Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora

and

Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds

PRIORITISED ACTION FRAMEWORK (PAF) FOR NATURA 2000 IN FLANDERS

For the EU Multiannual Financing Period 2014-2020

Draft of May 2013

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A. INTRODUCTORY OVERVIEW OF NATURA 2000 NETWORK FOR TERRITORY

A.1 Short introduction to the habitat types of Annex I and species of Annex II of the Habitats Directive and Annex I and migratory bird species for which Natura 2000 sites are designated

Flanders, as the northern region of member state Belgium, hosts 46 habitat types of annex I and 27 species of annex II of the Habitats Directive. Among those habitats and species Flanders has 9 priority habitats under the terms of the Habitats Directive. It also hosts 67 bird species of annex I of the Birds Directive and 19 migratory bird species.[1]
The main biomes in Flanders are: forests, semi-natural grasslands, heathlands, inland and coastal dunes, freshwater habitats and halophytic habitats.

Flanders is very important for species such as *Apium repens* and *Hamatocaulis vernicosus* and habitats such as 1130 Estuaries, 2130* Fixed coastal dunes with herbaceous vegetation ("grey dunes"), 2310 Dry sand heaths with *Calluna* and *Genista*, 6120* Xeric sand calcareous grasslands, 6230* Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe), 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 and 91E0* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae).[2]

(For more information see Annex I. Overview of the habitats protected by Habitats directive in Flanders and their conservation statusfor Habitat Directive habitats, Annex II. Overview of the species protected by Habitats directive in Flanders and their conservation status for Habitat Directive species and Annex III. Overview of the bird species protected by Birds directive in Flanders and their conservation status of this document for Birds Directive species.)

A.2 Number and area of Natura 2000 sites

Sites of Community Importance (SCIs)	Total SCI sites: 38 Total SCI area (km²): 1,048.88 Terrestrial SCI are (km²): 1,048.88 % of national area: 7.8% Marine SCI area (km²): -
Reference to Commission Decisions on SCIs	Atlantic Region - Commission Decision: 2011/63/EU of 10 January 2011 adopting, pursuant to Council Directive 92/43/EEC, a fourth updated list of sites of Community importance for the Atlantic biogeographical region (notified under document number C(2010) 9666)

[1] Based on the HD article 17 evaluation of 2007 for habitats and species of the Habitats Directive. For the bird species, based on a comparable evaluation in the same period.

[2] Paelinckx D., Sannen K., Goethals V., Louette G., Rutten J., Hoffmann M. 2009. Gewestelijke doelstellingen voor de habitats en soorten van de Europese Habitat- en Vogelrichtlijn voor Vlaanderen. INBO.M.2009.6

	Continental Region - Commission Decision: 2011/64/EU of 10 January 2011 adopting, pursuant to Council Directive 92/43/EEC, a fourth updated list of sites of Community importance for the **Continental biogeographical region** (notified under document number C(2010) 9669) *Link to Decisions at http://ec.europa.eu/environment/nature/natura2000/sites_hab/biogeog_regions/index_en.htm*
Special Areas of Conservation (SACs)	-
Special Protection Areas (SPAs)	Total SPA sites: 24 Total SPA area (km²): 982.43 Terrestrial SPA are (km²): 982.43 % of national area: 7.3% Marine SPA area (km²): -
Total Natura 2000 terrestrial area	Total Natura 2000 sites: 52 Total Natura 2000 area (km²): 1,661.87 % of national area: 12.3%
Total Natura 2000 marine area	-

A.3 Main land use cover and ecosystem categories for Natura 2000 sites

The land use cover of the Flemish Natura 2000 network is determined with the use of the CORINE Land Cover layer from the European Environmental Agency of the year 2006, the Natura 2000 layer of 2011 and the EuroBoundaryMap v5 [3]. The past years inevitably saw changes in the land use which are not reflected in this section.

About 40% of the area surface of the network as a whole has a more or less natural land cover, most of which is forest with heathland and some grassland, inland waters and wetlands. The only marine type is 'Estuary'. About 50% has an agriculture related land use, half of which has complex cultivation patterns or has significant areas of natural vegetation. Mind you, significant parts in agriculture related land use are in reality nature reserves or green areas. The remaining surface is artificial (urban, industrial, infrastructure or leisure).

If you look solely at the soon to be Special Areas of Conservation (SAC), you see the importance of agricultural land use diminishing and natural surfaces, especially forest, increasing. It is the other way around in the Special Protection Areas (SPA), amongst other things caused by the importance of Flanders for migratory birds such as geese and swans and ducks.

[3] The source files for the raster based statistics on 100m resolution are:
- Natura 2000 end2011 (vector) (http://www.eea.europa.eu/data-and-maps/data/natura-2)
- EuroBoundaryMap v5 (http://www.eurogeographics.org/products-and-services/euroboundarymap)
- Corine land cover 2006 v16 (http://www.eea.europa.eu/data-and-maps/data/corine-land-cover-2006-raster-2)

The complete breakdown of the land cover is added in Annex IV. The land cover of the Flemish Natura 2000 network.

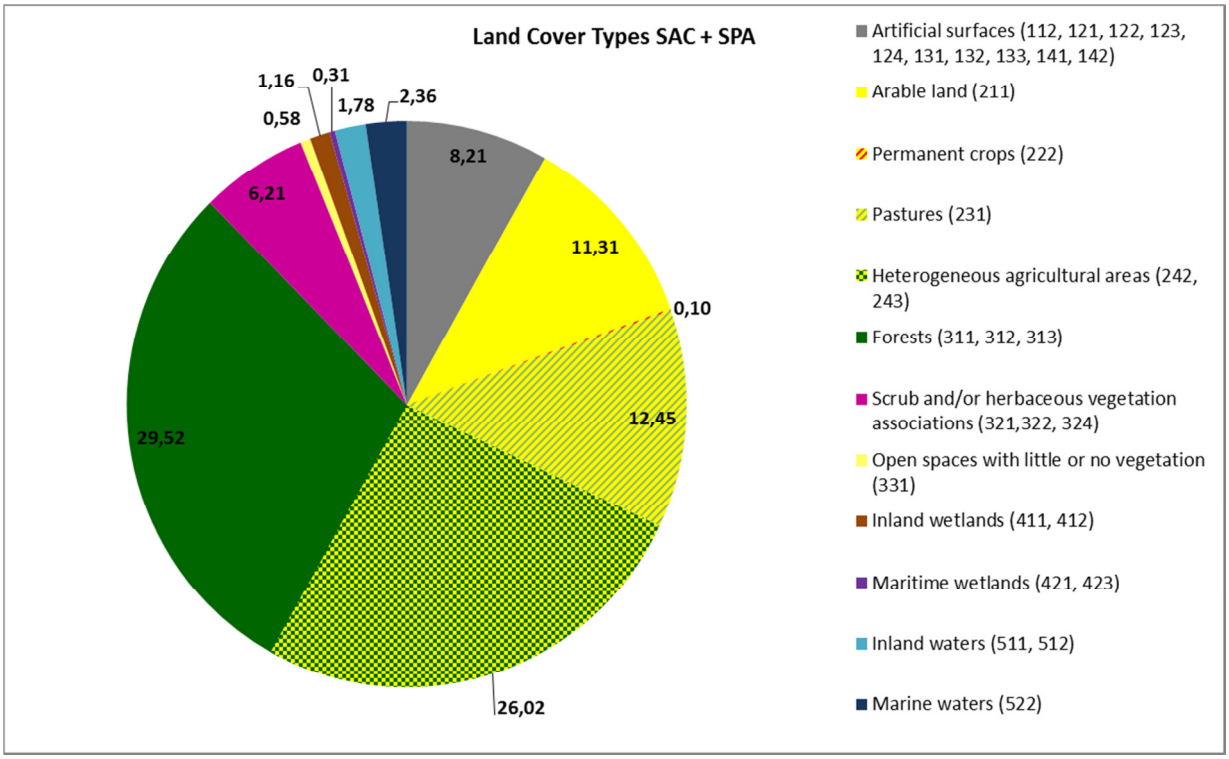

Figure 1. Relative surface (%) of clustered land cover types for the Natura 2000 network in Flanders (2011). The clustered land cover types according to Corinne(2006) are mentioned between brackets.

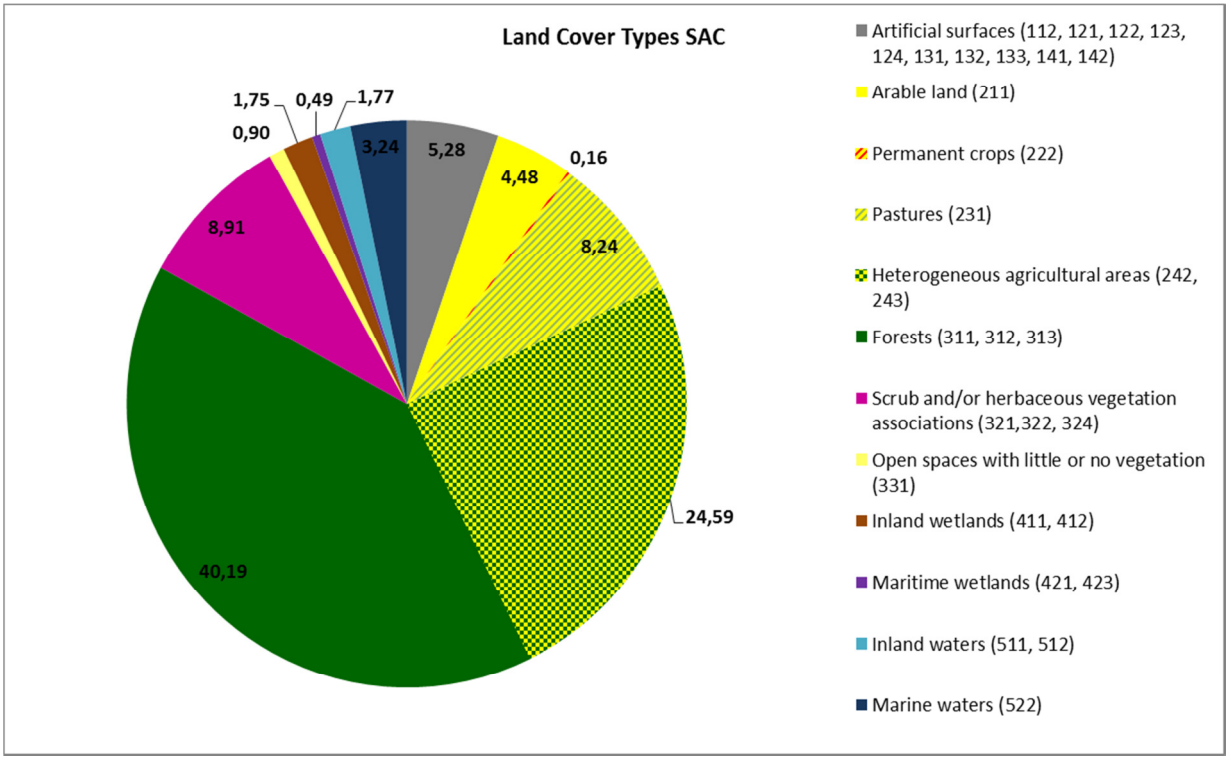

Figure 2. Relative surface (%) of clustered land cover types for the Special Areas of Conservation (SAC) in Flanders (2011). The clustered land cover types according to Corinne (2006) are mentioned between brackets.

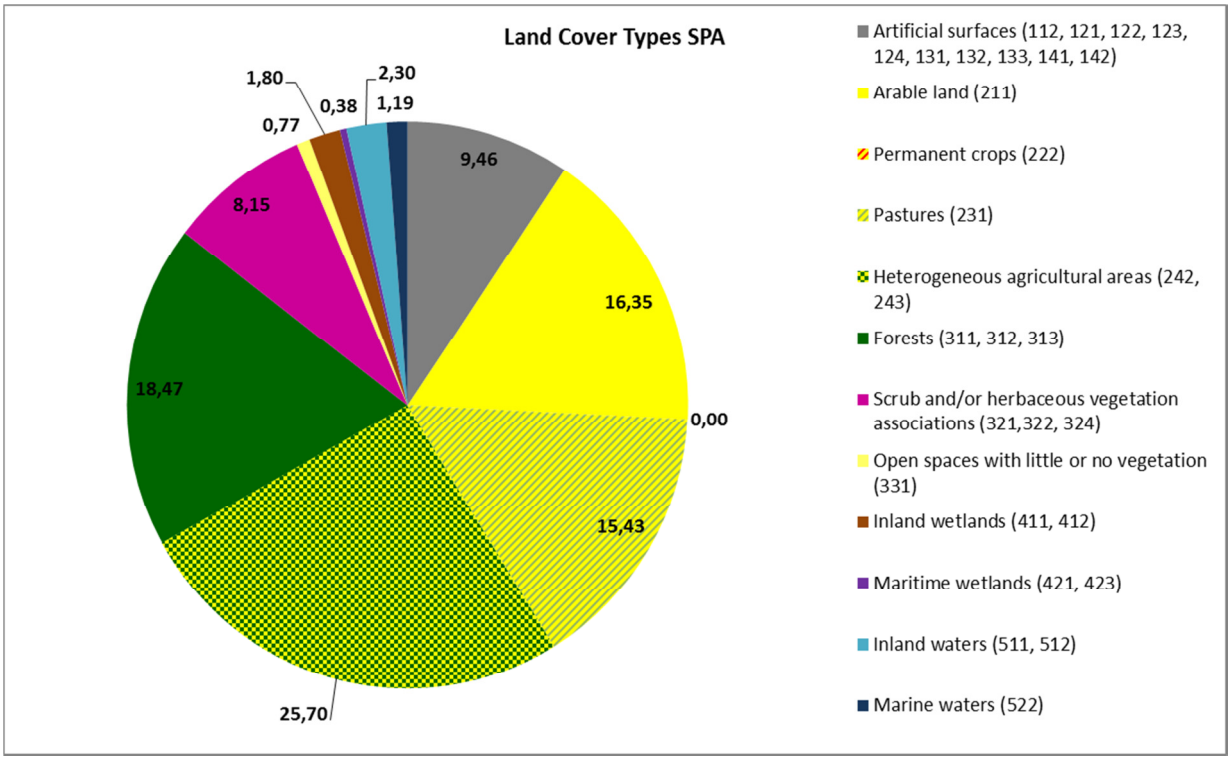

Figure 3. Relative surface (%) of clustered land cover types for the Special Protection Areas (SPA) in Flanders (2011). The clustered land cover types according to Corinne (2006) are mentioned between brackets.

B. STATUS OF THE HABITATS AND SPECIES

B.1 Most recent assessment of conservation status of species and habitat types for territory

B.1.a Habitat and species of Habitats Directive

Flanders is for the most part situated in the Atlantic biogeographical region. Only the municipality Voeren (this is approximately 0.4% of the surface area of Flanders) lies in the Continental region. This is only one SCI.

	HABITATS					SPECIES[4]				
	FV	U1	U2	XX	NA	FV	U1	U2	XX	NA
Atlantic	*3*	*7*	*36*	*1*	-	-	-	-	-	-
Continental	*0*	*1*	*11*	*0*	-	-	-	-	-	-
Flanders	*3*	*7*	*37*	*1*	-	*16*	*12*	*22*	*9*	-

FV – Favourable; U1 – Unfavourable inadequate; U2 – Unfavourable bad; XX - Unknown; NA – Not reported

Region / Conclusion	HABITATS					SPECIES				
	FV	U1	U2	XX	NA	FV	U1	U2	XX	NA
Range	*28*	*9*	*10*	*0*	-	*37*	*5*	*13*	*4*	-
Area / Population	*14*	*18*	*15*	*0*	-	*18*	*14*	*18*	*9*	-
Structure / Habitat	*2*	*9*	*33*	*3*	-	*1*	*13*	*11*	*34*	-
Future Prospects	*16*	*18*	*11*	*2*	-	*24*	*12*	*14*	*9*	-

FV – Favourable; U1 – Unfavourable inadequate; U2 – Unfavourable bad; XX - Unknown; NA – Not reported

This overview is based on the evaluation of the conservation status under article 17 of the habitats Directive in 2007.

