 2016.
http://indicatoren.milieuinfo.be/indicatorenportal.cgi?lang=en&detail=57&id_structuur=9

Exceedance of critical load for acidification

The critical load for acidification corresponds to the level of atmospheric inputs of potentially acidifying nitrogen and sulphur compounds ecosystems can receive without negative long-term effects on soil chemistry and plant growth. The area of sensitive ecosystems where deposition of acidifying compounds exceeded the critical load had steadily been decreasing during the period 1990-2006, primarily as a consequence of emission reduction policies. In 2006, this downward trend was halted and even reversed, with critical load being exceeded on 49, 22 and 41 % of the area of forests, heathlands and high nature value grasslands, respectively. Taken together, critical loads for acidification were exceeded on 44 % of the overall area covered by sensitive terrestrial ecosystems in Flanders in 2006. Given the downward trend in deposition rates of nitrogen and sulphur, a further decrease of the area with exceeded critical load is to be expected. However, the current 2010 policy target will not suffice to allow for spontaneous soil chemical recovery. A further decrease of deposition rates to levels below the critical loads is a prerequisite for such a recovery and for halting the pressure on biodiversity.
http://indicatoren.milieuinfo.be/indicatorenportal.cgi?lang=en&detail=57&id_structuur=9

3.2.2. Walloon Region

Enrichment of soils in nitrogen and phosphorous

The enrichment of soils is covered indirectly, by estimating the transfer of these two elements to water bodies. After a continuing rise in the flows of nitrogen towards water bodies since 1971, these have gone down by ± 10% between 1991 and 2005, essentially for surface water. The change is less marked for phosphorus, although a downward trend seems to have begun in 1991. This situation can mainly be explained by the changes in climate phenomena, a reduction in the use of fertilizers (- 17% for nitrogen and - 60% for mineral phosphorous between 1990 and 2006) and a better management of livestock effluents. http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p100.

Nitrogen enrichment of forest and semi-natural ecosystems

According to estimates made for 2005, around 45% of forest land, and almost all other semi-natural ecosystems were affected by exceedance of the critical load of nitrogen. In forests, the situation has noticeably improved compared to 1990, following a reduction in atmospheric deposits of nitrogen (- 12% between 1990 and 2004). More sensitive to this kind of disruption than forests, the ecosystems associated with open environments (peat bogs, heaths etc,) have seen higher surpluses of nutrient nitrogen, especially in the Hautes-Fagnes and to the north of the Sambre-and-Meuse river line. The acidifying effects of nitrogen deposits are less problematic, in that they only affect 7 % of forest land. Taking into account the measures planned to reduce nitrogen pollutants emissions by 2010, forecasts seem to indicate that 19% of forest land is still set to be affected by problems of eutrophication. The (very unlikely) respect for emission ceilings set by European legislation (2001/81/EC Directive) would mean that more than 90 % of wooded areas could be preserved. On the other hand, no beneficial effects are expected for the semi-natural vegetation of open environments, given that more than 98 % of land masses are still set to suffer the negative impacts of excessive nutrient nitrogen fallout between now and 2010.
http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p109

Eutrophication of watercourses

The watercourses with the highest concentrations of phosphates are located in the Escaut-Lys, Dendre and Senne basins. These basins have a large density of urban and industrial areas (discharge of waste water) as well as a lot of agricultural soils which are rich in phosphorous (P) and susceptible to erosion. Furthermore, the watercourses concerned show fairly weak flows, a fact which intensifies the negative effects of phosphorous discharges. The Region intends to take supplementary measures as well as those already in place for water bodies which might not achieve a good ecological status between now and 2015. The measures put forward (1) focus on the domestic, agricultural and industrial sectors.
http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p081.

3.2.3. Brussels-Capital Region

In the Brussels-Capital Region, the water quality depends of the river complex. Most problems with water quality concerns nitrogen compounds and suspended materials. For the Molenbeek-Pontbeek, Woluwe and Linkebeek rivers, the norms for the waters to be considered as fishable are relatively well respected; in the Geleysbeek and Neerpedebeek this is not the case. Since 1997, progress has been made in the water quality thanks to the setting up of the “Blue network”. See the following URL for more details:
http://documentation.bruxellesenvironnement.be/documents/EE2006FR_volet3_eau.PDF?langtype=2060

3.2.4. North Sea

Marine biodiversity is particularly threatened in our coastal zone and shelf sea, where direct and indirect disturbances are concentrated. There is also a trend towards more industrial activities at sea (sand and gravel extraction, mariculture, windmills, etc.) Marine pollution remains a concern: riverine input of nitrates and phosphates causes eutrophication of the marine environment, input from hazardous substances from land based activities, pollution caused by accidents at sea. Heavy metal input into the Belgian part of the North Sea is generally decreasing. Organotin compounds (TBT) are still a major concern, particularly in sediment near harbours and shipping lanes. As far as other organic compounds are concerned (PAH, PCBs, etc.), these hazardous substances remain a concern, primarily as a result of past inputs into the marine environment.

3.3. Invasive alien species

3.3.1. Flemish Region

During the last five years, the number of alien plant and animal species has increased by more than 25 per year in Flanders. The cost of controlling invasive species (e.g. black cherry and Canada goose) is high.

Number of alien animal species

This indicator evaluates the cumulative number of species that do not live in Flanders naturally, but were introduced through human activities. In 2006, 37 alien vertebrate and 38 invertebrate species were inventoried (in 1900, the numbers were respectively 11 and 4 species).
http://indicatoren.milieuinfo.be/indicatorenportal.cgi?lang=en&detail=654&id_structuur=19

Number of alien plant species

Between 1900 and 2007, about 900 alien plant species appeared in the Flemish countryside. Nearly 400 established permanent populations. The number of alien species increases exponentially. Whether these species will disappear or spread far beyond their place of introduction, is unknown at the moment.
http://indicatoren.milieuinfo.be/indicatorenportal.cgi?lang=en&detail=56&id_structuur=19

3.3.2. Walloon Region

In the Walloon Region, nearly 300 species of ornamental plants of alien origin are spontaneously developing in nature (naturalised species). Among them, 9 % have a high environmental impact and are therefore included on the black list. The pressure of introduction is less significant for vertebrates, but the proportion of naturalised species appearing in the black list is much higher (36 %). The pressure of introduction and the presence of anthropised ecosystems are particularly high in the north of the Sambre-and-Meuse river line, producing a concentration of observations of exotic species which damage the environment in this area. The Strategic Plan 2008-2013 of the administration of the Walloon Region foresees an item 'management and survey of invasive alien species' aimed at reducing the threats of biological invasions. Concrete management actions have been undertaken on the initiative of the Natural Parks or River contracts. At the moment however these are still at an experimental stage, and their coordination will need to be developed at a regional level.
http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p108.

3.3.3. Brussels-Capital Region

The number of alien plants present in Brussels has considerably increased since 1960. It has risen from about 54 alien species inventoried during the 1960-1974 period, to 301 inventoried in the period 1990-2005. One plant species out of four is currently a new exotic plant for Brussels. Some of which belong to the category of invasive alien species. The species with the most invasive characteristics are *Fallopia japonica, Solidago canadensis, Fallopia sachalinensis, Heracleum mantegazzianum, Prunus serotina, Senecio inaequidens* and *S. gigantea.*
See http://documentation.bruxellesenvironnement.be/documents/EE2006FR_volet2_nature_EV.PDF?langtype=2060 for more details.

3.3.4. Belgian part of the North Sea

A study by Kerckhof *et al*. (2007) identified 61 alien species in the Belgian marine and brackish waters of which eight are considered cryptogenic. The majority of these species have established self-sustaining

populations, although for some species the establishment is uncertain or in need of verification. Four species, namely the American jack-knife clam *Ensis directus* (Conrad, 1843), the pacific oyster *Crassostrea gigas* (Thunberg, 1793), the New Zealand barnacle *Elminius modestus* Darwin, 1854 and the slipper limpet *Crepidula fornicata* (Linnaeus, 1758) now constitute a dominant part of the Belgian marine nearshore fauna. These species are invasive, competing with native species, changing the original habitat and significantly altering the overall biodiversity and biomass. Prime introduction vectors are shipping, including small recreational craft, and aquaculture. The invasion rate has been increasing during the last two decades.

3.4. Impact of climate change on biodiversity

3.4.1. Flemish Region

Dragonflies

The first appearance of dragonflies in spring advanced gradually between 1984 and 2006, but the degree of shift varied considerably between species. Eight of the 26 species analysed, advanced significantly. For 18 species this was not the case. Some species even tended to appear later. During the last 20 years, the flying season of dragonflies has become extended by an average of 2 weeks.

This extension is positively correlated with the increased range of the species. The number of records of Southern European dragonflies increases in Flanders. Some species that were only occasional visitors in the past, such as *Lestes barbarus* now have permanent populations.

See also: http://indicatoren.milieuinfo.be/indicatorenportal.cgi?detail=701&lang=en&id_structuur=25 and http://indicatoren.milieuinfo.be/indicatorenportal.cgi?detail=404&lang=en&id_structuur=25.

Migrating birds

The arrival date for 15 species has been monitored during the past 20 years. This arrival date has advanced by on average 7.63 days (or 0.45 days/year). The biggest change was recorded for Common Chiffchaff (total 20 days or 1.16 days/year), the smallest for Marsh Warbler (total 3 days or 0.17 days/year).

Since some species adapt better than others, there is a risk of changes in the food web and/or ecological cohesion of ecosystems. This is illustrated by the Pied Flycatcher. The arrival date of this migratory species advances more slowly than the period of occurrence of the main food for its young, the caterpillars of the Winter Moth. This is a possible cause of the decline of this forest woodland bird.

See also: http://indicatoren.milieuinfo.be/indicatorenportal.cgi?detail=406&lang=en&id_structuur=25.

3.4.2. Walloon Region

Dragonflies

For the past decade, the frequency of southern dragonfly species has increased significantly. Seven species have recently settled down. If various colonisation trends have always been observed, they used to be limited in time (e.g. during warm summers). The new arrivals are more durable in time, and are interpreted as a consequence of climate change. Species with a more northern distribution also suffer from the rise in temperature as they have quite strict habitat requirements.
http://environnement.wallonie.be/eew/rapportchapitre.aspx?id=ch12

Birds

A recent study by BirdLife International predicted a movement in the ranges of European bird species of 550 km to the north east by 2100. This study is based on the “climate envelope” model for a probable rise of 3°C for the global average temperature. Wallonia would be the range limit for 60 species, 44 of which would be on the decline and 16 on the rise. There would be 19 new species, and the same number of species which would disappear.
http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p105

Butterflies

The climate's warming benefits certain southern species, which have posted the greatest expansions of their ranges. Still, the lack of relay habitats in Wallonia, e.g., "hot" habitats such as chalk grasslands for xerothermophilic species, is thought to limit the northward expansion of a series of other species that have more demanding habitat requirements and/or are less mobile.
http://environnement.wallonie.be/eew/downfile.aspx?dwn=ffh.pdf&dir=tbe2005en

3.4.3. Brussels-Capital Region

Recent changes in flora indicate that Brussels flora is adapting at stony and warmer surfaces, warmer soils and warmer ambient temperatures that are typical for urban areas. It seems however too soon to attribute it to climate change.

3.4.4. North Sea

Impact of climate change on marine biodiversity is certainly a major concern. More and more species are shifting their distribution in a southwards direction: species that used to have their natural boundaries in the eastern channel are now appearing more and more along the Belgian coast and further into the southern North Sea. For an overview, see Philippart, C.J.M. (Ed.) 2007. Impacts of climate change on the European marine and coastal environment: ecosystems approach. ESF Marine Board Position Paper, 9. European Science Foundation, Marine Board. Strasbourg, France: 82 pp.

Chapter II - Status of National Biodiversity Strategies and Action Plans

1. Introduction

Given the structure of the country, as a federal state composed of communities and region, there are several levels of biodiversity policy development in Belgium.

Belgium has adopted its first National Biodiversity Strategy (2006-2016) in October 2006. It is available at: http://www.biodiv.be/implementation/docs/stratactplan/national_strategie_biodiversity_en.pdf.

The three Belgian Regions - the Flemish Region, the Walloon Region and the Brussels-Capital Region - each have their own strategic documents and action plans in relation to biodiversity:

- The objectives for the conservation of biodiversity in the Flemish Region are included in the Policy Plan for Environment and Nature (2003-2007, extended to 2010) under a specific chapter on biodiversity: http://www.lne.be/themas/beleid/beleidsplanning.
  Since 2006 the Agency for Nature and Forests also has its own Strategic Plan and a yearly operational plan giving more detailed information on objectives, actions and indicators related to actions and processes for the conservation and management of nature, forests and green spaces.
- The strategic plan 2008-2013 of the administration in charge of agriculture, natural resources and the environment in the Walloon Region includes biodiversity objectives (no web link).
- The biodiversity policy of the Brussels-Capital Region is partially guided by the Regional Development Plan, priority 9.4 'Green and blue network': http://www.prd.irisnet.be/fr/priorites/priorite09.htm#4.

At the federal level, the government has identified priority policies for biodiversity in its Federal Plan for Sustainable Development (second plan: 2004-2008, third plan 2009-2012 under preparation). See http://www.plan2009.be/. The federal government has also established a 'Masterplan' for the management of the Belgian North Sea.

2. National Biodiversity Strategy 2006-2016

2.1. Description

Belgium's National Biodiversity Strategy (NBS) was adopted by the Interministerial Conference for the Environment, which is composed of the competent ministers of the Federal Government and the three Regions of Belgium (Flanders, Brussels, Wallonia) on 26 October 2006.

The strategy is a framework document that supports the integration and the fine-tuning of Regional and Federal action plans. It is the Belgian answer to the formal obligation under the CBD, while also taking into account existing strategies, plans and documents at (pan-)European level.

The strategy gives strategic political orientations to contribute towards the achievement of the 2010 Biodiversity target. It spells out a range of 15 priority strategic objectives which will be translated into actions in a second stage.

The 15 objectives are the following:

1) Identify and monitor priority components of biodiversity in Belgium.
2) Investigate and monitor the effects of threatening processes and activities and their cause.
3) Maintain or rehabilitate biodiversity to a favourable conservation status.
4) Ensure and promote sustainable use of components of biodiversity.
5) Improve the integration of biodiversity concerns into all social and economic sectoral policies.
6) Promote and contribute to an equitable access to and sharing of benefits arising from the use of genetic resources.
7) Improve and communicate scientific knowledge on biodiversity.
8) Involve the community through communication, education, public awareness and training.
9) Strengthen biodiversity-related regulatory framework and ensure compliance of biodiversity-related legislations.
10) Ensure consistency between and a coherent implementation of biodiversity-related commitments and agreements.
11) Ensure continued and effective international cooperation for the protection of biodiversity.
12) Influence the international agenda within biodiversity-related conventions.
13) Enhance Belgium's effort to integrate biodiversity concerns in relevant international organizations and programs.
14) Promote sustainable forest management in other countries.
15) Ensure the provision of adequate resources for biodiversity.

The NBS further lists 78 operational objectives to guide and help implementation. These objectives were chosen in a participatory process with the different actors of society.

In order to inform stakeholder of the existence and content of the NBS, a folder was drafted in French, Dutch and German. The folder was sent to a broad public concerned by implementation (regional, federal and local authorities, communities, actors for biodiversity conservation, other sectors, scientific institutions, non-governmental organizations).

2.2. Targets and indicators

Neither specific actions nor targets are adopted in the Strategy itself but they will be adopted and developed in a later stage in the implementation process, in consultation with all the actors for biodiversity in Belgium. However, specific targets and actions are included in the plans of the Regions.

2.3. Relation with the Convention on Biological Diversity

The text of the NBS clearly identifies, for each objective, the link with articles of the CBD, thematic programs of work, guidelines, etc. adopted under the Convention.

2.4. Progress in implementation

The first review of the strategy will be carried out at mid-term (2011). The work will start in 2010 and will be undertaken by the national Steering Committee 'Biodiversity Convention'.

It is important to underline that since the Regions and the Federal level have already developed (and are implementing) their own plans and programmes, specific actions have already been taken and several operational objectives of the National Biodiversity Strategy are therefore already (at least partly) being implemented.

In order to have a clearer picture of the current situation, a table summarizing the level of implementation, at regional and federal level, for each of the objectives identified in the strategy is being developed. This allows evaluating the actions already done on the ground and the actions that still need to be done to achieve the 2010 target.

Some examples of implementation:

- Establishment of an integrated, representative and coherent network of terrestrial and marine protected areas at national and transboundary levels. About 14% of the territory at land and sea is designated as Natura 2000 sites.

- Promotion of the integration of biodiversity concerns into all social and economic sectoral policies and establishment of partnerships at all level of decision making. A stakeholders' debate on these issues was organised in 2008 (the 'Spring Debate on the Environment').

- Definition of a common Belgian methodology for the identification and monitoring of biodiversity and application of SEBI 2010 indicators to harmonise data when reporting to European and International organisations. It should be noted that CBD indicators are being used in Flanders since 2005 and reported upon on a yearly basis (http://www.biodiversityindicators.be).

- Financing of scientific research contributing to the best knowledge on, and understanding of biodiversity, ecosystems services and functions, their value and their socio-economic benefits.

- Development of national coordinated CEPA actions on the 2010 Biodiversity Target. Yearly celebration of the International Biodiversity Day. Promotion of public engagement towards biodiversity conservation, e.g. through the national campaign 'I give life to my planet' (http://www.vip.biodiv.be), biodiversity campaign 'Bombylius' (http://www.bombylius.be), press releases, etc.

- Promotion of synergies at national and international level to ensure a coherent implementation of biodiversity-related agreements. Organization of national thematic workshops on the use of UNEP-IUCN TEMATEA modules (http://www.tematea.org).

- Development of a common strategic approach to avoid the introduction and mitigate the impacts of Invasive Alien Species. Several joint initiatives have been undertaken to tackle the issue of invasive alien species:
    - Development of black/grey lists of invasive alien species based on a standardised impact assessment protocol (ISEIA) (Scientific forum on IAS http://ias.biodiversity.be),
    - Reviewing/update of existing legislation to prevent introduction of IAS in Belgium (which will lead to an import/export ban of some IAS at federal level, ban of commercialization of some IAS in Brussels, etc.),
    - Consultation of plant and breeding sectors to increase awareness and understanding of the issue and identification of the most appropriate measures (e.g. labelling, substitution, information, etc.),
    - Co-organization of workshop SOS invasions gathering policy makers, des scientist and other stakeholders,
    - Research projects relating to IAS,
    - Development of public awareness tools.

- Adoption of biodiversity criteria in public procurement policies. For example, Federal and Regional authorities encourage the use of certified wood in public works (http://www.guidedesachatsdurables.be).

- Make best use of Belgian expertise to support the implementation of biodiversity-related conventions in developing countries, facilitate technology transfer and provide adequate capacity building.

2.5. Obstacles and challenges

Some of the main obstacles and challenges encountered in the implementation are the following:

- A better coordination is needed to increase coherence, to fill the gaps left by existing Belgian instruments and to obtain a global vision on the implementation status of the NBS.
- There is a need to define a common Belgian methodology and tools for the identification and monitoring of Belgian biodiversity (each level of government currently has its own methodology)
- There should be a greater involvement of all sectors concerned in the implementation of the NBS, in order to promote a better sectoral integration of biodiversity.
- There is clearly a lack of funding to implement the strategy, since no specific financial resources have been attributed for its implementation.
- There is a lack of human resources for the coordination of implementation and follow-up of the strategy.
- Although the situation has been improving in the past few years, the importance of biodiversity is still not understood at its full value, whether by policy makers or by other stakeholders.

3. Regional and Federal action plans

3.1. Flemish Region: Policy Plan for Environment and Nature 2003-(2007-)2010

The Flemish objectives for the conservation of biodiversity are included in the Policy Plan for Environment and Nature (2003-2007, extended to 2010) under a specific chapter 'Biodiversity'. See also http://www.lne.be/themas/beleid/beleidsplanning. The follow-up of the implementation of this policy plan is carried out using CBD-relevant indicators. These can be found at http://www.biodiversityindicators.be. Pages in English are available.

Some of the most important operational objectives are given below.

Extension of the area with conservation management. The Flemish Environmental Policy Plan (2003-2010) targeted 50,000 ha with active conservation management by 2007. These areas include the officially recognised nature and forest reserves managed by non-governmental organisations, local authorities or private owners, the nature and forest reserves managed by the Flemish government and the military sites mainly managed for conservation. A method of quantifying the effectiveness of this conservation management is still under development. It is clear that biodiversity within these areas is much higher than outside of them. At the start of the planning period (end 2002) the area with conservation management covered 29,480 ha, or 59% of the target. By the end of 2007, 39,365 ha, or 79% of the target had been reached. Nearly half of the increase was achieved via recognised nature reserves which are managed by non-governmental organisations. If the present trend continues, the target will be achieved by 2013. However, if the decline in funds for nature acquisition continues, there will be a further delay.

Sites designated under the EU Habitats and Birds Directives. In Flanders, 24 Special Protection Areas have been designated with a total area of 98,423 ha, or 7.3% of the Flemish territory. There were 38 sites designated and put on the list of Sites of Community Interest by the European Commission. The Sites of Community Interest have a total area of 104,888 ha, or 7.8% of the Flemish territory. The total Natura 2000 area comprises 166,187 ha (12.3% of the Flemish terrestrial area). Marine areas are not included, as they are under the jurisdiction of the Belgian federal government. In 2008, there was a limited increase in the Sites of Community Interest, when the main channel of the Sea Scheldt and IJzer were included. An international comparison shows that 12.3% is low in comparison to the European average, but high when compared to neighbouring densely populated regions.

*Spatial planning for nature and forest areas***.** The land destination maps are being actualised to include the designation of the Flemish Ecological Network that supports and enhances Natura 2000, and to extent green destinations for nature and for forest.

Site-specific instruments. These instruments give a framework for conservation measures and for setting up partnerships:

- development of conservation objectives for SCI and SPA sites (Natura 2000)
- site-specific Nature Objectives Plans
- projects for nature development and restoration, especially in Natura 2000 sites
- development and implementation of management plans for nature reserves, forest reserves, parks and green spaces

Species protection. Development and implementation of species protection plans, measures for restoration of living spaces and habitats for endangered species, update of Red Lists.

Acquisition of land to safeguard the most vulnerable and important natural values.

Support of local authorities (provincial and municipal authorities), regional landscape groups, NGO's to enhance local actions for conservation measures and participation.

Transboundary cooperation for ensuring harmonised approaches for the management in transboundary nature and forest areas.

Cooperation with stakeholders to enhance their sense of responsibility in conservation and management efforts: management agreements with private and business sector; agri-environment agreements; financial and technical support for forest owners, hunting groups, fishermen groups.

Enhance the knowledge basis and monitoring to support and evaluate policy issues, deliver data for communication and reporting and develop the science-policy interface.

Promote communication on conservation of nature, forest and green spaces to enhance public awareness and participation.

3.2. Walloon Region: the administration's Strategic Plan 2008-2013

In Wallonia, the administration in charge of agriculture, natural resources and the environment has adopted its strategic plan for the period 2008-2013. This plan contains four actions directly related to nature and biodiversity protection. These actions are accompanied by targets and indicators.

(i) by 2013, a *framework decree on nature* covering all component of the regional territory will be adopted.

(ii) in order to enhance the implementation of the *Natura 2000 network, designation bills will be adopted* for the 240 Natura 2000 sites (all of the Walloon sites) corresponding to approximately 13% of the Walloon territory.

(iii) a *Nature Action Plan* will be elaborated. It will aim at a better integration of nature issues in all relevant sectors and at encouraging exploitation and management methods favourable to wild species. This plan should involve all public and private stakeholders. It will define the general objectives for recovery/restoration of nature/biodiversity and to achieve the goal of stopping the loss of biodiversity in Wallonia.

(iv) the *durability of forests ecosystems and wild habitats* will be ensured through the achievement of forests and government nature reserve management plans. This specifies that 6 500 ha of forests must be designated as reserves by 2013. Management plans must be elaborated each year for 1 300 ha of natural reserves and for 12 500 ha of public forests from 2008 to 2012.

Other actions of this strategic plan will also have an added value for biodiversity such as:

- *Management and survey of invasive alien species*: there will be measures aiming at reducing the threats due to biological invasions in Wallonia**.**
- *Integrated management plans for water courses*.
- Etc.

