

2. Status of biodiversity

2.1. 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

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

2.3. 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' (SPA) designated under the EU Birds Directive and the 'Sites of Community Importance' (SCI) 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.

Table 3. Surface of Natura 2000 in the Brussels-Capital Region, Flemish Region, Walloon Region and the Belgian part of the North Sea (updated in 2013).

	territory (ha)	Natura 2000	
		surface (ha)	% of the territory
Brussels	16 200	2 375	14.7%
Flanders	1 352 200	166 322 ⁽¹⁾	12.3%
Wallonia	1 684 400	220 945	13.1%
Belgian part of the North Sea	346 200	124 929	34.2%
Total	3 399 000	514 571	15.1%

(1) When including the Flemish Ecological Network, which is covered by a similar to more strict protective legal framework, the total surface comes to 193 268 ha and 14.3% (areas belonging to the Natura 2000 network as well as to the Flemish Ecological Network are only counted once).

2.3.1. 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 the surface of Flanders), giving focus to 28 breeding bird species and 26 non-breeding bird species of annex I of the Birds Directive. 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. In 2012 there was an expansion of the SCI site 'Uiterwaarden langs de Limburgse Maas en Vijverbroek. Taking into account these additions the 38 SCI sites under the Habitats Directive cover now a surface of 105,022 ha (7.8% of the surface of the Flemish region), giving focus to 47 habitat types and 59 species of the annexes of the Habitats Directive. The total surface of Natura 2000 in Flanders covers 166,322 ha or 12.3% of the surface. 37.7% of the Flemish Ecological Network is situated within the Natura 2000 network.

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 site specific plans is carried out in consultation with land owners 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.

- Establishment of the conservation objectives and designation of the SCI

* legal and policy framework: Executive law of the Flemish Government of 3 april 2009 'on the procedure for the designation of special areas of conservation and the establishment of conservation objectives'

For each habitat and species of European importance the objectives on the regional level of Flanders were determined in the regional conservation objectives (G-IHD). The G-IHD indicate when a specific species or habitat in Flanders reaches a favorable conservation status and what areas are essential for this goal. This is when for a species the area, the population size and the quality of the habitat or for a habitat type, the total area and quality is sufficiently large or good enough to survive in a sustainable way. The G-IHD were approved by the Flemish Government on July 23, 2010.

Based on the G-IHD the site specific objectives (S-IHD) were developed, scientifically screened and brought in consultation with stakeholders and actors. On the basis of the S-IHD, the priority measures for

each site were established and integrated in the draft designation acts. End of 2012 the S-IHD and designation acts for all 38 SCI and overlapping SPA passed the 1st principle adoption by the Flemish Government and were submitted to the formal advisory councils.

For the protection and management of species a new Executive law for species protection was adopted 15th May 2009 that includes horizontal measures for the management and protection of species with specific attention to species of European interest. For the development of species protection programmes a format, procedure and prioritization of species was prepared.

* consultation process: an extensive consultation and participation process was set up with all relevant actors, both the socio-economic groups that are active in the open space in the 'IHD-discussion group' (agriculture, nature management, hunting, land owners, economic sectors and forest managers) and the relevant authorities in the 'IHD-project group'. To enable the socio-economic actors to participate in the consultation process in a professional manner, resources were also provided for capacity-building within each participating organization. The framework for the consultation process in the IHD-discussion group was set out in a letter of intent that was signed in 2009 by all organizations involved.

<http://www.natura-2000.be/overlegproces>

http://www.natuurenbos.be/nl-BE/Natuurbeleid/Natuur/Natura_2000/In_samenwerking.aspx

- Policy and management in relation to Natura 2000:

The implementation of the conservation objectives of Natura 2000 is one of the three strategic projects of the Agency for Nature and Forests ANB. The existing instruments were evaluated by the Mina Council (Advisory Board of target groups) and, where necessary, proposals for changes for a more effective and more efficient implementation are being prepared.

In the various processes of the ANB policy priority attention is given to the conservation objectives and Natura 2000:

* The management of nature and forest areas located in Natura 2000 is further tuned to achieving the conservation objectives. The surface with an approved management plan in Natura 2000 came the end of 2012 to 40.916 ha, about 25% of the total area of Natura 2000. All existing management plans are being screened and where needed the focus on the conservation objectives will be enhanced. Besides a new approach has been developed for multifunctional management with an integrated management plan for larger areas together with several landowners and managers and a division of tasks in realisation of objectives and appropriate stimulating policies.

For the concrete guidance of measures on site a vade-mecum on management measures was in collaboration with the INBO.

* For acquisition of land priority is given to areas with vulnerable nature values and areas located in Natura 2000. In the period 2007-2012 a surface of 5.749 ha was purchased whereby the total area of land owned by ANB came to 37.335 ha of which 63% is located in Natura 2000.

* Protection provisions: For the screening of projects/plans with potential impact on Natura 2000 an overall approach was developed to make 'the appropriate assessment' more tailored and more accessible. For this purpose, the development of an on-line pre-screening system was initiated.

* Nature development projects are initiated to restore and extend natural values and develop infrastructure for public access. Of the 24 selected projects started during the reporting period about 50% of the total surface of the project areas (ca 9400 ha) is located in Natura 2000.

* Cooperation: for the realisation of Natura 2000 the establishment of cooperation with other Governments and stakeholders is crucial. In the framework of the IHD-process the establishment of engagements with the various actors was initiated. Existing cooperation programmes provide the example of good practices, such as:

-with the Ministry of Defense: with the management of Natura 2000 on military domains the investment of the project Danah is continued on a long term: <http://www.DANAH.be>

-with the authority of the port of Antwerp and the NGO Natuurpunt a site specific species protection programme for the Antwerp port area was established in 2011: <http://www.portofantwerp.com/nl/natuur>. The objective is to preserve and manage up to 5% of the port area, about 600 ha, as suitable habitat for the species of European importance.

-in collaboration with the public administrations competent for the management of waterways, roads and railways attention is given to solve bottlenecks in connectivity so that measures that contribute to connection between Natura 2000 and other nature and forest areas are integrated in the projects or management programmes of infrastructure.