For more information see Annex I. Overview of the habitats protected by Habitats directive in Flanders and their conservation status for Habitat Directive habitats and Annex II. Overview of the species protected by Habitats directive in Flanders and their conservation status for Habitat Directive species).

B.1.b Bird species of Birds Directive

Region / Conclusion	ANNEX I					MIGRATORY SPECIES				
	FV	U1	U2	XX	NA	FV	U1	U2	XX	NA
Range	*19*	*0*	*11*	*3*	*30*	*17*	*2*	*0*	*0*	-
Area / Population	*16*	*1*	*14*	*2*	*30*	*17*	*1*	*1*	*0*	-
Structure / Habitat	*16*	*6*	*10*	*1*	*30*	*16*	*3*	*0*	*0*	-
Future Prospects	*16*	*6*	*11*	*0*	*30*	*13*	*4*	*1*	*1*	-
Flanders	*14*	*4*	*15*	*0*	*30*	*14*	*4*	*1*	*0*	-

FV – Favourable; U1 – Unfavourable inadequate; U2 – Unfavourable bad; XX - Unknown; NA – Not reported

To be able to formulate regional nature conservation objectives in 2009, the Flemish Region evaluated the conservation status of the bird species of Annex I of the Birds Directive and a

[4] The difference between both biogeographical regions is in view of the difference in size negligible for species, therefor the distinction between them is omitted.

selection of migratory bird species in the same way as the status of the species of the Habitats Directive[5].

Of the annex I species those which are breeding regularly were evaluated. Those birds not breeding regularly were not evaluated as their sporadic presence and small numbers make formulating nature conservation objectives a pragmatically futile exercise. Two exceptions were made because of recent trends and policy decisions. The four species, virtually extinct since the Birds Directive came into effect, were added too.

The selection of migratory species was made using the abundancy of the species in Flanders in relation to the biogeographical population. Those species with significant numbers at present or when the directive came into force, which means at least 1% of the biogeographical population, were selected. For the same reasons migratory species of Annex I were added to the list (details in Annex III. Overview of the bird species protected by Birds directive in Flanders and their conservation status.

(For more information see Annex III. Overview of the bird species protected by Birds directive in Flanders and their conservation status)

B.2 Overall assessment of conservation status by habitat category / species group

B.2.a Evaluation of the habitats of annex I of the Habitats Directive[6]

A total of 47 habitats protected by the Habitats Directive are present in Flanders. Those habitats can be divided according the biomes: forests, grasslands, heathland and inland dunes, coastal dunes, fresh water habitats (both river and standing water), marshland and halophytic vegetation. Habitats 1130 (Estuaries) en 8130 (Caves not open to the public) do not fit into these categories. Figure 4, Figure 5, Figure 6, Figure 7, Figure 8 illustrate the conservation status for the habitats of the different biomes, all based on the evaluation of the conservation status under article 17 of the habitats Directive in 2007.

About three quarters of the habitats have an unfavourable – bad conservation state because at least one of the underlying criteria is bad. 15% of the habitats score unfavourable – inadequate. Only two habitats are in a favourable conservation state: one halophytic vegetation (1140 - Mudflats and sandflats not covered by seawater at low tide) and one coastal dune (2160 - Dunes with *Hippophaë rhamnoides*). Two marshland habitats, one heathland habitat, two grassland habitats and two forest habitats have an inadequate conservation state. For one habitat it is unknown.

10 habitats, about a fifth, have an unfavourable - bad actual range and 9 an unfavourable – inadequate. Luckily 28 habitats have an acceptable range and score favourable on this criteri-

[5] Using the criteria for the evaluation of the conservation status as described in document DocHab-04-03/03 rev.3 "Assessment, monitoring and reporting of conservation status – Preparing the 2001-2007 report under Article 17 of the Habitats Directive". of 15 March 2005

[6] Based on De Bruyn L. en Paelinckx D., 2007. Habitats van de Habitatrichtlijn. In: Dumortier M., De Bruyn L., Hens M., Peymen J., Schneiders A., Van Daele T. en Van Reeth W. (red.) 2007. Natuurrapport 2007. Toestand van de natuur in Vlaanderen: cijfers voor het beleid. Mededeling van het Instituut voor Natuur- en Bosonderzoek nr. 4, Brussel. pp. 56 - 71.

on. The forest habitats score best for the range criterion (8 out of 9). Coastal dunes (7 out of 8) and heathlands (5 out of 6) score well too. Especially freshwater habitats (none favourable) and marshland (1 in 5) score bad.

15 habitats (about a third) have an area in a favourable state; 18 habitats (about 40 %) score unfavourable – inadequate and 14 (30%) score unfavourable - bad for area. Forest score best with 6 out of 9 habitats with a favourable area. Yet, the area of none of the fresh water and marshland habitats is favourable.

The structure of most of the habitats (33 habitats or 71%) have been assessed as unfavourable – bad and 9 habitats as unfavourable – inadequate. The structure of only 2 habitats (4%) has been evaluated as favourable. The unfavourable – bad class is spread over all the biomes. There is only one favourable in the heathlands (7150 - Depressions on peat substrates of the Rhynchosporion) and the coastal dunes (2160 - Dunes with Hippophae rhamnoides).

The future prospects of 16 habitats are appraised as favourable, 18 as unfavourable – inadequate and 11 as unfavourable – bad. The future prospects are mostly favourable for forest and costal dune habitats (6 out of 9, respectively 5 out of 8). The prospects for all the other biomes are much worse. No marshland and heathlands habitats have favourable prospects.

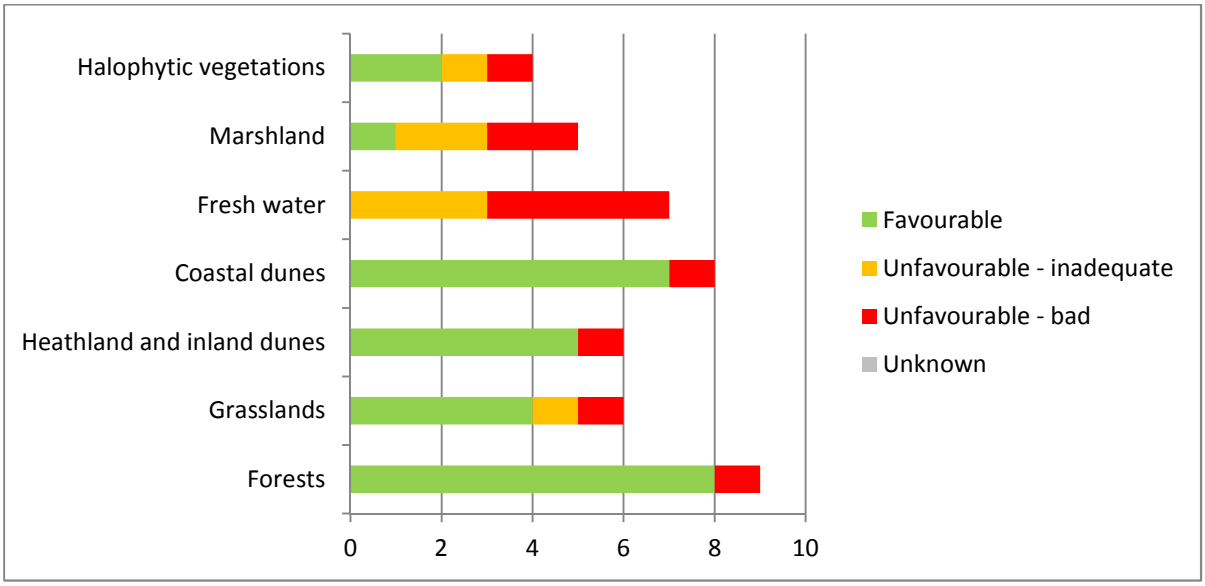

Figure 4 Evaluation of the state of the range for the habitats of the different biomes present in Flanders.

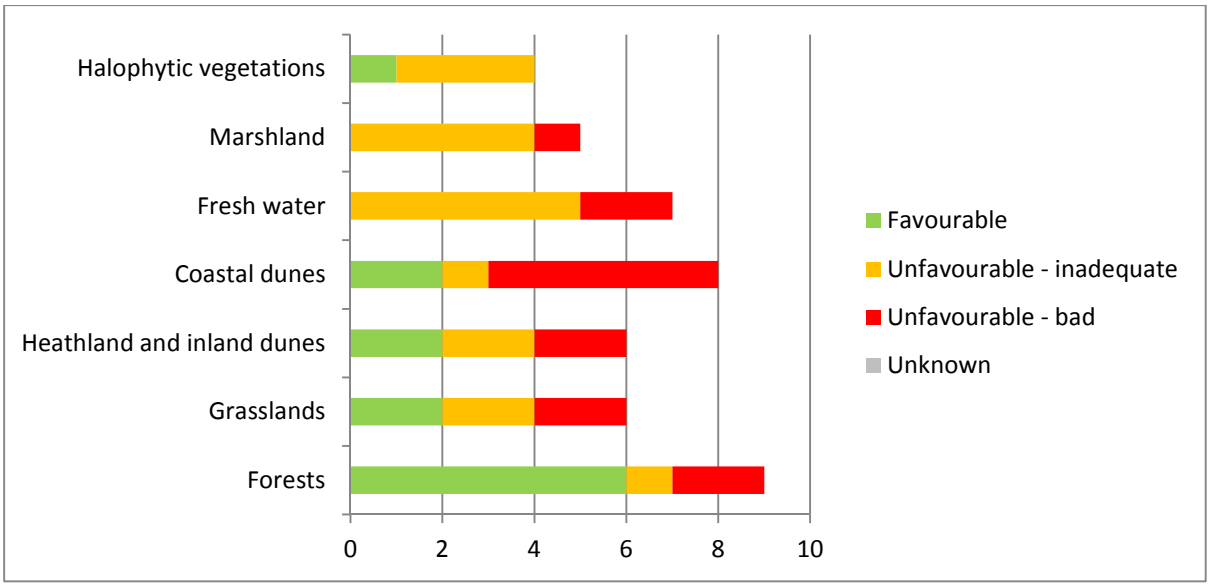

Figure 5 Evaluation of the state of the area for the habitats of the different biomes present in Flanders.

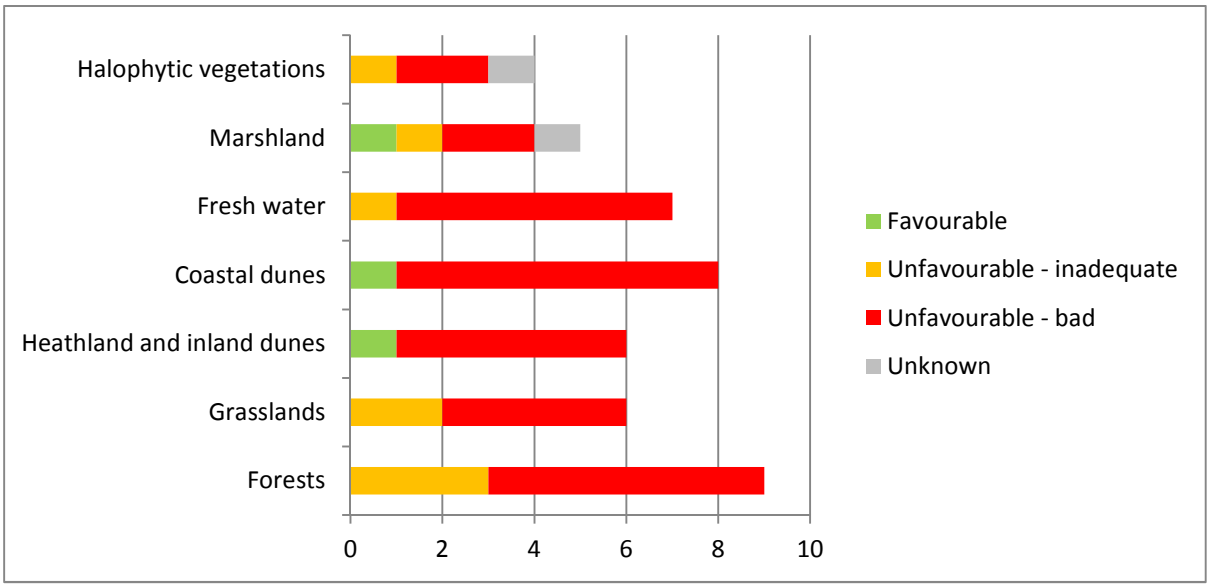

Figure 6 Evaluation of the state of the structure for the habitats of the different biomes present in Flanders.

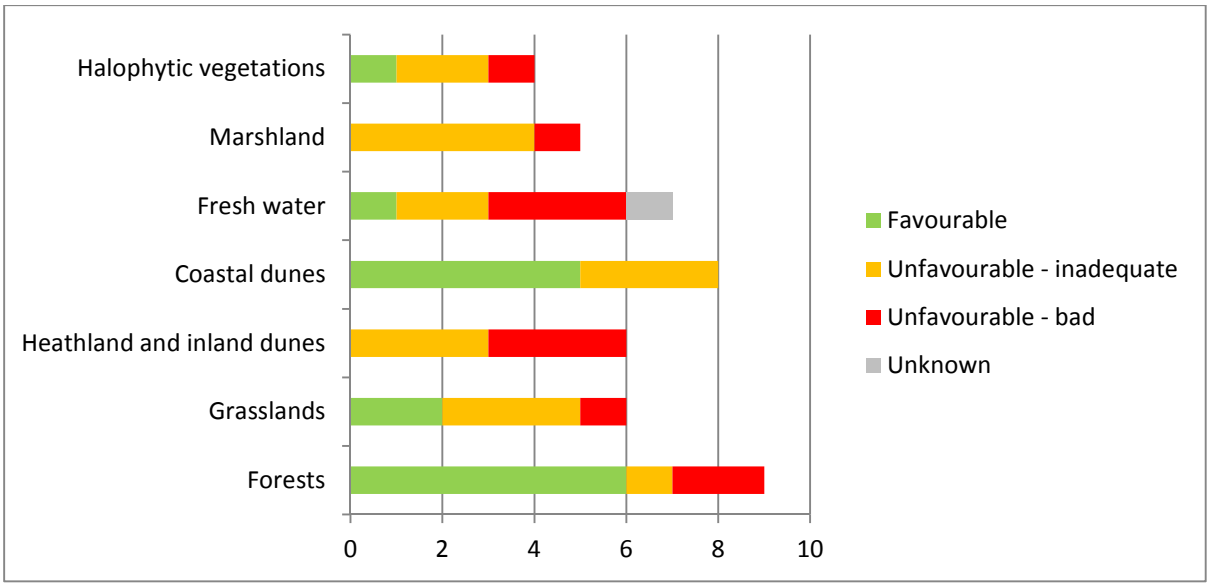

Figure 7 Evaluation of the state of the future prospects for the habitats of the different biomes present in Flanders.

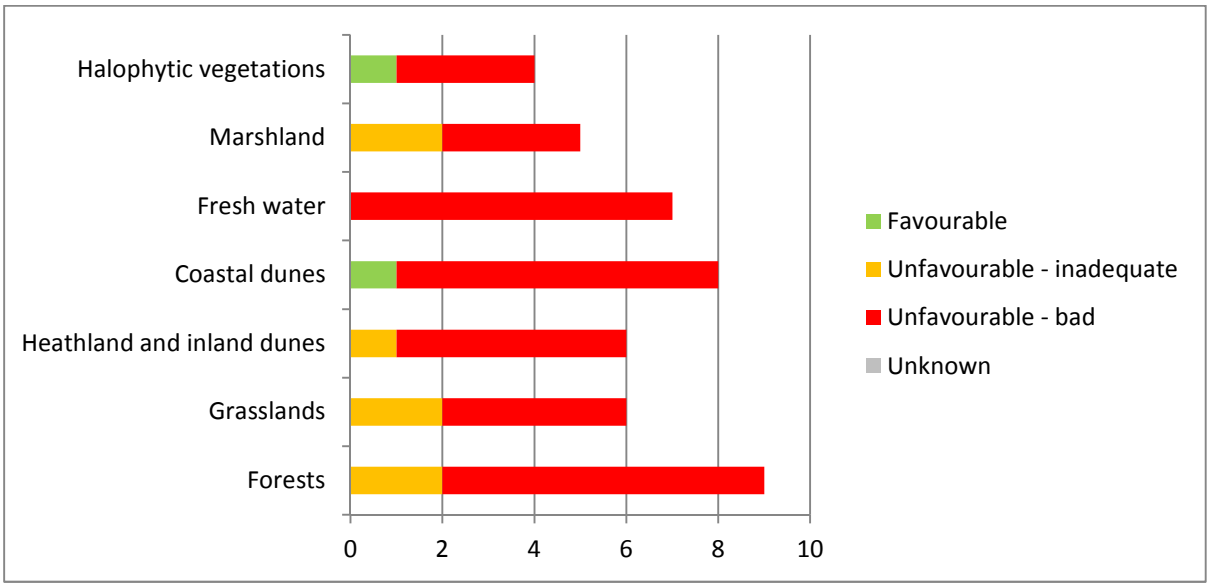

Figure 8 Evaluation of the conservation status for the habitats of the different biomes present in Flanders.