The new *Forestry code* (entered into force end 2008) for the Walloon Region puts emphasis on forestry practices that encourage biodiversity. According to the new Forestry Code, at least 3% of the public broad-leaved forests must be under integral reserve protection status.

3.3. Brussels-Capital Region: Regional Development Plan and upcoming policy developments

Regional Development Plan

The biodiversity policy of the Brussels-Capital Region is partially guided by the Regional Development Plan – priority 9.4 “Green and blue network”.

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. New green areas are intended to be created (mostly in the very centre of the town), green walls, green roofs and other greenery of buildings and public spaces are promoted. (see: http://www.prd.irisnet.be/fr/priorites/priorite09.htm#4). 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.

Upcoming policy developments

In addition, Brussels is currently working on the elaboration of a regional plan for nature and biodiversity. A draft is expected for late 2010. The requirements for the elaboration of such a plan appears in the draft of the new coordinated regional law about nature (articles 6 and 8 to 11) which should be adopted in 2009. The regional plan would be revised every 5 year. It would include among others:

- Political targets for nature and biodiversity (quantitative and qualitative).
- The map of the Brussels ecological network.
- Measures to implement the targets.

- A planning of the implementation of the measures.
- A list of legal dispositions in opposition with targets to be modified.
- An assessment of the required budget.

The elaboration of a regional plan for nature and biodiversity is part of the Brussels commitment for the 2010 biodiversity target signed in March 2009 (the Countdown 2010 initiative) together with the signature of an agreement with ICLEI to participle in their LAB program (Local Action for Biodiversity).
http://www.bruxellesenvironnement.be/Templates/Particuliers/informer.aspx?id=3342&langtype=2060.

The new draft on nature legislation also foresees the elaboration of more specific action plans (art. 6 and 12 to 14). These action plans would aim at:
- the amelioration of the conservation status of natural species and habitats.
- the struggle against biodiversity threats such as invasive alien species.
- the encouragement of sustainable use of biodiversity components.

Up to now 13 action plans are in preparation. They concern:
- the amelioration of the conservation status of 3 butterflies, 4 mammals, 1 bird and 1 amphibian species (*Thecla betulae, Satyrium w-album, Apatura iris, Martes foina, Martes martes, Eliomys quercinus, Muscardinus avellanarius, Riparia riparia, Salamander salamander)*
- the struggle against invasive alien species: 3 species of parakeets breeding in het Brussels-Capital Region (*Psittacula krameri, Psittacula eupatria, Myopsitta monachus*).

The scientific contributions to these action plans are on the point to be finalised.

The Brussels-Capital Region also supports the adoption and realisation of Local Agenda 21. Up to now 13 communities and 4 Social Assistance Centres are implicated. Several of them carry out actions to enhance local biodiversity.
See: http://www.leefmilieubrussel.be/Templates/Professionnels/informer.aspx?id=2906&detail=tab3.

Neighbourhoods that engage in a sustainable dynamic (including biodiversity) are also supported by the Brussels-Capital Region.
See: http://www.leefmilieubrussel.be/Templates/Particuliers/Niveau2.aspx?id=3204&langtype=2060.

3.4. Federal level: Federal Plan for Sustainable Development

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. The sustainable management of human activities at sea falls under the umbrella of a 'Master Plan' for the North Sea.

Action 18 of FPSD2 foresees the integration of biodiversity issues into four key sectors: transport, the economy, development cooperation and research. A specific action plan for the integration of biodiversity in those four federal key sectors has therefore been developed to put Action 18 into practice. It should be adopted in September 2009.

For each action, the plan identifies the responsible actor for implementation, a calendar of implementation as well as budget necessary for implementation. Examples of actions are the following:
- Economy: a better integration of biodiversity in the actions financed by the Belgian export credit agency, through the provision of training and the organisation of awareness raising activities (directed towards customers, staff, executive committee) as well as the inclusion of biodiversity in environmental impact assessment of projects

- Development cooperation: the development of a toolkit that will help better integrate environment (and in particular biodiversity) in projects funded by the Belgian Development Cooperation
- Transport: the provision for the sustainable management of fields and infrastructures of the Belgian railways company (ecological maintenance of embankments and use of less aggressive and less polluting products for clearance of weeds from the tracks)
- Science policy: the set up of research projects for the evaluation of the socio economic value of biodiversity in Belgium.

The policy plan for the management of the marine protected areas was prepared in 2008 and has been approved in 2009.

Chapter III - Sectoral and cross-sectoral integration or mainstreaming of biodiversity considerations

1. Introduction

As mentioned in chapter 2, Belgium's national strategy federates the country's various biodiversity initiatives into one common framework of action. One of its overarching principles is sectoral integration. Objective 4 of the strategy deals with sustainable use issues such as sustainable product policies, agriculture, fisheries, forestry, hunting and tourism. Objective 5 focuses specifically on sectoral integration. It targets stakeholder partnerships; the involvement of the private sector; the identification of negative and positive effects in land use planning, transport and energy; encourages the development of financial instruments for biodiversity; foresees the integration of biodiversity concerns into national export credit policy and in import and export decisions, encourages the implementation of CITES, and also maintains and reinforces the social function of biodiversity.
(http://www.biodiv.be/implementation/docs/stratactplan/national_strategie_biodiversity_en.pdf.)

The various administrations of the regional and the federal government are the main implementation bodies of the national strategy. They ensure that the objectives provided in the biodiversity strategy are met through adequate initiatives.

2. Flemish Region

The sectoral integration is enhanced and supported through concrete actions, often based on protocols or cooperation agreements with the relevant sector. Some examples are given below:

Water management

- **Defragmentation of rivers** (carried out in cooperation with the administration of waterways and local authorities). The fragmentation of watercourses by weirs and sluices, together with the degradation of water and habitat quality, is an important problem for the conservation of aquatic species, in particular fish. In 1996, Benelux countries announced their intention of achieving free fish migration in all water catchments by 2010. The Flemish Environmental Policy Plan (2003-2010) aims to achieve free fish migration within a priority network of 3000 km that comprises the most important breeding sites and migration routes. An evaluation of the Benelux situation shows that restoration is in progress, but far too slowly to achieve the 2010 target. A postponement to 2015 (90%) and 2021 (100%) is under preparation, synchronising the target with the European Water Framework Directive. By the end of 2007, 116 of the 796 barriers (15 %) along this network had been dealt with. If the present trend continues, the fish migration barriers on the priority network will be removed by 2047, far later than 2015. Obstacles to a swifter achievement are lack of budget and work force and social complications. Meanwhile, migratory fish species are recovering slightly, probably as a result of improving water quality. http://indicatoren.milieuinfo.be/indicatorenportal.cgi?lang=en&detail=567&id_structuur=54
- **Fish index**. According to the Water Framework Directive the objective of good and high ecological quality should be defined for each water type in terms of biotic scores for phytobenthos, macrophytes, invertebrates and fish. At this moment the dataset for Flanders is limited to invertebrates and fish. The score system used for fish is the IBI (Index of Biotic Integrity). This index evaluates different metrics of the type specific fish community. Results are available for two periods: 1995-1999 and 2000-2004. No sampling point reached the minimum standard of good ecological status in 1994-1999, while only

one sampling point out of the 250 reached this standard after 2000. Following the same trend in the future, the goal of 2015 will not be reached.
http://indicatoren.milieuinfo.be/indicatorenportal.cgi?lang=en&detail=678&id_structuur=60

Agriculture

- **Agri-environment schemes** (in cooperation with the administrations for land use management and agriculture). Schemes for field margin management and for the management of small landscape elements (pools, hedges, wooded banks), which aim to strengthen the ecological infrastructure in farmland areas, have been widely adopted by farmers. At the end 2007, 1 236 ha of field margins (4.9 times the target) had been installed and schemes for 81.7 ha of wooded banks and 179 km of hedges were in place (60% of the target). The agri-environmental schemes aimed at the development, conservation and restoration of specific farmland species and communities have been far less successful. By the end of 2007 only 37% of the intended 1 500 ha for species protection (meadow birds and Common Hamster) and 29% of the intended 6 000 ha for botanical grassland management had been realised.
- **Area under organic farming** (actions supported by the administrations for agriculture and land use management). The area under organic farming increased from 640 ha in 1994 to 4 026 ha in 2001. However, between 2002 and 2005 the total area and the number of organic farms decreased noticeably. In 2006 this trend was halted with a slight increase in the organically farmed area to 3 836 ha in 2007. This area corresponds to about 0.62% of the total farmland area in Flanders. Several socio-economic factors underpin the stagnation since 2000. Firstly, biological farmers have experienced difficulties in marketing their products. Secondly, traditional farming organisations erroneously uphold the idea that organic farming is technically and economically less sustainable. The stagnation of organic farming in Flanders since 2001 sharply contrasts with the strong increase in organically farmed area elsewhere in the EU-15, where organic farms comprised about 4% of the total farmland area in 2005.

Forestry

- **Area with management according to the criteria for sustainable forest management** (in cooperation with the private forest owners supported financially and technically by the Agency for Nature & Forest). Forest management plans are by decree compulsory for all forests larger than 5 ha. Private owners are offered the choice between limited and extensive management plans, whereas extensive management plans are compulsory for public forests. They are also compulsory for private forests located within certain nature oriented land use planning areas. The other private owners are encouraged to develop extensive management plans through grants and forest owner groups. Between 1990 and 2006, 42 190 ha of forest management plans were approved (13 958 ha extensive and 28 232 ha limited). Around 29% of the 150 000 ha of Flemish forest area is now covered by approved management plans. At the moment, there is no data available to evaluate the effectiveness of forest management. An analysis shows that limited forest management plans gradually increase their attention towards the ecological functions of forests. As the total forest area is three times the size of the area with conservation management, forest management plans are an important tool for maintaining biodiversity.

Military areas

- **Cooperation agreement with the Ministry of Defence** for the management of the nature areas on military domains. The agreement includes nature areas on the various military domains covering in total about 15.000 ha in Belgium for which management plans are being developed, implementation of measures for restoration and management, and monitoring is being carried out. Part of the costs is covered by the income of wood sale. A large part of this surface is also designated as Natura 2000 for

which an important LIFE-Nature project supports large scale restoration actions, mapping of habitats and species distribution, dialogue for integrated management planning that takes into account nature functions and military use.

Business and biodiversity

Several actions related with business sector have been set up in the framework of the Environment Policy Plan (2003-2007, recently extended till 2010).

- **Sector-specific platforms** have been established under the Department for Environment, Nature and Energy for exchanging information and sharing experience between administrations of the regional environment authority and user groups such as: Environment and Agriculture, Environment and Industries, Environment and Consumers. The main objectives of these platforms is to look into (1) possible common programmes in which the actors agree to take up their responsibilities and through which the environmental performance can be improved; (2) cooperate for improving jurisdiction and instruments and sector specific objectives.

The objectives of the Agency for Nature & Forests include other specific actions to enhance the integration of biodiversity concern and measures for conservation with socio-economic objectives:

- Aspects that are being explored include the **development of incentive measures** such as green taxes, support for land rehabilitation and restoration of nature and landscape values, support for private – public partnerships for biodiversity conservation actions
- New ways are being explored for effective **integration of biodiversity** into sectoral economic activities, such as improving the biodiversity content of environmental impact assessments, site management and conservation of biodiversity on domains of private companies, sustainable provision of raw materials, sustainable harvests and resource management, certification schemes,…
- **Consultation groups** are set up between the Agency for Nature & Forests and: Drink Water Companies, Waste Water Management (Aquafin), Waste Handling Companies (Remo), the Departments Waterwegen & Zeekanaal (Waterways and Sea Canal) and De Scheepvaart (Shipping), Port Authorities to discuss environmental impact assessments and other approaches, finding best solutions for limited impacts and for mitigation and/or compensation measures and identify voluntary practices to enhance natural carrying capacity and ecosystem functions. For example, there is a cooperation agreement between the Agency for Nature & Forests and REMO for the implementation of an 'Action plan for restoration and development of habitats' on the sites of the waste management company. There is also a strategic planning process for harbour development located in Natura 2000 sites that includes actions for restoration and conservation of habitats and species.
- **Consultation group** between Agency Nature & Forests, the Department Natural Resources and the Quarry Companies for sand and gravel exploitation to explore relation with biodiversity values and the proposed locations for the quarries, and discuss options for finding best solutions for limited impacts in the framework of EIAs, and for compensations and rehabilitation of natural values after their exploitation. For example with the sand mining company SIBELCO a cooperation agreement was developed to restore the natural values after the sand winning.
- With the private sector in energy production from biomass ways are explored for effective production and retail of biomass from the Agency's nature and forest areas.
- Consultation and advisory committees have been set up with several sector groups to enhance integration of biodiversity issues into their policies: agriculture, river fisheries, foresters, hunters.

Cooperation with local authorities

Under the Cooperation Framework with local authorities municipals receive financial and technical support for projects they submit for nature conservation actions. 226 out of 318 municipalities undersigned the cooperation agreement for 'nature', and 122 projects for specific actions received financial support. About 50% of these projects concerned acquisition and restoration of nature of forest areas, 14% for species protection actions. The other projects include installation of green roofs, development and implementation of management plans for parks and for road or river verges.

Private-public partnerships and stakeholder involvement

- The private-public cooperation project that was established for the protection of natural and cultural heritage of the Herkenrode abbey and its surrounding areas provides a framework for the restoration of the Herkenrode classified monument as well as for the restoration and development of the natural values of the abbey garden, agricultural land and orchards. The project includes partners from the environment administration, tourism department, provincial authority and private sector.
- Private forest owners are organised in forest groups which receive technical and financial support for the development and implementation of forest management plans that take into account forest biodiversity aspects.
- Commissions have been established with the provincial river fisheries representatives and anglers groups for an integrated planning and follow up of management measures of fish populations and river systems.
- Hunters are organised in Wildlife Management Units that receive technical and financial support for the planning and implementation of hunting activities and wildlife management measures.
- With the Youth Organisation a charter was signed in 2005 describing ways and means for the use of nature sites and forest areas for their out-door activities while ensuring protection of natural values. The National Park Hoge Kempen integrates objectives for socio-economic activities, recreation networks and measures for biodiversity conservation and awareness raising.
- The NGO Natuurpunt sets up partnerships with private companies for nature development and species protection measures on the areas around their buildings, and developed fact sheets to enhance such practices by others.

3. Walloon Region

Water management

- **Morphological quality of watercourses**: out of the 354 bodies of surface water in the Walloon Region, around 70 % are qualified as «natural», 25% are «heavily modified» (in other words, penalised by major obstacles to the circulation of fish or with artificial banks), and the remaining 5 % are «artificial» surface water bodies (canals). The EU Water Framework Directive stipulates the implementation of a network monitoring the hydromorphological quality of watercourses. The Walloon network will be operational by 2009. A better understanding of the physical status of watercourses should help target and adapt measures already included in the Walloon project of river basin district management plan. The main actions aim to prohibit access to the watercourses for cattle, to restore the functionality of rivers or to manage watercourses and their annexes in an ecological manner. http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p089.
- **Ecological quality of watercourses**: in 2007, more than 65 % of the 54 sites in the surveillance network presented water of good or high ecological quality. While water is generally of a (very) good quality in forest areas, it often becomes bad where there is a high level of urbanisation, industry and intensive farming. The number of sites where the ecological quality of the water is moderate to very

good has slightly improved over the last 15 years. This improvement is connected to increasing awareness on the part of the general public (in particular through River Contracts) and new legislation, the effects of which have been seen in the increase in the level of treatment of waste water and the reduction in pollutant waste water discharges. The implementation of the "Programme de gestion durable de l'azote en agriculture" and the ecological restoration of watercourses also seem to have had positive effects. http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p090.

Agriculture

- The **agri-environmental measures** largely relate to biodiversity, the landscape and protection of surface and underground waters. At the end of 2006, nearly half of farmers were involved in one or more agri-environmental measure. The most successful measures were those for hedges, isolated items (trees, ponds) and winter coverage of the ground before a spring crop. More than 9,600 km of hedges were subsidised as AEMs in 2006, while nearly 25,000 hectares of fields were given winter coverage (just under 20 % of the land covered by the main arable spring crops). The agri-enviromental programmes are reviewed regularly in order to target the most effective measures and priority zones from an environmental perspective. Comparing the situation in the Walloon Region at the end of 2006 with the aims of the Plan wallon de Développement Rural (PDR) 2000-2006(2) shows that apart from the lengths of hedges and maintenance of low livestock densities, which have been very successful, the aims of the PDR have generally only been 50 to 80 % successful. It should also be observed that the budget allocated to the AEMs was 14.2 million € in 2007, which was five times the 2004 budget. http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p018.

- The number of **organic farms** and their cultivated areas are on the rise. At the end of 2007, organic plots covered 29,200 hectares (mainly grazing land), or 3.9 % of the agricultural land used. The recent increase (2006 and 2007) can be explained by the implementation of a more generous regional support scheme (subsidies) and a more encouraging context (increased awareness of producers and consumers). http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p019.

Forestry

- A new **Forestry Code** entered in force in Wallonia end 2008. The aim of the new code is to safeguard the regeneration and sustainability of forests, as well as an optimum dynamic balance between its economic, ecological and social roles. Certain objectives are imposed on both public and private land owners (choice of species appropriate to local conditions, diversification, measures favouring biodiversity, restricting clear cutting, drainage and input, reasonable opening up to the public, etc.).
- In the Walloon Region, PEFC **certified forests** cover nearly 268,000 ha, or 49% of the Region's forest areas. Nearly 90% of certified forest land belongs to public landowners. In 2006, a new 'Plan de progrès pour la gestion forestière wallonne' (for documents, go to http://www.pefc.be) was drawn up for 2007-2011 by a task group which included all stakeholders. It contains 11 objectives organised into 27 actions. http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p022.

Land use planning

- Wallonia's 23 'plans de secteur' (land use planning) mainly aim to manage the pressure that urbanisation puts on the area by defining zones which can be built on (270,000 ha) and zones to be used for agriculture, forests, or wildlife (1,400,000 ha). The areas defined in the 'plans de secteur' largely correspond to actual use for agricultural land (91% of agricultural land in agricultural zones) and forest land (88% of forests in forest zones). However, 27 % of the wildlife areas defined in the PDSs are built on. http://environnement.wallonie.be/eew/rapportproblematique.aspx?id=p001.

- The **principle of compensation**: since 2005 in Wallonia, any new zone to be urbanised must be compensated either by a modification going in the other direction, for a similar-sized area not to be urbanised (agricultural, forest, natural, etc.), or by "alternative compensation defined by the Government". Furthermore, the implementation of urbanisation projects within the framework of the ZACCs (zones d'aménagement communal concerté) depends on an urban and environmental report which must look at the impact that the projects may have.

Military areas

- **Cooperation agreement with the Ministry of Defence** for the management of the nature areas on military domains. The agreement includes nature areas on the various military domains covering in total about 15.000 ha in Belgium for which management plans are being developed, implementation of measures for restoration and management, and monitoring is being carried out. Part of the costs is covered by the income of wood sale. A large part of this surface is also designated as Natura 2000 for which an important LIFE-Nature project supports large scale restoration actions, mapping of habitats and species distribution, dialogue for integrated management planning that takes into account nature functions and military use.

Local authorities and stakeholder involvement

- Several initiatives on the basis of the **participatory approach** contribute to biodiversity protection in Wallonia: Municipality plans for Nature development (PCDN), Nature Parks, and River Contracts (Contrats de Rivières). They include actions in favour of biodiversity conservation and protection at local scale. Two other nature development programmes focus on "roadside management" (e.g. through late mowing) and "attics and steeples". In 2007, 62 % of municipalities were involved in one or two programmes and 18 % in three programmes. Four municipalities are involved in all of the programmes. There were 47 municipalities which were not yet involved in any programmes. The most successful programmes are the «roadside» and «attics and steeples» conventions.
  http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p115
- **River contracts** are participative management structures whose aim is to bring together everyone working in the same water catchment basin, whether they come from a political, administrative, financial, associative or scientific background, in order to define a programme for restoring watercourses and their surrounding areas in a consensual way. Since 1993, 19 river committees have been formed, working on 19 river basins covering more than 78 % of Wallonia. Furthermore, 196 Walloon municipalities have become partners in a river contract. The total land area covered by signatory municipalities is ± 12,000 km2, or 71 % of the region. the river contracts currently incorporate more than 5,000 actions, the majority of which (69 %) are intended to practically preserve and improve the qualitative (physical, chemical and biological), quantitative, historical and aesthetic aspects of watercourses.

Business and biodiversity

Some examples of public-private partnerships:
- Elia (and formerly Electrabel) have signed conventions with the Nature and Forest administration for the ecological management of areas under high-voltage electrical lines.
- Electrabel (electricity provider) sponsors several projects including the 'Aquascope de Virelles', an interpretation centre on wetland areas
- Electrabel, Triodos, Vivara are partners of the nature protection organisation Natagora
- Interbrew (In-Bev, a brewery multinational) sponsors a prize for nature conservation initiatives
- Valvert (mineral water company) finances a Nature Film Festival.

- GlaxoSmithKline has a programme for the rehabilitation of wetlands around one of its site and has a public awareness programme for its staff members.
- Natagora has established partnerships with private companies for the greening of spaces around their buildings and infrastructure (nature-friendly development of sites).
- There are conventions with quarry companies for the preservation of swallow populations.
- There are rehabilitation plans set up with cement quarry companies so that sites that are not exploited anymore can be returned to natural areas.
- ECOSEM is a private company (university spin-off) specialised in the production of indigenous seeds and plants of local provenance.

Consultation groups and advice bodies

- A consultative group has been set up within the Walloon administration to have clear indications on which agricultural lot can benefit of agricultural financial aids. Natura 2000 sites and Natural reserves have now a particular status so as to continue to benefit from these measures even if not totally in agreement with previous specifications.
- A new group has been set also within the Walloon administration to better take into account the environment in cross compliance.
- A platform has been set up to identify what could be improved for biodiversity conservation in the CWATUPE (Code wallon de l'aménagement du territoire, de l'urbanisme, du patrimoine et de l'énergie).

Budgets for nature development

While they only represent a part of the resources to be mobilised, the budgets dedicated to nature development provide information about the action potential taken by the authorities, as well as about the major focuses for work undertaken in this area. The budgets for nature development have been recently going up slightly in Wallonia: + 54% for the period 2005-2008. More than 40% of the budgets are allocated to protection and management measures for sites of biological interest (purchase and management of natural reserves, LIFE Nature programmes for the conservation of Natura 2000 habitats etc.). The relative significance of budgets for the support of themed operations management should also be noted («attics and steeples», roadsides, PCDNs, etc.). They represent around 10 % of the total budget, depending on the year. http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p116.

4. Brussels-Capital Region

Land use planning

One of the most important threats to biodiversity in Brussels is urbanization. The integration of biodiversity in land use policy is not easy. Nevertheless, the Regional plan of soil allocation (PRAS) indicates the sites where nature conservation has the priority. A distinction is even done between high nature value areas and other nature areas. This plan needs to be completed and actualized. In the mid-term, it should integrate the Brussels ecological network. See: http://www.pras.irisnet.be/PRAS/.

Forestry

Important efforts are done to integrate biodiversity considerations in the forestry policy. The Brussels Sonian Forest covers 1 654 ha, i.e. about 10% of the regional territory. It belongs to the Natura 2000 network and benefits of a specific management plan which largely takes nature into account. The goals of the management plan are: enhance forest biodiversity, maintain or restore some of particular ecosystems,

partially maintain the cathedral beech grove, secure a diversity of quality landscapes, enhance the historic and cultural patrimony, maintain the forest clean, welcome the public, satisfy public demands for recreation and provide a good cohabitation between multiples activities, limit activities that could damage the soils, inform and heighten public awareness on nature and sustainable management, protect water resources of the site, tend towards natural regeneration of forest stands. In addition, the management of the Sonian forest respects the criteria of the *Forest Stewardship Council* (FSC) who gave their first attestation (IMO-FM/COC-23023) on 25 November 2003.
http://www.bruxellesenvironnement.be/Templates/Particuliers/Informer.aspx?id=1840&langtype=2060.

Management of public green spaces

Certainly to be mentioned is the Brussels effort to manage green spaces as biodiversity-friendly as possible. It is called "differentiated management". No pesticides are used, favour is given to native species, dead trees are maintain as long as people security is secure, grass are less often mowed where compatible with the recreational demand.
http://www.bruxellesenvironnement.be/Templates/Particuliers/Informer.aspx?id=1834&langtype=2060.