- Life-Nature projects under theme 'Nature' are submitted for the realization the sustainable recovery of habitats and species of European importance and improvement of the landscape and the public access of Natura 2000 sites. In addition, these projects are also important for the development of cooperation with partners in the region and in neighbouring countries (Governments, NGOs, municipalities, provinces, local associations, private owners) and for awareness raising and communication regarding Natura 2000 and biodiversity conservation. Thanks to this co-financing projects specialized equipment could also be purchased and expertise built up in restoring and managing Natura 2000 habitats that are often very vulnerable or that need large-scale overdue management. In the reporting period 10 new LIFE projects for actions in Natura 2000 in Flanders were approved.

<http://www.natuurenbos.be/nl-BE/Over-ons/Projecten.aspx>

http://www.natuurenbos.be/nl-BE/Natuurbeleid/Natuur/Natura_2000/Geen_verre_toekomstmuziek/Life_en_Interreg.aspx

<http://www.natuurpunt.be/nl/natuurbehoud/natura-273.aspx>

* in the scientific research priority attention was given to enhancing knowledge on habitats and species of European interest and the conservation objectives: scientific basis for the determination and evaluation of regional objectives G-IHD and site objectives S-IHD; methodology for a calibration model to optimize the distribution of the objectives over the various Natura 2000 sites and to evaluate effects of the implementation of the objectives on socio-economic processes; development of an on-line system for the pre-screening of the appropriate assessment; scientific basis for the determination of reference values for main effects groups; basis to use population-genetic principles for the analysis of bottlenecks on connectivity between areas and to determine favourable reference values; cost-benefit analysis of Natura 2000; development of plans and methodology for the monitoring of habitats and species .

* Monitoring and reporting: "Nature report 2007: State of nature in Flanders: data for policy" gives a comprehensive reporting of the conservation status and the trends of habitats and species. For the following reporting in 2019 a more focused monitoring is being developed, priorities and inventory networks are determined and methodologies are worked out.

* Communication: For the general communication on Natura 2000 and about the process for establishing the conservation objectives an online newsletter was developed – http://www.natuurenbos.be/nl-BE/Natuurbeleid/Natuur/Natura_2000/Nieuwsbrief.aspx.

The preparation of an umbrella website Natura 2000 was initiated in collaboration with the INBO.

2.3.2. Walloon Region

There are 240 SCI 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 240 SCI are subject to general measures (AGW dated 24.03.2011). Furthermore, as far as each SCI will be designated to SAC (covered by a designation order), it will be subject to specific measures (AGW dated 19.05.2011) 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 been finalized on January 23rd 2014 for 52 SAC covering 21,852 ha.

<http://biodiversite.wallonie.be/fr/natura-2000.html?IDC=829>.

<http://biodiversite.wallonie.be/fr/accueil.html?IDC=6>

http://etat.environnement.wallonie.be/index.php?mact=tbe.m588bb.default.1&m588bbalias=Natura-2000-network_1&m588bbreturnid=46&page=46

2.3.3. Brussels-Capital Region

The EU Commission has approved the list of Natura 2000 sites proposed for the Brussels-Capital Region in December 2004. Brussels is currently working on the official designation of those sites, including the definition of conservation objectives, according to the new regional legislation (*ordonnance du 1er mars 2012 relative à la conservation de la nature*). Each site (48) will be covered by a management plan that aims to reach the defined objectives.

2.3.4. 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. These marine protected areas (MPAs) 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.

The EU-Habitats Directive also applies to the Exclusive Economic Zone. Hence the Special Area of Conservation 'Vlaamse Banken' (1,099 km²) was designated (Royal Decree of 16 October 2012). This new site includes the previously designated Trapegeer Stroombank area and covers a part of the territorial waters and the EEZ. Thanks to the designation of the SAC 'Vlaamse Banken', one third of the Belgian part of the North Sea is now integrated in the Natura 2000 network.

3. Trends in biodiversity

3.1. Trends in species

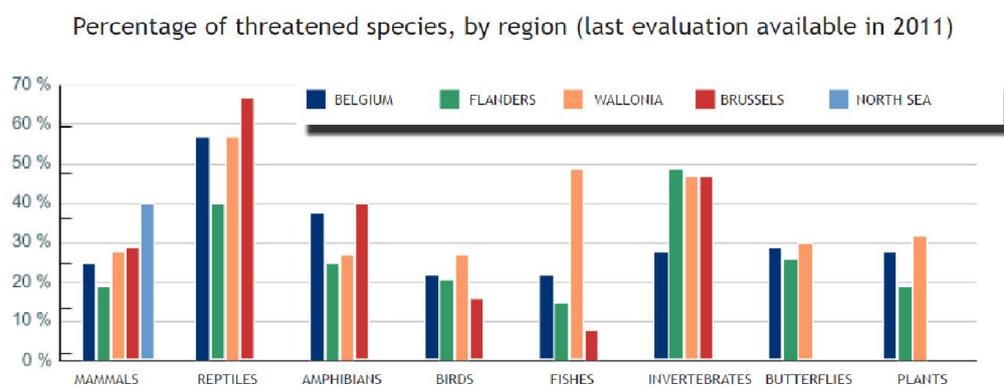


Figure 1. Species status in Belgium, Flanders, Wallonia, Brussels and the Belgian part of the North Sea in 2011 (Source: Statistics Belgium - http://statbel.fgov.be/fr/statistiques/chiffres/environnement/diversite_biologique/).

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. Of the remaining assessed species, 17% are endangered to critically endangered and 29% are vulnerable to near threatened; only 52% are considered safe or at low risk (for 2% of the assessed species, data are insufficient to define a status).
- In Wallonia, 9% of the animal and plant species have already disappeared and 31% of the animal and plant species are threatened to disappear.
- 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 amphibian species have disappeared.
- The initial assessment of the Belgian marine waters (2012) describes the current state of the marine habitats and species. The area covered by the Belgian part of the North Sea (BPNS) is part of a larger marine area, affected by sea currents, and as such no clear statement should be made on the state of the population size of species in the BPNS. Commercial fish species are assessed on a EU-level. An increase of invasive species has been identified over the years and some of these invasive species are fairly well inventoried (crustaceans, molluscs, ...). The quality of the structure and function of sandbanks and biogenic reefs have been affected by bottom-disturbing activities.