B.2.b Evaluation of the species of annexes II and III of the Habitats Directive[7]

De different species can be roughly divided in three main ecological groups: terrestrial, aquatic and semi-aquatic species. The last group contains those species that need both terrestrial and aquatic habitat for their life circle (e.g. dragonflies with aquatic larvae and terrestrial adults) and those that use both habitats (e.g. European beaver). Figure 9, Figure 10 and Figure 11 illustrate the conservation status for the different ecological groups, all based on the evaluation of the conservation status under article 17 of the habitats Directive in 2007.

[7] Based on De Bruyn L. en Paelinckx D., 2007. Soorten van de Habitatrichtlijn. In: Dumortier M., De Bruyn L., Hens M., Peymen J., Schneiders A., Van Daele T. en Van Reeth W. (red.) 2007. Natuurrapport 2007. Toestand van de natuur in Vlaanderen: cijfers voor het beleid. Mededeling van het Instituut voor Natuur- en Bosonderzoek nr. 4, Brussel. pp. 38 - 55.

About a fourth of the protected species have a favourable conservation status. Roughly a third score unfavourable - bad and a fifth unfavourable - inadequate. Nine species could not be evaluated. The global evaluation is worst for the aquatic species. Only one of them scores favourable. This is caused mainly by problems with population size and habitat quality.

Analysis showed that for some species the current range is smaller than the reference range, making it too small to guarantee long term survival. About a fifth of the species score unfavourable - bad and 8 % unfavourable – inadequate. Luckily the range of about two thirds of the species has been evaluates favourably. Proportionally most of the species with an unfavourable range can be found in the aquatic and semi-aquatic groups. In the terrestrial group four fifth has a favourable range.

The quality of the habitat could not be evaluated for almost 60% of the species. Only one species has a favourable quality of habitat. The rest is about fifty-fifty unfavourable - bad or unfavourable – inadequate. The habitat of aquatic species could be evaluated best.

The future prospect of four out of ten species has been assessed favourably, a fifth unfavourable – inadequate and a fourth unfavourable – bad, more or less evenly spread among the three ecological groups. The prospects of about 15% of the species could not be evaluated.

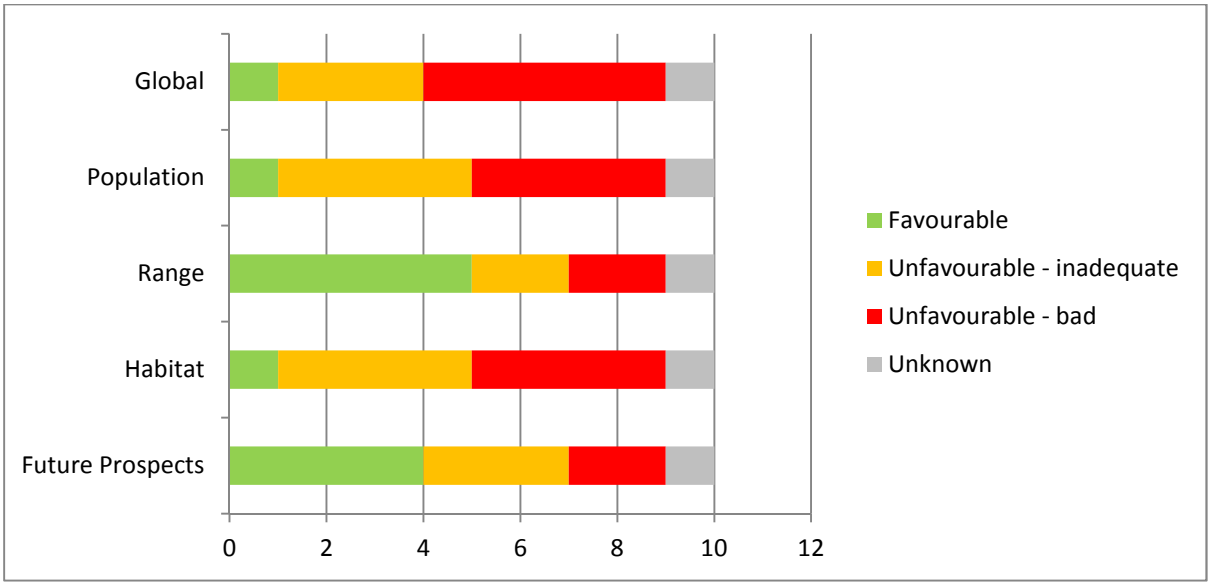

Figure 9 Overall assessment of conservation status for terrestrial species

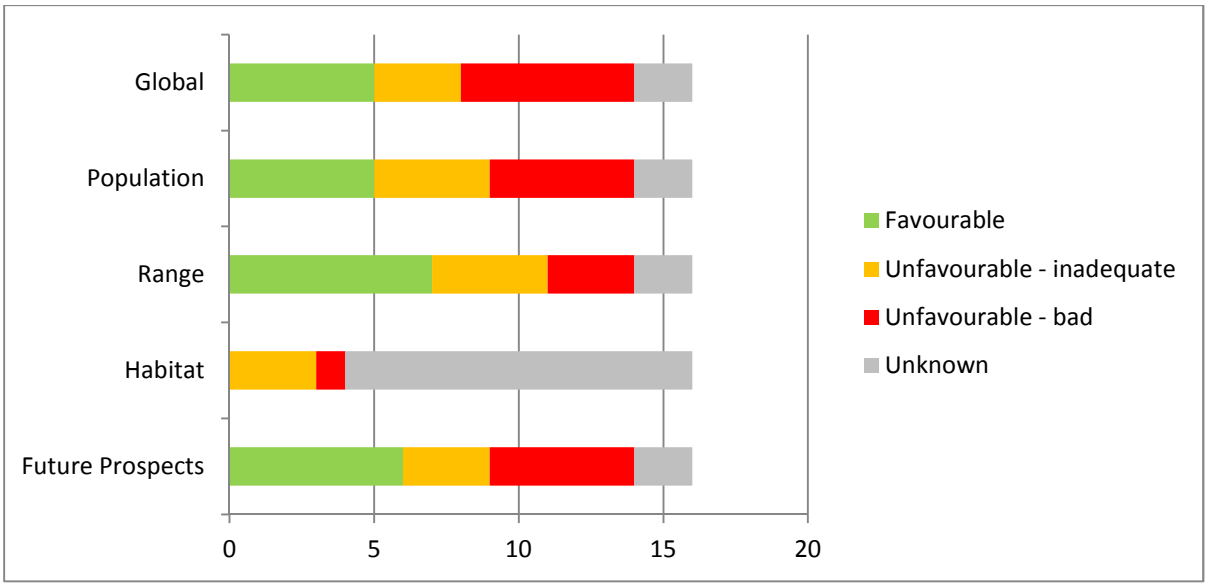

Figure 10 Overall assessment of conservation status for semi-aquatic species

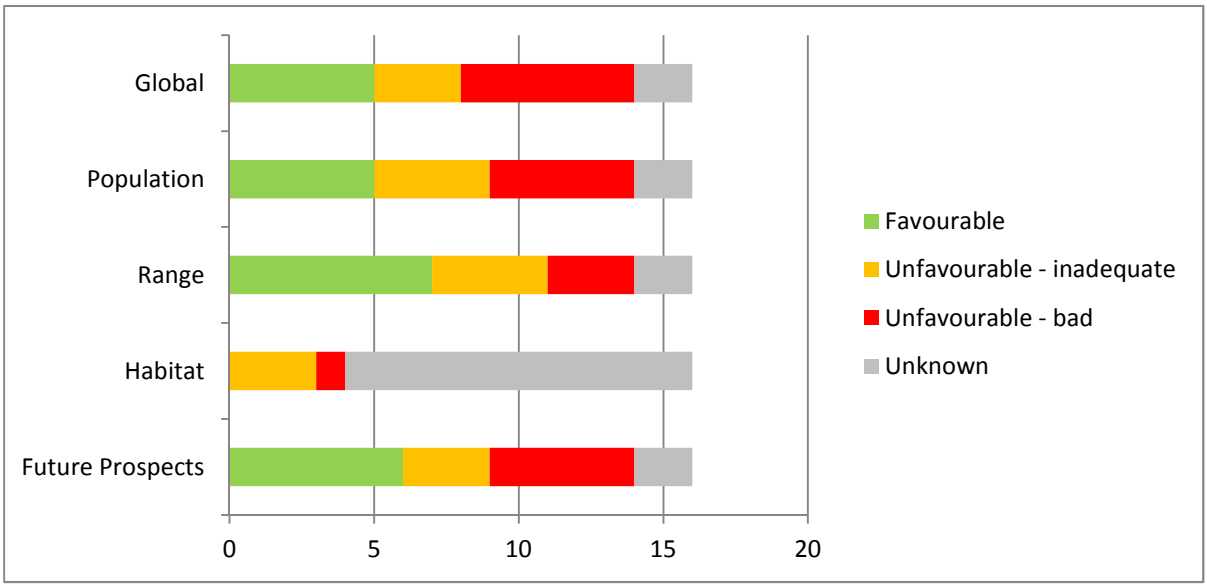

Figure 11 Overall assessment of conservation status for aquatic species

B.3 Overview of pressures and threats to species and habitats

Category of pressure / threat	HABITATS		SPECIES	
	Actual pressures	Future threats	Actual pressures	Future threats
Agriculture, Forestry	+	+	++	++
Fishing, hunting and collecting				
Mining and extraction of materials	+	+/-		
Urbanisation, industrialisation and similar activities	+	+/-	+/-	+/-
Transportation and communication			+/-	+/-
Leisure and tourism (other than above)	+	+		
Pollution and other human impacts/activities	++	++	++	++
Human induced changes in wetlands and marine environments	+	+	+	+
Natural processes (biotic and abiotic)	+	+	+/-	+/-

++ very high pressure; + high pressure; +/- low pressure (based on occurrences of pressures in Annex V. Overview of pressures and threats to species and habitats)

B.3.a Overview of pressures and threats to the habitats of annex I of the Habitats Directive[8]

For all 47 habitats present in Flanders, water and air pollution are reported as the most wide spread (18 out of 47 habitats, Table 7). This will not change in the future. 9 out of 12 pressures and threats should diminish in the future. Especially urban sprawl, sand and gravel quarries, outdoor sports and activities will have pressure on less habitats. The tables (Table 7, Table 8,

[8] Based on De Bruyn L. en Paelinckx D., 2007. Habitats van de Habitatrichtlijn. In: Dumortier M., De Bruyn L., Hens M., Peymen J., Schneiders A., Van Daele T. en Van Reeth W. (red.) 2007. Natuurrapport 2007. Toestand van de natuur in Vlaanderen: cijfers voor het beleid. Mededeling van het Instituut voor Natuur- en Bosonderzoek nr. 4, Brussel. pp. 38 - 55.

Table 9, Table 10, Table 11, Table 12,

Table 13) in 'Annex V. Overview of pressures and threats to species and habitats' give more insight in the different categories of pressures and threats. The mentioned numbers give the number of habitats affected by those. They do not reflect on the size of the impact.

On a whole 29 different pressures and threats are known for forest habitats. 14 will remain a threat in de future. Eutrophication, removal of dead and sick trees, air pollution, artificial plantations, acidification, forest clear cutting, general forest management and exploitation without replanting are mentioned for two thirds of the habitats. Eutrophication, air pollution, artificial plantations and acidification are expected to remain a problem. The impact of removal of dead and sick trees and forest clear cutting will diminish.

Grassland habitats have 22 types of pressure or threat, most of which will remain in the future. The main threat (5 out of 6 habitats) are mixed forms of flora competition: natural succession by forest vegetation, the disappearance of species and the emergence of a dens felted organic layer in the vegetation are a direct consequence of environmental factors and / or inappropriate management. This problem will remain in the future.

On heathlands the main pressure and threat is the succession by forest vegetation and the competition of grasses (*Molinia caerulea*). Every habitat type is affected. Other important factors are air pollution, afforestation, military manoeuvres and the abandonment of extensive grazing, but the last three will diminish in importance. On a whole 17 pressures and threats were mentioned. 15 of them will remain points of interest in the future.

For the habitats of the coastal dunes 11 different pressures and threats are noted; only one of them will stop being a factor. The importance of the expansion of urbanisation and urban sprawl will end because of a legal act. Competition by trees, grasses and bushes is the most important negative influence before access and overuse, and outdoor sports and activities. This will stay the same.

The main problems of marshland habitats are changes in the hydrology. 18 pressures and threats are noted; 14 of them will remain.

40 different pressures and threats are recorded for the fresh water habitats, the highest number of all habitat groups. 18 of them will remain in the future. The most important historic influence are water pollution (all 7 habitats) en eutrophication (6 habitats) and they will remain so.

The halophytic habitats have 13 different pressures and threats and they will mostly remain. Most mentioned pressures and threats are water pollution, boating, erosion and navigation). They will remain.

B.3.b Overview of pressures and threats to the species of annexes II and III of the Habitats Directive[9]

For all species combined, there are 65 different pressures and threats. The most important pressures and threats are water pollution (23 out of 59 species), eutrophication (21 species),

[9] Based on De Bruyn L. en Paelinckx D., 2007. Soorten van de Habitatrichtlijn. In: Dumortier M., De Bruyn L., Hens M., Peymen J., Schneiders A., Van Daele T. en Van Reeth W. (red.) 2007. Natuurrapport 2007. Toestand van de natuur in Vlaanderen: cijfers voor het beleid. Mededeling van het Instituut voor Natuur- en Bosonderzoek nr. 4, Brussel. pp. 38 - 55.

removal of hedgerows and such (19 species) and use of pesticides (18 species). The tables (Table 15, Table 16, Table 17, Table 18) in 'Annex V. Overview of pressures and threats to species and habitats' give more insight in the different categories of pressures and threats. The mentioned figures give the number of species affected by those. They do not reflect on the importance of the impact.

For aquatic species 22 different pressures and threats are important. The most encountered pressures and threats are water pollution and eutrophication (both 8 out of 10 species). Other factors include urbanisation, canalisation, fill-up of ditches, lakes, ponds, dikes, marshes, mores and wells, and the removal of sediment. There is no change expected for future pressures and threats.

For semi-aquatic species 28 different pressures and threats were reported. Water pollution is the main pressure or threat (12 out of 16 species). Other important ones are drainage and eutrophication. The restructuring of agricultural lands (parcelling) is at the moment a threat to 7 species, but is expected to diminish for 3 species.

For terrestrial species 43 different pressures and threats were reported. Use of pesticides (16 out of 33 species) and removal of hedgerows and such (15 species) will probably stay a problem in the future. A few agricultural and forestry techniques are perceived as less threatening in the future (forest clear cutting from 17 to 4 species, restructuring of agricultural lands (parcelling) from 15 to 4 and removal of undergrowth from 13 to 1). The terrestrial group is dominated by bat species. If we leave those aside, eutrophication and acidification are the most wide spread pressures and threats.