Eco-construction

Lots of efforts are made towards the **architects and the construction sector**, among others with the publication of a guide book on eco-construction for professionals. Several chapters concern biodiversity:
- How to maximise ecological productivity (based on the Biotope Area Factor developed by authorities for the city of Berlin, Germany) (fiche TER 05)
- How to build green roofs (fiche TER06)
- How to set up green walls (fiche TER07)

Training workshops are also organised for professionals.
http://www.bruxellesenvironnement.be/soussites/guide/(S(1doljvr1xfrqbm2jfydvoebe))/Guide.aspx?langtype=2060

5. Federal level

A federal plan for the sectoral integration of biodiversity in four key sectors will be adopted by the federal government in 2009. This plan is a response to the 'Second Federal Plan for Sustainable Development 2004-2008' (FPSD2) adopted by the Federal Council of Ministers on 24 September 2004.

The federal plan for the sectoral integration of biodiversity was elaborated by four multi-stakeholder committees representing respectively the major actors in the field of transport, economy, development cooperation and science, as well as environment. The committees were chaired by the ministerial departments in charge of the sectoral activity concerned, while the secretariat was carried out by the federal ministry of environment. Table 4 highlights the composition of the committees.

Table 4. Committee members involved in the preparation of the federal plan for the sectoral integration of biodiversity. The brackets refer to the category of stakeholder.

Sector	Chair	Members
Transport	Mobility and Transport	Mobility and Transport (administration) Environment (administration) National railway company (SNCB-NMBS) (agency)
Economy	Economy	Economy (several departments) (administration) Environment (administration) Finances (customs) (administration) Foreign Affairs (administration) Sustainable development (administration)

		Export credit agency (Ducroire-Degueldere) (agency) Royal Belgian Institute of Natural Sciences (scientific institution)
Development cooperation	Foreign Affairs (Development Cooperation)	Foreign Affairs (administration) Foreign Affairs / partim Development Cooperation (administration) Environment (administration) Sustainable development (administration) Belgian Technical Cooperation (agency) Federal Council for Sustainable Development (advisory body) Royal Belgian Institute of Natural Sciences (scientific institution) Royal Museum for Central Africa (scientific institution) National Botanic Garden of Belgium (scientific institution) Vrije Universiteit Brussel (university) KWIA/VODO asbl (NGO)
Scientific policy	Science Policy	Science Policy (administration) Environment (administration) Royal Belgian Institute of Natural Sciences (scientific institution) Royal Museum for Central Africa (scientific institution) National Botanic Garden of Belgium (scientific institution) Institute of Public Health (scientific institution) Veterinary and agrochemical research centre (scientific institution)

A steering committee gathering the responsible person of each sectoral committee ensured coherence of the whole process. A public consultation took place between 1 November 2008 and 3 January 2009. The adoption of the plan by the federal government is foreseen in September 2009.

The plan identifies, for each sector, a number of concrete actions (with identification of the responsible for the implementation, timing, etc). The plan highlights links between actions and the relevant objectives of the National Biodiversity Strategy.

For each sector, different key areas with several concrete actions each have been identified:
- **Transport**: maritime transport (limitation of introduction of invasive alien species), construction, use and the dismantling of ships, Belgian Railways Company.
- **Economy**: the question of bio-energy, economic and financial (federal) instruments, access and benefit sharing, private sector involvement, sustainable use of biodiversity.
- **Development cooperation**: traditional knowledge; capacity building; communication, education, awareness raising; environmental assessment of development cooperation activities, integration of biodiversity in policies of partner countries; ex situ conservation; climate and biodiversity.
- **Science policy**: biodiversity integration in all research sectors, tools to improve access to data and information, mobilize scientific competences in support of sustainable development policies.

As far as the Belgian part of the North Sea is concerned, the policy plan for the management of the marine protected areas includes a number of actions, which target specific sectors, in particular the fishery sector and the harbours. The policy plan foresees structural agreements and cooperation with these sectors to prepare appropriate measures to restore the favourable state of conservation for threatened habitat types and species.

One cross cutting action is also identified in the plan (applying to the four sectors):
- Effective integration of biodiversity when making strategic environmental assessments.

Although the action plan is not yet adopted, some actions have already been started, as highlighted below.

Economy

- **Biofuels**: a study evaluating the biodiversity impact of the development of agro-fuels, including genetically modified plants, in Belgium has just been finalised (under funding by the federal environmental administration). This study comprises three main parts: study of the environmental (biodiversity) impacts; analysis of the socio-economic impacts; and policy recommendations.
- **Invasive alien species**: a legal framework aiming at preventing the introduction of IAS in Belgium is being finalised. This legal framework aims to regulate import, transit and detention of non-indigenous invasive species that are assumed to be detrimental to native species in Belgium (based on a simplified environmental impact assessment protocol) and that are not yet established in Belgium (or isolated).
- **Financial mechanism**: a study has been launched to identify possible federal mechanisms that could be designed for financing federal actions to integrate biodiversity in other sectors (fiscal measures, establishment of a biodiversity funds, etc.)

Development cooperation

- **Mainstreaming of biodiversity**: With regard to the mainstreaming of biodiversity, Belgium supports the development of UNEP-IUCN TEMATEA modules to promotes synergies at national and international level to ensure the coherent implementation of biodiversity-related agreements, such as the biodiversity-related conventions (UNCBD, CITES, Convention on Migratory Species, Ramsar and the World Heritage Convention), the Rio conventions (UNFCCC, UNCCD), regional agreements and others, and organizes national thematic workshops on the use of the modules.
- **Training and capacity building**: the Belgian Directorate General for Development Cooperation finances biodiversity capacity building programmes through the Royal Belgian Institute of Natural Sciences and the Royal Museum for Central Africa. These programmes are specifically dedicated to the following CBD cross-cutting issues: the Clearing-House Mechanism, Global Taxonomy Initiative, Communication, Education and Public Awareness and Identification, Monitoring, Indicators and Assessments.

Science policy

- **Invasive alien species**: as a contribution to the set up of an early warning system, an alert list of invasive alien species in Belgium has been elaborated based on a standardised impact assessment protocol (ISEIA). It was carried out as a collective effort by the Belgian Forum on Invasive Species, which is maintained by the Belgian Biodiversity Platform. It is not exhaustive and will be progressively completed. Species profiles including description, habitat preferences and detrimental impact are currently in development. See: http://ias.biodiversity.be.

Cross cutting issues

- **Environmental strategic assessments**: Development of a SEA handbook to guide the managers of plans and programs and/or the persons in charge of the environmental assessments. The handbook includes criteria relating to the biodiversity, based on CBD guidelines.

The follow up of the federal plan for the integration of biodiversity in four sectors will rely on annual reporting of data (ideally based on performance indicators) during the implementation of the plan. The four committees 'economy', 'development cooperation', 'science' and 'transport' will draft an annual follow-up report identifying measures implemented. Reports will be based on the evaluation of positive and negative effects of integration measures implemented (desired or not). A mid-term review will be organised, as well as a final assessment, in order to identify strengths and weaknesses of the implementation and, if relevant, address potential gaps.

Chapter IV - Conclusions: Progress towards the 2010 Target and Implementation of the Strategic Plan

1. Progress towards the 2010 Target

<table>
<tr><td>Goals and targets</td><td>Relevant indicators</td></tr>
<tr><td colspan="2">Protect the components of biodiversity</td></tr>
<tr><td colspan="2">Goal 1. Promote the conservation of the biological diversity of ecosystems, habitats and biomes</td></tr>
<tr><td>Target 1.1: At least 10% of each of the world's ecological regions effectively conserved.</td><td>• Coverage of protected areas
• Trends in extent of selected biomes, ecosystems and habitats
• Trends in abundance and distribution of selected species</td></tr>
<tr><td colspan="2">Following data from 2008, 1.4% of the Belgian terrestrial and marine territory is protected by nature, forest and marine reserves. This percentage increases to 13.4% when Natura 2000 zones and alike are taken into consideration.

➧ This target is reflected in the National Biodiversity Strategy, strategic objective 3.</td></tr>
<tr><td>Target 1.2: Areas of particular importance to biodiversity protected</td><td>• Trends in extent of selected biomes, ecosystems and habitats
• Trends in abundance and distribution of selected species
• Coverage of protected areas</td></tr>
<tr><td colspan="2">Flemish Region:
. development of ecological network VEN-IVON (objective 125.000 ha VEN, 150.000 ha + interconnecting sites IVON), partly overlapping with Natura 2000 (= ca 163.400 ha); installation of ecoducts and fish passages, agri-environment measures; forest reserves network
. implementation of Natura 2000 through development of Nature Objective Plans, priority setting for acquisition of land, protocols for cooperation (e.g. with ministry of Defence, Port Authorities), agri-environment contracts, financial support of nature development and management projects of local authorities and Regional Landscape Organisations,.
. together with the Netherlands: transboundary ecological planning processes: Grensoverschrijdend Ecologisch Basisplan (GEB), Zwinproject, Schelde estuary, grensparken (bv. De Zoom Kamthoutse Heide), Grensmaas, Drielandenpark (with Germany)
. together with France: conservation measures for the coastal zone between Duinkerken-Lombardsijde, transboundary integral coast reserve De Westhoek
. coastal zone programme for the conservation of sand dunes, sandy beaches and salt marshes: e.g. acquisition of land, restoration projects, integrated management actions.
(see also chapter II, areas under conservation management, Natura 2000)

Walloon Region:
The general concept of the ecological network has been transposed in the 'Main Ecological Structure' (Structure écologique principale or SEP) and has been mapped. This structure contains two types of areas:
. core areas: mainly dedicated to nature conservation</td></tr>
</table>

Goals and targets	Relevant indicators
. ecological development areas: areas where human activities are less intensive in order to obtain a balance between nature conservation and economic incomes. Core areas: the Nature department of the Walloon Region continues to strictly protect natural sites through the following status: government nature reserve (Réserves Naturelles domaniales (RND)), chartered nature reserve (Réserves Naturelles agréees (RNA)), forest reserve (Réserves Forestières (RF)), wetlands of biological interest (Zones Humides d'Interêt Biologique (ZHIB)), and underground cavity of scientific interest (Cavités Souterraines d'Interêt Scientifique (CSIS)), in order to protect important sites for species and habitats. The target of this process is to protect all sites of great biological value on the Walloon territory. Furthermore, the designation of the Natura 2000 sites for the protection of priority species and habitats as meant by the Birds and Habitats Directives covers 220 944 ha for 240 sites in the Walloon Region which corresponds to approximately 13% of the territory. The network is based on the hydrological network so there is a good connectivity between the different sites (http://natura2000.wallonie.be/). In the Walloon Region, 44 habitats of community interest (of which 10 priority habitats), 101 bird species of community interest and 31 other species of community interest are present. ***Brussels-Capital Region***: . blue and green networks, implementation of Natura 2000 network (+ 2.400 ha), . implementation of protected areas in forest, nature and forest reserves, integral reserves, . development of a 'green network' including an ecological network, the promotion of ecological management, green roofs, green walls, trees, etc., . installation of ecoducts, promotion of fauna passages. ***North Sea***: . the 'MMM' (*Marien Milieu Marin*) act of 20 January 1999 on the protection of the marine environment in sea areas under Belgian jurisdiction establishes the legal basis for the protection of the Belgian part of the North Sea against sea-related pollution and for the conservation, restoration and development of nature, . the Royal Decree of 14 October 2005 on the installation of five marine protected areas, . preparation of a policy plan for the management of the five marine protected areas (Natura 2000 network) and agreements with competent authorities (e.g. fishery authorities) to manage these sites; collaboration with France for the management of the transboundary sites. ➧ This target is reflected in the National Biodiversity Strategy, strategic objective 3.	
Goal 2. Promote the conservation of species diversity	
Target 2.1: Restore, maintain, or reduce the decline of populations of species of selected taxonomic groups.	• Trends in abundance and distribution of selected species • Change in status of threatened species
Flemish Region: see also chapter I, e.g. common bird index. The species protection plans that are being implemented concern various bat species under the LIFE project BatAction (also including awareness raising, restoration of habitats in forts), hamster (re-introduction programme with 60 specimens and monitoring of the population, cooperation with farmers), some indicator butterfly and plant species of heath habitats, night jar. Species protection plans for fish species are being evaluated, and for the eel pilot projects have been started up. For endemic tree and scrub species protection plans are being implemented and monitored in the framework of the European Forest Genetic Resources Programme EUGORGEN. For the black popular the restoration	

Goals and targets	Relevant indicators
programme is carried along the Grens-Maas in cooperation with the Netherlands and France. ***Walloon Region***: Many restoration projects are in place such as LIFE projects (conservation of pearl mussel's habitats, restoration of the otter's habitat, restoration of peatlands, management and restoration of military camps, restoration of peatland in the Haute-Fagnes area) and others (restoration of freshwater fish habitats (spawning grounds); study and scientific monitoring in order to restore populations of the Atlantic salmon; inventory of obstacles for fish circulation in the hydrographical network), etc. Besides these projects, the Walloon Region has recovery programmes or action plans for the European hamster, bats (with a particular one for *Rhinolophus hipposideros*), the yellow-bellied toad (*Bombina variegata*), the salmon, the black stork, freshwater mussels (current Life project). A new one is in preparation for the sand lizard (*Lacerta agilis*). ***Brussels-Capital Region***: see chapter I, common bird data. ***Federal level***: target on the conservation of marine mammals (harbour porpoise). ➧ This target is reflected in the National Biodiversity Strategy, strategic objective 3. See also Appendix III (1. Progress towards the Targets of the Global Strategy for Plant Conservation) for more information on seed banks and collections of cultivated and wild plant species.	
Target 2.2: Status of threatened species improved.	• Change in status of threatened species • Trends in abundance and distribution of selected species • Coverage of protected areas
Flemish Region: Development and implementation of species action plans, contracts with land owners for species protection measures (meadow birds, hamster, farmland birds), financial support for birds rehabilitation centres, research for re-introduction projects (e.g. fish species). For status and trends on main species groups: http://www.biodiversityindicators.be. (see also target 2.1 and chapter I, conservation status of species of European interest) ***Walloon Region***: Several projects and measures aim to improve the populations status of threatened fishes species: . restoration of freshwater fish's habitat (spawning grounds), . study and scientific monitoring in order to restore populations of the Atlantic salmon, . protection netting in hydro-electric power station, . management of river banks. Besides these projects and measures, the Walloon Region has recovery programmes or action plans in place (see text for target 2.1 above). Life projects on the corncrake and on birds of reed beds in the 'Basin de la Haine' are finalised. For particular indicators, consult http://environnement.wallonie.be/eew/tablematiere.aspx. It includes a detailed diagnosis of the state of several species groups in Wallonia (mammals, birds, reptiles, amphibians, fishes, dragonflies, butterflies, ladybirds, beetles, vascular plants and non vascular cryptogams). ***Brussels-Capital Region***: Species Action Plan: in development for 9 species (3 butterflies, 4 mammals, 1 bird and 1 amphibian	

<table>
<tr><th>Goals and targets</th><th>Relevant indicators</th></tr>
<tr><td colspan="2">species), see chapter II.
Actions already taken for some bird species:
. swallows: nesting boxes, creation of extra breeding area, etc.,
. bats: nesting boxes, preservation of old trees, restoration and preservation of roosts in buildings (cellars, attics,.).

➧ This target is reflected in the National Biodiversity Strategy, strategic objective 3.</td></tr>
<tr><td colspan="2">Goal 3. Promote the conservation of genetic diversity</td></tr>
<tr><td>Target 3.1: Genetic diversity of crops, livestock, and of harvested species of trees, fish and wildlife and other valuable species conserved, and associated indigenous and local knowledge maintained.</td><td>• Trends in genetic diversity of domesticated animals, cultivated plants, and fish species of major socio-economic importance
• Biodiversity used in food and medicine (indicator under development)
• Trends in abundance and distribution of selected species</td></tr>
<tr><td colspan="2">The ‘Rapport National sur l’état des Ressources Phytogénétiques pour l’alimentation et l’agriculture’ was developed at the request of the FAO and was finalized in January 2009. The report was prepared by a multidisciplinary team constituted by experts out of the three Belgian regions. Several meetings were held during 2008 to develop and finalize the report.

In 2005, Belgium prepared its first national report to FAO on animal genetic resources: ‘Les ressources génétiques des animaux d'élevage en Belgique. Rapport national à la FAO. Contribution de la Belgique au Premier Rapport sur l'État des Ressources Zoogénétiques dans le Monde’.
http://agriculture.wallonie.be/apps/spip_wolwin/IMG/pdf/RapportNationalFAO.pdf

Flemish Region: a specific indicator is under development.

Walloon Region: a new agri-environment measure aims to protect threatened local livestock species.

➧ This target is reflected in the National Biodiversity Strategy, strategic objective 4.</td></tr>
<tr><td colspan="2">Promote sustainable use</td></tr>
<tr><td colspan="2">Goal 4. Promote sustainable use and consumption.</td></tr>
<tr><td>Target 4.1: Biodiversity-based products derived from sources that are sustainably managed, and production areas managed consistent with the conservation of biodiversity.</td><td>• Area of forest, agricultural and aquaculture ecosystems under sustainable management
• Proportion of products derived from sustainable sources (indicator under development)
• Trends in abundance and distribution of selected species
• Marine trophic index
• Nitrogen deposition
• Water quality in aquatic ecosystems</td></tr>
<tr><td colspan="2">Flemish Region:
Code of good practices have been developed and are being applied or are under development:
. for nature with guidelines for the management of protected vegetation types,</td></tr>
</table>

Goals and targets	Relevant indicators
. for agricultural uses based upon integration of environmental issues, . for river fishing practices. The Flemish forest policy is based upon multifunctional and sustainable forestry and applied through development of a management vision consisting of: . specific and concrete guidelines for a close-to-nature forest management, . a framework to assess the forest functions, . a method for quality control, . promotion and granting of FSC-label to forest, . publication of criteria for sustainable forest management and technical/financial support for the implementation these criteria by private forest owners (see chapter III, area with management plan according to the criteria for sustainable forestry). Incentives are provided for the use of criteria for sustainable forest management in the management planning and implementation. Organised and controlled hunting in Wildlife Management Units (WMU) is promoted so that hunters can act as joint managers of the open space. Principles, criteria and indicators are being developed to evaluate the sustainability of the implementation and hunting plans and to review policies. ***Walloon Region***: Many tools are available to improve sustainable forest management: . The '*Circulaire relative aux aménagements dans les forêts soumises au régime forestier*' is a normative tool for the management planning in public forests (255.000 ha in Wallonia). At this stage, about 65% of the forest area is covered by new management plans following this circulaire. The remaining area should be covered by 2013, . financial incentives are available both for public and private owners, with multifunctional objectives, such as the improvement of the trees diversity, special emphasis to the broadleaves, etc. . several experiences have been initiated for close to nature forestry, in the framework of Pro Sylva, both for broadleaves and conifers, . about 150.000 ha of forests are included in Natura 2000 areas. Management contracts will be concluded between the authorities and the owners, to implement the objectives of each site. (see also chapter III). Some other measures and tools: . organic farming, agri-environmental measures, forest certification, nature development programmes, new forest code, . the Walloon Region has adopted the Water Code (Code de l'Eau) on 27 May 2004 to implement the Water Framework Directive. One of its objectives is to prevent additional degradations and to preserve and improve the state of the aquatic ecosystems as well as of the terrestrial ecosystems and wetlands depending on them. ***Brussels-Capital Region***: . sustainable forest management: FSC certification, . guidelines of ecological management applying to urban green spaces, . prohibited use of pesticides, . publication of an eco-construction guide book as well as training for professionals. ***Federal level***: . development of a federal public procurement policy to promote SFM (circular letter in 2005); a	

Goals and targets	Relevant indicators
methodological guide supports federal purchasing authorities; promotion and follow-up of forest certification, . an information campaign was set up to inform the public on SFM and related certification (2006 and 2007), . adoption of the 'products plan: towards an integrated product policy', . the development of biofuel production pathways/chains is conditioned by the application of a system of sustainability criteria (European directives on Renewable Energy and Fuel Quality 2009/28/CE published in June 2009). Those criteria represent the main measures to allow reasonable use of biofuels while limiting negative impacts on biodiversity. According to the law of 10 June 2006, which promotes biofuels in Belgium, the approval of biofuel production units is based on certain criteria, such as: (1) a short distance between biomass cultivation site and biofuel production unit; (2) the most favourable CO2 balance; (3) the energetic efficiency of the production unit; and (4) reduced use of fertilizers and/or pesticides. Decision rules with respect to the approval of production units also take into account the global CO2 balance, in order to assure that biofuel production leads to a significant reduction of greenhouse gases. However, apart from the use of fertilizers and/or pesticides, no biodiversity-related criteria are included in the attribution criteria. Moreover, these criteria are fixed until 2013. Ongoing: . establishment of a steering committee on sustainable production and consumption patterns, . a conference on socio-economic impacts of GMOs will be organised early 2010. ➧ This target is reflected in the National Biodiversity Strategy, strategic objective 4.	
Target 4.2. Unsustainable consumption, of biological resources, or that impacts upon biodiversity, reduced.	• Ecological footprint and related concepts
Flemish Region: *Ecological footprint of the consumption of renewable natural resources* In order to produce renewable natural resources, biologically productive land is required: e.g. farmland for crops and livestock, forest land for wood, and water bodies for fish. The ecological footprint of renewable natural resources consumption of a certain region is defined as the area of biologically productive land which is required to fulfil these consumption needs. The ecological footprint of renewable natural resources consumption is measured in 'universal hectares', which refers to the world average biological productivity of one hectare. On a global scale, there are 1.8 universal hectares of biologically productive land available per person (1999 data). This means that on average, the land required to produce all the renewable natural resources and energy needs for one person should not exceed 1.8 ha. In 2002, the ecological footprint for renewable natural resources in Flanders was on average 1.94 universal hectares per person, but excluding energy consumption. Since on average, only 1.8 universal hectares of biologically productive area is available per person, it is clear that each Flemish inhabitant requires more than the average available area per person on the globe. Under these conditions, halting the loss of biodiversity becomes a difficult task. At the moment, 59% of the area necessary to satisfy Flemish consumption is located abroad. This applies mainly to farmland producing energy-rich feed crops for Flemish livestock. As such, the environmental pressure caused by the Flemish region is partly exported. The only change between 1993 and 2002 was a reduced pressure on forest resources thanks to an increased recycling of paper fibre. New research on the ecological footprint will result in more actual and precise data in the following MIRA-report. ***Brussels-Capital Region***: The mean ecological footprint, including energy consumption, has been calculated for Brussels citizen:	

Goals and targets	Relevant indicators
6.5 ha, which is less than the Belgian average (see: http://www.wwf.be/fr/?inc=page&pageid=308). A calculator has been developed to raise awareness among Brussels citizens: http://www.ibgebim.be/soussites/empreinte_ecologique/index.html. ***Walloon Region***: *Assessment of environmental efficiency* http://environnement.wallonie.be/eew/rapportpartie.aspx?id=pa2 Within the framework of the Lisbon and Gothenburg strategies, the European Commission has drawn up a list of 20 structural indicators which it can use to monitor and assess the environmental performance of Member States. The table available through the following link enables Belgium and the Walloon Region to be compared with the European averages and positioned with respect to other Member States and enables an evaluation of the progress made: http://environnement.wallonie.be/eew/rapportproblematique.aspx?id=p137. ➧ This target is reflected in the National Biodiversity Strategy, strategic objective 4.	
Target 4.3: No species of wild flora or fauna endangered by international trade.	• Change in status of threatened species
Belgium is a Party to CITES. This target is consistent with the main purpose of CITES and the CITES Strategic Plan: "No species of wild flora or fauna subject to unsustainable exploitation because of international trade". The first Federal Plan for Sustainable Development (2000-2004) mentions: "enforcement of CITES will be strengthened so as to support the policy of biodiversity conservation (training experts, providing inspectors, intensifying controls)". ***Federal level***: Different actions and initiatives have been undertaken in order to enforce the application of CITES at a Belgian level in order to contribute to the general goal of CITES. A short overview is given below. *Controls* The controls with regards to CITES are largely intensified, with a peak of controls for birds of prey in 2008-2009. Also several actions with regards to the new requirements in the labelling of caviar were organised. *Formation* A team of inspectors has followed an intensive one-week study in France about CITES-control and implementation in April 2009. A course was organised for customs officers about CITES-listed wood species. A second course concerning the new legislation and marking of caviar was organised and given to several customs officers, federal police, FASFC (Federal Agency for the Safety of the Food Chain) and our own inspection team. *Organisation* A Belgian application Group was formed in April 2007 which consists of members from the different regions, the federal police, the FASFC, customs officers and a representative of the Attorney General. This Group wants to improve the application of CITES legislation in Belgium and will meet two times per year, in accordance with the European Application Group. Several small working groups are also formed with a specialised subject, e.g. birds of prey.	