The trends in the species listed in the EU Habitats Directive have been evaluated within the framework of the Article 17 reporting of the Habitats Directive for the period 2008-2013, (see also <http://cdr.eionet.europa.eu/be/eu/art17/envucdy2q>). 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 species of European interest in Belgium (fig. 2) show that 43% have a bad conservation status, 26% an inadequate status and 19% a favourable status. For 12% of the species there is not enough information. Fig. 3 shows the conservation status trend of these species in our country.

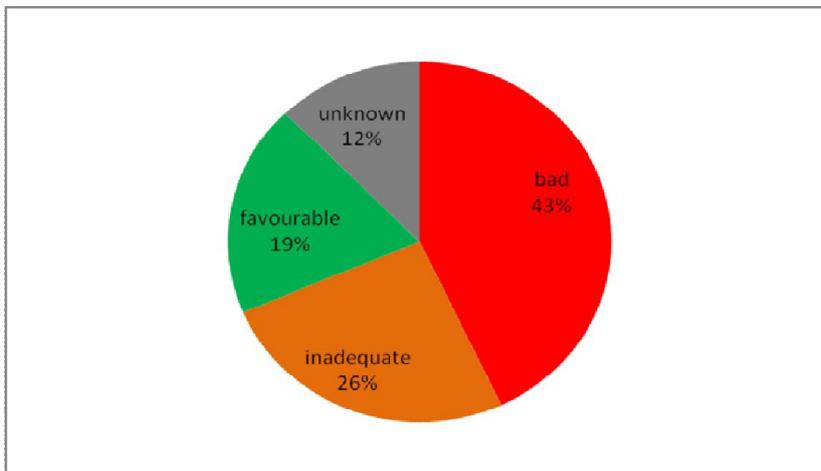


Figure 2. Overall assessment of the conservation status of the 85 species of European interest in Belgium (based on the Article 17 reporting of the Habitats Directive for the period 2008-2013).

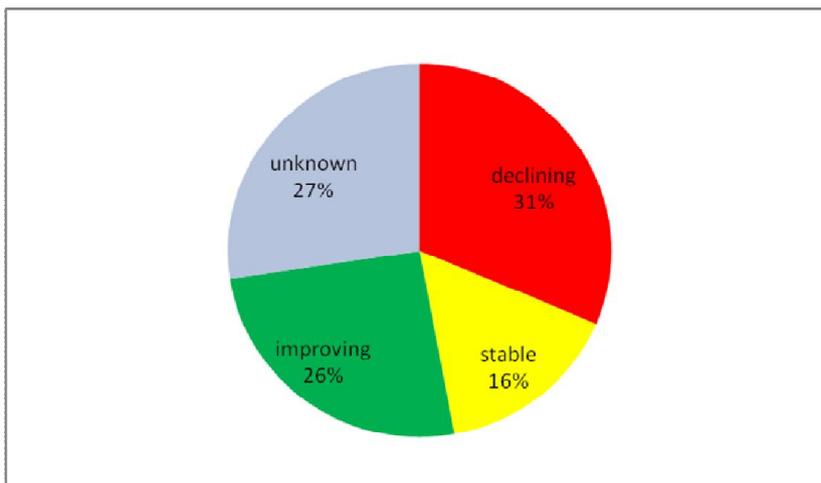


Figure 3. Overall trend in conservation status of the 85 species of European interest in Belgium (based on the Article 17 reporting of the Habitats Directive for the period 2008-2013).

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.

3.1.1. Flemish Region

Figure 4 illustrates the **species status** in the Flemish Region, based on validated Red Lists. The status of 1,909 species (ca. 5% of all species occurring in Flanders) has currently been documented. Knowledge on the status of Flemish biodiversity is strongly biased towards vascular plants, the status of which has been described for 58-70%. The status of invertebrates remains largely undocumented, with the status descriptions only available for 2% of the species. From the species assessed, 7% have recently become regionally extinct and 24% have been listed as threatened (critically endangered, endangered or vulnerable). Butterflies are among the most threatened with 29% categorized as extinct and 27% as critically endangered, endangered or vulnerable. A relatively large number of the fish and lampreys, grasshoppers and crickets, amphibians and reptiles are threatened as well. Among vascular plants, breeding birds, waterbugs and dragonflies, a smaller number of species was listed as extinct or threatened. Red List data of fungi, mammals, ants, spiders, dolichopodids and empidids are excluded from this analysis due to a lack of sufficient actual data.

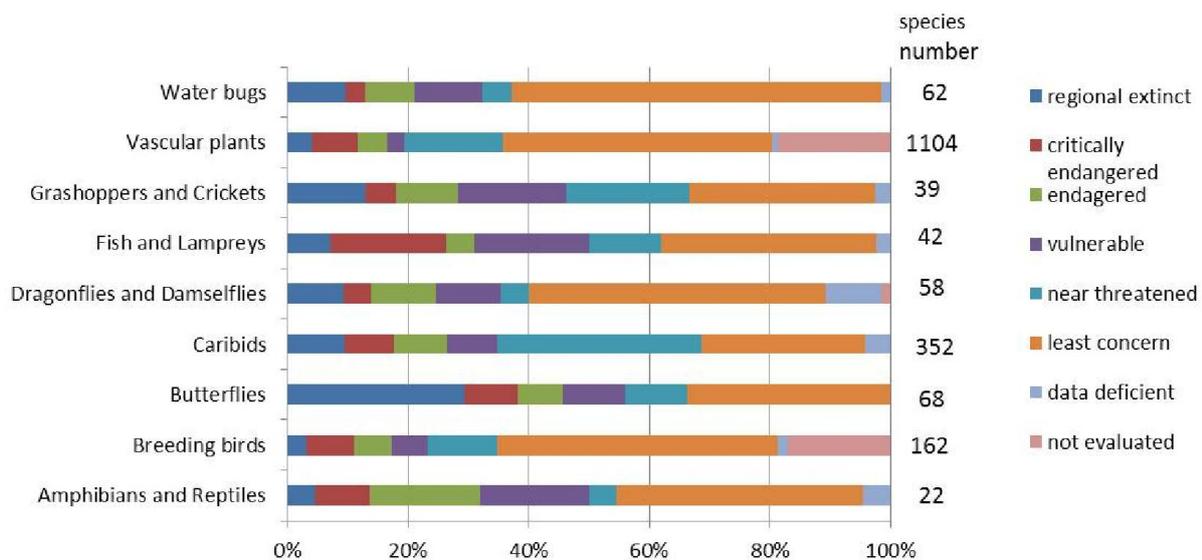


Figure 4. Species status in the Flemish Region in 2013 (Source: Research Institute for Nature and Forest, http://indicatoren.milieuinfo.be/indicatorenportal.cgi?lang=en&detail=657&id_structuur=71).