C. LEGAL AND ADMINISTRATIVE PROVISIONS FOR THE PROTECTION AND MANAGEMENT OF THE NATURA 2000 SITES

C.0 The Flemish Natura 2000 strategy

C.0.a Strategy on setting nature conservation objectives

Flanders uses a nested approach to setting nature conservation objectives. First a set of regional objectives was put forward. These targets basically state when a habitat or species will be in a favourable conservation status on the level of Flanders as a whole in accordance with the criteria set up in the implementation of article 17 of the Habitats Directive.

Even though it is not required by the Birds Directive to put forward nature conservation objectives for birds, Flanders did set targets in the same way as for the species of the Habitats Directive. This way SAC and SPA can be treated in the same way making things more obvious, logical and harmonized.

In the final step the regional nature conservation objectives are being divided over the different SPA and SAC (the specific nature conservation objectives). Overlapping SPA and SAC were treated as one site with different subareas according to their statute, but with one set of NCO. However not every patch of protected habitat or habitat of a protected species lays inside the SPA or SAC causing the regional nature conservation objectives to set targets outside the network. This approach ensures reaching a favourable conservation status when all local targets in the different sites are met.

Flanders chose a more participatory process of formulating the nature conservation objectives on the grounds that a sense of ownership by the stakeholders will ultimately help in achieving our goals faster and with fewer troubles. The participatory process helps keeping down the opportunity costs since most of the goals can be reached in diverse ways and on various sites within the optimal ecological range. On top of that, the input of the stakeholders also points out the weaknesses in our set of implementation measures and which the pitfalls to avoid in the implementation. It is a necessity because the vast majority of Natura 2000 is privately owned.

C.0.b Implementation strategy

Flanders has chosen a comprehensive and focused programmatic approach which allows us to move to a favourable conservation status along clearly set milestones based on the nature conservation objectives. These milestones follow the goals of the European Biodiversity Strategy and the Flemish overall strategic policy plan "*Vlaanderen in Actie*"; both containing goals for 2020. The milestones and the argumentation behind them can be found in section F 'Strategic conservation priorities for Natura 2000 for the territory for period 2014-2020'.

The nature conservation objectives result in targets set per habitat type or species. They translate locally in priority actions that need to be completed by 2020. There are two categories of actions: on the one hand management and development of habitats and habitats of species, on the other hand the improvement of the environmental conditions. The difference between both types of actions is extended throughout the approach. The interconnection however is crucial: the better the environmental pressures are managed, the bigger the savings on management and development will be.

The implementation in the field will be embedded within a strategic management plan Natura 2000 for each SPA, SAC or cluster in case of overlap, an evolution of the current nature directive plan ("*natuurrichtplan*"). These plans contain local targets for each subarea and the zone in which these local targets should be realized, their search area. In contrast to the nature directive plan, the strategic management plan Natura 2000 will not allocate all objectives and actions immediately at plot level; it will move in that direction in different phases through the use of search areas for each target. The first phase will only give local targets and their search areas. A second phase describes what part of these local targets will be covered by existing plans and agreements. In a third phase the remaining gaps will be filled in by voluntary schemes. In the final phase compulsory mechanisms may be used when voluntary means fail to reach the goals. In every phase the search area will be adjusted accordingly.

A local target is only covered when the development or management of a concerned plot is recorded in an official operational management plan. As long as that part of the local target is not officially recorded, a sufficiently large search area of ecological suitable sites in the concerned subarea will be safeguarded to be able to optimally place the local targets taking socio-economic considerations into account. In every phase the search area will shrink as more targets will be covered by operational management plans. The search areas also play an important role in the application of the appropriate assessment.

The division of efforts to implement the nature conservation objectives is based on a "strongest shoulders, heaviest loads" principle. The Flemish government and the nature conservation NGO's who manage nature reserves will carry the brunt of the load. It is assumed that all surfaces in areas under their responsibility, on which local targets can be implemented, will be properly managed by 2020. The execution of the necessary actions regarding the environmental conditions is an important task for the different competent authorities as well. At the same time, the contribution of other stakeholders needs to be as big as possible. Therefore, a new system of integrated management planning and an appropriate financing scheme will be developed to encourage involvement of all actors. Land purchase by government or facilitated by government will be weighed against the commitment and possibilities of other stakeholders.

The Agency for Nature and Forest, the competent authority for Natura 2000 in Flanders, is looking for commitments of the different stakeholders on their contributions to the implementations of the nature conservation objectives. The stakeholders who commit themselves are asked to join the steering committee that will monitor and supervise the implementation. The commitments will also show what can be done with the existing public and private means and what the real additional cost will be. Spending will be kept as low as possible through focus and synergy with other (policy) objectives.

The programmatic approach has also a more passive side, aimed at the avoidance of pressures caused by activities, that could jeopardize the realization of the nature conservation objectives. The appropriate assessment naturally being the main instrument. The character of this assessment will change with the arrival of actual nature conservation objectives: the reference will no longer be the situation at the time of the delineation of the sites, but the nature conservation objectives themselves. At the same time efforts will be made to make the appropriate assessment more effective, more transparent and more equitable. All necessary information will be made available by the government so initiators only need to identify their own impact.

Critical thresholds for environmental pressures that should be applied will be determined in a science and policy process. Enforcement of existing rules remains a focus point: a specific Natura 2000 enforcement program will be implemented.

The breech block of the program is an efficient monitoring of support, agreements, implementation and results. This effort is necessary to ensure that thousands of local activities really contribute to the set targets. But it is equally important to keep tabs on the evolutions, to build trust between the parties involved and to constantly improve. More information on the monitoring approach can be found in section H'.

C.1 Relevant legal provisions

In Flanders all kinds of legal provisions are in place. However most of these provisions are not specific for or limited to Natura 2000. You can assort these provisions in different categories: delineation, setting targets, coordination, nature development and management, mitigation of negative effects and scientific support and education. In this section an overview of the legal provisions existing early 2013 is given. All reference to the different laws, decrees and executive decisions of the Flemish Government can be found in Annex VI. Overview of the relevant legal provisions in Flanders'.

Discussion within the Flemish government and with different stakeholders on the implementation of the nature conservation objectives showed the need of further modernization and more integration of the existing measures. The measures which will be looked at primarily are the integration of the different types of operational management plans and of the different subsidy schemes and the performance of the strategic management plans, the evolution of the nature directive plan. This process is still on-going.

Delineation of sites and the setting of targets
The rules to delineate SPAs, pSCIs and SACs are set out in the Decree for Nature Conservation. Unlike the SPAs, the SACs still need to be formally adopted by the Flemish Government. The process is on hold pending the draft of the nature conservation objectives, a process that is being wrapped up. Both SAC delineation and nature conservation objectives are expected to be adopted at the end of June 2013.

As mentioned in C.0.aStrategy on setting nature conservation objectives Flanders uses a two-step-approach while setting the targets. Firstly regional objectives are set which will be divided over the various sites in a second phase. SPAs and SACs, birds, habitats and other species are treated the same way, respecting the different policy goals. The regional nature conservation objectives were adopted in 2009. The distribution of the different specific objectives over the different sites is on-going.

Coordination
The nature directive plan is the current strategic management plan for an individual SCI, SAC or SPA. It gives direction to the operational management plans for individual nature reserves and forests and the different subsidy and licensing schemes. For species not specifically bound at Natura 2000 sites, a system of species protection programs aimed at the management of populations of threatened species, will be used.

As mentioned before, Flanders is currently working to adjust the earlier approach to the strategic management plan because of the time consuming nature of the nature directive plans, the

lack of an action oriented component, the need for a more efficient participatory approach and the need to avoid planning for everything at once (final state planning). A new approach is being designed, aimed at:

- A spatial explicit accounting system of goals and realizations,
- A planned deployment of financial stimuli,
- The encouragement of active participation of local stakeholders,
- And a framework for appropriate assessments.

Nature development

Nature development can be done on different scales. 'Land development for nature' projects ('*Natuurinrichting*') are a large scale development schemes aimed purely at nature development and nature friendly recreation. Comparable systems but with different goals exist too ('*Ruilverkaveling*' or 'land consolidation' and '*Landinrichting*' or 'land development'). Nature development can be a part of both of these schemes. Funding for small scale projects exists in the form of nature project agreements and a scheme for nature reserves and afforestation of agricultural land.

Only nature project agreements are more or less aimed specifically at Natura 2000 since they are linked to a nature directive plan.

Management

A system of mandatory management plans is in place for nature reserves, forest reserves and all forest assets larger than 5 ha, either private or public. Each system has its own financial support schemes. A set of agri-environmental measures is operational for farmers.

The Flemish government developed a set of criteria for the sustainable management of forests to promote and frame it. These criteria must be met in certain areas. To support and promote sustainable management especially in privately owned forests the "Forest Group" scheme has been set up. A Forest Group is an association for forest owners with the aim of sustainable management and cooperation which can be sanctioned and supported.

The quoted schemes are not specifically developed for Natura 2000, let alone solely used in it, but most have specific rules or focus for these areas.

Prevention and mitigation of negative effects

Besides the system of the appropriate assessment set up by the Habitats Directive, there are several sets of regulations, norms and licensing schemes aimed at the protection of the environment in general or of certain ecosystems, habitats or species in Flanders as a whole or specifically for Natura 2000. A range of agri-environmental measures is set up to mitigate the impact of farming.

Scientific support and education

Several educational institutions are working on, amongst other things, Natura 2000, in particular Inverde, a semi-governmental organization tied to the Agency for Nature and Forests.

The Research Institute for Nature and Forest collects and evaluates data regarding Natura 2000. It works actively at the dissemination of knowledge and experience about protected species and habitats and their management.

Competent authority

The competent authority for the management of SPA and SAC in Flanders is the Agency for Nature and Forests (ANB). She also owns and manages vast parts of the networks and is responsible for the preparation and implementation of nature policy in its broadest sense (biodiversity, nature conservation, forestry, hunting and river fisheries). Other public terrain managers / owners within Natura 2000 are the ministry of Defense, the administrations tasked with the exploitation and management of the waterways ('*Waterwegen en Zeekanaal nv*' and '*De Scheepvaart nv*') and the Flemish Environment Company (VMM), the provinces and some communes. The Flemish Land Company (VLM) is amongst other things responsible for large scale nature and land development projects. However most of the land is privately owned. Large parts of which are managed by NGO's such as '*Natuurpunt vzw*' and '*Limburgs Landschap vzw*'. ANB stimulates the sustainable management of privately owned nature rich sites.

C.2 Progress and perspectives for management planning for the sites

Progress in establishing conservation objectives	Regional nature conservation objectives ('*gewestelijke instandhoudingsdoelstellingen*' or '*G-IHD*') for the habitats of annex I and the species of annex II and IV species of the Habitats Directive and de bird species of annex I of the Birds Directive and the migratory bird species in significant numbers were addopted by the Flemish government on July 27th 2010. These are for the whole Flemish territory and basically state when favourable conservation status is reached. The process, in which the regional nature conservation objectives are apportioned over the different Natura 2000 sites, is being wrapped up. The legally required consultation processes need to be carried out. The site specific nature conservation objectives ('*specifieke instandhoudingsdoelstellingen*' of '*S-IHD*') should be approved in the summer of 2013. The site specific nature conservation objectives will be translated in local priority actions, recorded in the strategic management plan, an evolution of the current nature directive plan or '*natuurrichtplan*', for each Natura 2000 site in a local participatory process to ensure the necessary local support for their implementation. This is important because of the vast majority of Natura 2000 that is privately owned.
% of sites with plans completed	strategic management plans: 2 sites fully covered, 5 sites partially covered by old style nature directive plans (01/01/2013); operational management plans: an estimated 25% of Natura 2000 surface (01/01/2013).
% of sites with plans in preparation	strategic management plans: in anticipation of formal approval of nature conservation objectives by Flemish government for both SPA and SAC; operational management plans: for a whole range of sites management plans are being drafted for public and private land, but no estimation of the percentage is possible at the moment (01/01/2013).
% of sites with no plans	strategic management plans: 55 sites fully without, 5 sites partially (01/01/2013); operational management plans: an estimated 75% of Natura 2000

	surface, but for many public and privately owned sites plans are under preparation (01/01/2013).
Link to websites with plans & any guidelines	For information on the nature directive plans: http://www.natuurenbos.be/nl-BE/Natuurbeleid/Natuur/Natuurrichtplannen.aspx For information on nature reserve management plans: http://www.natuurenbos.be/nl-BE/Natuurbeleid/Natuur/Samenwerking/Erkenning_reservaten.aspx For information on forest management plans: http://www.natuurenbos.be/nl-BE/Natuurbeleid/Bos/Bosbeheerplanning.aspx
More background information on plans and comment on other instruments/approaches for management planning, information on and plans for particular sectors (e.g. forestry etc.)	In Flanders two levels of site specific plans can exist with reference to 'management plan': detailed operational management plans indicating the site specific measures to be taken (compulsory for reserve areas), and at a higher level the so called nature directive plans indicating the objectives and possible implementation. The idea was to first develop the directive plans that would provide the framework for several more detailed operational management plans. The development of the nature directive plans was started in a pilot phase for parts of both Natura 2000 and the Flemish Natural Structure (consisting of the Flemish Ecological Network and the Integral Interweaving and Supporting Network). In this pilot phase six of these directive plans were completed. At present (1 January 2013), one of these plans contains both a SAC and a SPA - counted here as two different Natura 2000 sites because not fully overlapping with each other, the other five plans contain only smaller parts of Natura 2000. The drafting of nature directive plans was put on hold pending the evaluation of the system and even further delayed because of the shift in focus to the development of the nature conservation objectives for Natura 2000. On 1 January 2013 many sites within Natura 2000 have been recognised as a private nature or forest reserve which includes an approved operational management plan (6 % of Natura 2000 surface), other zones are acquired by the Agency for Nature and Forests and assigned as reserve area with operational management plan (4 % Natura 2000), forest areas of the Agency and of private owners lying in Natura 2000 with an approved operational management plan cover 9 % of Natura 2000 surface, and some areas are situated in military domains for which specific operational management plans have been developed under the LIFE project DANAH (6 % of Natura 2000 surface). The total surface of Natura 2000 with an operational management plan covers 25 % of Natura 2000 in Flanders (40,916 ha out of 166,196 ha). As mentioned before, Flanders is currently working to adjust the

	earlier approach to the nature directive plans because of the time consuming nature, the lack of an action oriented component, the need for a more efficient participatory approach and the need to avoid planning for everything at once (final state planning). A new approach is being designed aimed at: – A spatial explicit accounting system of goals and realizations, – A planned deployment of financial stimuli, – The encouragement of active participation of local stakeholders, – And a framework for appropriate assessments. At the same time, steps are being taken to integrate the existing systems of management action planning and their supporting instruments and make them more efficient and effective.

C.3 Relevant government and non-governmental plans

Designation of nature corridors and connective zones to ensure spatial and functional connectivity through spatial planning

Designation of the Flemish ecological structure supports the coherence of the Natura 2000 network. This network structure is composed of two main parts. The first one is the Flemish Ecological Network ('*Vlaams Ecologisch Netwerk*' or '*VEN*'), that includes Large Nature Units ('*Grote Eenheden Natuur*' *or* '*GEN*') and Potential Large Nature Units ('*Grote Eenheden Natuur in Ontwikkeling*' *or* '*GENO*'). The second part is the so-called Integral Interweaving and Supportive Network ('*Integraal Verwevings- en Ondersteunend Netwerk*' or '*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 also core sites of Natura 2000) 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 detailed spatial planning maps ('*ruimtelijk uitvoeringsplan*' of '*RUP*') that outlines the land use classes for the entire region. This approach of identifying core areas (VEN) and supporting zones and connecting structures (IVON) through an integrated spatial planning perspective offers a practical method to implement connectivity and to ensure coherence of the overall network. 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 includes 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 rivers or hedgerows.

The Nature Decree sets the targets for VEN to 125,000 ha and the Interweaving Areas to 150,000 ha to be established by 2003. On 1 January 2012 89,317 ha of VEN and 3,974 ha of 'interwoven' areas have been designated. Establishment of corridor areas is the responsibility of the provincial authorities and are now in preparation based on a general methodology and

on the overall mapping of potential corridor areas. About 433 connective zones or nature corridors between areas with important natural value, such as Natura 2000 sites, or with potential value have been mapped.