Goals and targets	Relevant indicators
Communication A leaflet was made to inform tourists about the requirements for the importation of certain souvenirs. This brochure is distributed at the national airport, via travel agencies, town houses and several websites. ***Flemish Region***: by law, wild indigenous protected species cannot be subject of trade. See chapter I, conservation status of species. ***Walloon Region***: the law on nature conservation stipulates that protected species cannot be the subject of any trade. ***Brussels-Capital Region***: wild mammals, birds, amphibians or reptiles may not be the subject of any trade. ☛ This target is reflected in the National Biodiversity Strategy, strategic objective 5.	
Address threats to biodiversity	
Goal 5. Pressures from habitat loss, land use change and degradation, and unsustainable water use, reduced.	
Target 5.1. Rate of loss and degradation of natural habitats decreased.	• Trends in extent of selected biomes, ecosystems and habitats • Trends in abundance and distribution of selected species • Marine trophic index
Flemish Region: . Monitoring and reporting of pressures: 2-yearly reports NARA and MIRA - see chapter I. . Nature conservation policy measures: extension of surface and numbers of nature and forest reserves; development and implementation of Nature Objectives Plans, site or species specific management plans for nature and forest areas, management agreements with local authorities and land users (+ cross-compliance), introduction of criteria for sustainable forest management; legal framework for protection scheme for FEN and Natura 2000 sites. . EIA-procedures imposed for development projects, licenses needed for alteration of bottom relief, vegetation and hydrological system; stricter protection regimes in FEN and Natura 2000. . The use of pesticides and herbicides by local authorities in public domains or parks is forbidden since January 2004. . Several projects have been carried out for the defragmentation of roads dividing important natural areas by construction of ecoducts, and on river systems by installations resolving fish migration barriers. ***Walloon Region***: . The Walloon Region has adopted the Water Code (Code de l'Eau) on 27 May 2004 to implement the Water Framework Directive. One of its objectives is to prevent additional degradations and to preserve and improve the state of the aquatic ecosystems as well as of the terrestrial ecosystems and wetlands depending on them. . Environmental impact assessment studies are required for new activities near or in Natura 2000 sites. . Protected zones of the '*Code wallon de l'Aménagement du Territoire, de l'Urbanisme et du Patrimoine*' may not be changed anymore without an urban permit. (see also chapter I, invasive alien species)	

Goals and targets	Relevant indicators
Brussels-Capital Region: . EIA-procedures are imposed for disturbing activities, large building activities, development of infrastructure, etc. . Licenses are needed for every activity that could alter relief and vegetation of sites having biological value on the zoning plan and sites belonging to the green network. . Prevention of water pollution originating from motorways. . Limitation of pollution: no use of pesticides. . Invasive exotic species: special attention is given to their management to prevent extension; eradication is performed where and when possible. . Establishment of non accessible forest and nature reserves to develop biodiversity islands in the forest. ***Federal level***: . Joint Implementation and Clean Development Mechanism projects. . Extensive pesticide risk reduction plan (March 2005). . SEA procedures include biodiversity criteria and refer to relevant national policy documents such as the Belgian Biodiversity Strategy, the CBD and biodiversity-related conventions and agreements. *North Sea* . Sand and gravel extraction, dredging and dumping of dredge spoil are subject to licences. Zero tolerance policy in relation to oil pollution. . Development of a cleaning policy of the North Sea through the 'fishing for litter programme'. . Measures regulating coastal fisheries in protection of marine mammals. . Ongoing actions in order to reduce import of nutrients and hazardous substances into the North Sea. . A Biosafety Consultative Council (involving representatives of federal and regional levels) is in charge of environmental risk evaluation of GMOs introduced for field trials in Belgium or for commercialisation in the EU. National sanctions are foreseen to punish violations to EU legislations on GMOs. ➧ This target is reflected in the National Biodiversity Strategy, strategic objective 3.	
Goal 6. Control threats from invasive alien species	
Target 6.1. Pathways for major potential alien invasive species controlled.	• Trends in invasive alien species
The National Biodiversity Strategy identify the following strategic and operational objectives directly related to IAS: . strategic objective 3: Maintain or rehabilitate biodiversity in Belgium to a favourable conservation status (operational objective 3.7.: "Avoid the introduction and mitigate the impact of invasive alien species on biodiversity"), . strategic objective 5: Improve the integration of biodiversity concerns into all social and economic sectoral policies (operational objective 5.7.: "Consider the potential impact on biodiversity, and in particular the invasiveness of species, in making import and export decisions"). ***Flemish Region***: It is prohibited to introduce animals and plants without a permit (Forest Decree) in both public forests and forest reserves. The introduction of alien animal species is prohibited, and there is a legal base for measures to control and eradicate alien animal species. Measures can also be taken to control or prohibit the transport of animal species and their carcasses (Decree on nature conservation). A decision describes what species of fish can be used as fish bait (only native fish species are allowed). See also	

Goals and targets	Relevant indicators
chapter I, number of alien species. ***Walloon Region***: The introduction of non-indigenous species or indigenous species of non-indigenous origin in nature is forbidden except for species used for agriculture and forestry (see chapter I). ***Brussels-Capital Region***: It is forbidden to introduce non-indigenous species of birds into the wild. But the number of invasive alien species is increasing in the Brussels-Capital Region (see chapter I). An action plan for the control of three species of parakeets is in preparation (see chapter II). ***Federal level***: Action 18 of the second Federal Plan for Sustainable Development is devoted to biodiversity and focuses on sectoral integration of biodiversity in key federal sectors (transport, economy, development cooperation and scientific policy). The action plan 'Integration of biodiversity in the four federal key sectors' (in preparation, adoption expected in September 2009) will address IAS. Actions foreseen in this action plan include (see chapter III for achievements at federal level): . Economy: the consultation of key sectors in order to increase awareness and understanding of the issue and the identification of the most appropriated measures (such as e.g. labelling, substitution, information, etc.) and the review, actualization and extension of existing legislations at federal level to prohibit the import / export / transit and detention of some IAS in Belgium. . Science: the establishment of an early warning system on IAS. . Transport: the control and management of ballast water. The Belgian Law of 20.01.1999 (MMM law) forbids the intentional introduction of non-indigenous species in the marine environment without special license (Art. 11, §1). A royal decree will be adopted in the second part of 2009 to implement the Council Regulation dealing specifically with alien species in aquaculture (708/2007/CE) with regard to marine species. The Royal Decree of 9 April 2003 foresees measures related to the commercialisation of species listed in annex A (excepted for specimens bred in captivity, with CITES certificate).	
Target 6. 2. Management plans in place for major alien species that threaten ecosystems, habitats or species.	• Trends in invasive alien species
This target is reflected in the National Biodiversity Strategy through strategic objective 3: Maintain or rehabilitate biodiversity in Belgium to a favourable conservation status / operational objective 3.7.: "Avoid the introduction and mitigate the impact of invasive alien species on biodiversity". Management plans have been established. Two international projects were set up to combat the muskrat: one between East- and West-Flanders and Zeeland, another between West-Flanders, the North of France and the Walloon Region. A third international project, aimed at the coypu this time, is being set up for the moment involving the Belgian and Dutch provinces of Limburg, and Germany. The Belgian Forum on Invasive Alien Species (BFIS) provides and gathers scientific knowledge about invasive alien species. ***Flemish Region***: The Decision of the Flemish Government of 21.04.1993 prohibits the introduction into the wild of non-native animal species, unless a special permit is being granted. An integrated and updated executive law for species protection is submitted for approval. This law includes the basis for the prevention and control of invasive species.	

Goals and targets	Relevant indicators
Several research programmes includes monitoring, assessment of impacts and development of control, mitigation and/or eradication programmes: . assessment of the risks posed by the muskrat (*Ondatra zibethicus*) and coypu (*Myocastor coypus*) not only to dikes, crops and vegetation but also to also to local fish, amphibians, breeding bird species, . monitoring and eradication of exotic plant species in nature and forest areas under management, . project for removal of floating pennywort (*Hydrocotyle ranunculoides*) from watercourses, . monitoring and inventory of fish occurring in inland waters including alien fish species. ***Walloon Region***: The muskrat (*O. zibethicus*) is actively eradicated in the Walloon Region. Furthermore, guidelines on how to manage the more damageable invasive alien plant species (how to prevent their expansion, how to control them) have been developed. Nature Parks, many River Contracts and cities which have either a Municipality Plan for Nature Conservation or a 'Roadside management plan' actively manage invasive alien species at a local scale. ***Brussels-Capital Region***: It is forbidden to introduce non-indigenous species of birds into the wild. The intentional introduction of non-indigenous species is regulated. Since January 2007, legislation on species protection and conservation (flora & fauna) is in revision. The aspect of IAS will be an important issue. Several research programmes includes monitoring and assessment of impacts e.g. on parakeets, naturalised water birds and plants. One action plan is in preparation for the control of three species of parakeets (see chapter II). Some management actions are already in use (e.g. Egyptian goose in parks). ***Federal level***: In 2006, the DG Environment has commissioned a study to analyse the federal legislation in relation to IAS in order to identify gaps. The DG is currently working on the development of a legislative instrument to forbid importation/exportation/transit of IAS (black list). (see chapter III)	
Goal 7. Address challenges to biodiversity from climate change, and pollution	
Target 7.1. Maintain and enhance resilience of the components of biodiversity to adapt to climate change.	• Connectivity/fragmentation of ecosystems
Flemish Region: . see chapter II, Natura 2000, . see chapter III, defragmentation of rivers. ***Walloon Region***: . see chapter I, Natura 2000, . see chapter III, morphological quality of watercourses. ***Brussels-Capital Region***: . see chapter II, green and blue network.	
Target 7.2. Reduce pollution and its impacts on biodiversity.	• Nitrogen deposition • Water quality in aquatic ecosystems
Flemish Region: See chapter I, exceeding of critical load for eutrophication, phosphorus in rivers.	

Goals and targets	Relevant indicators
The use of pesticides and herbicides by local authorities in public domains or parks is forbidden since January 2004. Pesticide reduction programmes in agricultural practices are promoted through stimulating measures under the Rural Development Programme and codes of good practices. ***Walloon Region***: See chapter I, enrichment of soils in nitrogen and phosphorus, nitrogen enrichment of forests and semi-natural ecosystems, eutrophication of watercourses. *Reduction in the use of inorganic and organic fertilizers* The use of inorganic fertilizers, and particularly of phosphorous, has been going down since 1995 in the Walloon Region. The progress made in the sensible use of synthetic fertilizers reflects environmental concerns as well as changing costs. The quantities used throughout the Walloon Region are nevertheless a lot higher than the European average (around 40% for nitrogen and 50% for phosphorous). The production of organic nitrogen (waste from livestock rearing) has also been going down since 2001. http://environnement.wallonie.be/eew/rapportProblematique.aspx?id=p013 *Pesticides* Their use is forbidden in some public areas such as road sides, public parks, public domains. Introduction of pesticides in underground water is also forbidden. *Evaluation of the risks and objectives of reduction* In order to minimize the risks for the environment, a 'Thematic strategy on the sustainable use of pesticides' was drawn up on a European level. ***Brussels-Capital Region***: A very strict legislation is in place on the use of pesticides for public green spaces. In public regional green spaces: no use of pesticides or very restricted. ***Federal level***: *Federal programme to reduce dependence on and the risks associated with pesticides and biocides*: The first reduction program for plant protection products for agricultural use and biocides covers the period 2005 to 2010 and was drawn up with the cooperation of all the players involved: the government at the various administrative levels, the professional organizations for the protection of consumers and the environment, and so on. The first update (2007-2008) takes stock of the first two years, specifies priority actions that must be taken during the forthcoming period and also contains a revision of the management structures for the program. This update also fills in a few gaps in the original text. The overriding objective of the PRPB is to reduce the environmental impact of pesticides for agricultural use by 25% in 2010 and to achieve a 50% reduction in other sectors on which approved pesticides and permitted biocides have an impact. This objective must be achieved through various means, including concrete actions such as the separation of approvals, support for organic pesticides and the introduction of certificates permitting the professional use of plant protection products. The objective of the OSPAR strategy 'Hazardous substances' is to reduce the concentration of hazardous substances to background levels by 2020. Note also the implementation of the EU-Water Directive for coastal waters and the future measures under the 2008 Marine Strategy Directive in view of a 'good ecological status' by 2020.	

Goals and targets	Relevant indicators
See also the text in relation to target 5.1 above.	
Maintain goods and services from biodiversity to support human well-being	
Goal 8. Maintain capacity of ecosystems to deliver goods and services and support livelihoods	
Target 8.1. Capacity of ecosystems to deliver goods and services maintained.	• *Biodiversity used in food and medicine (indicator under development)* • Water quality in aquatic ecosystems • Marine trophic index • Incidence of Human-induced ecosystem failure
Flemish Region: see chapter I, water quality of rivers. Restoration of natural flood plains and river borders in the estuary of the Schelde and the IJzer, and other main river systems, restoration and nature development of nature and forest zones on military areas, sustainable management of nature and forest areas. ***Walloon Region***: see chapter I, item 3.2.2.	
Target 8.2. Biological resources that support sustainable livelihoods, local food security and health care, especially of poor people maintained.	• Health and well-being of communities who depend directly on local ecosystem goods and services • *Biodiversity used in food and medicine*
Flemish Region: study on mapping and valorisation of ecosystem services ongoing. Based on this study, indicators may be developed. ***Federal level:*** the federal science policy has launched a call for proposals about the valuation of ecosystem services in Belgium in a climate change context.	
Protect traditional knowledge, innovations and practices	
Goal 9 Maintain socio-cultural diversity of indigenous and local communities	
Target 9.1. Protect traditional knowledge, innovations and practices.	• Status and trends of linguistic diversity and numbers of speakers of indigenous languages • *Additional indicators to be developed*
This target is reflected in the National Biodiversity Strategy through operational objective 6.4.: 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. The action plan 'Integration of biodiversity in the four federal key sectors' (in preparation, adoption expected in September 2009, see chapter III) will address traditional knowledge. Actions foreseen in this action plan with regard to traditional knowledge are the following: . collect ethno-botanic data for central Congo, . cultivate useful plants in the botanical garden of Kisantu, . valorisation of useful mushrooms in Eastern Congo, . valorisation of the 'Prélude' database of medicinal plants.	
Target 9.2. Protect the rights of indigenous and local communities over their traditional knowledge, innovations and practices, including their rights to benefit-sharing.	*Indicator to be developed*
Flemish Region: the Flemish Fund for Tropical Forests is particularly emphasising this aspect.	

Goals and targets	Relevant indicators
Walloon Region: The research unit on Biodiversity and Reflexive governance (BIOGOV) is a research unit of the Centre for the Philosophy of Law (CPDR) at the Université catholique de Louvain (UCL). Its focus is on collective learning in the field of sustainable development. This research is developed in an international (REFGOV) and national (IUAP VI/09) network on democratic governance. Thematic fields in biodiversity governance: . Microbiological commons: collective management organisations for the exchange of biological resources and related information. . Traditional knowledge: seed exchange networks and institutional repositories for biodiversity related traditional knowledge. . Joint forest management: joint management institutions of public and private forests. . Future harvest centres: collective action arrangements in the network of the CGIAR. ***Federal level***: . Belgian Development Cooperation projects that aim to support indigenous communities in partner developing countries. . Potential actions foreseen in the Global Programme (2003-2007) for Biological Diversity and Development Cooperation at the Royal Belgian Institute of Natural Sciences for example include the valorisation of orally transmitted knowledge. . Within the existing legal framework, conceiving the 'bundle of rights' as an innovative mechanism of allotment of tangible and intangible rights on biological resources and related data (see MOSAICS project and 'bundle of rights' concept). . Agreements with users of the marine protected areas have been made in 2005 when the marine protected areas were established.	
Ensure the fair and equitable sharing of benefits arising out of the use of genetic resources	
Goal 10. Ensure the fair and equitable sharing of benefits arising out of the use of genetic resources	
Target 10.1. All access to genetic resources is in line with the Convention on Biological Diversity and its relevant provisions.	*Indicator to be developed*
. This target is reflected in the National Biodiversity Strategy through strategic objective 6: Promote and contribute to an equitable access to and sharing of benefits arising from the use of genetic resources and operational objectives 6.1: Explain the concept of ABS and disseminate widely information on ABS; 6.2: Implement and encourage the use of the Bonn Guidelines and related codes of conducts, 6.5: Conclude an international regime on ABS. . Study on the awareness of Belgian users concerning ABS dispositions (and more specific the Bonn Guidelines) to obtain representative information on the degree of knowledge and the taking into account by Belgian players of CBD provisions regarding ABS. . Amendment of Belgian patent legislation (disclosure of country of origin). . Development of the MOSAICC voluntary code of conduct for transfer of microbial genetic resources. Designing and promoting the use of Material Transfer Agreement (MTA) by Belgian collections . Development of a pilot project (http://www.straininfo.net) using bioinformatics tool (web crawlers and search engines) to access and make available data and information related to microbial resources via internet. Development and promotion of specific bioinformatics tool such as Global Unique Identifiers (GUIDs). Conceiving Integrated Conveyance System as a way to implement ABS in routine operation (see MOSAICS project). . Contribute to an international regime on ABS by 2010.	

Goals and targets	Relevant indicators
The action plan 'Integration of biodiversity in the four federal key sectors' (in preparation, adoption expected mid 2009, see chapter III) will address access and benefit sharing. Actions foreseen in this action plan with regard to ABS are the following: . explain the concept of 'Accesses and Benefit Sharing (ABS)' to least informed stakeholders and disseminate information widely, . initiate a capacity building project with the private sector in order to facilitate the respect of ABS provisions at the national and the international level.	
Target 10.2. Benefits arising from the commercial and other utilization of genetic resources shared in a fair and equitable way with the countries providing such resources in line with the Convention on Biological Diversity and its relevant provisions	*Indicator to be developed*
See text in relation to target 10.1 above.	
Ensure provision of adequate resources	
Goal 11: Parties have improved financial, human, scientific, technical and technological capacity to implement the Convention	
Target 11.1. New and additional financial resources are transferred to developing country Parties, to allow for the effective implementation of their commitments under the Convention, in accordance with Article 20.	• Official development assistance provided in support of the Convention
See 'Progress towards the Goals and Objectives of the Strategic Plan', Goal 2, paragraph 2.2, below.	
Target 11.2. Technology is transferred to developing country Parties, to allow for the effective implementation of their commitments under the Convention, in accordance with its Article 20, paragraph 4.	*Indicator to be developed*
The Belgian CHM partnership with African countries provides for the building of capacities and for the transfer of technologies for the development of CHM websites, in collaboration with the European Community CHM (EC CHM) and other European countries. The websites are developed using the web content management system 'EC CHM Portal Toolkit'.	

2. Progress towards the Goals and Objectives of the Strategic Plan of the Convention

Goal 1: The Convention is fulfilling its leadership role in international biodiversity issues.
1.1 The Convention is setting the global biodiversity agenda.
The overarching goal of the Belgian National Strategy is to reach the target of halting the loss of biodiversity by 2010, as established by the EU's Sustainable Development Strategy. This can be seen as the national contribution to the achievement of the CBD objectives at global level.
1.2 The Convention is promoting cooperation between all relevant international instruments and processes to enhance policy coherence.
Belgium strongly endorses this CBD objective and has been playing an active role in its achievement by

prioritizing the follow up of the theme 'cooperation between conventions' for many years. One example is its support of the UNEP-IUCN 'TEMATEA modules' that promote synergies at national and international level to ensure the coherent implementation of biodiversity-related agreements.

1.3 Other international processes are actively supporting implementation of the Convention, in a manner consistent with their respective frameworks.

Actions undertaken in Belgium under other international processes contribute to CBD implementation in Belgium, e.g. actions under the Ramsar convention, CITES and CMS as well as regional processes such as OSPAR, etc.

1.4 The Cartagena Protocol on Biosafety is widely implemented.

Belgium has already adopted a comprehensive domestic regulatory framework in order to prevent the potential adverse effects on human health and the environment which might arise from the use of living modified organisms (LMOs) - referred to in Belgium as GMOs (genetically modified organisms). Most Belgian legislation related to LMOs (GMOs) implements or enforces European Community (EC) legislation. This includes Directive 90/219/EEC on the contained use of GMMs, Directive 2001/18/EC on the deliberate release and placing on the market of GMOs, Regulation 1946/2003 on transboundary movements of GMOs, Regulation 1829/2003 on GM food and feed.

Belgium has also appointed relevant competent authorities for performing the administrative functions related to the above-mentioned legislations.

Belgium has implemented a comprehensive system of risk assessment dealing with all uses of GMOs. Accordingly, all regulatory-related aspects of the uses of GMOs are assessed altogether in a coordinated way, independently of the specific concerned regulation(s). The main legal basis is the "Cooperation Agreement between the Federal State and the Regions on the administrative and scientific coordination concerning Biosafety" (1997). This cooperation agreement establishes a common scientific evaluation system for the Federal State and the Regions, consisting in the Biosafety Advisory Council and the Division of Biosafety and Biotechnology of the Scientific Institute of Public Health.

Belgium is actively involved (through several laboratories) in the European Network of GMO laboratories. ENGL is a platform of EU experts active in the development, harmonisation and standardisation of means and methods for sampling, detection, identification and quantification of GMOs or derived products in a wide variety of matrices, covering seeds, grains, food, feed and environmental samples.

Last but not least, Belgium has been active for many years in the development and management of Internet-based systems for information sharing in the field of GMOs, in particular the Belgian Biosafety Clearing-House (http://www.biosafetyprotocol.be).

1.5 Biodiversity concerns are being integrated into relevant sectoral or cross-sectoral plans, programmes and policies at the regional and global levels.

. *Development cooperation*
The Belgian Development Cooperation is currently investigating ways on how to better integrate biodiversity concerns in its own policies and programmes with partner countries. An 'environmental integration kit' (including biodiversity) is currently being finalised. This will help contribute to a better integration of biodiversity in poverty reduction strategies.

. *Sustainable forest management*
The Belgian Development Cooperation also participates in the financing of trust funds for the conservation of forests in the Congo Basin.
Belgium, through the Belgian Federal Ministry of Environment, support efforts of developing countries

to combat illegal logging and associated illegal trade through the EU FLEGT action plan. In 2009 the Belgian Development Cooperation recruited an expert to prepare the development of a Voluntary Partnership Agreement in the framework of this EU FLEGT action plan.
The Flemish Fund for Tropical Forests supports projects for forest restoration and management in South America.

See also chapter III (Sectoral and cross-sectoral integration or mainstreaming of biodiversity considerations).

1.6 Parties are collaborating at the regional and subregional levels to implement the Convention.

Belgium is involved in numerous initiatives at regional level, whether at European (as a member of the European Union) or pan-European level. It is also involved in transboundary projects and in projects within the Benelux framework. It would be too long to list them here. Some examples are already highlighted in chapter II.

A few non-exhaustive examples:
. *Forests*: participation in the MCPFE process at Pan-European level
. *Protected areas*: participation in the Natura 2000 network (including the setting up of transboundary projects thanks to financing through the LIFE+ funding initiative)
. *Ex-situ conservation*: European and international projects through universities and scientific institutions: e.g. KULeuven and the INIBAP project on bananas strains, ENSCONET or the *European* native *seed* conservation network through the National Botanic Garden of Belgium (http://www.ensconet.eu); Universiteit Gent and the 'European consortium for microbial resource centres'.
. *Invasive alien species*: the Belgian Forum on Invasive Species (moderated by the Belgian Biodiversity Platform) is participating in the Daisie project (Delivering Alien Invasive Species Inventories for Europe (http://www.europe-aliens.org/)
. *Monitoring, indicators and assessments*: contribution to the European Environment Information and Observation Network (Eionet) that collects data on the status and trends of biodiversity in Europe
. *Taxonomy* (including access to natural history collections): 3 Belgian scientific institutions participate in the EDIT and SYNTHESYS projects financed by the European Union.
. *Clearing-House Mechanism*: the Belgian CHM is an active member of the EC CHM network
. *Research policy*: the Belgian Biodiversity Platform participates in the EPBRS network (European Platform for Biodiversity Research and Strategy).
. *Biodiversity research*: Belgian universities and scientific institutions are involved in many European-funded research projects on biodiversity in terrestrial, freshwater and marine ecosystems. See the CORDIS database (http://cordis.europa.eu).
. *Science policy and research*. Belgium is a member of the BiodivERSA project (2004-2008). BiodivERSA is an European network involving 15 countries and 19 major research funding agencies in Europe with significant research funding in the field of terrestrial, freshwater and marine biodiversity. Most members are represented on other fora which discuss and recommend requirements for European biodiversity research: including the CBD (SBSTTA), Diversitas, the European Platform for Biodiversity Research Strategy (EPBRS) and the European Science Foundation (ESF). Recommendations from these fora are often made without a formal mechanism to ensure connection with the strategies, priorities and budgets of national research funding agencies. BiodivERsA contributes to setting up such a mechanism, to achieve an efficient trans-national research co-operation in the field of biodiversity research funding. With the aim of contributing to the implementation of the EU Biodiversity Strategy, BiodivERsA allows the funding agencies to collate existing activities, compare future strategies and recommendations of consultative bodies, and systematically explore opportunities for future collaboration. BiodivERsA also contributes to better coherence and increased synergies between the national programmes of cooperation with developing countries in the field of biodiversity research funding.