The ‘**Common birds index**’ is calculated as the trend abundance of forest, farmland and other common birds in Flanders. The farmland bird indicator dropped sharply between 1990 and 2000-2002. This decline continued in the period 2000-2002 until 2007. Between 2007-2012 the decline was less pronounced. The decline is related to the intensification of agriculture.

On average, the trend of common forest birds shows a continual increase. This is the result of a more natural tree and shrub vegetation and structure in the forest. The other common birds of different habitats, especially a lot of habitat generalists, still increase.

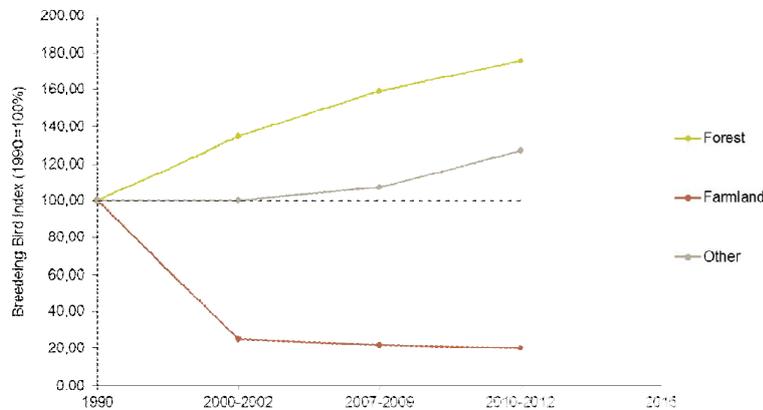


Figure 5. Trend abundance of forest, farmland and other breeding birds in Flanders, http://indicatoren.milieuinfo.be/indicatorenportal.cgi?detail=715&id_structuur=71&id_categorie=-1&lang=en&jump=yes.

The general decline of the birds of agriculture is linked to the intensification and expansion in agriculture. Measures to stop this decline, like measures taken within the scope of CAP, proved to be applied on a far too small scale. However, a recent INBO study showed that some of these measures can possibly be very useful. The general progress of the woodland birds is probably mainly due to the concern of the forestry sector for nature and a more natural tree and shrub species composition and structure, the increased tolerance in regard of standing dead wood and older trees to be. All these measures lead to increased food supply and nesting.

Population targets haven been formulated for 19 wintering **waterbird species** which occur in internationally important numbers in Flanders. When comparing average numbers during the last five winters to these target values (fig. 6), we can conclude that population goals are met for seven species. Numbers of four species are just below the targets. For 8 species, there is a rather large gap between actual numbers present and population goals. Most of them showed a clear negative trend during the last 10 years. Trends of migrating waterbirds are often determined by a combination of different factors. For many species the Flemish trend reflects the changes in the European population. There are also increasing signs that recently, large scale changes are taking place, mainly under the influence of changing climate. Milder winters mean that many species can shorten their migration route and can overwinter further north (and resulting in lower wintering numbers in Flanders). But local and/or regional factors within Flanders are important for observed population changes too. The trends in Flanders for common teal, pintail and common pochard have been strongly influenced by ecological changes in the Scheldt estuary which has had a big impact in the numbers of waterbirds stopping over in this area. It is believed that nature development and restoration projects could help to reverse negative trends, as has been successfully demonstrated in several areas during the last years.

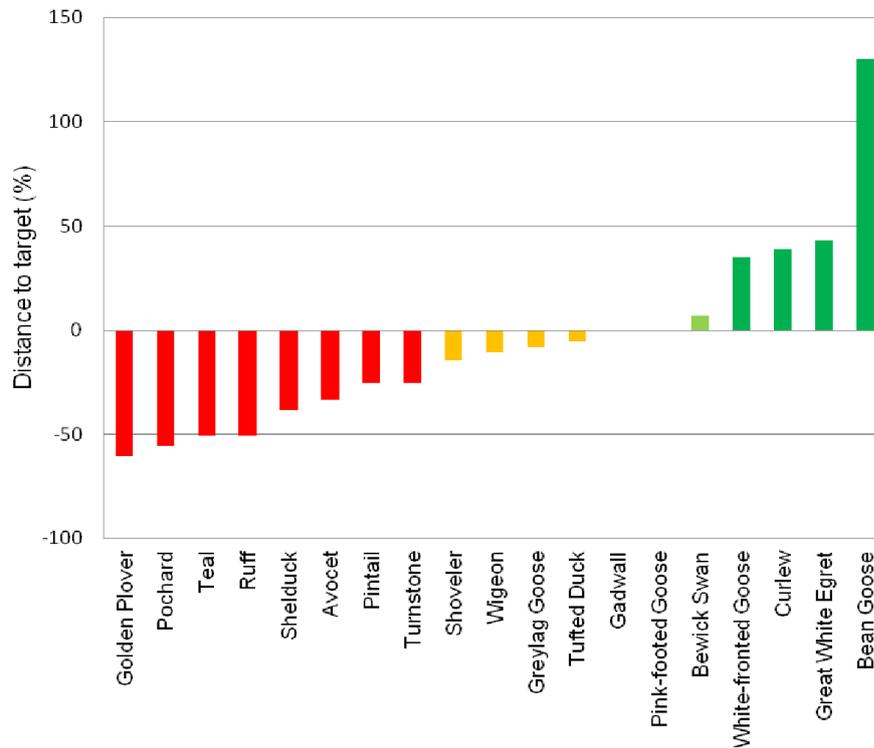


Figure 6. Distance to population goals of wintering waterbird species (Flemish Research Institute for Nature and Forest).