Development and conservation of natural areas and elements as stepping stones and migrating corridors
Protection of small landscape elements: a permit is mandatory for changing small landscape elements within Natura 2000 sites, development and management of small landscapes is promoted and financially supported through agri-environment agreements.

Delayed mowing of road verges and ecological management of road verges and waterway embankments contribute to the improvement of the conservation state: in Flanders about 1.000 km of road-side verges and 600 km of river and canal embankments are now under nature-oriented management schemes.

Actions to maintain and restore biodiversity at urban and municipal level are financially supported through the Cooperation Agreement with local authorities. In urbanized areas: active promotion to develop green roofs, green walls, development of more natural public gardens, fitting out of roofs and church towers for bat populations. In Flanders about 532 municipal projects, of which 110 newly initiated in 2012, are or were being carried out with the objective of conservation and development of nature, forest or green spaces.

Construction or restoration of fauna passages supports connectivity for species migration
Examples are the construction of “eco-tunnels” and “eco-passages” in fragmented habitats and now also as mitigating and compensatory action in various construction projects, and defragmentation of rivers for fish migration. Four large eco-passages were constructed: “De Warande” ecoduct on the N25, “Kikbeek” ecoduct and the ecoveloduct on the E314 and “De Munt” ecoduct on the E19. There are plans for two more.

Inventories of the obstacles for fish migration have been compiled and measures for restoring migration passages are included in the river basis management plans. In 2011 9 of the 38 obstacles of first priority are resolved (24%) and 103 out of 539 of second priority (19%). By the end of 2015 90% of the first priority obstacles should be removed and half of the second priority. Hundreds of fauna exit points are constructed or planned on different canals.

Integration of the **conservation and restoration of habitats in the river basin management plans** through the implementation of the Water Framework Directive and through specific waterway schemes such as floodplain restoration and development along the Scheldt and the Yzer.

Published reports or websites
Information on the establishment of the Flemish Ecological Network can be found on http://www.natuurenbos.be/nl-BE/Natuurbeleid/Natuur/VEN_en_IVON/Inleiding.aspx or http://www.natuurindicatoren.be
Information on the implementation of other measures can be found on http://www.natuurindicatoren.be
Information on agri-environment agreements can be found on http://www.vlm.be/landtuinbouwers/beheerovereenkomsten/Pages/default.aspx
Information on the river basis management planning: http://www.integraalwaterbeleid.be/

D. CURRENT EXPERIENCE WITH USE OF EU FINANCIAL INSTRUMENTS[10]

D.1 European Agricultural Fund for Rural Development (EAFRD)

This is a summary of allocations (co-financing) under relevant provisions of rural development fund for Natura 2000 management, as well as other relevant national/regional financing.

However, the estimate was only possible for payments in Natura 2000. No information on the contribution towards the favourable conservation status is available.

Fund	Provision	Level of Use*
EAFRD	213 Natura 2000 payments	€ 153 327 Estimation of average yearly expenditure.
	214 Agri-environment payments	€ 927 315 Estimation of average yearly expenditure based on the surface under contract in Natura 2000 (10%). There is no earmarking with regards to Natura 2000 as such.
	221 First afforestation of agricultural land	MI No recent use of funds of this category within Natura 2000, but the possibility exists.
	224 Forest Natura 2000 payments	NU
	225 Forest-environment payments	NU
	227 Non-productive investments (Forest)	€ 50 141 Estimation of average yearly expenditure based on the % of forest area situated in Natura 2000 (35%). There is no earmarking with regards to Natura 2000 as such.
	323 Conservation and upgrading of the rural heritage	€ 23 702 Estimation of average yearly expenditure based on the surface in Natura 2000. There is no focus on Natura 2000 as such.
Other relevant (national/regional) payment schemes for Territory		€ 44 765 Estimation of average yearly expenditure based on the surface under contract in Natura 2000 (10%) for agri-environment measures other than those captured under 213 and 214 of EAFRD.
Summary of key Natura 2000 related measures being undertaken under fund:		

[10] Based on: Arcadis Belgium nv. 2012. Verkennende studie naar alternatieve en innovatieve financieringsmechanismen voor de implementatie van de instandhoudingsdoelstellingen in Vlaanderen, in opdracht van het Agentschap voor Natuur en Bos van de Vlaamse overheid. Brussel. 284 p.

- Agri-environment measures to enhance development and/or nature oriented management of grasslands, field margins and verges of water courses, development and management of small landscape features such as pounds and hedges;
- Agri-environment measures to restore environmental quality by implementation of reduced or zero manure use and zero pesticide use;
- Measures to enhance nature oriented management of forests and reforestation and afforestation.

Following key lessons learnt and obstacles encountered, were mentioned in an independent study [10]:

- Not every possibility provided by EAFRD for the management of Natura 2000 is used, especially regarding forestry. Because of lack of capacity, institutional structure and tradition the Flemish government focused primarily on agriculture and on axis 1. This also applies to Leader and measure 323 'Conservation and upgrading of the rural heritage', where Natura 2000 (and nature / biodiversity more broadly) has not been considered as an objective in any of the projects.
  The Flemish axis 2 of the EAFRD provides around 8 million euros per year, about 14% of which can be more or less related to Natura 2000 sites without any guarantee on its contribution towards achieving favourable conservation status.
- Nature conservation measures on farmland bear a high opportunity cost due to high land prices and high productivity. The compensations should be suitable and more adjustable to changing market conditions to be more attractive to farmers.
- An adapted marketing strategy, coaching and administrative support is necessary to get farmers to accede to the schemes in sufficient numbers.
- An area specific framework based on nature conservation objectives and monitoring is necessary for the efficient deployment of the schemes. Without it the advantage of these schemes for Natura 2000 is not clear.
- There is a need for a more planned and coordinated approach on a larger scale to improve the efficiency of the deployed measures for nature conservation objectives.
- EAFRD means are useful to (co)finance the follow-up of nature development projects financed by other financial instruments such as LIFE^{+}. But to be effective the schemes should be able to be tailored to the necessities created by these projects.

** Where estimates are available they should be provided. Otherwise indicate as VS Very significant; MU Moderate Use; MI Minor use; NU No use*

In the 2012 Nature Report on Policy Evaluation the Flemish Research Institute for Nature and Forest scrutinized the nature policy in agricultural areas. It looked specifically at policy evaluation and optimization of bird management (and erosion control). It looked at outcome, scientific foundation, use of instruments, monitoring, feasibility and policy context.

The outcome of the bird policy is mixed: some meadow and arable field birds are still in decline, others, mainly common birds, are fearing better. Flanders is also important for migratory birds such as hibernating geese and swans. Nine species are linked to agricultural areas. All nine stay status-quo, but only five reach a favourable conservation status (*Anser brachyrhynchus*, *Anser fabalis*, *Cygnus bewickii*, *Numenius arquata* and *Anser albifrons*), while four (*Anser anser*, *Philomachus pugnax*, *Pluvialis apricaria*, *Anas penelope*) do not. Developments on a Nord Western European level (e.g. the improved protection of wetlands and species) and weather conditions can influence the hibernating numbers strongly.

It is too soon to have a final judgement on the effectiveness of the policy on arable field birds (longer monitoring is needed), but for meadow birds the policy have a positive outcome. The

measures also seem to have a positive effect on the ecosystem as a whole: biodiversity increases.

The recommendations of the Nature Report on the meadow birds management policy are the following:
- Choose a site specific approach,
- Aim the measures as much as possible at target species of a particular area,
- Have clear regulations.

The recommendations of the Nature Report on the use of agri-environmental measures are the following:
- Ensure the active participation of stakeholders on policy design,
- Create continuity and legal certainty,
- Mix measures of different levels of difficulty,
- Communicate appropriately,
- Compensate measures in a correct way,
- Weigh freedom versus obligation,
- Use area concepts,
- Introduce fixed contacts,
- Distinguish between temporal and permanent nature.

D.2 European Fisheries Fund (EFF)

Provide a summary of allocations under Axis 1-4 of EFF used for Natura 2000 management, (as well as other relevant national/regional funding)

Fund	Provision	Level of Use*
EFF	Axis 1	NU
	Axis 2	NU
	Axis 3	NU
	Axis 4	NU
Other (national/regional) payment schemes for Territory		NU
Summary of key Natura 2000 related measures being undertaken under fund: The mid-term review of the Belgian Operational Program showed a few projects aimed at the improvement of fish stocks, the dissemination of best practices on sustainability and the implementation of new fishing techniques. These measures do not target Natura 2000 as such, but they nevertheless contribute to the adaptation of the fishing sector to marine protected areas through the mitigation of negative ecological impact: investment in technological infrastructure which lessens sea soil impact, diversification of fishing techniques, ...		
Following key lessons learnt and obstacles encountered, were mentioned in an independent study [10]: Axis 3, which is the most obvious approach, is aimed at fish species of economic importance. Since Flanders has no marine SAC or SPA, only a few estuarine, Natura 2000 is mainly designated for fresh water species, which are not economic important, at least in Flanders. A lack of attention or of sense of urgency on a political and administrative level is a consequence.		

Where estimates are available they should be provided. Otherwise indicate as VS Very significant; MU Moderate use; MI Minor use; NU No use

D.3 Structural Funds and the Cohesion Fund

Provide a summary of allocations (co-financing) under relevant provisions of structural funds used for Natura 2000 management.

Fund	Provision	Level of Use*
ERDF	Category 51	MU
	Category 55	MU
	Category 56	MU
	INTERREG	MU
European Social Fund (ESF)		NU
Summary of key Natura 2000 related measures being undertaken under fund: Since the categories are not used within the Flemish government, it is very difficult to trace the investments in Natura 2000 as such. Based on the projects in which the Agency for Nature and Forests participated, the key measures are related to: – Restoration of European protected habitats and nature development; – Restoration of habitats for European protected species and protective measures; – Control of invasive species (development of methods and implementation); – Defragmentation through the combination of green and recreation infrastructure; – Infrastructure for public access and nature friendly recreation.		
Following key lessons learnt and obstacles encountered, were mentioned in an independent study [10]: – The current Flemish ERDF programme has a strong economic focus with a lot of attention going to innovation, the strengthening of entrepreneurship and the enhancement of spatial-economic factors. The main goal is the advancement of the on-going development of Flanders as one of the most competitive regions, resulting in sustainable economic growth, the creation of more en better employment en de protection en improvement of the environment. – Not every possibility provided by the ERDF for Natura 2000 is used in the current programme, because of lack of capacity, institutional structure and tradition within the Flemish government. Explicit attention on Natura 2000 is a must in the coming programme. – Stakeholders in the management of Natura 2000 tend to lack the capacity en the means to identify possibilities and to attract opportune funding, especially smaller organisations and singular actors. The public agencies tasked with the management of Natura 2000 lack the capacity to optimize the use of the ERDF for nature conservation by stakeholders within or without these agencies. – The knowledge of the benefits derived from the ecosystems which encompass the Natura 2000 network, the ecosystem services, should be mainstreamed and used as an argument to set up Natura 2000 as a priority for the ERDF and other funds.		

Where estimates are available they should be provided. Otherwise indicate as VS Very significant; MU Moderate use; MI Minor use; NU No use

D.4 LIFE+

Provide a summary of allocations (co-financing) under LIFE+ for Natura 2000 management,

Fund	Provision	Level of Use*
LIFE+	Nature and Biodiversity	€ 3,500,000 - € 6,000,000 (period 2002 - 2012) Estimation of average yearly ex-

		penditure.

Summary of key Natura 2000 related measures being undertaken under fund:

- Nature development measures aimed at the protection, restoration and development of habitats: forests, wetlands, coastal dunes, halophytic vegetation, heathlands and natural grasslands;
- Measures aimed at the protection, restoration and development of populations of key species such as bats, meadow birds and invasive alien species;
- Measures aimed at the optimization of nature areas for nature friendly recreation through the (re)construction or relocation of infrastructure;
- Acquisition of land necessary for the realisation of the measures mentioned above;
- Communication activities aimed at the improvement of support for the proposed and implemented measures.

Following key lessons learnt and obstacles encountered, were mentioned in an independent study [10]:

- LIFE+ is the easiest and most direct road to European funding for Natura 2000 linked projects in Flanders with the added benefit of being more targeted and effective.
- LIFE+ provides funding for time-limited projects. Other funds such as EAFRD can provide means to support the follow-up or they can form synergies to provide mutual support.
- An improved administrative support within the competent authorities would make the application procedures easier and more cost efficient for the submitter.

Where estimates are available they should be provided. Otherwise indicate as VS Very significant; MU Moderate use; MI Minor use; NU No use

D.5 Other key funding sources

Fund	Level of Use*
7th Framework Programme for Research (FP7)	NU
Public/Private Partnership financing schemes	MI
Use of innovative financing	NU
Other (specify)	MU

Summary of key Natura 2000 related measures being undertaken under fund:

Port authorities and a number of private companies especially from the quarry sector pay for nature development and the management of valuable nature above and beyond the legal requirements related to land use and licensing.

The Ministry of Defense invests the gains out of sale of wood and other biomass in nature development and the specific management of ecologically valuable habitats and species populations in military sites in Natura 2000. Preparation and execution of the management is carried out in cooperation with ANB and NGOs.

Following key lessons learnt and obstacles encountered, were mentioned in an independent study[10]:

Lack of capacity, institutional structure and tradition within Flanders inhibits the use of mentioned sources. Through consultation and participation of private stakeholders the trust between different stakeholders is growing and the number and focus of cooperation agreements is increasing. To be able to build the trust, all stakeholders, private and public, have to be open minded and willing to take into account each other's objectives.

Where estimates are available they should be provided. Otherwise indicate as VS Very significant; MU Moderate use; MI Minor use; NU No use

E. CURRENT ESTIMATE OF FINANCIAL NEEDS FOR MANAGEMENT OF NATURA 2000 FOR THE TERRITORY

E.1 Current estimate of financial needs for management of Natura 2000

To estimate the financial needs for the management of Natura 2000 you need to calculate the cost for:

- Development and maintenance: all measures needed for a correct management of protected habitats and habitats of protected species, comprising both costs for actual management activities and land acquisition cost;
- Environmental conditions: all measures needed to create the appropriate environmental conditions on patch level such as investments in water quality and quantity, connectivity and erosion control;
- Organisation: all other measures to operationalize the Natura 2000 program.

Development and maintenance

To implement all measures needed for a correct management of protected habitats and habitats of protected species an acquisition and a maintenance policy is needed. The costs for both policy is estimated.

Cost for acquisition

The Flemish nature conservation objectives are expressed in terms surface of and quality; this is the surface (existing plus newly developed) needed to reach favourable conservation status respectively the key issues for a proper management of said surface. Both types of goals can give rise to acquisition depending on management costs, complexity of management, scale of needed operation. Acquisition covers both the purchase of existing nature elements to improve the quality and to bring them under proper management, and the purchase of sites for nature development. The priorities as expressed in 'F. Strategic conservation priorities for Natura 2000 for the territory for period 2014-2020' apply. All the necessary purchases will have to be effectuated before 2020 for the 16 habitats indicated; for the remaining habitats one third will be realised by 2020, the remaining two thirds by 2040.

42% of the surface of actual habitat is already owned by the Agency for Nature and Forests, other governmental institutions or nature conservation NGOs and under proper management. Three criteria were used for deciding which group of stakeholders is best suited to fill-in the remaining distance to target (58%):

- The level of effort needed: some habitats demand very specific and long term management, mainly to preserve certain succession stages;
- Management costs: the more expensive and technical the management needed, the more important it is to invest money wisely and to preserve the investment in the long run – three categories are used: cheap (less than € 250/year), moderate (between € 205 and € 750/year) and expensive (more than € 750/year);
- Compatibility with regular agricultural of sylvicultural use: maintenance of some habitats[11] can be combined with agriculture or forestry; acquisition of these habitats is occasionally necessary for restoration of highly degraded patches, the creation of large coherent nature complexes or specific targets (e.g. fauna goals, very high proportion of dead wood and specific vegetation structures).