Walloon Region:
. Interreg projects.
. Bilateral co-operation with neighbouring countries (GD Luxembourg, France, the Netherlands, Germany) does exist for the management of transboundary protected areas, such as the High Fens Eiffel Natural Reserve with Germany and the management of the Our Valley area together with Luxembourg and Germany in the frame of the Benelux Convention and EU framework.
. A project plan for the transboundary management of an ecological network between GD Luxembourg and Wallonia is being developed. Joint actions are also implemented with The Netherlands in the frame of Salmon reintroduction in the river Meuse basin (project Salmon 2000).
. In the frame of the Ramsar Convention, Wallonia supports the management of wet zones crossed by the black stork in its migration between Europe and Senegal.
. Cooperative management of the transboundary Ramsar Site of the Haute-Sûre (Wallonia Luxembourg).
. Cooperative management against floodings is in place on several water bassins.
. The international Commission of the Meuse and Escault assures the coordination of the implementation of the Water Framework Directive and provides advice to Parties for a better prevention and a better protection against floodings and pollutions.
. A project aims at implementing integrated management in the Haine bassin:
http://www.gihm.org/index.htm
. Cooperative management is also in place for the European Otter (Wallonia, Luxembourg and Germany).
. A cooperation project aims at producing local ecotypes of trees to be planted on riverbanks (Wallonia, Luxembourg and France) (http://ecoliri.cra.wallonie.be/).

Goal 2: Parties have improved financial, human, scientific, technical, and technological capacity to implement the Convention.

2.1 All Parties have adequate capacity for implementation of priority actions in national biodiversity strategy and action plans.

Human capacity:
Belgium has a wealth of scientific and technical expertise to undertake its activities. In addition, it is involved in many European and international programmes and projects to help to share this expertise with other countries.

Financial capacity:
Belgium's three regions and the federal government each have their own budgets for the financing of biodiversity. In Flanders, a specific funds (Minafonds) has been established to deal with financial aspects of investments in the field of environment. The country also beneficiates from co-financing opportunities through European financing programmes (LIFE+, the European Fisheries Fund (EFF), the Cohesion and Structural Funds and the European Agricultural Fund for Rural Development (EAFRD), the Seventh Framework Programme for Research, etc.).

See also chapter III.

2.2 Developing country Parties, in particular the least developed and the small island developing States amongst them, and other Parties with economies in transition, have sufficient resources available to implement the three objectives of the Convention.

Federal government:
The Belgian Development Cooperation (composed of the Directorate General for Development Cooperation and of the Belgian Technical Cooperation) devotes resources to environmental management (including biodiversity) in developing countries through several channels: bilateral cooperation (e.g.

support to the sustainable management of forests in the Congo Basin), multilateral cooperation through the financing of GEF, UNEP and other international programmes and organisations and indirect cooperation through the financing of universities, scientific institutions and civil society organisations.
The Belgian contribution to GEF amounts to 11,545,000 EUR per year for the period 2007-2011. The cooperation with UNEP is fixed by multi-year programmes of work. For the period 2004-2007, the amount of contributions was 2,375,000 EUR per year (or 9,500,000 EUR). Priority was given to environmental assessments, water management and the links between poverty and environment.

The amount of Belgian public aid for development cooperation in the field of environment and water management/water sanitation is highlighted in the table below:

	2002	2003	2004	2005	2006
Environment	12.069.284	15.624.043	16.398.675	15.560.252	16.874.027
Water and sanitation	15.589.582	23.726.259	21.044.349	30.730.641	43.942.283
Total MDG 7	**27.658.866**	**39.350.302**	**37.443.024**	**46.290.893**	**60.816.310**

Source: http://www.dgci.be/fr/campagne_omd/index.html

Flemish Region:
Since 2002, the Flemish Fund for Tropical Forests has been supporting local projects in South America that pertain to the sustainable management and protection of forests.
http://indicatoren.milieuinfo.be/indicatorenportal.cgi?lang=en&detail=606&id_structuur=74.

Walloon Region:
Several development cooperation projects exist:

Burkina Faso
. Support to the computerization of forest management (UCL grant)
. Rehabilitation of the dams of Barka, Kouzougou and Naggio (SHER grant)
. Scientific valorisation of the Nazinga ranch (Nature+ grant)
. Preservation and protection of the forest gallery in the Sourou valley (FUL & Coprod grants)

Morocco
. Development of an information system and internet server on biodiversity (UMH grant)
. Support to the computerization of forest management (UCL grant)
. Establishment of a thematic House of the Cedar

Romania
. Support to the computerization of forest management (UCL grant)
. Analysis and protection of pristine forests (UCL grants)

Mauritania
. Extension of the green belt of Nouackchott (FAO grant)

Congo
. Reactivation of the hunting domain of Bombo Lumene (Nature+ grant)

2.3 Developing country Parties, in particular the least developed and the small island developing States amongst them, and other Parties with economies in transition, have increased resources and technology transfer available to implement the Cartagena Protocol on Biosafety.

See text in relation to item 1.4 above.

2.4 All Parties have adequate capacity to implement the Cartagena Protocol on Biosafety.

See text in relation to item 1.4 above.
2.5 Technical and scientific cooperation is making a significant contribution to building capacity.
Belgium is involved in many capacity building programmes both at European and international levels, some have already been mentioned in the 3rd National Report. As the situation is not fundamentally different nowadays, please refer to http://www.biodiv.be/implementation/docs/reports/nat_reports/nat_report_3/art5 http://www.biodiv.be/implementation/docs/reports/nat_reports/nat_report_3/art16 http://www.biodiv.be/implementation/docs/reports/nat_reports/nat_report_3/art18 Belgian CHM partnership initiative (Royal Belgian Institute of Natural Sciences): 200 persons from 36 countries or regional organisations attended training courses, meetings and workshops organised or co-organised by the Belgian focal point for the CHM from 2005 to May 2009. See also http://www.biodiv.be/cooperation/chm_coop. Belgian GTI capacity building programme (Royal Belgian Institute of Natural Sciences): Since 2004, 281 applications from nearly 50 countries yielded a selection of 69 candidates for training in Belgium. In addition, a few dozen scientists were trained *in situ* either during practical training sessions or during theoretical workshops. Abc Taxa series: six manuals for capacity building in the field of taxonomy and the management of natural history collections have been published since 2004. See also http://www.biodiv.be/cooperation/gti_coop and http://www.abctaxa.be.
Goal 3: National biodiversity strategies and action plans and the integration of biodiversity concerns into relevant sectors serve as an effective framework for the implementation of the objectives of the Convention.
3.1 Every Party has effective national strategies, plans and programmes in place to provide a national framework for implementing the three objectives of the Convention and to set clear national priorities.
See text in chapter II of this report.
3.2 Every Party to the Cartagena Protocol on Biosafety has a regulatory framework in place and functioning to implement the Protocol.
See text in relation to item 1.4 above.
3.3 Biodiversity concerns are being integrated into relevant national sectoral and cross-sectoral plans, programmes and policies.
See text in chapter III of this report.
3.4 The priorities in national biodiversity strategies and action plans are being actively implemented, as a means to achieve national implementation of the Convention, and as a significant contribution towards the global biodiversity agenda.
See text in chapter II of this report.
Goal 4: There is a better understanding of the importance of biodiversity and of the Convention, and this has led to broader engagement across society in implementation.
4.1 All Parties are implementing a communication, education, and public awareness strategy and promoting public participation in support of the Convention.
A Belgian national survey on people's perception of biodiversity was carried out in 2007 by the Royal Belgian Institute of Natural Sciences. It covered 48 Belgian cities and gathered 735 answers through face-to-face interviews. The main conclusions are: - 62% of the respondents have heard of biodiversity - 79% think that the number of species is decreasing, 9% think it is increasing - 43% think that the state of environment has worsened, 38% that it has remained stable - 88% of respondents agree that humans have the responsibility of protecting life on Earth

- 16% of respondents are member of a nature protection association
- 2% of the respondents do not wish to receive information on biodiversity.

CEPA activities are undertaken by all 3 regions and by the federal administration, as well as by numerous stakeholders (universities, scientific institutions, NGOs) each in their field of competence.
A national coordination group (the 'CEPA contact group' under the Belgian Steering Committee "Biodiversity Convention") has been set up for the exchange of information and the coordination of activities relating to public awareness. One of its main tasks is to identify activities for the International Day on Biological Diversity on 22 May (see http://www.biodiv.be/implementation/ibd). It will also serve as the national coordination committee for the International Year of Biological Diversity in 2010.

***Flemish Region**:*
- specific school programmes MOS (Environment at School);
- activities undertaken by the visitor centres of the Agency for Nature and Forests;
- education projects by Division for Nature and Environment Education of the Department;
- financial support for Nature/Environment NGO's for awareness and educational programmes
- organisation/participation in events related to biodiversity: outings, conferences, markets, fairs,…
- public consultation and brochures on the Environment & Nature Policy Plan, Press conferences such as for the launch of Nature Reports NARA and Environmental and Nature Reports MIRA, newsletters, booklets and leaflets, brochures on the main domains of the Agency, website of the Agency with links to various topics on nature conservation issues (http://www.natuurenbos.be), etc.

Awareness campaigns on the needs to involve all sectors in the conservation of nature values
- organisation of awareness campaigns such as in relation with port development, transport infrastructure, military domains
- activities of awareness-raising on the use of indigenous material for forestry
- activities of awareness-raising for fishery societies on good fishery practices and standing waters management for fishermen
- trainings for hunters on good hunting practices, big-game licence, ornithology
- information sessions for stakeholders, other administrations and local authorities on Natura 2000 and the process for development of conservation objectives
- training sessions for local authorities for the management of parks and green spaces
- continuous awareness activities and guided tours in nature areas organised by NGO's

***Walloon Region**:*
Different organisms provide to schools educational programmes in relation to nature conservation. The 'Institut d'éco-pédagogie' organises additional training courses for teachers on how to get in touch with nature. The 'Réseau Idée' assists schools to integrate activities aiming for the discovery of and sensitisation on nature and the environment. The Walloon Region finances and distributes pedagogic kits on different themes related to the environment and the natural heritage. The 'Centres de Dépaysement et de Plein Air' (CDPA), established by the French Community, conduct training and education activities in relation to the environment for schools. The network of 'Centres Régionaux d'Initiation à l'Environnement' (CRIE) is made of centres for environmental education and awareness. Their actions are mainly (but not exclusively) oriented towards school children aged 6-12.

. Naturalists' associations are financed in view to organise public awareness and education activities oriented towards nature conservation (e.g. excursions, visits of nature reserves, management of nature reserves, publications, etc.) or towards specific thematic areas (e.g. forests, quality of watercourses, etc.).
. The Nature Department of the Walloon Region also launches regularly thematic nature protection or development operations, which always include an important public awareness and educational part. Some examples of projects include the protection of bats, migration of amphibians, the migration of

black storks (www.explorado.com).
. The Nature and Forest Division launched several partnerships with municipalities aiming among others to raise awareness and involve them in the preservation and development of their natural heritage: 'Plans Communaux de Développement de la Nature', the road verges operation, 'Combles et clochers', the week of the tree, etc.;
. The waterway schemes (Contrats de Rivières) also intend to involve rural actors into a participative process designed to enhance or restore biodiversity at a local scale and to make public awareness on nature conservation issues.
. Natural parks and Ramsar sites have organised awareness and education activities on inland waters.
. Information sessions on Natura 2000 have been organised by the Nature Department
. LIFE projects also include public awareness activities for stakeholders and local communities.
. Many brochures on nature conservation have been published by the Nature and Forestry department of the Walloon region (on Natura 2000, birds, wetlands, etc.).
. For the French-speaking community, a specific TV programme 'Jardin Extraordinaire' addresses nature and biodiversity topics from Belgium and worldwide.
. Other associations such as GAWI (integrated and biological fruit production) and CARI (protection of pollinators) receive support from the Walloon Region to promote awareness programmes on sustainable management of natural resources.

***Brussels-Capital Region**:*
. Regional centres for ecology initiation receive funding to develop training programs for schools. Communication actions for schools also exist.
. The Brussels Centre for Nature Education organises every two years a new touring workshop/exhibition for schools in Brussels. From 2008 to 2010 the workshop focuses on "Birds". From 2010 to 2012, the workshop will focus on "Biodiversity in cities".
. The biodiversity theme is integrated in the general education and public awareness programmes of the Brussels Institute for Environmental Management (brochures, leaflets, presence at fairs and other public events, actions oriented towards families, schools, citizens, etc.). The Institute has a well-developed website with extensive information in French and Dutch (http://www.ibgebim.be).
. Financial and logistic support is given to NGO's for awareness and educational programmes. Among others, there is a programme called "Nature in the garden" which helps city dwellers develop a nature-based approach to their gardening practices (http://www.natureaujardin.be/)
. Public consultation and information campaigns for biodiversity action are organised (e.a. on the extension of protected areas in forests).

***Federal level**:*
Some examples of publications:
. Booklet 'Biodiversiteit in België: een overzicht / La biodiversité en Belgique: un aperçu'.
. Booklet 'Biodiversiteit in België: van vitaal belang / La biodiversité en Belgique: une question vitale'.
. Booklet 'Biodiversiteit in België: de opmars van exoten / La biodiversité en Belgique: SOS invasions'.
. Booklet 'Bezint eer je met hout begint - FSC en PEFC voor een verantwoord bosbeheer'/ FSC et PEFC : le bois certifié ! Un petit conseil avant d'acheter ?'.
. Booklet 'Bombybook'
(see also http://www.biodiv.be/implementation/docs/leaflets and http://www.belgium.be/fr/publications/publ_bombybook.jsp)

Web-based applications:
. AMAI biodiversity (http://www.naturalsciences.be/institute/structure/biodiv/amai/index_html)
. Bombylius website for kids (http://www.bombylius.be/)

Campaigns:
. The engagement campaign 'I give life to my planet' has for objective to engage people in favour of

biodiversity, by getting individuals take small and simple steps that will have long-term positive effects. The campaign presents practical tools, relevant information and useful contacts to motivate people who want to take action. People can commit themselves via an engagement booklet or a website. The campaign will be reactivated and will culminate in 2010 during the International Year on Biological Diversity (http://www.vip.biodiv.be)

Participation in fairs and other public events:
. The federal Ministry of Environment and the Royal Belgian Institute of Natural Sciences both participate regularly in fairs and public events in order to disseminate information and raise awareness on biodiversity. The RBINS also participates in the 'sciences congress' that provides training for science teachers.
. Environmental associations (e.g. Natagora and Natuurpunt) will collaborate during the International Year of Biodiversity in 2010. These associations will disseminate biodiversity awareness materials developed by the federal Ministry of Environment and the Royal Belgian Institute of Natural Sciences. These materials will be distributed during their own activities and several nature events.
. Moreover, partnerships with TV channels will be considered in the context of broadcasts dedicated to environmental themes such as among other biodiversity.

Exhibitions:
The Royal Belgian Institute of Natural Sciences, the Royal Museum of Central Africa and the National Botanic Garden of Belgium regularly organise exhibitions on biodiversity-related themes. A special attention will be provided to biodiversity by all three institutions during the International Year of Biodiversity (in 2010). The RBINS will open a new permanent exhibition hall on 'biodiversity in cities'. The RMCA will open a temporary exhibition on the biodiversity of the Congo River. The NBGB will put African plants and botany into the spotlight. It will also open a renovated greenhouse to the public.

Capacity building:
The CHM partnership initiative contains a special Public Awareness component for partner countries. Since 2005, 12 small projects to raise public awareness in partner countries have been implemented in 11 countries thanks to the support of the Belgian Development Cooperation.

4.2 Every Party to the Cartagena Protocol on Biosafety is promoting and facilitating public awareness, education and participation in support of the Protocol.

Belgium maintains on-line information systems that provide the public with up-to-date information on the legislative framework for LMOs, applications for LMO authorisations, decisions taken by relevant authorities, risk assessment aspects and guidelines, and measures provided as part of risk management. To date, the main information source for these purposes is the "Belgian Biosafety Server" (http://www.biosafety.be).
In accordance with European Community and national requirements, Belgium is also actively contributing to information exchange systems established at Community level to provide public information about LMOs.
Belgium has established practical procedures for public consultation in the case of requests field trials with GMOs in Belgium (for marketing of GMOs, the consultation process is managed by the European Commission).
Belgium has been largely involved in the negotiating process under the Aarhus convention that establishes public participation in decisions on deliberate release into the environment and placing on the market of GMOs.

4.3 Indigenous and local communities are effectively involved in implementation and in the processes of the Convention, at national, regional and international levels.

Since 2002, the Flemish Fund for Tropical Forests has been supporting local projects in South America that pertain to the sustainable management and protection of forests:

http://indicatoren.milieuinfo.be/indicatorenportal.cgi?lang=en&detail=606&id_structuur=74 These projects are carried out through the non-profit organisation Groenhart vzw. Groenhart supports activities in the South which aim at local development and any other of the following topics: nature and biodiversity conservation, sustainable management of natural resources, recovery of degraded areas and reinforcement of the ecological capacity of ecosystems. In the supported projects, Groenhart works together with local partner organizations and the population. Participation all through the process of the project, from the beginning of the idea until the final activities, is of great importance. In the North, Groenhart aims at strengthening the public support for an awareness of the global importance of the topics aforementioned.
4.4 Key actors and stakeholders, including the private sector, are engaged in partnership to implement the Convention and are integrating biodiversity concerns into their relevant sectoral and cross-sectoral plans, programmes and policies.
See chapter III.

3. Conclusions

The attention to biodiversity has increased over the years. Policies have been adopted and measures have been taken to stop the erosion of biodiversity and the deterioration of ecosystems, among others through the establishment of the Natura 2000 network. There have also been many 'nature development' initiatives in the various regions. At the federal level, biodiversity has been integrated in the sustainable development policy.

However, this report and various other reports show that despite some positive results for some species groups, the efforts are not enough to stop biodiversity loss. Most species groups are threatened to some extent, some groups with up to more than 70% of their species in a precarious conservation status. The situation is the same in all of Belgium's regions, even if some slight differences can be observed from one region to another.

It is clear that current activities are not sufficient to reach the European target (also reflected in Belgium's national biodiversity strategy) of halting the loss of biodiversity by 2010.

It is hoped that the full implementation of the Natura 2000 network, including the setting up of management plans and site-specific actions, will help improve the status of biodiversity in the areas covered by the network.

This will not suffice to ensure that the loss of biodiversity is reduced. The conservation of biodiversity should be supported by measures for the sustainable use of its components and for the restoration of degraded habitats. Greater attention and support are needed for the effective integration of biodiversity issues into other sector policies and budgets. This includes sectors such as agriculture, land-use planning, fisheries, economic development, financing, etc. It is also essential to better integrate biodiversity concerns in environmental impact and strategic assessments.

Where needed, enforcement should be enhanced. Knowledge is needed on how to estimate the economic value of ecosystem services and instruments are needed to integrate these values in policies and management measures. Finally, communication on biodiversity should highlight the importance of biodiversity for human livelihood, in an understandable and accessible way.

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

1. Reporting Party

Contracting Party	Belgium
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CONTACT OFFICER FOR NATIONAL REPORT (IF DIFFERENT FROM ABOVE)	
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SUBMISSION	
Signature of officer responsible for submitting national report	Mr Roland Moreau, Director General - Environment, Federal Public Service for Public Health, Food Security and Environment
Date of submission	05.10.2009

2. Overview of Belgian Regional and Thematic Focal Points

Regional Focal Points

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3. Procedure for the preparation of the report

- September 2008: an email with a proposition of a methodology to complete the fourth national report was sent out to the three regional focal points and the federal administration.
- November 2008: the fourth national report was discussed during the 51st meeting of the Steering Committee 'Biodiversity Convention'.
- The first answers were received in February and March 2009, but most arrived in May and June.
- June & July 2009: the National Focal Point held a thorough review to harmonise the input as much as possible, to identify the remaining gaps and to try to address them.
- A non official version of the national report was sent to the CBD-secretariat programme officers in charge of the national report on 17.07.2009 for GBO-3 purposes.
- The fourth national report was further completed and submitted to the Steering Committee Biodiversity Convention for approval on 14.09.2009.

- The third national report was submitted to the Coordinating Committee for International Environmental Policy for approval on 24.09.2009.