Population targets have been formulated for 28 **breeding bird species**, 27 of the Annex I of the Birds Directive (27) and one internationally important species, lesser black-backed gull. When comparing for 20 yearly monitored species the numbers of breeding pairs during the period 2007-2012 to the target numbers (fig. 7), we can conclude that population goals are met for three species. For another three the goals were met in one or two years during the six year period. For 14 species however, there is still a large gap between actual numbers and the goals. Five of the remaining seven species have larger populations that are not monitored each year. Their average number of breeding pairs for the period 2007-2012 compared to the target number suggests that the target is met by four of them. Two species which have population goals but are still irregular or very scarce breeders are still between 90 and 100% away of their goals. Some forest breeding species seem to do rather well. It is however clear that for most of the other species, although some of them are slowly increasing in numbers, the population is actually depleted or too low and there is still a long way to go. For most of them, nature development and large nature restoration projects could help to reverse negative trends. In particular species with large homeranges are often in need of a better general quality of their environment. Additionally, increasing the quality of mosaic farmland landscapes should be another important goal for the future.

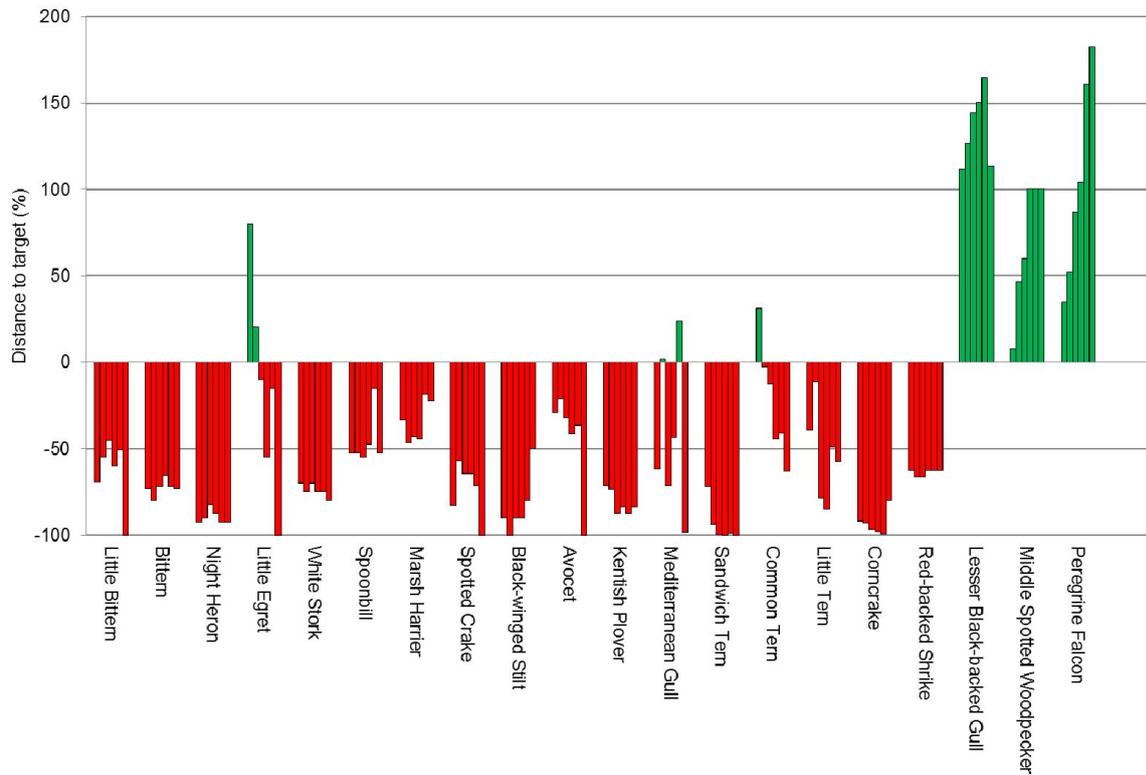


Figure 7. Distance to population goals of breeding bird species (Flemish Research Institute for Nature and Forest).

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 (2007-2012). The main goal of the Habitats 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 set down by Europe. These are the population of the species, its distribution, the state of its habitat and its future prospects. In Flanders, only nine species (three amphibians, one fish and five bats) have a favourable conservation status. For more than half of the species (32) the conservation status is poor and for nine species (16%) the status is inadequate. For 10 species there was insufficient data to evaluate their status. Compared with 2007, the conservation status of 14 species improved, but at the same time the situation for 17 species deteriorated (fig. 8).

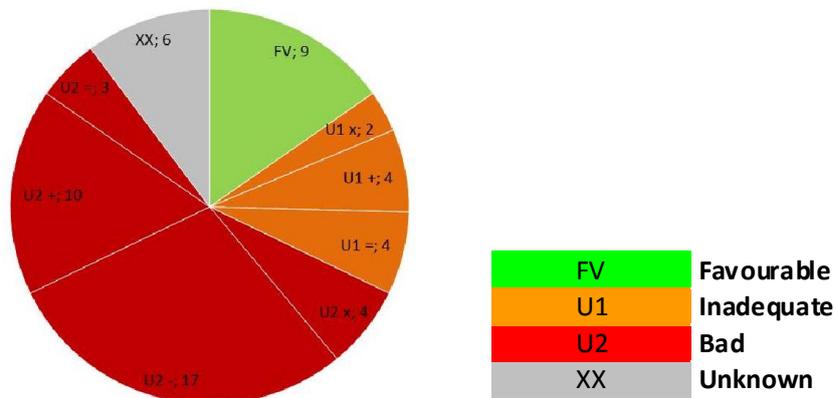


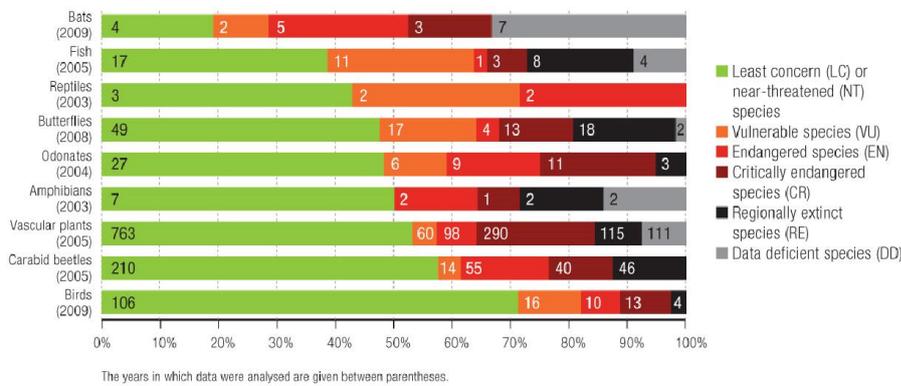
Figure 8. Evaluation of the conservation status of species (partim, no birds) of European interest in Flanders (2013). For each category there is information on the number of species that improves (+), deteriorates (-), remains unchanged (=) or when the trend is not known (x).