[11] MINA-raad. 2012. Instrumenten van natuur- en bosbeleid in functie van instandhoudingsdoelstellingen, Advies naar aanleiding van de evaluatie van de instrumenten van natuur- en bosbeleid in functie van instandhoudingsdoelstellingen, advies MINA-raad 2012/77

Based on these criteria for every protected habitat the part and therefore surface that should be bought by the government or nature conservation NGOs was determined, using the proportion of purchase between ANB and nature conservation NGOs. About 4.200 ha of protected habitat and a 100 ha of extra habitat for protected species should be bought by ANB and about 3000 ha respectively 60 ha by the nature conservation NGOs. This is in total 7.360 ha out of 23.333 ha.
Based on this projected surface, an acquisition cost can be estimated using the average cost per ha of acquisitions for different nature types in Flanders, the estimated proportion of expropriation (as capstone and up to 20% of surface, including reinvestment allowance), and timing (for the 16 priority habitats 1/8th of the goal each year in the period 2013-2020, for the rest 1/28th of the goal each year between 2013 and 2040). The yearly cost for acquisition (2014-2020) for quality reasons is estimated at € 10.3 million a year.

The nature conservation objectives set the quantitative goals at in total 37.000 ha for nature conversion (starting point is already an existing nature element of lower quality) and at in total 5.200 ha for nature development (starting point is not a nature element, generally arable land). ANB used a spatial model for assigning the nature conservation objectives. The same model distributes the surface targets for development over domains of the Agency for Nature and Forests (19.000 ha), other governmental institutions (1.400 ha), nature conservation NGOs (3.600 ha) and different stakeholders (mainly agriculture and private forestry). About 6.000 ha of extra habitat for protected species are foreseen too, with half nature conversion and half nature development. Based on the actual distribution of the species concerned and the working areas, about 400 ha can be placed on ANB land and on NGO land. The remaining distance-to-target cannot be placed on existing public or NGO land.
The decision which group of stakeholders is best suited to fill-in the remaining gap was taken based on an estimate of the potential for management by these groups per broad group of habitat type:

- Arable land: habitat for *Cricetus cricetus* and *Circus pygargus*;
- Grass: basically grassland types suitable for production of hay or extensive livestock breeding – habitat types 1310, 1320, 1330 and 6510, and habitat for inter alia *Lanius collurio* and *Crex crex*;
- Forest: natural deciduous woodland;
- Nature: protected habitat or habitat for protected species with little or no economic relevance and mainly expensive or highly specific management needs;
- Dune: no economic relevance.

Using these criteria a task for every group of stakeholders was defined (Table 1) in the form of a proportion of the distance-to-target surface. ANB is tasked with the purchase of about 5.000 ha of protected habitat and 1.250 ha of habitat for protected species; nature conservation NGOs 4.200 ha.
An acquisition cost can be estimated using the average cost per ha of acquisitions for different nature types in Flanders, the estimated proportion of expropriation (as capstone and up to 20% of surface, including reinvestment allowance), and timing (for the 16 priority habitats 1/8th of the goal each year in the period 2013-2020, for the rest 1/28th of the goal each year between 2013 and 2040). The yearly cost for acquisition (2014-2020) for quantitative reasons is estimated at € 10.5 million a year.

Table 1. Distribution of tasks (% NCO surface) over the different groups of stakeholders (ANB = Agency for Nature and Forests, NGO = nature conservation NGOs, AGR. = farmers, FOR = private forestry) for each broad habitat group and divided in tasks for nature conversion (con) and nature development (dev).

type	*ANBcon*	*ANBdev*	*NGOcon*	*NGOdev*	*AGRcon*	*AGRdev*	*FORcon*	*FORdev*

Arable	10%	10%	10%	10%	80%	80%		
Forest	20%	60%	5%	10%		5%	75%	25%
Dune	80%	80%	10%	10%			10%	10%
Grass	25%	25%	25%	25%	50%	50%		
Nature	45%	45%	45%	45%			10%	10%

Technical costs for nature development and maintenance

The estimate for the period 2014 – 2020 of technical costs for development and maintenance of Natura 2000 habitats was made using a technical cost model[12]. This model calculates costs based on assumptions of location, actual nature quality and ownership regarding the nature conservation objectives. The costs for development and maintenance of habitats of protected species that are not protected habitats (not listed on annex I of the Habitats Directive) are based on the standard cost calculations of the Verheijen commission of 2009[13].
All costs are expressed in euro (2012) and without VAT (mostly 21%). The cost for the development and maintenance of extra habitat for the protected species, on top of the nature conservation objectives for the protected habitats are not yet determined.

The technical cost includes only those costs related to actual acts of managing or developing nature (mowing, digging, cutting, …); costs for coordination, development of management plans and management bodies are not included. The model looks at development (acts aimed at the creation of new habitats), restoration (acts aimed at improving the local conservation status of degraded habitats) and maintenance (acts aimed at keeping the local conservation status favourable) taking into account the priorities as expressed in section 'F. Strategic conservation priorities for Natura 2000 for the territory for period 2014-2020'. This timeframe implies that 16 Natura 2000 habitats will be brought into favourable conservation status by 2020. By then all costs for the development and quality improvement will have been made. For the remaining Natura 2000 habitats one third of the development and quality improvement measures will be in place by 2020 to make sure that the nature conservation objectives will be met by 2050.

This subsection describes the technical cost for reaching the policy goal as put forward in section F. These are not the expenses to be charged on the government budget. The actual expense will be influenced by for instance policy synergies: e.g. flood protection through the use of natural flood-prone areas and the use of volunteers: e.g. NGOs in nature reserves.

The technical costs for period the 2014 - 2020 are estimated at € 12.3 million per year for nature development, at € 11 million per year for restoration of degraded habitat and at € 10.7 million for maintenance of protected habitats and € 350.000 per year for maintenance of extra habitat of protected species. Due to the characteristics of these types of measures the financial need will vary in time as expressed in Figure 12. In time costs for nature development and restoration will be replaced by maintenance costs, reducing overall financial needs gradually of an initial increase (until 2020).

[12] Arcadis. 2012. Opmaak van een model voor de technische kosten van inrichtings- en beheerwerken. Eindrapport in opdracht van het Ondersteunend Centrum van het Agentschap Natuur en Bos, Projectnummer BE0112000229

[13] Commissie Verheijen (2009). Advies commissie Verheijen herberekening standaardkostprijzen. Rapport LNV & IPO 5 februari 2009.

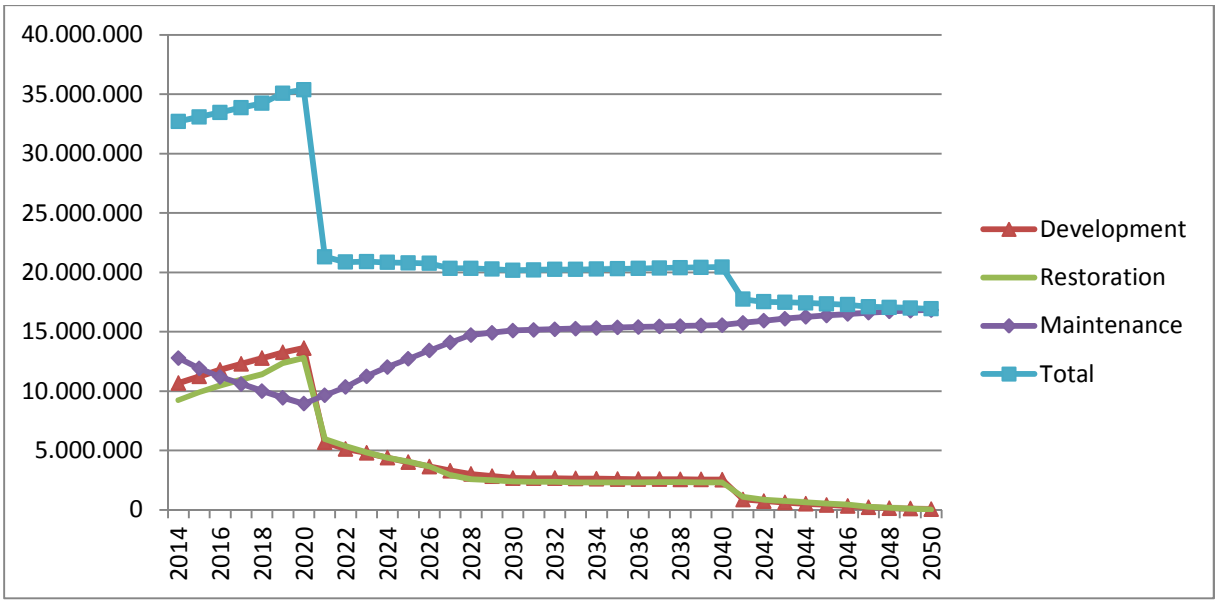

Figure 12. Evolution in the period 2014-2050 of cost related to development, restoration and maintenance of protected habitats and habitats of protected species. Costs are expressed in EUR (2012) and without VAT.

Species protection programs for protected species

Between 2014 and 2020 25 species protection programs are planned (see section G.1.a General Priority Measures for Natura 2000 for the species concerned) at five per year. Implementation of these programs will be done through integration in river basin management planning, but mainly in the strategic management plans for Natura 2000:

- Development of new protected habitats or restoration of existing protected habitats;
- Acquisition of parts of the existing extra habitat for the "extra space needing" species, needing appropriate management;
- Acquisition of land for development of new habitat for the "extra space needing" species.

However, not every activity needed is caught by these plans:

- Acquisition of existing habitat for other species;
- Development or restoration of existing habitat for other species;
- Development itself of new habitat for the "extra space needing" species;
- Measures to restore connectivity.

The additional costs will differ strongly between the different programs. A preliminary estimate is € 250,000 per program for five year, gradually going from € 250,000 per year to € 1,250,000 per year for the whole.

Environmental conditions

It is very difficult to estimate the financial needs to alleviate the negative environmental conditions since the estimate is depending on site, problem and solution. Since there are at the moment no clearly defined and specific problems, let alone certainty about the appropriate solution, no estimate can be made on the cost for investments resolving the environmental conditions. A more detailed analysis and therefore estimate can be made while drafting the strategic management plans. The same goes for subsidies to resolve certain environmental problems (e.g. agri-environmental agreements).

In any case, a supporting policy is needed in situations where farmers will be confronted by obligations concerning environmental conditions or with nature conservation objectives demanding large expansions, limiting the viability of their business. The size of the measures

under this policy depends on the priority actions (to be determined in the strategic management plans) and funding opportunities, including the availability of land banks.

In preparation, some studies and measures are needed that can be budgeted:
- Ecohydrological studies are needed for 28 sites, budgeted at € 3.5 million in 2014 and 2015;
- The spatial model for assigning the nature conservation objectives ("*kalibratiemodel*") will be transformed in a comprehensive spatial model integrating site specific information (e.g. ecohydrological models). The development cost is estimated at € 250,000 a year for three year.
- Resolution of the site specific environmental issues will need further detailed study. € 500,000 per year is budgeted.

The programmatic approach for eutrophying and acidifying depositions will take further analysis and study. However the costs are depending on the chosen approach which still has to be determined.

Organisational costs
Organisational costs are the mainly recurrent cost for coordination, planning, communication, assessment and licensing, monitoring and data management.

Staffing is needed for **general coordination**, execution of the participatory strategy, local consultation, assessment of funding applications, drafting strategic management plans, data management and so on. The estimate for staffing costs is based on current personnel deployment and assumptions on future needs for the realization of our chosen implementation strategy. The estimate is amounts to € 3.2 million yearly and an exceptional expenditure of € 360,000 to start up in 2014.

The estimate for drafting **operational management plans** totals € 2.6 million a year, based on the following parameters:
- The proportion of targets already covered by existing operational management plans;
- The surface in need of new operational management plans based on the 2020 milestones (see section F);
- The proportion of actual nature conservation objectives in operational management plans;
- Staffing costs for upgrading existing operational management plans (including costs for coaching;
- Funding costs for private operational management plans and contracting cost for plans of public terrains.

The estimate for developing species protection programs amounts to € 30,000 per plan or, for 25 plans between 2014 and 2020 at 5 a year, at € 150,000 a year.

There are different **licensing** schemes that concern Natura 2000 sites. ANB, as the competent authority for Natura 2000, is involved as licensing authority or gives advice to the licensing authority (e.g. on the **appropriate assessment**). Staff needs are estimated at € 5.2 million each year. For further development of the screening tool for appropriate assessments and the Support Database Appropriate Assessment an extra € 200,000 is needed for 2014 and 2015.

Capacity building is needed to make sure that the organisations representing the most important stakeholders have the necessary knowledge and staff capacity to play their part in the

process, such as diffusion of correct and adapted information, and the collection and insertion of the necessary input. The present estimate amounts to € 280.000 a year.

The necessary targeted, site specific and general **communication** (including staff expenses and media costs) about Nature 2000 is estimated at € 557,000 a year.

The costs for **surveillance and supervision** are expected to be stable and to be captured by the present expenses. They amount to € 915,000 a year. The same goes for expenses for **infrastructure for access**. They are estimated at € 1.1 million a year in one off costs and € 3.4 million a year in recurrent costs.

Monitoring and data management is crucial for the implementation of the nature conservation objectives, the formal reports for Habitats and Birds Directive, the application of the appropriate assessment and nature management itself. Different types of monitoring are needed:

- Personnel and operating costs for monitoring the conservation status of protected habitats and species at ***national level*** is estimated at € 1,362,000 a year;
- Personnel and operating costs for monitoring the conservation status of protected habitats and species and for monitoring of the main environmental pressures at ***site level*** is estimated at € 3,200,000 a year;
- Personnel and operating costs for monitoring of management at ***patch level*** is estimated at € 35 per ha per year or € 1.4 million in 2014 gradually increasing to € 16.6 million a year.

E.2 Current estimate of needs for European funding (EAFRD)

Based on the information of sections D.1 European Agricultural Fund for Rural Development (EAFRD), E.1 Current estimate of financial needs for management of Natura 2000, F and G an estimate was made for the need of European co-financing by the European Agricultural Fund for Rural Development (EAFRD) for the period 2014-2020. The estimate amounts on average to just under € 3 million a year as shown in Table 2. A more detailed analysis can be found in Annex IX. Current estimate of needs for co-financing by the EAFRD

Table 2. Current estimate of needs for co-financing by the EAFRD.

EAFRD	***Description***	***Yearly spending at cruising speed in 2020***	***Current spending***	***Yearly average spending (2014-202)***	***% EU co-financing***	***average yearly contribution EAFRD***
Art. 21	Development	3,900,000	2,000,000	3,900,000	30	1,170,000
Art. 23	Afforestation	728,850	250,000	570,675	50	285,338
Art. 26	Reforestation	3,250,000	415,000	2,250,000	50	1,125,000
Art. 29	Agri-environment	5,146,800	1,100,000	2,642,900	45[1]	1,189,305
Total		**13,025,650**	**3,765,000**	**5.463.575**		**3.769.643**

[1] The common level of EU co-financing is 60%, but because of a top-up by the Flemish government the general % is lower.

Table 3 Current estimate of financial needs for management of Natura 2000 for the territory in million euros.