4. Contributing experts

- Alaime Pascale, Brussels Institute for Management of the Environment (IBGE-BIM)
- Beck Olivier, Brussels Institute for Management of the Environment (IBGE-BIM)
- Breyer Didier, Scientific Institute of Public Health (IPH)
- Collin Claire, Ministry for Public Health, Food Chain Safety and the Environment
- de Koeijer Han, Royal Belgian Institute of Natural Sciences (RBINS)
- Debruyne Catherine, Wallonian Public Service
- Degreef Jérôme, National Botanic Garden of Belgium (NBGB)
- Dumortier Myriam, Flemish Research Institute for Nature and Forest (INBO)
- Engelbeen Mathias, Brussels Institute for Management of the Environment (IBGE-BIM)
- Evrard Georges, Ministry for Public Health, Food Chain Safety and the Environment
- Franklin Anne, Royal Belgian Institute of Natural Sciences (RBINS)
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- Hallet Catherine, Wallonian Public Service
- Hollebosch Patrick, Belgian Development Cooperation
- Kerckhof Francis, Royal Belgian Institute of Natural Sciences (RBINS)
- Martens Els, Agency for Nature & Forests, Flemish Ministry for Environment, Nature and Energy
- Peeters Marc, Royal Belgian Institute of Natural Sciences (RBINS)
- Peymen Johan, Flemish Research Institute for Nature and Forest (INBO)
- Prignon Jean-Christophe, Brussels Institute for Management of the Environment (IBGE-BIM)
- Raeymaekers Geert, Ministry for Public Health, Food Chain Safety and the Environment
- Rotsaert Guy, Brussels Institute for Management of the Environment (IBGE-BIM)
- Samyn Yves, Royal Belgian Institute of Natural Sciences (RBINS)
- Schlesser Marianne, Royal Belgian Institute of Natural Sciences (RBINS)
- Thomas Evert, Ministry for Public Health, Food Chain Safety and the Environment
- Van der Wijden Ben, Brussels Institute for Management of the Environment (IBGE-BIM)
- Van Looy Miet, Ministry for Public Health, Food Chain Safety and the Environment
- Van Orshoven Christophe, Ministry for Public Health, Food Chain Safety and the Environment
- Vanwijnsberghe Stephane, Brussels Institute for Management of the Environment (IBGE-BIM)
- Verleye Ines, Ministry for Public Health, Food Chain Safety and the Environment

Appendix II - Further sources of information

1. National / Federal level

Biodiversity in Belgium, a country study:
http://www.biodiv.be/implementation/docs/books/bib

Belgium's National Biodiversity Strategy 2006-2016:
http://www.biodiv.be/implementation/docs/stratactplan/national_strategie_biodiversity_en.pdf

Federal Plan for Sustainable Development 2004-2008:
http://www.icdo.be/NL/publicaties/federale_plannen/2e_plan

First, Second and Third National Report of Belgium to the Convention on Biological Diversity:
http://www.biodiv.be/implementation/docs/reports/nat_reports

First Regular National Report on the implementation of the Cartagena Protocol on Biosafety:
http://www.cbd.int/doc/world/be/be-nr-cpb-01-en.pdf

Interim National Report on the Implementation of the Cartagena Protocol on Biosafety:
http://www.cbd.int/doc/world/be/be-nr-cpbi-en.pdf

Environmental Performance Reviews: Belgium (2007)
http://www.oecd.org/document/61/0,3343,en_2649_34307_38168061_1_1_1_37465,00.html#Contents

Mid-term Report of Belgium on implementation of EU Biodiversity Action Plan:
http://ec.europa.eu/environment/nature/biodiversity/comm2006/pdf/profiles/be.pdf

CBD Programme of Work on Marine and Coastal Biodiversity - National implementation Report (2009):
http://www.biodiv.be/implementation/docs/reports/them_reports/thematic-report-marine-and-coastal-biodiversity

Report from Belgium in reply to the CBD Secretariat Notification 2006-080 on Protected Areas (2007):
http://www.biodiv.be/implementation/docs/reports/them_reports/pa_2007

Belgian Report on the Implementation of the Program of Work for the Global Taxonomy Initiative (2004):
http://www.biodiv.be/implementation/docs/reports/them_reports/gti_2004

Thematic Report on Forest Ecosystems in Belgium (2002):
http://www.biodiv.be/implementation/docs/reports/them_reports/forests_2002

Report on indicators for biological diversity in Belgium (2001):
http://www.biodiv.be/implementation/docs/reports/them_reports/indicators_2001

http://www.biodiv.be

http://www.biodiversity.be

http://www.naturalsciences.be/biodiv

http://www.health.fgov.be

2. Flemish Region

Nature Report 2007:
http://www.inbo.be/content/page.asp?pid=BEL_NARA_NARA2007download

Nature Reports 1999, 2001, 2003 and 2005:
http://www.inbo.be/content/page.asp?pid=BEL_NARA_OUD2

State of Nature in Flanders (Belgium) - Biodiversity Indicators 2008:
http://www.inbo.be/docupload/3997.pdf

Policy Plan for Environment and Nature (2003-2007, extended to 2010):
http://www.lne.be/themas/beleid/beleidsplanning

Flanders Environment Reports (MIRA-T, MIRA-BE, MIRA-S) on themes (T), on policy (BE) and on scenarios (S):
http://www.milieurapport.be/nl/MIRA/

http://www.natuurenbos.be

http://www.biodiversityindicators.be

http://www.natuurindicatoren.be

http://www.nara.be

http://www.inbo.be

http://www.lne.be

3. Walloon Region

Le tableau de bord 2008:
http://environnement.wallonie.be/eew/tablematiere.aspx

Le rapport analytique 2006-2007:
http://environnement.wallonie.be/eew/tablematiere.aspx

Plan d'environnement pour le développement durable:
http://environnement.wallonie.be/cgi/dgrne/plateforme_dgrne/visiteur/anims_divers.cfm?pere=295&doc=afrnat_1.htm&theme=Nature%20et%20for%EAts

http://natura2000.wallonie.be/

http://environnement.wallonie.be/

http://biodiversite.wallonie.be/

http://environnement.wallonie.be/crnfb/

http://environnement.wallonie.be/contrat_riviere/index.htm

http://environnement.wallonie.be/dnf/PCDN/

4. Brussels-Capital Region

Report on the state of the environment (2003-2006):
http://www.bruxellesenvironnement.be/Templates/etat/Niveau2.aspx?id=3036&langtype=2060

Weiserbs, A. & Jacob, J.-P. (2007). Oiseaux nicheurs de Bruxelles (2000-2004). Aves. Liège. 288 pp.

Weiserbs A. & Jacob J.-P. (2005). Amphibiens et Reptiles de la Région de Bruxelles-Capitale. Aves & Institut Bruxellois pour la Gestion de l'Environnement, Bruxelles. 107 pp.

http://www.bruxellesenvironnement.be

http://www.bruxellesenvironnement.be/Templates/Particuliers/Niveau2.aspx?id=118&langtype=2060

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

1. Progress towards the Targets of the Global Strategy for Plant Conservation

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

National species lists for vascular plants, mosses and lichens are available. A complete country list of naturalised species of Phanerogams is also available and put on the Inplanbel website (http://www.fsagx.ac.be/ec/inplanbel/Pages/intrologo.htm). A partially completed national flora of fresh water algae also exists.

A recent and complete checklist of fungi for Belgium does not exist. The distribution of ~ 200 species of fungi was published (*Distributiones Fungorum Belgii et Luxemburgi*). For the whole country, only a list of Uredinales is in press (Vanderweyen & Fraiture 2007, 2008)
For Flanders, there is an up-to-date checklist of Basidiomycetes and Myxomycetes. The list of Ascomycetes is in preparation.

Apart from that, the National Botanic Garden of Belgium and researchers from many other Belgian research institutes actively contribute towards the preparation of plant species lists and floras in selected other countries (see below).

No new strategies have been developed since the ratification of the Global Strategy for Plant Conservation. However, the following running programmes should ensure the realisation of target 1:

- Regular updating of the species list of Phanerogams is guaranteed by the regular update of the 'Flora of Belgium ' by Lambinon et al. published by the National Botanic Garden of Belgium in both Dutch and French.
- Completion of the species list for fresh water algae is guaranteed by the continuation of 'Flore Pratique des Algues d'Eau Douce de Belgique' by Compère, published by the National Botanic Garden of Belgium.
- The National Botanic Garden of Belgium in collaboration with the other Belgian herbaria is contributing to a database with scanned images of all nomenclatorial types for both the flora of Africa south of the Sahara (API-project) and South America (LAPI-project).
- The National Botanic Garden of Belgium is editor and publisher of the 'Flore d'Afrique Centrale' and 'Fungus Flora of Tropical Africa'.
- Researchers from several research institutes contribute to the realisation of other African flora projects and checklists.
- International initiatives:
    - 65% of 'Flore d'Afrique Centrale' has been completed
    - The results of the API-project are available on-line since 2007
    - Flore du Bénin has been published in 2006 with contributions of researchers from the National Botanic Garden of Belgium
    - A check-list of Gabonese vascular plants prepared by Sosef et al. has been published by the National Botanic Garden of Belgium

- Databasing of plant specimens from Central Africa is continued as an effort to compile a checklist of vascular plants for this region.
- Belgian Rubiaceae researchers will contribute to the completion of the Rubiaceae part for the 'Flore du Gabon'

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

All three regions have developed plans to establish a preliminary assessment of the conservation status of the known species.

Federal: For lichens, frequency indices exist for each species in each phytogeographical district (http://www.lichenology.info/cgi-bin/baseportal.pl?htx=atlas). For bryophytes, the European red list species present in Belgium have been listed (Sotiaux et al. 2007).

Flemish Region: distribution atlases, updates of red lists and monitoring programmes form an important basis for the development of comprehensive species protection plans. The theme 'Biodiversity' in the Flemish Environment Policy Plan includes a species-specific programme with development of updates of red lists and distribution atlases over the planned period.

A red list of vascular plants has been developed. The list can be consulted at http://flora.inbo.be/flora. The list will be updated regularly in the future. The 'Atlas of the flora of the Flemish and Brussels-Capital Regions' has been published in 2006. A regional Red List for fungi has been published by the Flemish Region (Walleyn & Verbeken 2000).

Brussels-Capital Region: Within the framework of the Brussels-Capital Region monitoring programme on flora and fauna, an estimation of the conservation status of plant species of the region has been performed on basis of observations from 1991-94. A new plant inventory study has been completed (2003-2006). These data provide new information on the conservation status of plant species present in the Brussels-Capital Region. The National Botanic Garden of Belgium is working on the online publication of the Brussels data by 2010.

Walloon Region: a red list of vascular plants exists (according to IUCN criteria), and is consultable on internet (http://biodiversite.wallonie.be/especes/ecologie/plantes/listerouge/liste.aspx). It should be noted that this Red List is a binding legal instrument as it has been published in the decree of 06.12.2001 on the conservation of Natura 2000 areas and the fauna and flora (Moniteur Belge, 22/01/2002).

An atlas of vascular plants of the Walloon region should be completed by 2010.

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

All three regions have developed models for plant conservation:

Flemish Region: the Research Institute for Nature and Forest is a member of Planta Europa. During the meeting of Planta Europa in Valencia (17-20.09.2004), the development of a list of Important Plant Areas was proposed to document and safeguard the floral biodiversity in Europe. This methodology has since then been acknowledged by the CBD.

Criteria for the assessment of conservation status of EU-habitats have been developed (Heutz & Paelinckx 2000).

The National Botanic Garden in Meise was one of the first gardens in the world to use suitable alternatives to peat as compost for cultivating plants in the garden. To grow plants in peat compost is tremendously damaging for nature because it directly endangers peat bogs and the plants and animals that live there. For this reason, the NBGB uses and promotes a compost made of coconut fibre.

Walloon Region: the Nature and Forest Division requested the Research Centre on Nature, Forests and Wood as well as the Gembloux Agricultural University to search for and identify new seed-forming populations, not only of the principal wood essences but also of secondary essences, with the aim to increase the genetic diversity of the Walloon forest. For non-social species, parent plants have been

identified for the conservation of plants of local origin. The Walloon Counter of Reproductional Forestry Material is in charge of the harvesting and distribution of this material to public and private plant-breeders and tree nurseries.

For nearly thirty years the Fruit Tree Genetic Resources Laboratory (RGF) of the Walloon center for agricultural research has been involved in the collection, conservation, evaluation and valorization of old fruit varieties. The Department's collection of old varieties to date comprises 3,160 introductions including some 1,600 apple trees, 1,030 pear trees and 340 plum trees.

Brussels-Capital Region: sustainable management of nature areas helps to protect specific plant species and habitats listed in the Habitat Directive.

Apart from the above-mentioned strategies, the following initiatives help contributing to this target:

- The INIBAP Transit Centre of Biodiversity International at the Catholic University of Leuven (KULeuven) will have cryopreserved the entire FAO designated banana germplasm by 2010. This is the world reference centre for banana.
- Member of European Native Seed Conservation Network (ENSCONET). Its purpose is the improved quality, coordination and integration of European seed conservation practice, policy and research for native plant species.

A lot of experience exists within the sector of nature conservation organisations. Specific publications are available. Existing initiatives and knowledge should be listed.

At the National Botanic Garden of Belgium, seed samples of rare or endangered species of the different phytogeographical regions of Belgium are stored at -20° C.

The National Botanic Garden of Belgium ensures the management of a base collection of botanical and wild forms of legumes (tribe Phaseoleae, sub-tribe Phaseolinae). The main objective is to conserve on a long-term basis the largest possible genetic diversity through seed samples stored at –20° C.

Concerning the cryopreservation of the banana germplasm, about 550 accessions are frozen at present. Financial sources are being secured for this purpose via the World Bank, the Gatsby Charitable Foundation and the Global Crops Diversity Trust.

Developed protocols for cryopreservation have proven to function also on strawberry, potato and chicorei. These are really crops of importance to Belgium and therefore efforts should be made to start cryocollections of these crops.

Target 4. At least ten percent of each of the world's ecological regions effectively conserved

In Belgium there is no special target requiring that protected areas cover a minimum percentage of the ecological regions. However, the EU Habitats Directive and Birds Directive include qualitative targets for the designation of protected areas for the listed endangered species and habitats in Belgium.

Flemish Region: At the end of 2008, the Flemish region had 20014 ha of nature reserves. Just for the year 2008 the area of nature reserves has increased by 1379 ha. At the end of 2008, the Flemish region had 2554 ha of forest reserves. Between 2004 and 2007 the network grew on average by about 145 ha per year. Taking into account the areas with a nature oriented management the total area with 'conservation management' at the end of 2007 totalises 39 365 ha. 12.3% of the Flemish region is designated as Natura 2000 area.

Brussels-Capital Region: c. 1.5% of the Brussels-Capital Region is designated as nature or forest reserve. However, as much as 14% of the Brussels-Capital Region is designated as Natura 2000 area.

Walloon Region: On 1st January 2009, the Walloon Region had 147 state nature reserves covering 7058 ha, 135 approved nature reserves covering 2286 ha, 13 forest reserves covering 610 ha, and 51 wetlands of biological interest covering 1090 ha. 13% of the Walloon region is designated as Natura 2000 area.

Target 5. Protection of fifty percent of the most important areas for plant diversity assured

None of the regions has a list of most important areas for plant diversity. However, Natura 2000 is focusing on some vegetation types important for plant diversity such as peat bogs, alluvial forests, etc. The Natura 2000 network of protected areas is expected to include most important areas for plant diversity in Belgium.

Target 6. At least thirty percent of production lands managed consistent with the conservation of plant diversity

No specific action has been taken to achieve this target.

Flemish Region: only 204 ha of production land have a management agreement "Botanical Management" and 1541 ha falls under 'Nature Management' (figures for 2007). The goal for the future had been set to 6000 ha (see: http://www.biodiversityindicators.be).

Walloon Region: agricultural land under convention, large forest area managed considering plant diversity vast programme to convert tree plantations (*Picea abies*), often of bad quality, to wetland.

Target 7. Sixty percent of the world's threatened species conserved *in-situ*

Natura 2000 and the Bern Convention, among others, are contributing to this objective but cannot be regarded as specific targets for this.

Flemish Region: 3 species listed under Annex 1 of Bern convention & Habitat Directive

Luronium natans (77% of recent populations in Habitat Directive areas)

Liparis loeseli (single population in Habitat Directive area)

Apium repens (most populations in Habitat Directive areas)

Walloon Region: only one endemic taxon, *Sempervivum funckii* var. *aqualiense*, which is under very high threat. It is protected by the law on nature conservation. Species listed under the Annexes of the Bern Convention and the Habitat Directive, and which are also under total protection status: *Drepanocladus vernicosus, Dicranum viride, Trichomanes speciosum, Luronium natans, Bromus grossus, Bromus bromoideus* (extinct), *Liparis loeseli, Cyripedium calceolus* (extinct).

Target 8. Sixty percent of threatened plant species in accessible *ex-situ* collections, preferably in the country of origin, and 10 percent of them included in recovery and restoration programmes

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

- In April 2001, Botanic Gardens Conservation International launched the Action Plan for Botanic Gardens in the European Union. The goal of this plan is to provide an EU-wide regional framework and to promote the sharing of priorities and strategies in the future.
- The National Botanic Garden of Belgium houses several threatened plant species:
    - *Sempervivum funckii* var. *aqualiense* is currently under cultivation
    - *Bromus bromoideus,* a species thought to be extinct, has been successfully sawn
    - Some Belgian threatened taxa are in long-term storage in seed bank: Wallonia: only 24% of the threatened species (EX, EW, CR, EN, VU) are preserved in seed bank yet (135 species). 208 additional species have to be collected in order to reach the target. Flanders: only 24% of the threatened species (EX, EW, CR, EN, VU) are preserved in seed bank yet (65 species). 99 additional species have to be collected in order to reach the target.
    - Long and mid-term seed bank facility safeguarding 697 accessions of native species of which 176 are duplicated at the Millennium Seed Bank
    - 3081 taxa listed on CITES 1 and 2 (from all over the world)
    - Important, wild-collected *Saintpaulia* collection
- Plantcol project has been set-up to make an inventory of the contents of all Belgian ex-situ collections of living plants (http://www.plantcol.be)
- The Belgian Co-ordinated Collections of Micro-organisms (BCCM™) consist of four complementary research-based service culture collections. One of them, MUCL, includes fungal strains of agrofood- and other industrial as well as environmental interest. This collection is quite interesting for two main aspects: the status of "Biological Resource Centre" (BRC) defined by OECD and the structure and the search facilities provided by the website.
- So far, there is only one restoration programme focused on the recovery of a particular plant species. The European black poplar (*Populus nigra* L.) is the rarest native tree species in Belgium and is among the most endangered native species of Europe. As a typical species of alluvial forests (a priority habitat type of Natura 2000), the black poplar plays a crucial role in the development of gravel banks and islands in the river gravel. After a thorough study, a reintroduction programme was undertaken along the Grensmaas, according to the guidelines established by the European EUFORGEN Network. In addition to monitoring and further development of the reintroduction program, the exchange of genes between cultivated poplars and black poplar is being studied. These studies help in predicting the composition and structure of future spontaneously developed riparian forests in Flanders.

Target 9. Seventy percent of the genetic diversity of crops and other major socio-economically valuable plant species conserved, and associated indigenous and local knowledge maintained

Federal:

Gene bank of wild Phaseolineae in the National Botanic Garden of Belgium.

Gene bank of bananas under protection (INIBAP)

Flemish Region:

From 1997 till 2006, a programme has been running to locate autochthonous trees and shrubs: *Malus sylvestris*, *Rosa* spp., *Quercus robur*, *Q. petraea*, *Carpinus betulus*, *Populus nigra*, *Ulmus laevis*, *Salix* spp., *Prunus* spp. In 2008, Flanders was completely mapped. This work gives a basis for conservation programmes and for commercial production.

Development of autochthonous seed orchards:

http://indicatoren.milieuinfo.be/indicatorenportal.cgi?lang=nl&id_structuur=10

"Orchard foundation": In-field gene banks of rare (and old) varieties of fruit tree

Walloon region:

Three research centres have special programmes for the conservation of crops and crop wild relatives (e.g. old varieties of fruit trees).

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

No national target has been set, but some activities have been supported to study the problem of invasive species:

Federal:

- Vast research project between Belgian universities and research institutes regarding invasive species (Inplanbel: http://www.fsagx.ac.be/ec/inplanbel/). The general aims of the BELSPO INPLANBEL project are the establishment of a basic framework for the assessment of invasive species threats, for the development of management guidelines and for the definition of further research perspectives.
- Belgian Forum on Invasive Species (http://ias.biodiversity.be) gathers scientific information on presence, distribution, auto-ecology, adverse impacts and management of invasive alien species. It regularly updates a reference list of exotic species in Belgium and is responsible for the elaboration of a black list gathering species with a strong detrimental impact on biodiversity.
- Botanic gardens make lists of species which have the tendency to behave invasive or which are invasive in the garden, as a part of a project supported by the European Consortium of national networks of Botanic Gardens (BGCI).

Flemish Region: management plans for invasive aquatic species (*Hydrocotyle ranunculoides*, *Ludwigia grandiflora*, *Myriophyllum brasiliense*), coordinated by the Flemish government.

Walloon Region: management plans for invasive species along rivers and water courses.

Apart from this, several invasive plants, such as black cherry (*Prunus serotina*), floating pennywort (*Hydrocotyle ranunculoides*), Japanese knotweed (*Fallopia japonica*) and giant hogweed (*Heracleum mantegazzianum*) are eradicated in some nature reserves and public green spaces.

A national inventory of alien plant species was established and their status of invasiveness has been monitored.

The implementation of the management plan on *Heracleum mantegazzianum* is under way.

The translation of the scientific information into management plans seems to be a first bottleneck. Another major constraint is the lack of means for the (rapid) implementation of the management plans.

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

Belgium is a Party to CITES. This target is consistent with the main purpose of CITES and the CITES Strategic Plan: 'No species of wild flora subject to unsustainable exploitation because of international trade'.

The first FPSD (2000-2004) mentions: 'enforcement of CITES will be strengthened so as to support the policy of biodiversity conservation (training experts, providing inspectors, intensifying controls)'.

Flemish Region: no indigenous species endangered by trade

Walloon Region: law for protected species which cannot be the subject of any trade

Target 12. Thirty percent of plant-based products derived from sources that are sustainably managed

To date no corresponding quantitative target has been defined for Belgium. However, in the different Regions plans are in place to guarantee the sustainable use of forests.

Flemish Region: forest area is 150,000 ha. Forest management plans are considered as a measure for sustainable exploitation. At the end of 2006, 29% of forests had an official management plan. 9 % of the forest has a management plan according to the criteria for sustainable forest management, which are close to the FSC-criteria. In those forests, the FSC-label is now actively promoted through a group certificate.

Walloon Region: forest area is 544,000 ha. 46% of forests with PEFC label (no FSC label in the Walloon region)

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

The Belgian Development Cooperation funds a number of programmes that aim to support indigenous communities in partner developing countries, including the recovery and the promotion of traditional knowledge and practices. Most of those actions though are implemented through third actors such as NGO's, universities or multilateral organisations.

Barely little bilateral official cooperation provides direct support to indigenous and local knowledge, since such issue is not often taken up as a priority by the partner countries either in their national development and poverty reduction policies, or in their policy dialog with donor countries.

First Federal Plan for Sustainable Development (2000-2004): actions in support of local and indigenous communities included: (1) the ratification of ILO Convention 169 (Indigenous and Tribal Peoples Convention); (2) support to the strategies of indigenous peoples for the conservation of their traditional territories and the restoration of their control over the management of their natural heritage; (3) initiatives for the international recognition of the collective intellectual property rights of indigenous peoples and local communities within the framework of the World Intellectual Property Organisation (WIPO).

Belgium provides support to the protection and/or the promotion of indigenous and traditional knowledge and practices through funding NGO programmes and scientific institutes research programmes (e.g. CGIAR and affiliates) and the 'Fondo Indigena' for Andean countries

There is no suitable indicator of progress available except spending figures.

The rights of indigenous people and communities and the rescue of their traditional knowledge and practices are often overlooked by the countries' national development and poverty reduction strategies, which set the priorities of our cooperation agenda.

Cooperation through non-state third parties (NGO's, universities) is much more likely to reach this target. There also exists a specific budget line for direct support to local NGO's and communities. So far nonetheless, there is no support provided yet that specifically targets the protection of indigenous traditional knowledge and practice (in biodiversity).

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

The importance of plant diversity is incorporated in and addressed by communication, education and public awareness programmes on nature and biodiversity.

- **Flemish Region's** visitors centres:
    - Agency for Nature and Forests

    - Inverde
    - CVN (NGO)
    - Natuurpunt (NGO)
    - Botanic Gardens/Arboreta
    - Research Institute for Nature and Forest
- **Walloon Region's** visitors centres:
    - Education-environment
    - CRIE (non profit organisations)
    - Botanic Gardens/Arboreta
    - activities in and around Nature reserves
    - Natagora (NGO)
- **Brussels Region's** visitors centres:
    - CRIE (asbl Tournesol/Zonnebloem vzw)

The importance of plant diversity and the need for its conservation are incorporated into several programmes:

- communication via brochures, leaflets, posters etc. (description of semi-natural sites and parks, description of walking tours, with special attention to present biodiversity and its need to protection);
- educational programmes: regional centres for environmental and ecological education, green classes, organising training sessions, guided walks, information days or workshops on medicinal and edible plants, a biodiversity interface on Belgium's natural treasures, plant fairs, etc. for children, adults, naturalists, others.

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

The country has not established national targets corresponding to the above global target.

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

Federal: Belgian Biodiversity Platform. The mission of the Platform is to foster biodiversity research that contributes to sustainable development, by:

- Facilitating access to biodiversity data, science and research information;
- Encouraging interdisciplinary cooperation amongst scientists;
- Stimulating interaction between scientists, policy makers and stakeholders in biodiversity research;
- Advising on the designation of biodiversity research priorities;
- Promoting Belgian biodiversity research at international fora.

Flemish Region:

FLO.WER (http://www.plantenwerkgroep.be/): a project on identifying and collecting seeds of trees and shrubs from autochthonous origin with the aim to propagate them is developed in Flanders. Genetic analysis, inventory of the complete area (Flanders), and delimitation of distribution areas of autochthonous plant species material. The aim is to recognise locations suitable for seed collecting, to start the creation of seed orchards and to create a contact point for the propagation of autochthonous forest plants. Part of the project is devoted to capacity building and information towards the professionals in order to stimulate the use of autochthonous woody plant material.

The Catholic University of Leuven (KULeuven) has developed a European and intercontinental network on cryopreservation of many crops both in research, training and applications for long-term use.

Walloon Region: AEF (Association pour l'Etude de la Floristique)

The AEF is a non-profit organization consisting of both amateur and professional botanists, who work in the collection and updating of floristic data, primarily from the Walloon Region and the Brussels-Capital Region.

2. Progress towards the targets of the Programme of Work on Protected Areas

The table below mainly reflects the Belgian report on protected areas developed in 2007 in reply to the CBD Secretariat Notification 2006-080 for the period 2004-2006, and includes an update for the period 2007-2008.