Other species-based indicators for Flanders can be consulted on-line (in English) at the following URL: http://indicatoren.milieuinfo.be/indicatorenportal.cgi?detail=700&id_structuur=23&id_categorie=1&lang=en&jump=yes.

3.1.2 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). All groups combined, 31% of the species that were examined run the risk of disappearing in Wallonia and close to 9% have already disappeared. Among bats, fish, reptiles, butterflies, dragonflies and damselflies, more than half of species are in an unfavourable situation. The conservation status of any given species is the result of a combination of factors such as habitats fragmentation, incidence of pollution, disruptions caused by invasive exotic species... The objective of halting the loss of biodiversity for 2010, as set at European level, has also been written down in the 2009-2014 Regional Policy Declaration. This objective has not been reached yet and supplementary measures have to be put in place.

Fig. 12-2 IUCN conservation status of species in Wallonia (2003-2009)



KEIW 2012 – Source: SPW - DGO3 - DEMNA

Figure 9. Species status in the Walloon Region (Source: SPW - DGO3 - DEMNA, http://etat.environnement.wallonie.be/index.php?mact=tbe.m588bb.default.1&m588bbalias=Conservation-status-of-species_2&m588bbreturnid=46&page=46).

During the last two centuries, 172 nesting **bird species** have been observed in the Walloon Region, 149 of which have been subjected to a recent evaluation: 106 species are not threatened, 39 species are threatened and 4 species are extinct. In comparison with the previous evaluation (1997), 23 species have a better status (some due to a more sensitive methodology) while the status of 16 species deteriorated (fig. 9). About 64% of the threatened species are linked to open and aquatic habitats. This situation is partly due to the fact that the surface of heathlands, fens and grasslands is rather restricted in the Walloon Region. Within agricultural zones, only few nesting sites and alimentary resources are available all year long, hence creating unfavourable conditions for farmland birds. For more information: <http://biodiversite.wallonie.be/fr/oiseaux.html?IDC=787>.

A detailed analysis indicates that 52% of the 101 studied species of **butterflies** in the Walloon Region are threatened or extinct (fig. 10). The analysis also shows that the expanding species are the more common, ubiquitous or flexible species, while numerous rare species with strict ecological demands are in regression. The disappearance, alteration and fragmentation of habitats, as a consequence of inappropriate urbanisation, agricultural and sylvicultural practices, are the main reasons for this regression.

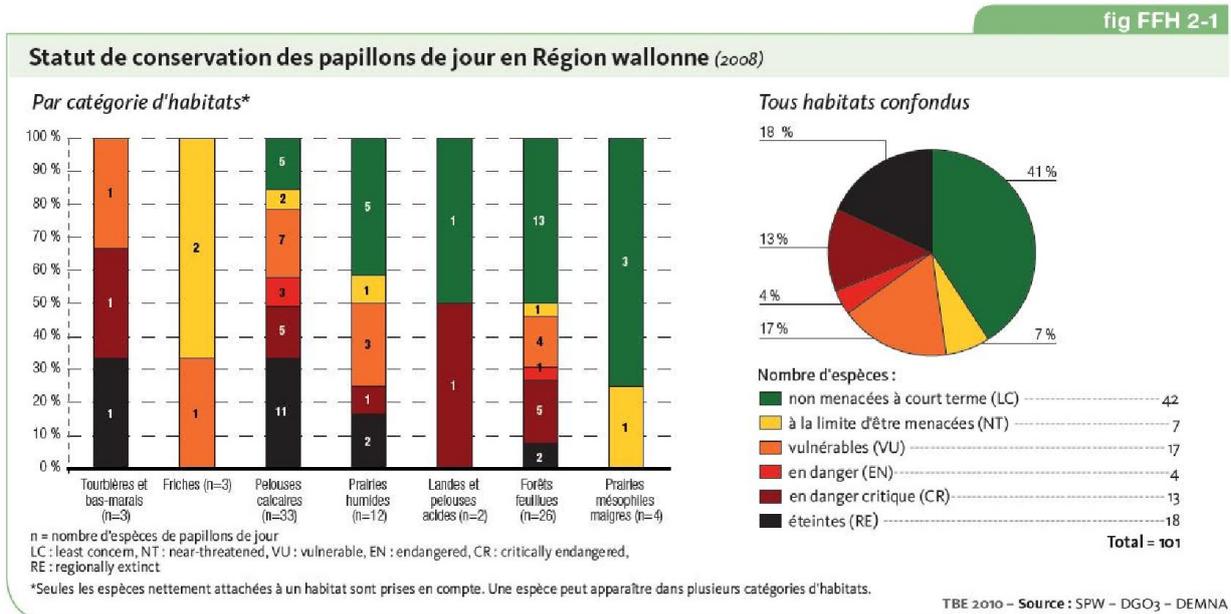


Figure 10. Conservation status of butterfly species in the Walloon Region (Source: Département de l'Etude du Milieu naturel et agricole, <http://etat.environnement.wallonie.be/index.php?mact=tbe.m787b7.default.1&m787b7what=fiches&m787b7alias=Statut-de-conservation-des-papillons-de-jour&m787b7returnid=40&page=40>).

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 taxa 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://biodiversite.wallonie.be/fr/especes.html?IDC=3025>. Given the difficulty to realise a Nature Plan, the Walloon Region elaborated a project of an evolutionary catalogue of actions aiming among others to specifically preserve rare and threatened habitats.

3.1.3. Brussels-Capital Region

The wealth of Brussels' natural heritage derives from its diversity of geomorphological and urban structures (valleys, wetlands, old trees, old buildings). However, continuous urbanisation is highly disruptive to plant and animal communities.

While the most drastic declines in species and natural habitats were recorded during the nineteenth and early twentieth centuries, or during the post-war period, at a time of major industrial and economic developments and growing urbanisation, numerous species are still in a precarious situation, mainly due to the increasing scarcity of their habitats and the deterioration of the quality of their environment (fig. 11).