Type of cost	***2014***	***2015***	***2016***	***2017***	***2018***	***2019***	***2020***	***Full period***
One-off costs								
Land acquisition	20.9	20.9	20.9	20.9	20.9	20.9	20.9	146.3
Nature development	10.7	11.2	11.8	12.3	12.8	13.3	13.6	85.7
Mitigation of environmental pressures[1]	4.3 + ?	4.3 + ?	0.5 + ?	0.5 + ?	0.5 + ?	0.5 + ?	0.5 + ?	11.0
Infrastructure for access	1.1	1.1	1.1	1.1	1.1	1.1	1.1	7.7
Recurrent costs								
Management planning	2.8	2.8	2.8	2.8	2.8	2.6	2.6	19.0
Maintenance and management	22.1	21.8	21.6	21.6	21.4	22.2	21.7	152.4
Mitigation of environmental pressures[2]	?	?	?	?	?	?	?	0.0
Monitoring	6.0	8.5	11.1	13.6	16.1	18.6	21.2	94.8
Surveillance and supervision	0.9	0.9	0.9	0.9	0.9	0.9	0.9	6,3
Infrastructure for access	3.4	3.4	3.4	3.4	3.4	3.4	3.4	23,8
Licensing and appropriate assessment	5.4	5.4	5.2	5.2	5.2	5.2	5.2	36.8
Coordination and overhead	3.6	3.2	3.2	3.2	3.2	3.2	3.2	22.8
Communication and capacity building	0.8	0.8	0.8	0.8	0.8	0.8	0.8	5.9
Total cost	***81,9***	***84,2***	***83,3***	***86,3***	***89,1***	***92,7***	***95,1***	***612,4***

[1] no estimate could be made, except preliminary studies
[2] no estimate could be made

F. STRATEGIC CONSERVATION PRIORITIES FOR NATURA 2000 FOR THE TERRITORY FOR PERIOD 2014-2020

F.0 Setting priorities having regard to the to the need for measurable progress on the nature sub-target under EU 2020 biodiversity strategy and for ensuring good functioning of Natura 2000 network (SACs + SPAs)

As mentioned in C.0.aStrategy on setting nature conservation objectives' Regional Nature Conservation Objectives are set for every European protected habitat or species, including birds. This means that for every habitat a target was issued on the range, the area covered by habitat type within that range and the specific structures and functions (in short quality); targets on range, population and habitat for the species. These Regional Nature Conservation Objectives can be found in Annex VII. Regional Nature Conservation Objectives

Implementation of these Regional Nature Conservation Objectives entail the creation of about 41,000 to 55,000 ha of European protected habitat and 4,000 to 7,000 ha of habitat of species (not European protected habitat types) in addition to the existing patches of habitat and habitats of species (approximately 74,000 ha).

Based on the EU Biodiversity Strategy 2020 and the Flemish overall strategic policy plan "*Vlaanderen in Actie*" (VIA)[14] a roadmap with five Flemish waypoints or goals are formulated. Each goal helps to formulate the concrete targets to be reached by 2020 and the targets to be reached by 2050.

1. Halt and prevent deterioration of the present conservation status.
For every habitat or species protected by the Habitats of the Birds Directive deterioration of the present conservation status should be halted or prevented by 2020. This means that by 2020 all the necessary local interventions will have to be carried out in those sites (SAC or SPA) for which a negative trend in the local conservation status is reported while formulating the nature conservation objectives or where deterioration threatens.

2. Reach favourable conservation status or improve status by 2020 for 16 habitats.
The EU Biodiversity Strategy 2020 states that in 2020 the number of habitats in favourable conservation status has at least to equal the number of 2007. The conservation status of the same number of habitats needs to improve (from bad to inadequate or from inadequate to favourable). For the EU as a whole this means 17 % of the habitats have to remain in a favourable conservation status and 17 % has to improve; together 34 %. Translated to Flanders it means that about one third of our habitats (16 out of 46) have to keep or reach favourable conservation status or have to be improved in 2020. In 2007 two habitats already had a favourable conservation status.

This selection is based on two criteria:
- Is it feasible to achieve a proper management for the whole of the surface target of the habitat by 2020?

[14] VIA states that Flanders will have developed, redestined, improved or delineated sufficient habitat to achieve 70% of the Nature Conservation Objectives.

- Is it realistic to achieve favourable conservation status or at least a significant improvement by 2020?

The list is made up in cooperation with key stakeholders and should therefore represent a realistic set of targets. However, an abstraction has been made of the development time needed. This means that proper management and development need to be in place as soon as possible to have measurable progress in 2020.

The concerned priority actions are related to:
- The necessary development and proper management of the total surface target;
- The elimination of local environmental issues;

The reduction of acidifying and eutrophying depositions will take a rather time consuming regional approach.

3. Reach favourable conservation status for all habitats by 2050.

The goal of the EU Biodiversity Strategy 2020 is to reach favourable conservation status for all protected habitats by 2050. To be able to reach that goal you need to take action well in advance. Therefor interim targets for 30 out of 46 habitats are posted for the Flemish territory for 2020. By 2040 all remaining actions will have to be taken to reach favourable conservation status in 2050.

The interim targets are set as follows:
- Firstly, for each habitat type is determined how much can accomplished on public land and on land owned or managed by nature conservation NGOs. By 2020 all these surfaces should be under proper management and recorded in an official operational management plan, for governments because it is compulsory for them to achieve the nature conservation objectives and for the NGOs because they proclaimed this to be one of their core tasks.
- Secondly, for each type of habitat is determined what surface is already under proper management on private land and is officially recorded in an operational management plan (e.g. an elaborate forest management plan).
- Finally, for each habitat type the remainder is calculated. This is the distance-to-target that has to be reached by 2040 to achieve favourable conservation status in 2050. It is assumed that one third of the distance-to-target must be covered by 2020.

The concerned priority actions relate to:
- The proportional realization of development and proper management in every part of Natura 2000 for which habitat goals are formulated (mandatory on site level for priority habitats (*));
- The proportional reduction of acidifying and eutrophying depositions in a regional approach.

4. Reach favourable conservation status or improve status by 2020 for protected species.

The 2007 article 17 report showed that 34°% of the species in Flanders protected by the Habitats Directive were in a favourable conservation status. The evaluation of the bird species protected by the Birds Directive (see B.1.b Bird species of Birds Directive) showed over 50 % in a favourable conservation status. This is both above the European average and it meets the mentioned targets. No specific goals for 2020 are formulated; knowing full well that realisation of the 2020 habitat goals will benefit the species.

5. Reach favourable conservation status for all species by 2050.
The goal of the EU Biodiversity Strategy 2020 is to reach favourable conservation status for all protected species by 2050. To be able to reach that goal you need to take action well in advance. Therefor interim targets are posted for the Flemish territory for 2020. By 2040 all remaining actions will have to be taken to reach favourable conservation status in 2050.

However, the realisation of the 2050 habitat goals should make sure that most species will reach favourable conservation status. There are some species though that need extra efforts on top of the habitat goals. For these "extra space needing" species interim goals are posted for 2020.

The interim targets contain, besides the prevention of deterioration, the improvement of the existing habitats when needed and one third of the total foreseen targets for additional habitat. There are no interim targets in figures or partitioning over the various types of vegetation the habitat consists off. The targets will materialize in the species protection programmes which will coordinate the efforts on habitat maintenance and expansion needed within and without the SPAs or SACs.

Regional nature conservation objectives outside Natura 2000
To be able to achieve a favourable conservation status in Flanders as a whole (cf. art. 17 status reports) measures are needed to protect the patches of protected habitat or habitat of protected species outside Natura 2000 too. On top of that, it has not always been possible to place the surface needed inside the boundaries of Natura 2000 because of the characteristics of the site. This said, surface goals of 22,788 ha forests and 122 ha grassland (6430 and 6510) is set outside Natura 2000.

The strategic management plan Natura 2000
Reaching the local nature conservation objectives demand targets on two levels: (1) the development and management of patches of protected habitat types or habitats of protected species and (2) the achievement of adequate environmental conditions suitable for the target species of habitats. Both sets of targets will be further elaborated in the strategic management plan of the Natura 2000 site. The plan will distribute the local nature conservation objectives over the various subareas and define the priority actions on development and management, and on environmental conditions for each subarea.

Priority actions on development and management:
- All measures needed to stop or avoid deterioration of patches of habitat types or habitats of species;
- All measures needed to achieve the (surface) targets for habitats that need to reach favourable conservation status in 2020 or at least improve significantly;
- All measures needed to achieve the 2020 interim targets for those habitats and species that need to reach favourable conservation status in 2050.

Priority actions on environmental conditions:
- All measures needed to reduce the environmental pressures to stop or avoid deterioration of patches of habitat types or habitats of species;
- All measures needed to reduce the environmental pressures that hinder the achievement of favourable conservation status in 2020 by the target habitats.

The strategic management plan will run through four phases:

- SMP 1.0: 'starting distribution' – distribute the specific Nature Conservation Objectives and priorities over subareas; delineate search areas for objectives on development and management; list priorities on environmental conditions.
  Completion for every Natura 2000 site on adoption of the specific Nature Conservation Objectives.
- SMP 1.1: 'the obvious phase' – determine which part of the targets regarding development and management, and environmental conditions are covered by existing regulations and agreements; detail priorities; translate priorities in priority actions; determine responsibilities.
  Completion for every Natura 2000 site on mid 2014.
- SMP 1.2: 'the voluntary phase' – cover the largest part possible of the outstanding balance through voluntary agreements;
  Completion for every Natura 2000 site end 2017 at the latest.
- SMP 1.3: 'the compulsory phase' – cover the outstanding balance through compulsory measures.
  Completion for every Natura 2000 site where appropriate, after 2017.

Regional priority action on eutrophying and acidiphying depositions
A programmatic approach to end the negative impact off atmospheric nitrogen depositions will be set up by the end of 2015. This approach aims at the systematic reduction of depositions to ensure favourable conservation status for sensitive habitats and species by 2050 and prevent further deterioration.

This program will comprise both generic and area-specific policy measures. Simultaneously, a recovery package will be defined, budgeted and executed. This can lead to room for new local development whereby renewal of permits and limited expansions might be possible.

Defining ecological thresholds to mitigate local environmental pressures
To be able to reach a local favourable conservation status it is necessary to reduce local environmental pressures to below critical thresholds. These values are the maximum permissible environmental pressures per unit of surface or volume on a certain habitat type or habitat of a species that allows the conservation or the achievement of the local favourable conservation status. The critical thresholds will have to be set in a scientific and transparent and therefor socially acceptable way.
The result will be a uniform reference framework for the determination of the local conservation status, appropriate assessments, E.I.A. and S.E.A., and the implementation of priority actions on environmental pressures.

F.1 en F.2 give a summary of the priorities for the period 2014-2020 for priority habitat types and species, respectively the other protected habitats and species.

F.1 Summary of priorities for period (and expected outcomes), for priority habitat types and species having regard to the to the need for measurable progress on the nature sub-target under EU 2020 biodiversity strategy and for ensuring good functioning of Natura 2000 network (SACs + SPAs)

The Specific Nature Conservation Objectives at site level are expressed in terms of surface and quality. For the following habitats the target is to have the whole of the surface objective under an approved operational management plan aimed at the achievement of the required quality. By 2020 an improvement in the conservation status is anticipated for:

2130* - Fixed coastal dunes with herbaceous vegetation ("grey dunes');
6210 - Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites);
7110* - Active raised bogs;
7210* - Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*;
7220* - Petrifying springs with tufa formation (*Cratoneurion*).

For all other priority habitats the priorities are firstly to maintain at least the current conservation status and secondly to strive at an average of 70% of the surface objectives altogether. As mentioned in F.0 Setting priorities having regard to the to the need for measurable progress on the nature sub-target under EU 2020 biodiversity strategy and for ensuring good functioning of Natura 2000 network (SACs + SPAs) interim targets are set.

The Regional Nature Conservation Objectives, overarching all the Specific Nature Conservation Objectives, can be found in Annex VII. Regional Nature Conservation Objectives. All 2020 targets (final as well as interim targets) can be found in Annex VIII. Priority surface targets for protected habitats in view of the achievement of the relevant regional nature conservation objectives

F.2 Summary of priorities for other habitats and species covered by nature Directives having regard to the need for measurable progress on nature sub-target under EU 2020 biodiversity strategy (Habitats and Birds Directives) and for ensuring good functioning of Natura 2000 network (SACs + SPAs)

The Nature Conservation Objectives at site level are expressed in terms of surface and quality. For the following habitats the target is to have the whole of the surface objective under an approved management plan, aimed at the achievement of the required quality. In 2020 the favourable conservation status should be preserved for:
1140 - Mudflats and sandflats not covered by seawater at low tide;
2160 - Dunes with *Hippophaë rhamnoides*.
By 2020 an improvement in the conservation status is anticipated for:
1320 - *Spartina* swards (*Spartinion maritimae*);
2110 - Embryonic shifting dunes;
2120 - Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes');
2170 - Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*);
2190 - Humid dune slacks;
3140 - Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.;
6210 - Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites);
7230 - Alkaline fens;
8310 - Caves not open to the public;
9150 - Medio-European limestone beech forests of the *Cephalanthero-Fagion.*

For all other priority habitats the priorities are firstly to maintain at least the current conservation status and secondly to strive at an average of 70% of the surface objectives altogether. As mentioned in F.0 Setting priorities having regard to the to the need for measurable progress on the nature sub-target under EU 2020 biodiversity strategy and for ensuring good functioning of Natura 2000 network (SACs + SPAs) interim targets are set.

The Regional Nature Conservation Objectives for protected habitats, overarching all the Specific Nature Conservation Objectives, can be found in Annex VII. Regional Nature Conservation Objectives. All 2020 habitat targets (final as well as interim targets) can be found in Annex VIII. Priority surface targets for protected habitats in view of the achievement of the relevant regional nature conservation objectives

The realisation of the habitat goals mentioned in F.1 and F.2 will contribute to the accomplishment of favourable conservation status for the protected species in 2050.

F.3 Strategic priorities in relation to investments in Natura 2000 linked to green tourism and jobs, to support climate change mitigation and adaptation or other ecosystem benefits, for research, education, training, awareness and promotion of co-operation (including cross-border) linked to Natura 2000 management[15]

The Millenium Ecosystem Assessment[16] and the TEEB reports (The Economics of Ecosystems and Biodiversity[17]) both point to the inextricable link between economic development and biodiversity. Biodiversity and the ecosystems it is composed of, provide a wide range of goods and services that contributes to the wellbeing and welfare of the Flemish society. The Natura 2000 network as the backbone of the ecological structure is a key component of the Flemish natural capital. It provides invaluable services in different areas, ranging from climate change mitigation over green tourism and jobs to air and water quality.

Air quality improvement

Vegetation filters different polluting components from the air. Suspended fine particulate matter comes into contact with leaves and branches, is deposited and finally the rain will wash it into the soil. Gaseous pollutants such as ozone and nitrogen oxides can be taken up by the leaves through the stomata. Volatile components, such as PCBs and dioxins, can be captured by the cuticle on the leaves by means of adsorption. Ammonia (NH_3) is deposited on leaves in the form of ammonium (NH_4^+). The contribution of vegetation in filtering polluting components is dependent on the type of vegetation, the type of pollution, the location and configuration of the vegetation. Trees are most effective in the capture of harmful substances. In general, the effectiveness diminishes from trees, over shrubs and herbaceous plants to grass.

This service is relevant given the relatively high degree of air pollution in Flanders. There is a general consensus that the current air quality has a major impact on public health. This effect is primarily associated with exposure to fine particulate matter. Particulate matter (PM) is associated with 75% of the total environmental burden of disease in Flanders.

The Natura 2000 sites filter each year an estimated 4,000 to 8,000 tonnes of PM from the air-with its vegetation. The realization of the strategic priorities as described in F.1 Summary of priorities for period (and expected outcomes), for priority habitat types and species having

[15] For more information on the benefits of the Flemish Natura 2000 network, consult Broekx Steven, De Nocker Leo, Poelmans Lien, Staes Jan, Jacobs Sander, Van der Biest Katrien, Verheyen Kris. 2013. Raming van de baten geleverd door het Vlaamse NATURA 2000-netwerk. Studie uitgevoerd in opdracht van: Agentschap Natuur en Bos (ANB/IHD/11/03) door VITO, Universiteit Antwerpen en Universiteit Gent. 2012/RMA/R/1 (in preparation)

[16] http://www.maweb.org/en/index.aspx

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

regard to the to the need for measurable progress on the nature sub-target under EU 2020 biodiversity strategy and for ensuring good functioning of Natura 2000 network (SACs + SPAs) and F.2 Summary of priorities for other habitats and species covered by nature Directives having regard to the need for measurable progress on nature sub-target under EU 2020 biodiversity strategy (Habitats and Birds Directives) and for ensuring good functioning of Natura 2000 network (SACs + SPAs), will lower this with an estimated 78 to 150 tonnes, due to the transformation of large tracts of resinous woodland to deciduous within Natura 2000 while a significant part of the forest expansion takes place outside Natura 2000 and as such is not counted. Forest expansion (habitat types 9110, 9120, 9130, 9150, 9160, 9190, 91E0, and 91F0) is the main driver for air quality improvement.

Climate change mitigation and adaptation (including carbon sequestration)
Plants take carbon from the environment and use it to build biomass. The carbon is thus (temporarily) removed from the environment. Of course all types of nature sequester carbon, but forests with a large, long-living biomass are most important for the sequestration. The carbon fixed in the biomass of forests will no longer contribute to the warming of our climate.