Goals	Target
1.1. To establish and strengthen national and regional systems of protected areas integrated into a global network as a contribution to globally agreed goals.	By 2010, terrestrially and 2012 in the marine area, a global network of comprehensive, representative and effectively managed national and regional protected area system is established as a contribution to (i) the goal of the Strategic Plan of the Convention and the World Summit on Sustainable Development of achieving a significant reduction in the rate of biodiversity loss by 2010; (ii) the Millennium Development Goals – particularly goal 7 on ensuring environmental sustainability; and (iii) the Global Strategy for Plant Conservation

Definitions and terminology

There are no national or regional definitions adopted in the law or targets assigned for the specific requirements related to PA system with reference to being comprehensive and ecologically representative. These terms suggest that the PA network will contain examples of all ecosystems and all species, in spatial scale and population size large enough for conservation over time. Priorities for area designation and for acquisition of land as reserves aim at protecting in the first place threatened species (red lists) and habitats of international or regional importance and at covering a representation of the natural values of each of the ecoregions. In practice it is not possible to set aside large enough areas to conserve all species within the boundary of protected areas, mainly due to the highly urbanised landscape and due to restriction of land acquisition for nature conservation in certain land use destination areas such as agricultural or industrial destinations. Designation of Natura 2000 areas is evaluated at EU-level on representativeness of habitats and species of the annexes in the EU Habitats Directive and Bird Directive.

Effective management of PA can be related to obtaining favourable conservation status of habitats and species as determined in the Habitat Directive, and also included in regional and feral law on environment and nature protection. These law texts for the protection of nature and natural environment provide a definition of "**protection**" taking into account the necessary protection measures, the restoration needs and the sustainable management of the protected areas. With reference to Natura 2000 the texts provide de definition of the '**favourable state of conservation'** of species and habitat types for which the sites have been designated.

Main law in the regions – texts and specific regulations can be consulted on the regional websites (see under 1.2):
- Federal: Law for the protection of the marine environment in the sea (20/01/1999)

Goals	Target

- Walloon Region: Decree for nature protection (6/12/2001)
- Flemish Region: Decree for the protection of nature and the natural environment (21/10/1997, revised on 19 July 2002), government Decision on site specific measures for the protection and development of nature (2003)
- Brussels-Capital Region: Brussels law about frequentation of forests (30 March 1995), Brussels Law for the protection and the conservation of nature (27 April 1995). A new coordinated legislation is in preparation. It will assure among others a better transposition of the Habitats Directive.

Evaluation of conservation importance and effectiveness of PA is done by monitoring of management measures and of the status of habitats and species – see further under point 1.4.

Types of PA

The IUCN-categories are now under revision and are not used as basis for descriptions given below. Only the nature and forest reserves correspond to the IUCN category IV. The other types of PA could be linked to some of the other IUCN categories, but it was preferred to wait for the new descriptions of IUCN.

Through the different categories of protected area different types of ecosystems and habitats are protected. They represent many different types of ecosystems such as pasture, calcareous grasslands, heathlands, forests, caves, wetlands, …There sizes can go from 0,3 ha to 4 500 ha for a nature reserve, from 7 000 ha to 72 000 ha for a natural park. Marine protected areas are larger (above 10.000 ha). The management measures of these protected areas are adapted to the site's needs. Some nature reserves are in fact integral reserves, which means they are not managed at all.

1/ PA with a legal status:

- government nature and forest reserve: protected area, laid out on lands belonging to the regional government, leased by the Region or made available to it for that purpose, established by ministerial decision, formal recognition includes approved management plan
- forest reserve: a forest or a part of a forest, protected with the aim of safeguarding characteristic or remarkable sites of plantations of indigenous species and protecting the integrity of the surrounding soil and environment.
- chartered nature reserve: protected area, managed by a person other than the Region, in most cases an NGO, and recognised by the Ministry, at the request of the owner of the lands and with the agreement of the occupier, recognition as reserve by ministerial decision, formal recognition includes approved management plan, subsidies are granted for the purchase and the management of lands.
- Natura 2000 (Special Protection Areas and Special Areas for Conservation): designation for specific habitats or species of the Annexes of the Birds or Habitats Directive, established by regional government decision and by Federal government decision for marine areas
- Ramsar sites: designation based upon criteria of Ramsar Convention, established by regional government decision and by Federal government decision for Ramsar site in marine area
- protected landscapes and natural monuments: for the protection of high value landscape features, established by ministerial decision
- Nature Parks (or natural parks): rural areas with a high biological, landscape and geographical value, where specific attention is dedicated to the conservation of natural values, sustainable use and tourism and leisure.
- wetlands of biological interest: this status allows the protection of wetlands, established by ministerial decision
- caves of scientific interest: this status allows underground cavities of scientific (biological, geological, petrographical, mineralogical or prehistoric) interest to be protected

Goals	Target

- special protected areas (in forest): vulnerable plantation or regeneration areas, refuge areas for the fauna, vulnerable re-colonisation areas

2/ PA managed as nature reserves:

- nature areas managed by NGO's or by the government agencies but without a legal status as reserve as the formal recognition has not yet been processed

3/ Other areas with protected status:

Flemish region:

- VEN (= Flemish Ecological Network that includes core areas of the Flemish ecological structure): included in regional spatial land use plans, designation restricted to 'green land use categories' but other uses can also be present, with a strict protection regime to prevent damage to nature values but derogation possible
- Coastal dune areas: protected by law through the Dunes Decree of 1993 to prevent any further development (urbanisation, camping, tourism etc.) of all dune areas along the coast. This included all geomorphological landscape elements that can be classified as dunes (grasslands, meadows, forested areas, ruderal areas, decalcified fossil dunes, etc.).

Brussels-Capital Region:

- sites "B": sites received the official status of "high biological value" on the regional zoning plan, official but general recognition, but not always adapted management (Brussels-Capital Region)

Walloon region:

- In order to preserve and improve the quality of its groundwater, the Walloon Region has developed a range of regulatory tools which facilitate, on the one hand the delimitation of protection and surveillance zones around water catchment points and, on the other, to control activities which might pollute groundwater within these boundaries. In the prevention zones approved by a ministerial decree, some kinds of installations and some activities which are at risk (e.g. underground conversions, transport, storage and disposal of potentially pollutant materials) may be banned, regulated or subjected to an environmental permit.

Established PA

- table with number and area for the main types of PA: in annex
- overview map of the main types of PA with a legal status in Belgium: in annex

Biomes represented in PA:

- Sandbanks covered by sea waters (marine PA's) and coastal, lakes and rivers, wetlands - marshland and peatlands, grasslands, heathland, forests, agricultural landscapes

Additions of PA since COP 9 (2008): number and area of PA added in the period 2007-2008 – since last PA-report

- Walloon Region: 9 (360 ha) new RNA, 14 (192 ha) new RND, 6 new caves, 2 (45 ha) new wetlands
- Brussels-Capital Region: one new forest reserve has been added (Grippensdelle forest reserve) and another has been extended (Forest reserve of the Rouge-Cloître). One forest reserve has been scraped (Vuylbeek forest reserve), but some special protected areas have been created[1] (+ 587 ha).

1 Arrêté du Gouvernement de la Région de Bruxelles-Capitale donnant à certaines parties de la Forêt de Soignes le statut de zone de protection spéciale.

Goals	Target
- Flemish region: 13 private nature reserves (2057 ha) and -2 (fusion of 3 public reserves to 1) public nature reserves (1088 ha), 2 forest reserves (124 ha), 1 Natura 2000 site (SPA of ca 480 ha) - Federal marine area: all PA's established in 2005 and 2006: 5 Natura 2000 areas (42.090 ha) and one protected marine nature reserve (670 ha) Overall total for the additions for Belgium since 2004: 66 reserve areas for ca 5843 ha, 6 Natura 2000 sites for 42.570 ha, 5 wetlands for 57 ha - but the surfaces of different types of PA are in some cases overlapping. **Additions planned by 2010 – terrestrial, by 2012 – marine** - Flemish Region: objective in MINA-plan for the acquisition of land to establish nature and forest reserves of 3000 ha/year by Government & NGO's - Walloon Region: According to the new Forestry Code (entered in force end 2008) , at least 3% of the public broad-leaved forests must be under integral reserve protection status. The administration's strategic plan specifies that 6 500 ha of forests must be designated as reserves by 2013 For the other types of protection status, no quantitative objective has been fixed, but the Nature Direction will continue to designate areas of particular interest. - Brussels-Capital Region: In the framework of Natura 2000, the objective is to designate several Natura 2000 sites as nature reserve. Management plans are in preparation for adoption after a new nature conservation law is voted. - Marine area: the Federal administration has launched in 2009 a study to establish a list of potential Sites of Community importance in the EEZ and territorial sea. **Management effectiveness** Several instruments have been developed or are in development and being tested for evaluating effectiveness of management measures – monitoring of management measures, monitoring of outcome: status of habitats and species – see under point 3.1	

1.2. To integrate protected areas into broader land- and seascapes and sectors so as to maintain ecological structure and function.	By 2015, all protected areas and protected area systems are integrated into the wider land- and seascape, and relevant sectors, by applying the ecosystem approach and taking into account ecological connectivity and the concept, where appropriate, of ecological networks.

1/ For the development of a coherent ecological network system several instruments are implemented to ensure connectivity between PA and to enhance integration of PA into the wider landscape:

Actual results and trends over the years can be consulted on the regional websites:
http://environnement.wallonie.be/eew/ for the Walloon Region,
http://www.ibgebim.be for the Brussels-Capital Region,
http://www.mumm.ac.be for the Federal marine area
http://www.natuurenbos.be and http://natuurindicatoren.be for the Flemish region (information given per indicator, also in English)
http://www.consult-leefmilieu.be for the approved management plan of the marine protected areas.

=> Establishment of ecological network
Natura 2000 sites have been designated based on the criteria given in de Birds Directive and the Habitats Directive – numbers and surfaces are given in the overview table in annex.

- Flemish Region:
Besides the Natura 2000 network comprising 166.187 ha which covers about 12,3% of the regional territory, a Flemish ecological network system is also being established – both are partially overlapping. This network structure is composed of two main parts. The first one is the Flemish Ecological Network (Vlaams Ecologisch Netwerk, VEN), that includes Large Nature Units (Grote Eenheden Natuur, GEN) and Potential Large Nature Units (Grote Eenheden Natuur in Ontwikkeling, GENO). The second part is the so-called Integral Interweaving and Supportive Network (Integraal Verwevings- en Ondersteunend Netwerk IVON) and is composed of Nature 'Interwoven' Areas (Natuurverwevingsgebieden) and Nature Corridor Areas (Natuurverbindingsgebieden). The basic concept of this integrated approach is that VEN provides the core biodiversity areas within the region, being based primarily on designated areas (for a large part including nature and forest reserves and Natura 2000 sites) and that IVON identifies components of the landscape which mostly have primary functions other than nature conservation and/or elements that connect these core areas together. Identification and designation is based primarily on a detailed spatial planning map that outlines the land use classes for the entire region. In principle this approach of identifying core areas (VEN) and connecting structures (IVON) through an integrated spatial planning perspective offers a practical method to implement connectivity. It is based on the principle of identifying the primary functions of the areas involved. VEN areas must have nature conservation as their primary function; this could include nature-oriented recreation or limited production (nature friendly forestry) as secondary functions. The IVON however utilises areas that are identified for use and production and states that a secondary function can be nature conservation. Examples of such areas include agri-environmental schemes and traditional connecting structures such as small rivers or hedgerows. In practice the process has experienced resistance and difficulties implementation.
The Nature Decree sets the targets for VEN to 125.000 ha and the Interweaving Areas to 150.000 to be established by 2003 but due to extensive consultation procedures and the participatory approach being used for these processes the designation takes much longer time. Till now 87.073 ha of VEN and 1529 ha of 'interwoven' areas have been designated. Establishment of corridor areas is the responsibility of the provincial authorities and are now in preparation – see also under 1.2.
Information can be found on http://www.natuurenbos.be and on http://www.natuurindicatoren.be

- Walloon Region:

The consolidation of the network demands considerable effort as well as the availability of targeted land areas, their market value and the available budget determine the speed at which the network can be consolidated.The Wallonian Nature and Forest department's strategic plan specifies that management plans need to be concluded/revised for 12 500 ha of forests and 1300 ha of natural reserves each year during the 2008-2013 period. In 2008, a study of the effectiveness of the different LIFE Nature projects in Wallonia has been conducted. It gives hints on how to improve their effectiveness.

There are 240 Natura 2000 sites in the Walloon Region, covering 220,944 ha, equivalent to 13 % of the Region. The network is based on the hydrological network and is nearly 70 % forest (31 % of Walloon forests). Grassland, fallow land and orchards on the one hand, and crops on the other, occupy 16 % and 2 % respectively of the total network, but represent less than 5 % of agricultural land.

1. The general concept of the ecological network has been transposed in the "Main Ecological Structure" ('*Structure ecologique principale*' or SEP) and has been mapped. This mapped structure contains two types of area's:

⇨ Core area's: mainly dedicated to nature conservation

⇨ Ecological development area's: area's where human activities are less intensive in order to guarantee a balance between nature conservation and economic incomes.

In order to encourage farmers to apply agri environmental measures, their subsidies are increased if they are applied in interesting sites for nature (Natura 2000 sites and SEP area's).

2. Nature development programmes in Wallonia are complementary to the protection of sites of significant biological interest. They mainly aim towards the redeployment and consolidation of the ecological network. As well as the River contracts, four programmes are supported by the Walloon Region: Plans communaux de développement de la nature (PCDN), Natural Parks and «roadside» and «attics and steeples» conventions. In 2007, 62 % of municipalities were involved in one or two programmes and 18 % in three programmes. The most successful programmes are the «roadside» and «attics and steeples» conventions. They are the easiest to set up at a municipal level and there is considerable regional support considering the effort to make. For the PCDNs, with the help of a regional facilitator, municipalities must:

⇨ draw up a report on municipal areas of natural heritage;
⇨ draw up a strategic plan;
⇨ draw up a programme of actions;
⇨ establish partnerships including everyone involved locally.

- Brussels-Capital Region:

The green network plan is the masterplan for the ecological network. A specific ecological network plan has been developed and has been accepted as general guidance. The practical implementation in the field is however not very easy. The implementation of the Natura 2000 network, which is based on the concept of core areas and connecting areas, however is already a major contribution to the realisation of the network and covers about 14,3 % of the regional territory.

- Marine area (Federal administration). No formal ecological network of marine protected areas.

=> designation of nature corridors to ensure spatial and functional connectivity between PA

With reference to network coherence and connectivity the Natura 2000 network was developed mainly on the basis of the hydrographic network to ensure a good connectivity between the different sites and coherence between core areas and connecting areas.

The Brussels-Capital Region being highly urbanised, also developed the concept of green and blue network, as

strategic vision in the concept, development, realisation and management of its greens spaces and (semi)natural areas. The green network emphasizes the cohesion and continuity of green spaces and semi-natural areas in the urban environment. The intention is to integrate the scenic, esthetical, social, recreational and ecological functions of the green spaces and to develop of their interconnectivity by greenways and new green areas. Simultaneously, work is being done to implement the blue network. Its purpose is to have an integrated, durable and ecologically-justified management of the open waterways and associated wetlands in the Region.

In the framework of the development of the Flemish Ecological Network Structure (see above) the areas with important natural value or with potential value have been mapped and about 433 connective zones or nature corridors identified – to be consulted on the website under the indicator 'corridor areas'. Provincial authorities are developing designation and management plans for the corridor areas – 17 pilot projects are now in process.

Marine spatial planning will be ecosystem based and will include the necessary provisions for the network coherence.

=> **for the protection of small landscape elements** which have an important function as stepping stones and migrating corridors several types of measures are taken by the government, promoted and financially supported for private owners

- Delayed mowing of road embankments and ecological management of roads and waterways verges: is a way to manage raod embakments more ecologically: the use of pesticides is then forbidden and the delayed mowing insures the flowering of many plant species and the nesting of some animal species

In Flanders about 998 km of road-side verges – for 725 km with a specific management plan, and 636 km of river and canal verges are now under nature-oriented management schemes, in Wallonia about 13 000 km of roads.

- Financial incentives are given to private and public landowners to plant or restore hedges, for ecological management of borders of plots, for enhancing botanical values of grasslands (see also under agri-environment measures)

- On the basis of an ecological network map or of an environment policy plan, 'Municipality plans for nature development' develop actions to maintain and restore biodiversity at the city or municipal level.

- The Natural Parks intend to protect nature of an area of high biological interest in harmony with the population concerns, rural and economic development. There are 9 Natural parks in the Walloon Region covering 306 971 ha, and 1 National Park in Flanders covering about 4.500 ha.

- fitting out of roofs and church towers for bat populations, installation of nesting boxes for birds and roosts for bats, nest box actions for raptors and owls (« Opération Combles et Clochers » in Wallonia)

- in urbanized areas: active promotion to develop green roofs, green walls, development of more natural gardens

In Flanders about 560 municipal projects are being carried out with the objective of conservation and development of nature, forest or green spaces.

=> **in river basin management plans** include conservation and restoration of natural values through the implementation of the Water Framework Directive and through specific waterway schemes (e.g. Contrats de Rivières in Wallonia, implementation of the "blue network" in Brussels, floodplain restoration and development in Flemish Region)

=> **construction of fauna passages**

The construction of "eco-tunnels" and "eco-passages" in fragmented habitats and now also as mitigating and compensatory action in various construction projects. A project for the construction of two eco-passages in

the most important natural site of Brussels, the Sonian Forest, is under study.
In the Flemish Region 15% of 193 known barriers for amphibian passages are neutralized till now, while two large ecoduct-projects and 17 ecotunnel-projects have been implemented.

=> ensuring fish migration by de-fragmentation of rivers
Inventories of the obstacles for fish migration have been compiled for the Walloon and Flemish Region, measures for restoring migration passages are included in the river basis management plans and also form the implementation of a Benelux Agreement.
In the Flemish Region 116 of 796 (15 %) of known barriers are neutralized till now.

=> spatial planning
- Flemish Region: designations of the Flemish Ecological Network areas are integrated into the spatial land use destination plans, implying specific regulations for the protection and management
- Brussels-Capital Region: In the regional zoning plan of 2001, a category "B" (sites of high biological interest" has been added in the general category of green spaces. This is a very important recognition. Also the concept of "ecological network" has been accepted, but has no legal force until now.
- Federal marine area: The Masterplan North Sea was adopted in 2004. It provides the spatial planning of the Belgian marine areas and takes into account (at least to a certain extent) the integration of the marine protected areas in other sectorial policies and will be updated based upon the EC-guidelines, which are presently being developed.. A Royal Decree has been approved for user agreements in protected areas (KB14 October 2005). A Royal Decree concerning protection of ship wrecks has been proposed (Chamber of Representatives – November 2006).
- Wallonia's 23 plans de secteur (PDS) mainly aim to manage the pressure that urbanisation puts on the area by defining zones which can be built on (270,000 ha) and zones to be used for agriculture, forests, or wildlife (1,400,000 ha). We observe that 27 % of the wildlife areas defined in the PDSs are built on. Following an Order of the Walloon Government on the protected zones of the 'Code wallon de l'Aménagement du Territoire, de l'Urbanisme et du Patrimoine' (CWATUP, published in the Belgian Official Journal on 23.09.2003), such as hedges, tree rows, habitats of community importance, forest reserves, wetlands of biological interest and underground cavities of scientific interest, these may not be changed anymore without an urban permit.

=> urban parks and green buffers
Public parks also contribute to nature conservation. Some large landscape parks including forests, grasslands, ponds,… in the Brussels-Capital Region do present a very rich flora and fauna and received the status of Natura 2000 site. Park management plans include zoning of the park area in order to have different area's dedicated to different functions: recreational, walks, nature…. The administration gives advices to municipalities for ecological management to develop natural values
- Flemish Region: Handbook for harmonised park management + training sessions
- Brussels-Capital Region: regional public green spaces (parks, gardens, …) are managed following the principles of "differentiated management", which implies ecological management where there are potentialities
- Wallonia: The SPW owns and manages several public green parks, but also gives advices and subsidies for the management of municipalities green spaces.

2/ sectoral integration is being stimulated and supported through:

=> agri-environment measures and other measures for the agriculture sector encourage the conservation of landscape elements, ecological network elements (such as hedges, tree rows, isolated trees, fruit tree, grove, pounds) ; natural grasslands ; well managed borders and grassland buffer zones; high nature value grasslands; actions under the programme a 'Fallow for fauna' and delayed mowing of grasslands for meadow bird protection schemes.

- In Flanders: 1.745 ha of agricultural area with botanical management schemes, for the development of small landscape elements – mainly hedge rows – the total surface under agri-environment contracts reached 7.888 ha in 2006 but decreased to 5.908 ha by end of 2007, contracts for species protection in agricultural areas reached 724 ha in 2006 but lowered to 560 ha end of 2007. Main reason for decrease in the surfaces under contract was delay in the new government decision on subsidies for agri-environment measures in 2007.
- In the Walloon Region, involvement from farmers has been increasing since the first year that agri-environmental measures (AEM) were put forward (1995). The AEMs available since largely relate to biodiversity, landscape and protection of surface and underground waters. At the end of 2006, nearly half of farmers were involved in one or more MAE. The most successful measures were those for hedges, isolated items (trees, ponds) and winter coverage of the ground before a spring crop. In 2007, the Walloon Government adopted a new legal tool. This increased the sums granted for hedge planting and extended the measure to orchards and rows of trees. Furthermore, subsidies are now planned to encourage their upkeep. Agricultural ecosystems: traditional grazing practices with rustic cows or sheeps are encouraged in protected area's in order to preserve specific ecosystems that depend on it.

=> **management agreements:**
- In the regions management agreements are established with Ministry of Defence for nature and forest management in the Natura 2000 sites on military domains (about 15.000 ha for Flanders and Wallonia together), with Infrastructure Departments for the ecological management of road and waterways verges
Federal marine area: legislation concerning marine protected areas requires that 'user agreements' are negotiated and approved between competent authorities and sectors (yachting and angling in particular). At present there is no integration of the commercial fishing sector or tourism sector in management of marine protected areas – although stakeholder networks exist to exchange information and to prepare sectorial integration. Belgium reported in 2006 its implementation of the Integrated Coastal Zone Management (Recommendation 2002/413/EC) (Nationaal Rapport van België inzake de aanbeveling 2002/413/EC. FOD, DG 5 Leefmilieu: 40 pgs). The ICZM also foresees and facilitates inter-sectorial cooperation.
Information can be consulted on: www.de-Noordzee.be

=> **forest certification**
The Programme for the Endorsement of Forest Certification schemes (PEFC) is used in Wallonia. Nearly 268,000 ha of forest areas, or 49 % of the forests cover of the Walloon Region's is PEFC certified. Nearly 90 % of certified forest land belongs to public landowners. Information available on www.pefc.be
In the Brussels-Capital Region, the whole Sonian Forest, 1650 ha and about 10 % of Brussels surface, is ecocertified with the FSC label. And in Flanders about 14% of the public forests have a FSC certification.

The federal Council of Ministers approved in November 2005 a public procurement policy on timber and timber products. Federal public services and institutions have to procure wood and wood products from sustainably managed forests. Both FSC and PEFC are accepted as a guarantee that wood and wood products are coming from sustainably managed forests. Equivalent certifications schemes are also accepted after assessment by an expert panel. More information is available on http://www.guidedesachatsdurables.be

=> **concertation with forest groups and game management units** to ensure integration of biodiversity concerns in their management plans
- Walloon Region: a specific tool is available to improve sustainable forest management: The "Circulaire relative aux aménagements dans les forêts soumises au régime forestier" which is a normative tool for the management planning in public forests (255.000 ha in Wallonia). At this stage, about 65% of the forest area is covered by new management plans following this circulaire. The remaining area should be covered by 2013

- Brussels-Capital Region: Nature and forest department of the BCR are integrated in the same division,

which ensures the integration of biodiversity in the forest management. Further more, as all Brussels forests are Natura 2000, a specific biodiversity Natura 2000 management plan is in progress.

- Flemish region: financial and technical support is given to forest groups (19 active, of which 17 formally established) and game management units (180 established) for management planning and implementation. Criteria for sustainable forest management are provided by a ministerial decision of 2003 and guidelines for management plan development and measures have been published and are available from the website, technical advice is given by the government administration. Game management units are supported to develop a management plan and have to report on the monitoring of game and of hunting data.

- Ecosystem approach

The ecosystem approach is being applied as far as possible for the development and implementation of management plans. The basis of these plans includes ecological functions, specific habitat and species requirements and take into account actual land use and services. For coastal and marine areas the overall management approach is based on the ICZM principles which are guided by the ecosystem approach. Both Federal marine authorities and Regional authorities are now in negotiation for implementation of ICZM.