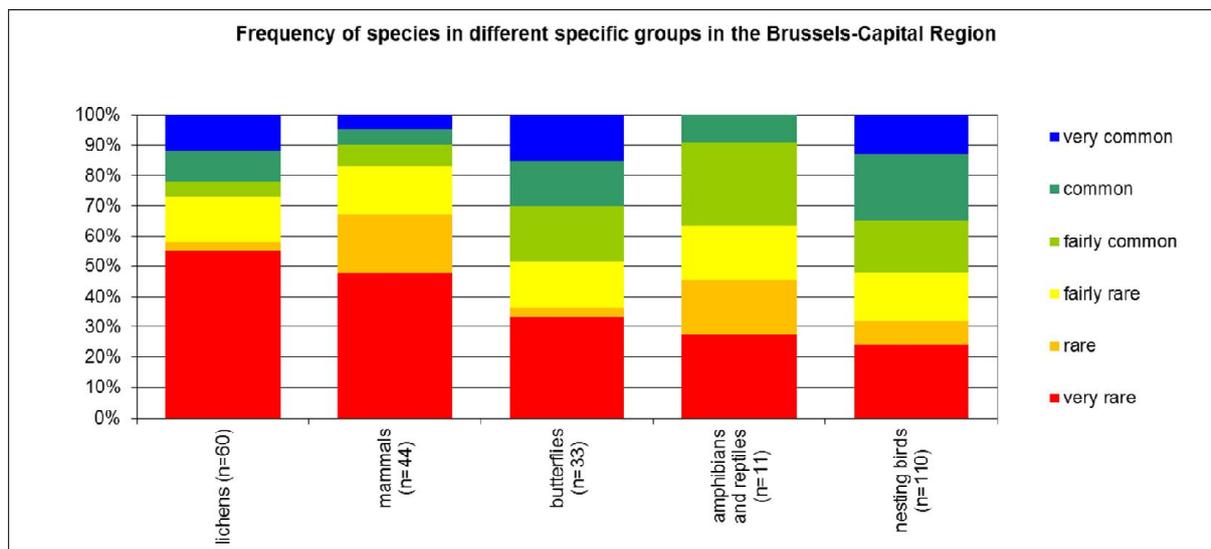


Figure 11. Frequency of species in different specific groups in the Brussels-Capital Region.

More information on species-based data for the Brussels-Capital Region can be found at: http://documentation.bruxellesenvironnement.be/documents/NARABRU_20120910_FR_150dpi.pdf (French) http://documentatie.leefmilieubrussel.be/documents/NARABRU_20121004_NL_150dpi.PDF (Dutch).

3.1.4. Belgian part of the North Sea

Several reports describe the international importance of the Belgian part of the North Sea for marine bird species. 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: population counts in 2007 and 2009 show a decline of the populations of little tern (*Sterna minor*), Sandwich tern (*Sterna sandvicensis*) and common tern (*Sterna hirundo*), probably due to modified breeding circumstances (source: http://indicatoren.milieuinformatie.be/indicatorenportal.cgi?lang=nl&detail=716&id_structuur=71).

The trend for marine mammals is more positive, although it is certain that most species remain threatened. The article 17 reporting, in application of the Habitats Directive (http://cdr.eionet.europa.eu/Converters/run_conversion?file=be/eu/art17/envucdy2q/BE_species_reports-1371-154426.xml&conv=354&source=remote) mentions a positive trend for the harbour porpoise (*Phocoena phocoena*), primarily due to a shift of the population in the North Sea, as well as for the common seal (*Phoca vitulina*). The trend for the grey seal (*Halichoerus grypus*) is uncertain.

3.2. Trends in habitats

The trends in habitats have been evaluated within the framework of the Article 17 reporting of the EU Habitats Directive (2008-2013, see also <http://cdr.eionet.europa.eu/be/eu/art17/envucdy2q>). 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: 9% of the Belgian habitats of European interest are in favourable conservation status; 17% are in inadequate, 73% bad and 1% are in unknown status (fig. 12). Fig. 13 shows the conservation status trends of these habitats in our country.

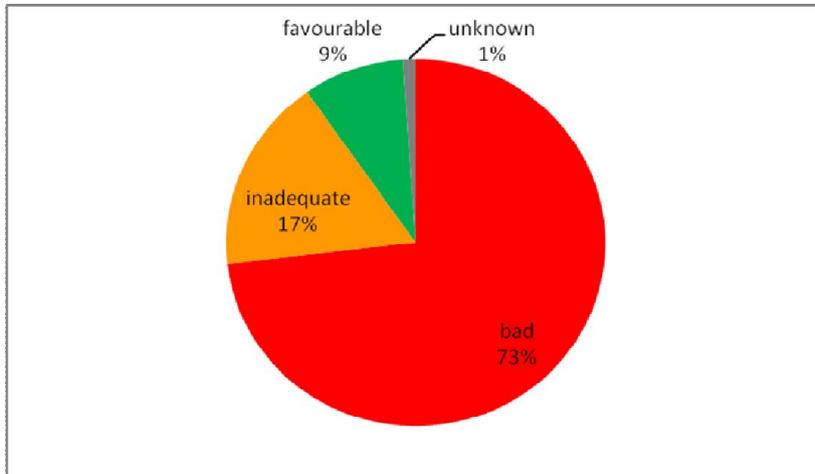


Figure 12. Overall assessment of conservation status of the 59 habitats of European interest present in Belgium (based on the Article 17 reporting of the Habitats Directive for the period 2008-2013).

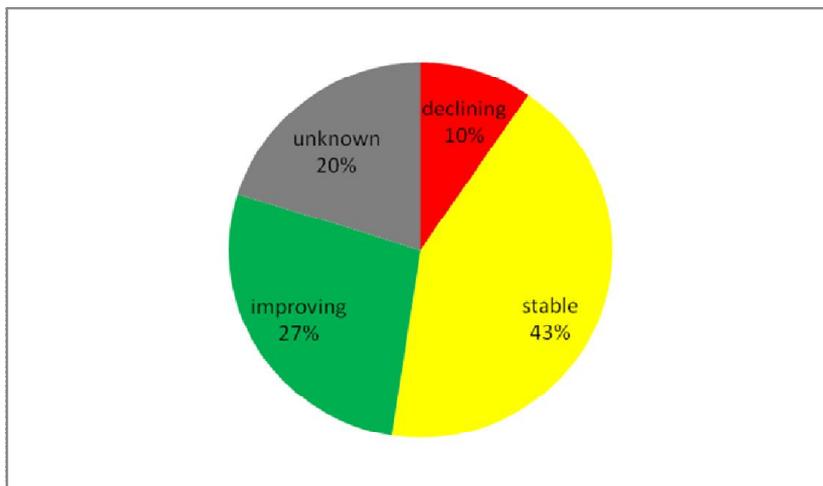


Figure 13. Overall trend in conservation status of the 59 habitats of European interest present in Belgium (based on the Article 17 reporting of the Habitats Directive for the period 2008-2013).

3.2.1. Flemish Region

More than three-quarters of the habitats (38 habitats) are of poor conservation status and 9% have an inadequate conservation status. The latter includes one peat and marsh habitat, one coastal dune habitat, one heathland, one grassland and one aquatic habitat. Consequently, only five habitats have a favourable conservation status, these being one saline habitat (mudflats and sandflats not covered by seawater at low tide), one coastal dune habitat (dunes with sea buckthorn), one aquatic habitat (hard oligo-mesotrophic

waters with benthic vegetation of *Chara* spp.), one grassland habitat (Rupicolous calcareous or basophilic grasslands of the Alysso-Sedion albi) and one cave habitat (caves not open for public). For seven habitats the situation on the field improved slightly compared with 2007.

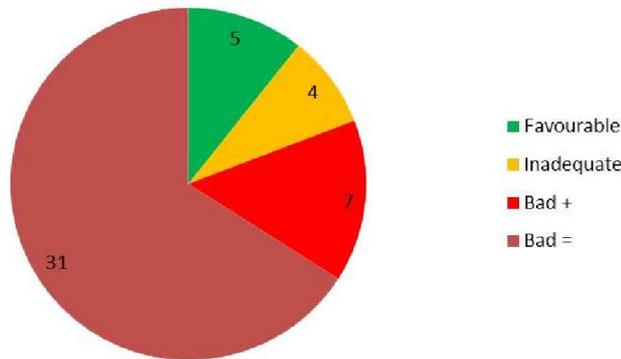


Figure 14. Conservation status of habitats of European interest in Flanders, http://indicatoren.milieuinfo.be/indicatorenportal.cgi?detail=694&id_structuur=23&id_categorie=-1&lang=en&jump=yes.

3.2.2. Walloon Region

Based on the Article 17 reporting (Habitat Directive) for the period 2008-2013, 4 habitat types of European interest in the Walloon Region are in a favourable conservation status (compared to only one in the previous report), 9 habitat types are in an inadequate conservation status (compared to 4 in the previous report), 27 habitat types are in a bad conservation status (33 in the previous report) and only one habitat type has an unknown conservation status. Habitat types of European interest in favourable conservation status in the Walloon Region: water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitriche-Batrachion vegetation, petrifying springs with tufa formation (Cratoneurion), caves not open to the public, and stable xerothermophilous formations with *Buxus sempervirens* on rock slopes (Berberidion p.p.).

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.

http://etat.environnement.wallonie.be/index.php?mact=tbe.m588bb.default.1&m588bbalias=Conservation-status-of-habitats_1&m588bbreturnid=46&page=46

3.2.3. Brussels-Capital Region

Almost all the forest types present in the Brussels-Capital Region are protected internationally. 83.6% of the forests in Brussels have been put forward as Natura 2000 areas, the largest part of which are acidophile beech forests (habitat type 9120). 112 ha of the Brussels part of the Sonian forest have been designated as forest reserve, 36 ha of which as integral reserve. However, the quality of forests could be better. The high

(potential) nature value of the Brussels' forests is mainly due to the average high age of the plants, the topographic and pedologic diversity and the fact that the majority of the current forest surface used to be forest in the previous centuries as well. The numerous old forest plants, in regional forests as well as in residential gardens, are proof of that.

An evaluation of the conservation status shows that large parts of the forests are in an unfavourable state. Some criteria and indicators are scoring rather well, but according to the stricter European evaluation method, in which the general score is unfavourable when one criterion is (one out, all out), less than 3% of Natura 2000 forests has a favourable conservation status. The alluvial forests (habitat type 91E0) display a more positive picture: a quarter of those forests have a favourable conservation status.

The problem that causes the unfavourable status of the forests in Brussels rarely has to do with quantity. The analysis shows that it is mainly qualitative improvements that can be made. The most striking issues have to do with horizontal and vertical structure, vegetation composition and the amount of dead wood. Distortions because of leisure activities and wastewater discharge create local problems in various Natura 2000 stations. Atypical species in the canopy layer and the presence of invasive introduced species are local issues as well.

Besides the forest habitats, 5.3% of grasslands in the Natura 2000 areas have a favourable conservation status.

Because of their rarity and species richness, some humid habitats are of international importance. In order to protect the Natura 2000 habitat types 6430 (Hydrophilous tall herb fringe communities) and 91E0 (alluvial forests), special protection areas (SPA) were delimited in the Brussels-Capital Region. Eutrophication, ruderalisation and desiccation are the most important issues for realising a favourable conservation status.

The role of city parks, playgrounds, sports grounds and gardens is first and foremost to give inhabitants a place to relax, walk and enjoy, in short, a place for leisure activities. However, especially parks play other roles as well:

- heritage role: the specific design and style of a lot of parks make them real architectural pearls;
- water managing role: because of their location near valleys and the presence of ponds, parks play a water storage role and are important areas for the infiltration of rain water;
- nature role: large city parks have a high nature value, therefore many of these sites have been put forward as Natura 2000 areas.

Large private domains play the same roles, but without public access. Some of these domains with a high nature value have been included in the Natura 2000 network as well.

3.2.4. Belgian part of the 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 or sea beds dominated by *Lanice conchilega*, both 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-affecting gear. Hence their typical assemblage of species has been altered over time and habitats such as biogenic oyster reefs, which used to occur in those stony areas, have disappeared completely. The conservation status of the habitat types of European interest mostly range from inadequate to bad, only the habitat type 'Mudflats and sandflats not covered by seawater at low tide' is in a favourable conservation status.