1.3. To establish and strengthen regional networks, transboundary protected areas (TBPAs) and collaboration between neighbouring protected areas across national boundaries.	Establish and strengthen by 2010/2012 transboundary protected areas, other forms of collaboration between neighbouring protected areas across national boundaries and regional networks, to enhance the conservation and sustainable use of biological diversity, implementing the ecosystem approach, and improving international cooperation

- Transboundary protected areas

The regions have developed formal interregional as well as formal bilateral cooperation with neighbouring countries on the integrated management of transboundary ecosystems, such as river ecosystems and protected areas.

For the Sonian Forest area a joint management plan is under development by the tree regions based upon a global “vision plan”, and will be implemented through joint actions.

The ‘Three Countries Parcs - Open space without borders’ (Belgium-The Netherlands-Germany) aims to improve transboundary cooperation to maintain and strengthen the functioning of rural zones as well as to conserve open space in an urbanised environment.

The ‘Transboundary Ecological Basis Plan’ between Flemish Region and The Netherlands identifies several transboundary nature areas that include PA. Commissions have been set up to start with the development of a common management plan and a joint action plan for implementation.

The Flemish region and the Netherlands have formal bilateral cooperation agreements for the management planning and implementation of the Schelde river (Natura 2000), the transboundary nature reserve Kalmthout-De Zoom and border river Grensmaas. Transboundary corridors for migration of large grazers have been identified and proposal for actions were developed but are not yet implemented.

The ‘Plan de Base Ecologique et Paysager Transfrontalier’ (PBEPT) between Walloon Region-Luxembourg is being implemented through joint actions.

The “Vallée de la Haute Sûre” is a transboundary Ramsar site (Wallonia-Luxembourg).

- Type of transboundary cooperation

=> development of common management plan and joint implementation

=> transboundary joint committees/working groups for EIA procedures of projects planned by one of the countries/regions at the border side (Grensmaas, Schelde)

1.4. To substantially improve site-based protected area planning and	All protected areas to have effective management in existence by 2012, using participatory and science-based site planning

management.	processes that incorporate clear biodiversity objectives, targets, management strategies and monitoring programmes, drawing upon existing methodologies and a long-term management plan with active stakeholder involvement

Management planning, implementation, evaluation of the actions taken and monitoring of biodiversity is being done on an important scale but is not covering all the protected areas effectively due to insufficient financial and personnel capacity and insufficient public and political support.

- format and criteria for development of management plans for nature reserves, forest reserves, parks and urban green areas, river basins have been compiled and include information on:
=> planning process
=> guidelines for management measures
=> surface/nr PA with management plan
=> monitoring plan for monitoring management measures, specific habitats and species
A computer based tool has been developed for management planning and monitoring of management measures to be used by the administration.

- guidelines for private use of PA
=> guidelines exist for agri-environment management practices
=> guidelines for recreational use
* Protocol with youth groups for recreational activities in nature and forest areas: established in Flemish Region, under development in the Brussels-Capital Region,
* Federal marine area: user agreements have been adopted for the marine Natura 2000 areas. These user agreements focus on arrangements with yachting and sea-angling societies. User groups who signed these agreements committed themselves to support the conservation goals of the protected areas, to actively inform their membership and clients, to minimise disturbance during sensitive periods (foraging areas and periods), and promise not to pollute the marine protected areas. The competent authority contributes by means of public awareness raising campaigns. The user agreements, which are valid for 3 years, will be assessed in view of the management plans that are presently being prepared.

(see also 'codes of conduct')

1.5. To prevent and mitigate the negative impacts of key threats to protected areas.	By 2008, effective mechanisms for identifying and preventing, and/or mitigating the negative impacts of key threats to protected areas are in place.

Several instruments and mechanisms have been installed to prevent destruction of natural values, and to promote effective management:

- the EIA procedures: The EIA regulations and procedures for projects and plans and the Strategic Environmental Impact (SEA, implementation of the EC-Directive 2003/35) for plans and programmes are included in the jurisdiction of each of the regions and of the Federal Authority. In case of projects and plans or programmes in (or affecting) protected areas, these projects, plans or programmes are also assessed in view of their potential effect on the conservation status of the habitats and/or species. Specific guidelines for the implementation of the EIA for projects have been developed, for SEAs they are presently being prepared by development screening methodology.
In Wallonia these aspects are included in the Environment Code and in the Decree on conservation of Natura 2000; in Flanders in the Decree for Nature Conservation and in the EIA law and guideline books; in the Brussels in the Decree for Nature Protection; for the Federal marine areas in the Royal Decree of 9 September 2003 and in the Federal Law of 13 February 2006.

- development of strategies for the control and prevention of IAS: IAS working group has been

established on national level and has compiled all existing information on IAS in Belgium and organises concertation between the regions and federal authorities. Strategies and measures for controlling specific species(groups) have been developed and are implemented on regional level. Concrete management and restoration actions have been undertaken on the initiative of the Natural Parks or River contracts in Wallonia, or site specific management or restoration plans in Flanders such as in the framework of LIFE-projects for Natura 2000 sites. At the moment however these are still at an experimental stage, and their coordination will need to be developed at a regional level.
Federal marine area: deliberate introduction of non-native species into the Belgian marine areas is forbidden by law (Law of 20 January 1999) unless specific permission by Royal Decree and after appropriate assessment of the consequences of the introduction of non-native species for the native fauna, flora and habitats and risk assessment towards neighbouring areas. The IMO treaty on Ballast Water, which was signed by Belgium, has not yet been ratified.

- **codes for good conduct/practices**: regional authorities developed codes of conduct or for good practices for ecological measures in agricultural uses, for nature management measures, for use of pesticides, for forest management.

- **measures for restoration, compensation**: regulations are included in regional and federal law and are mandatory for projects and plans affecting natural values in protected areas. Regional and Federal authorities are presently preparing the transposition and implementation of the EU-Directive 2004/35/EEC of 21 April 2004 on "Environmental Liability with regard to the prevention and remediation of environmental damage".
In the Flemish region specific Nature Development Projects are initiated for Natura 2000 sites to restore and enhance nature values and develop public access infrastructure;, an overall programme has been approved by Decision of the government for the restoration and nature development for flood plains of the Schelde estuary.

- **cross compliance**: evaluation of agricultural use and practices in Natura 2000 is carried out in the regions through the EU cross compliance system to ensure compliance to EU environment and nature regulations, implementation is done in the framework of the EU Rural development Programme.

- **Federal: marine action plan for pollution control**
Bio-accumulating, persistent and toxic pollutants are tackled through the implementation of various EU-Directives concerning chemical compounds and their effect on the environment (REACH, Water Framework Directive, Environmental Quality Standards Directive, …), international conventions (e.g. Stockholm Convention and regional sea conventions (OSPAR). In the OSPAR-Convention, (covering the East-Atlantic region), the Hazardous Substances Strategy aims to reduce the hazardous substances to background levels by 2020. Specific action plans exist for a number of priority substances (see website OSPAR).
The Law of 20 January 1999 is the main legal instrument for the protection of the marine environment in the marine areas under Belgian jurisdiction. It provides measures to prevent and reduce the pollution caused by economical activities carried out at sea. It is linked with the Law of 6 April 1995 dealing more specifically with the prevention of the pollution of the sea by ships (MARPOL).
Concerning legislation and actions to combat oil pollution and other pollution resulting from accidents at sea Belgium is a contracting party to the Bonn Agreement, a regional agreement dealing with operational cooperation between all North Sea countries in the fields of surveillance and combating marine pollution.
Under IMO, Belgium is presently implementing or ratifying various conventions (such as the International Convention on Pollution Preparedness, Response and Co-operation of 30 November 1990 and its protocol on preparedness, Response and co-operation to pollution incidents on ships of 2000, the International Convention on the Control of harmful anti-fouling Systems on Ships (2001), etc. (see website www.imo.org).

- **pesticide reduction plan**: regional and local authorities are implementing reduction plans for the use of

pesticides in the management of buffer zones, green spaces in urbanised areas, road and waterways verges. For the marine area pesticides are tackled through the Hazardous Substances Strategy of the OSPAR Convention. According to this strategy, emission to the marine environment of hazardous substances (including pesticides) that are persistent, toxic and bioaccumulate will be reduced to background levels.

- **a Manure Action Plan** has been approved by government decision in the Flemish region to control manure use in so called 'fragile areas' which include PA.

2.1. To promote equity and benefit-sharing.	Establish by 2008 mechanisms for the equitable sharing of both costs and benefits arising from the establishment and management of protected areas

- **socio-economic cost-benefit assessments for PA**
=> study on public awareness
Flemish Region: report on a public awareness study and development of specific indicators was published in 2005, and public conference day organised in 2006.
Brussels-Capital Region: public awareness of biodiversity is under study
Federal marine area: study on public awareness - F. Maes et al. 2005. Een Zee van Ruimte – naar een ruimtelijk structuurplan voor duurzaam beheer van de Noordzee. Uitg. Federaal Wetenschapbeleid 204pg. (CD in English)

- **regulations and measures to promote for public access to protected areas**
=> regulations (law) and /or guidelines for public access are integrated in users agreements and often included in the management plan of the area – private and public reserves are open for public for leisure
=> several visitor centres and education centres are present in the 3 regions with information sets on the surrounding areas and on biodiversity issues, brochures and guided visits are made available for the public
=> public information: websites of regional, federal and local authorities and NGO's developed portal websites under which specific themes such as nature conservation or protected areas or scientific studies can be consulted, for most protected areas information panels are set up on site and area specific brochures are published often at the establishment of the protected area, brochures on specific species(groups) or habitats and newsletters are published on a regular basis or at the occasion of a certain public event, guided tours for the public are organised by the administrations and especially the NGO's on weekly basis.
An important project in the Brussels-Capital Region is the "green walk" at the periphery of the Region which promote the controlled and "sustainable" access to green spaces and protected areas.

- support to NGO's for acquisition, management, public access of PA: regional authorities give financial support for NGO's for the acquisition of land to be established as a nature reserve, for the management of the reserve and for the development of infrastructure for public access

2.2. To enhance and secure involvement of indigenous and local communities and relevant stakeholders.	Full and effective participation by 2008, of indigenous and local communities, in full respect of their rights and recognition of their responsibilities, consistent with national law and applicable international obligations, and the participation of relevant stakeholders, in the management of existing, and the establishment and management of new, protected areas

- participation of stakeholders + public consultation procedures are mandatory for overall designation and management planning processes such as for Natura 2000, river basins, marine areas

- technical and financial support is given to private owners to develop and implement forest management plans, nature area management plans

- cooperation agreements for management measures are established between the regional authorities and the

provincial/municipal authorities, ministry of Defence, water management departments,… (see under point 1). For the marine area cooperation agreements exist between local, regional and federal authorities (Kustwacht and Coordinatiepunt Beheer van de Kustzones), see also "user agreements" for marine areas above.
In Flemish Region: cooperation with and financial support of Regional Landscape Organisations – till now 10 formally approved for registration, each including min. 3 municipals, registration based on action plan that includes nature and landscape conservation, ecologically sound tourism and leisure development, awareness actions.
In Wallonia, involvement of local stakeholders is being done via nature development programs (see 1.2)

3.1. To provide an enabling policy, institutional and socio-economic environment for protected areas.	By 2008 review and revise policies as appropriate, including use of social and economic valuation and incentives, to provide a supportive enabling environment for more effective establishment and management of protected areas and protected areas systems.

Main impediments for effective establishment and management of PA are financial capacity, political support, public awareness and support. Effectiveness of management efforts is still strongly impacted by inferior quality of the environment due to nitrification, acidification, fragmentation, pollution – critical loads for the majority of sensitive ecosystems are still exceeded. Another threat that is becoming more important is recreational use.

- **Monitoring and reporting to provide a basis for revising policies**
=> monitoring of management effectiveness in nature reserves
=> monitoring of Nature Development Projects, of agri-environment schemes

- **studies on effectiveness of existing instruments/measures for PA management**
Nature reserves are most successful in sustainable management of high nature values, but are susceptible to negative effects from the surrounding land use, mainly due to fragmentation, eutrophication and desiccation. Small reserve areas require more intensive management measures due to remaining higher border effects from environmental quality. But as nature reserves become larger intensive nature management is slowly shifting to more extensive grazing management and more attention for natural dynamic forces in order to preserve biodiversity. However, consequences of this shift still need to be documented on a larger scale.

- **main obstacles/needs for establishment/management of PA** are human and financial resources, environmental quality, un-sustainable use especially tourism and leisure in general while for marine areas also fishing and angling. For the marine area the management is also being hampered by the fact that the Belgian part of the North Sea is one of the most densely used marine areas in the world and by the fact that several competences are delegated to the regions (eg. Fishing policy, coastal planning,) or to various federal administrations (marine environment, defence, interior, economical affairs, energy, …).

- **legislation and policy information on PA**:
Legislation on PA is included in regional law on nature conservation. Policies or strategies are included in the regional environment and nature policy plans, and in the National Biodiversity Strategy.

3.2. To build capacity for the planning, establishment and management of protected areas.	By 2010, comprehensive capacity-building programmes and initiatives are implemented to develop knowledge and skills at individual, community and institutional levels, and raise professional standards

- training sessions: internal for administrations, external for land users and owners – by government institutions, training is also provided by nature associations such as Natagora, Natuurpunt,

* Flemish Region: INVERDE (institution supported by government for training on nature and forest law,

policies, management practices, monitoring); JNM (nature education of youth groups), CVN (training of nature guides)
* Walloon Region: There is a network of ONG's local representatives to manage protected area's
Advices and assistance can be given to managers of public protected area's by regional coordination structures.

- technical and financial support for NGO's, local authorities, private land owners, private forest owners, game management units

- research institutes organise workshops to inform administrations and organisations on the outcomes of research studies, monitoring reports, evaluation procedures,…

- The Flanders Marine Institute (VLIZ) is an important and instrumental organisation to raise public awareness concerning the marine environment and its use and to support marine research.

3.3. To develop, apply and transfer appropriate technologies for protected areas.	By 2010 the development, validation, and transfer of appropriate technologies and innovative approaches for the effective management of protected areas is substantially improved, taking into account decisions of the Conference of the Parties on technology transfer and cooperation.

To support management planning and evaluation of nature, forest and marine areas several types of information systems have been developed:
=> GIS, satellite images (ICONOS), habitat maps, species atlases, landscape maps
=> information is accessible through websites, reports, seminars (websites given below)
=> CHM: website on biodiversity issues and information in framework of Convention of Biodiversity (Natural Science Institute)

- Flemish Region: computerized management planning and follow-up system (GIS-linked) for PA managed by government Agency, evaluation reports for establishing conservation status of Natura 2000, reports on nature typology including measures for restoration and management; maps of designated areas are publicly available and can be consulted on specific websites of the Information Centre: http://gisvlaanderen.be

- Walloon Region: online database system for with measures for habitat restoration/management; regular media event
- Brussels-Capital Region: management plans linked with GIS and species databases are under development for Natura 2000 sites. Drafts are awaiting publication after adoption of the new nature law and the Natura 2000 designation decrees.
- Federal marine area: Coastal atlas ("Kustatlas") has been recently published as part of the ICZM. A collaborative research project (GAUFRE) between federal and regional institutes compiled scientific date on the use of the marine area and developed a strategic vision (based upon sustainable development criteria) of an optimal spatial plan of the Belgian marine area of the North Sea.
The Federal Ministry of Economic Affairs prepared in 2006 a map that indicates the overlay of protected areas, military areas, economic activities (san extraction areas, pipelines, communication cables, energy network, windmills, etc.).
The SADL unit of the KU Leuven hosts the EU-database of Natura 2000 areas and is as such in the position to provide a map of all protected areas in Belgium (regional and federal).

3.4. To ensure financial sustainability of protected areas and national and regional systems of protected areas.	By 2008, sufficient financial, technical and other resources to meet the costs to effectively implement and manage national and regional systems of protected areas are secured, including both from national and international sources, particularly to support the

	needs of developing countries and countries with economies in transition and small island developing States.
Studies on ecosystem services and values are restricted to specific areas: for the Schelde river area, Heverlee forest area, Marine areas Identification of financial needs for Natura 2000 has been published in the EC report on art 8 of the Habitats Directive – available from EU website - government budgets allocated for nature conservation (OECD report 2006) Public expenditure on biodiversity and landscape protection in Belgium amounted to EUR 130-150 million annually during 2000-03, an increase from EUR 90-110 million a year during 1996-99. The share of investment expenditure steadily increased, from 11% in 1996 to 44% in 2003. - international cooperation projects => Flemish Region supports projects in developing countries for forest protection and management through the Flemish forest fund, and re-introduction projects of Saharan-Sahel antilopes in protected areas in Tunesia and Algeria through the Bonn Convention Programme.	
3.5. To strengthen communication, education and public awareness.	By 2008 public awareness, understanding and appreciation of the importance and benefits of protected areas is significantly increased
- communication strategies on PA => in the regions several information days and conferences have been organised on Natura 2000 designation, management and protection regimes => public info sessions on specific PA are organised on regular basis through visitor centres activities, public awareness materials (newsletters, brochures), media happenings, fairs and other public events - organisation of public events => yearly: environment day, international Biodiversity Day focussing on the theme of the year, international Wetlands (Ramsar) Day, Park day, week of the forests, earth day, European bat night, Natural reserve week- end during which the public can have a guided visit of some of these natural reserves in each of the regions => Nature NGO week-end activities and holiday camp programmes - regular consultation sessions with landowners, forest owners, hunter organisations, port authorities, water management agencies, tourism and recreation, defence,… Brussels-Capital Region: Several NGOs are subsidized to develop educative projects to the benefit of environment. As example, associations are subsidized for more than 10 years to help citizen to develop nature in their gardens (“Nature au jardin” program). Not less than 120 gardens got the “nature friendly garden” label. Federal: Marine area: see remark on VLIZ above.	
4.1. To develop and adopt minimum standards and best practices for national and regional protected area systems.	By 2008, standards, criteria, and best practices for planning, selecting, establishing, managing and governance of national and regional systems of protected areas are developed and adopted.
- criteria for selection and establishment of PA => guidelines on designation of Natura 2000 areas are based on the criteria of the Habitats and Birds	

Directives, for each site a designation form is completed and includes the habitats and species for which the site is designated

=> priorities for acquisition of land to be established as are based on occurrence of protected species or habitat types, representativeness and geographic distribution, and the aim to enlarge existing protected areas

- guidelines for management: description of various nature types and recommended management measures is available on the regional websites

4.2. To evaluate and improve the effectiveness of protected areas management.	By 2010**,** frameworks for monitoring, evaluating and reporting protected areas management effectiveness at sites, national and regional systems, and transboundary protected area levels adopted and implemented by Parties

- **methods for monitoring** of PA for evaluation of management effectiveness
Pilote studies for monitoring management effectiveness have been carried out to determine methodology and time planning and are now implemented in several nature reserves. A general monitoring for the evolution of habitats and species is carried out in most protected areas, as well as monitoring of nature development projects, monitoring of agri-environment measures, hunting bag monitoring, reporting on forest certifications. For NGO's monitoring of specific species and habitats and management measures and reporting is mandatory in the approved management plan.

- **evaluation of habitat and species conservation status** Natura 2000 has been carried out based on the guidelines developed for the implementation of art 17 of the Habitats Directive concerning reporting obligations. The evaluation has been carried out by bio-geographical region. The report must summarise the conservation measures taken and their impact on the conservation status for the targeted habitats and species. The summary report can be consulted on: http://cdr.eionet.europa.eu/be/eu/art17/envrf6cg.
See also species action plans for marine mammals (ASCOBANS).

- **status and trends of protected areas**: reports are published by the regions on regular basis and made available on the respective websites. An overall report was published by the CBD National Focal Point on biodiversity in Belgium which also includes a chapter on protected areas: Biodiversity in Belgium 2004 (in French and in Dutch) and will be updated in 2009.
On a yearly basis management, status and trends of government reserves are being evaluated: in Flanders by the Research Institute for Nature & Forests (http://www.natuurindicatoren.be) – a new monitoring framework is being developed to enable better evaluation of the impact of the management measures; in Wallonia evaluation is done by the CCGRND, consultative commissions on the management of governement nature reserves in (Commissions consultatives de gestion des réserves naturelles domaniales) évaluates. For private reserves an evaluation is done on the basis of the reports submitted by the NGO's.

4.3. To assess and monitor protected area status and trends.	By 2010, national and regional systems are established to enable effective monitoring of protected-area coverage, status and trends at national, regional and global scales, and to assist in evaluating progress in meeting global biodiversity targets

See previous answer.

4.4 To ensure that scientific knowledge contributes to the establishment and effectiveness of protected areas and protected area systems.	Scientific knowledge relevant to protected areas is further developed as a contribution to their establishment, effectiveness, and management

- **Scientific publications on ecological aspects of Natura 2000** sites have been published by each of the regions and the federal authority. The Institutes for scientific research in the different regions and the NGO's

also publish on a regular basis reports on the evolution of nature reserves and management implications and on the status of nature, forests, water systems– information available on respective websites given below.

- Scientific information exchange and networking – via platform on biodiversity research: EBPRS – BE: http://www.biodiversity.be

- The **Belgian Clearing-House Mechanism for CBD** handled by the National Focal Point at the Royal Belgian Institute of Natural Sciences provides an overall website for information on biodiversity aspects in Belgium and for indicating the links to regional and federal authorities as well as to NGO's: http://www.biodiv.be

- ⇨ Flemish Region: 2-yearly Nature Reports NARA, 2-yearly environment reports MIRA, yearly update of nature indicators and publication of report on the EU Headline Indicators for Biodiversity
  http://www.natuurindicatoren.be; http://www.nara.be
  http://www.mira.be
  http://www.natuurenbos.be

- ⇨ Walloon Region: The latest publication, the Environmental Outlook for Wallonia 2008, brings together 140 key indicators which give a valuable insight into the state and development of the environment (including protected natural sites)
  http://natura2000.wallonie.be/ ;
  http://mrw.wallonie.be/dgrne/sibw/sites/home.html ;
  http://environnement.wallonie.be/

- ⇨ Brussels-Capital Region: Etat de l'Environnement – Report 2003-2006.
  http://www.bruxellesenvironnement.be
  http://www.bruxellesenvironnement.be/Templates/etat/Niveau2.aspx?id=3036&langtype=2060

- ⇨ Federal marine area: monitoring of ornithological importance of marine areas to prepare designation of Special Protection Areas (SPAs) took place by the MUMM (Management Unit of the North Sea Mathematical Models), reports and atlases on the North Sea area of Belgium
  http://www.mumm.ac.be
  http://www.VLIZ.be
  http://www.interregnorthsea.org or www.euregioscheldemond.be

Overview table with numbers and surface of various types of PA

An overall total surface for PA cannot be given as surfaces of PA of several types are overlapping totally or partially.
The total Natura 2000 surface in terrestrial zone comes to 12.6 % of the surface of Belgium, in marine zone about 12% of the Belgian territorial sea and its exclusive economic zone is designated as Natura 2000.

	Brussels-Capital		Flanders		Wallonia		Federal marine		Belgium	
	Number	Area(ha)	Number	Area(ha)	Number	Area(ha)	Number	Area(ha)	Number	Area(ha)
Nature reserves										
public nature reserves	13	117	368	14546[2]	147	7 058	1	670	406	21083
private nature reserves	-	-	554	19302[3]	135	2286	-	-	767	20432
Natura 2000	3	2432	62	166187	240	220944	4	42305	310	428908
Forest reserves	2	112	47	2546	13	610	-	-	61	4556
Forest special protection areas[4]	4	587								
Wetlands of biological interest	-	-	-	-	51	1090	-	-	49	1045
Caves	-	-	-	-	71	-	-	-	63	-
Natural parcs	-	-	1	5700	9	306971	-	-	10	312167
Ramsar and other wetlands	-	-	4	5572	4	38528	1	1900	9	4600
Dune Protection Act: protected dunes	-	-	135	1105	-	-	-	-	±117	1088

2 Of this total area being managed as a reserve 6.579 ha (nr = 73) has a formal recognition by ministerial decision as nature reserve
3 Of this total area 13.681 ha (nr = 331) has a formal recognition by ministerial decision as nature reserve
4 Arrêté du Gouvernement de la Région de Bruxelles-Capitale donnant à certaines parties de la Forêt de Soignes le statut de zone de protection spéciale