The Natura 2000 sites store an estimated 155,000 tonnes of carbon in its biomass. The realization of the strategic priorities as described in F.1 Summary of priorities for period (and expected outcomes), for priority habitat types and species having regard to the to the need for measurable progress on the nature sub-target under EU 2020 biodiversity strategy and for ensuring good functioning of Natura 2000 network (SACs + SPAs) and F.2 Summary of priorities for other habitats and species covered by nature Directives having regard to the need for measurable progress on nature sub-target under EU 2020 biodiversity strategy (Habitats and Birds Directives) and for ensuring good functioning of Natura 2000 network (SACs + SPAs), will add an estimated 5000 tonnes. Forest expansion (habitat types 9110, 9120, 9130, 9150, 9160, 9190, 91E0 and 91F0) is the main trigger for extra carbon storage in biomass.

Carbon storage in the soil is achieved by sequestration of non-mineralized carbon from dead plant material into the soil where it is stored under the long-term anoxic conditions. The more atmospheric CO2 is fixed in the soil in this way, the less it can contribute to global warming. The benefits of this service are realized by both safeguarding the existing stocks and additional storage of soil carbon.
Soils under natural ecosystems typically exhibit higher carbon stocks than those under intensive land use. The carbon stocks are therefore higher in the soils of forest and permanent grassland than in the soils of temporary grassland or in arable soils. Especially marshes and historic peat soils possess large quantities of carbon.

The Natura 2000 sites store an estimated 34.2 million tonnes of carbon in its soil. The realization of the strategic priorities as described in F.1 Summary of priorities for period (and expected outcomes), for priority habitat types and species having regard to the to the need for measurable progress on the nature sub-target under EU 2020 biodiversity strategy and for ensuring good functioning of Natura 2000 network (SACs + SPAs) and F.2 Summary of priorities for other habitats and species covered by nature Directives having regard to the need for measurable progress on nature sub-target under EU 2020 biodiversity strategy (Habitats and Birds Directives) and for ensuring good functioning of Natura 2000 network (SACs + SPAs), will add an estimated 1.4 million tonnes of carbon. Raising water tables is the main driver for carbon storage in the soil. Restoration and expansion of peat and marshland vegetation (4010, 7110, 7140, 7150, 7210, 7220 and 7230), wet forests (91E0, 91F0), wet grasslands

(6410, 6430 and 6510) and fresh water habitats (3110, 3130, 3140, 3150, 3160, 3260 and 3270) are key elements.

Water quality improvement: denitrification and nutrient retention
Biological denitrification is the process in which nitrate is converted by bacteria to nitrogen. This final step removes nitrate (which in large amounts will contribute to eutrophication) from the water. This process takes place in most ecosystems, but the underlying mechanisms may differ. Denitrification occurs in microsites of well-drained soils of forests, grasslands and farmlands, in partly to fully water saturated soils, in seepage areas, in riparian zones, in sediments of rivers and lakes, in intertidal and subtidal sediments of estuaries etc.
Denitrification is an ecosystem service if nitrogen (N) is removed from water or the ecosystem avoids nitrogen ending up in ground water or surface water.

The Natura 2000 sites remove each year an estimated 1,100 tonnes of nitrogen through its ecosystem processes. The realization of the strategic priorities as described in F.1 Summary of priorities for period (and expected outcomes), for priority habitat types and species having regard to the to the need for measurable progress on the nature sub-target under EU 2020 biodiversity strategy and for ensuring good functioning of Natura 2000 network (SACs + SPAs) and F.2 Summary of priorities for other habitats and species covered by nature Directives having regard to the need for measurable progress on nature sub-target under EU 2020 biodiversity strategy (Habitats and Birds Directives) and for ensuring good functioning of Natura 2000 network (SACs + SPAs), will remove an estimated 420 tonnes extra. Denitrification is only marginally determined by the vegetation, but favourable conditions for denitrification will be accompanied by wet conditions and the associated nature types (e.g. grasslands such as 6410, 6430 and 6510; forests such as 91E0 and 91F0; fresh water habitats such as 3110, 3130, 3140, 3150, 3260 and 3270).

Just as organic carbon, nitrogen and phosphorus (P) can be buried in the soil when organic material is not mineralized by a lack of oxygen. N and P can be stored long-term under anoxic conditions. Like denitrification, N and P storage in the soil is an ecosystem service when nitrogen and phosphorus are removed from water or if the ecosystem avoids N and P ending up in ground or surface water.

The Natura 2000 sites keep an estimated 2.25 million tonnes of nitrogen stored in its ecosystems. The realization of the strategic priorities as described in F.1 Summary of priorities for period (and expected outcomes), for priority habitat types and species having regard to the to the need for measurable progress on the nature sub-target under EU 2020 biodiversity strategy and for ensuring good functioning of Natura 2000 network (SACs + SPAs) and F.2 Summary of priorities for other habitats and species covered by nature Directives having regard to the need for measurable progress on nature sub-target under EU 2020 biodiversity strategy (Habitats and Birds Directives) and for ensuring good functioning of Natura 2000 network (SACs + SPAs), will add an estimated 21,000 tonnes of nitrogen extra. Restoration and expansion of peat and marshland vegetation (4010, 7110, 7140, 7150, 7210, 7220 and 7230), wet forests (91E0, 91F0), wet grasslands (6410, 6430 and 6510) and fresh water habitats (3110, 3130, 3140, 3150, 3160, 3260 and 3270) are key elements.

Flood protection - sea
Protection against flooding from the sea through dissipation of energy and coastal defence is of great importance for Flanders with a coastline of 65 km and 150 km² macrotidal estuary. Most parts of the Flemish coastal plain lay 2 m below the water level of an average yearly

storm (+5.5 m TAW). The minimal coastal protection level (*Masterplan Kustveiligheid*) is set at + 7 m TAW (storm of a return period of 1000 year). For the river Scheldt it is set at + 8.3 m at Antwerp.

Beaches play an essential role in the protection of the coastal plain because of their capability to (partially) dissipate the energy of incoming waves; thereby decreasing the erosive force of waves reaching the foot of dunes or dikes and reducing erosion of dunes or dike instability. Dunes protect the coastal plain by dissipating wave energy and by forming a physical barrier able to stop sea water. Mud flats and sand flats form like beaches wave absorbing structures but this is supported by the friction between flowing water and leaves, stems and sometimes roots.

Habitats 1140 and 1320 (mud flats and sand flats), 2110, 2120, 2130*, 2160, 2170 and 2190 (dune habitats) will be brought or kept in favourable conservation status by 2020 and therefore fulfil their natural in a better fashion. Habitats 1310, 1330, 2150 and 2180 will be significantly improved by 2020 and brought in favourable conservation status by 2050.

Flood protection - rivers
Protection against flooding from rivers can be achieved through the temporary storage of water in areas that are relatively tolerant to flooding, thereby reducing flooding in sensitive areas like urban areas and farmland. Historic changes in landscape such as the construction of drainage ditches, the deepening, normalization and canalization of rivers, and the sealing of soils, have ensured that water is discharged rapidly to lower areas. The increased and accelerated drainage of water can cause downstream flooding, especially during periods of heavy precipitation, as can be frequently witnessed. The restoration of the capacity to store water in upstream areas will reduce the amount of flooding downstream.

Restoration in river valleys of habitats such as 3260, 3270, 6430, (subtypes of) 6510, 91E0 and 91F0 will contribute to the protection against flooding. But to ensure flood protection, measures are necessary in the whole river basin starting with infiltration areas, especially since artificial water level peaks and bad water quality will hamper the development and conservation of the mentioned habitats. Many artificially drained soils upstream are the naturally water infiltration areas, limiting infiltration and water storage. Therefore restoration of various other habitats will enhance both infiltration and water storage.

Water production
Ecosystems hold water enabling it to percolate into the ground and repleting ground water stocks. These stocks resurface as rivers, ponds and wet habitats as sources or seepage areas and are of great importance for wild and domesticated fauna and flora. The processes involved also provide the product clean ‘fresh water’ which can be used for drinking water production and water production for industrial or agricultural purposes.

The elements that contribute to water quality improvement (denitrification and nutrient retention) are the key elements in enhancing this ecosystem service on the qualitative side.

The Natura 2000 sites provide an estimated 16 million m³ of fresh water for water production through its ecosystem processes. The realization of the strategic priorities as described in F.1 and F.2, will add an estimated 2 million m³ of fresh water. The priorities for increasing water infiltration and therefore the quantity of available water are related to restoration and improvement of heathland vegetation (4010, 4030, 5130, 7150) and grasslands (6120, 6210,

6230, 6410, 6430 and 6510), and to a lesser extend the transformation of resinous into deciduous forests (9120 and 9190).

Physical and mental health
Scientific evidence shows a significant contribution of nature and green areas to physical and mental health of local residents and visitors.
- A view on and contact with nature have positive effects on mental health (stress, depression).
- Proximity of green encourages outdoor recreation and exercise, with direct positive effects on health and derived positive effects by reducing obesity.
- Contact with green stimulates a better cognitive development of children.
- Proximity of green reduces the risk of overweight and obesity.
- A natural setting is important for health tourism.

These are all positive effects on top of the contribution by the protected habitats in reducing air and sound pollution.

An overlap with the benefits of attractiveness of residential areas and recreation and tourism is unavoidable. Recovery and tranquillity are main motives for recreational visits at green spaces and nature areas, linked to mental health issues. Recreational visits imply more exercise with added benefits of physical health.

The described positive health issues benefit the rest of society too in the form of lower expenditure on health and avoided absenteeism in the workplace.

The Natura 2000 sites provide a direct health benefit for about 1.8 million people of 2,100 DALYs. DALYs or "disability adjusted life years" is an indicator to compare various health effects. The indicator takes into account severity and duration of the disease and is expressed in the number of healthy life years lost.

Attractiveness of residential areas
The presence of green increases the value of the living environment. This higher value is due to:
- a pleasant view from home and / or garden;
- an enjoyable setting for functional movements;
- more and better opportunities for (daily and regular) recreation.

This higher value translates into a higher willingness to pay to live in that environment, and thus to higher prices for the purchase or rental of residential units (houses and apartments).

About 2 million homes lay within 3 km; 176.000 within 300 m of an SAC and 87.000 of an SPA. The increase in value is estimated at 9 % on average.

Recreation and tourism (including spending, added value, employment)
One of the main services of Natura 2000 is related to recreation and tourism. SPAs represent a large part of the open green space in Flanders in which recreation in a broad sense can develop:
- Nature-oriented activities like bird watching and nature study;
- Soft informal recreation such as walking and cycling, and specific activities such as games, walking, mountain biking, boating and hunting;
- Short and long term activities including day trips and visits by tourists.

The area characteristics that matter are:

- The proportion of natural landscape, especially forests, and its variety;
- The scenic value of agricultural land;
- Accessibility;
- Area size: even a small green area is potentially relevant for local recreation, but to transcend local recreation the area should be larger.

Depending on the methods used, the estimate for the number of visits to Natura 2000 sites is between 26 and 43 million visits per year. The realization of the strategic priorities as described in F.1 and F.2, will add between 4.5 and 7.5 million visits.

Other ecosystem services
The ecosystem out of which the Natura 2000 network is built up, provide a range of other ecosystem services that are less easily to assign, to locate, to quantify or to value, or that are very local, but they are still important. Examples are pollination by wild insects, pest limitation through predation, erosion control and soil formation, hunting and fishing, and gene pool protection. Other ecosystem services like biomass production for food, fodder, fibres or fuel will likely decrease.

Benefits and values of the Natura 2000 network[18]
Different ecosystems and their constituent species and habitats play different roles in the maintenance of essential life-supporting processes such as energy conversion, biochemical cycling and evolution. Therefore people attach importance to a healthy, ecologically stable environment for its contribution to human survival and intrinsic values. The Natura 2000 network and its protected habitats and species provide these ***ecological benefits and values*** in abundance.

Through the influence of biodiversity and natural ecosystem on mental health and their historical, national, ethical, religious and spiritual values, the Natura 2000 network is an important source of nonmaterial wellbeing in Flanders and delivers a vast range of ***socio-cultural benefits and values***.

The biodiversity and ecosystems of the Nature 2000 network provides plenty of services which deliver ***economic benefits and values***. The total economic value of the network comprises the use values (direct use values like resources and recreation, and indirect use values from regulation and maintenance services) and the non-use values such as the value people place on protection for future use (option value) and ethical reasons (bequest and existence values).

Through the use of various techniques an estimate was made of the use value of a limited range of ecosystem service provided by the Flemish Natura 2000 network. For only 11 out of 36 possible ecosystem services a monetary value could be reliably estimated on a Flemish scale. Ecosystem services such as flood protection with possibly very high values had to be left out.
The 11 ecosystem services as delivered by the Natura 2000 network in 2010 have an estimated use value of between 800 million and 1.2 billion euro each year, which is between 5,000

[18] TEEB. 2010. The Economics of Ecosystems and Biodiversity: Ecological and Economic Foundations. Edited by Pushpam Kumar. Earthscan, London and Washington.

and 7,300 euro per year and per ha. The realization of the strategic priorities as described in F.1 and F.2, will add an estimated 13 to 84 million euro each year. [19] Bear in mind that the estimate of financial needs as described in section E also include the necessary interventions to maintain at least the current state (2010) of the ecosystems of Natura 2000 delivering the services worth up to 1.2 billion euro each year.

[19] Broekx Steven, De Nocker Leo, Poelmans Lien, Staes Jan, Jacobs Sander, Van der Biest Katrien, Verheyen Kris. 2013. Raming van de baten geleverd door het Vlaamse NATURA 2000-netwerk. Studie uitgevoerd in opdracht van: Agentschap Natuur en Bos (ANB/IHD/11/03) door VITO, Universiteit Antwerpen en Universiteit Gent. 2012/RMA/R/1 (in preparation)

G. DESCRIPTION OF KEY MEASURES TO ACHIEVE PRIORITIES

G.1.a General Priority Measures for Natura 2000

Type of activity	Description of measure	Target species/habitats/sites	Potential Financing sources*
Preparation of management plans, strategies and schemes (including scientific studies and investigations needed for planning and implementation based on solid knowledge)	The draught of the strategic management plan for a Natura 2000 site (SAC, SPA or a cluster of overlapping sites). It gives direction to the operational management plans of individual nature reserves and forests and the different subsidy and licensing schemes.	All species, habitats and sites	EAFRD, National public
	The draught of species protection programmes, aimed at the management of populations of protected species mainly outside Natura 2000, as the complement of the Nature Directive Plan.	*Lampetra planeri, Crex Crex, Circus pygargus, Chiroptera, Cricetus cricetus, Botaurus Stellaris, Pelobates fuscus, Lanius collurio, Liparis loeselii, Misgurnus fossilis, Charadrius alexandrinus, Leucorrhinia pectoralis, Acrocephalus paludicola, Hyla arborea, Coronella austriaca, Porzana porzana, Circus aeruginosus, Muscardinus , vellanarius, Lucanus cervus, Alytes obstetricans, Numenius phaeopus, Ixobrychus minutus, Triturus cristatus, Rana arvalis, Bufo calamita, Pernis apivorus, Nycticorax nycticorax, Anser brachyrhynchus, Castor fiber, Lutra lutra*	EAFRD, ERDF, EFF, LIFE, National public, Private sources
	Elaboration and/or update of management and operational management plans, land use plans etc.	All species, habitats and sites	EAFRD, ERDF, LIFE, National public, Private sources
Establishment of management bodies Running costs of management bodies (maintenance of buildings and equipment) Consultation – public	Establishment of a directing bureau responsible for the daily management of the Natura 2000 program aimed at the realisation of the nature conservation objectives. The bureau will consist of the appointed “account managers” of the concerned public stakeholders.	All species, habitats and sites	National public, Private sources
	Establishment of Flemish steering group which is composed of representatives of the different stakeholders and which will be tasked with monitoring the progress of the Natura 2000 program, launching initiatives to resolve policy bottlenecks and building consensus around the nature directive plans.	All species, habitats and sites	National public, Private sources

meetings, liaison with landowners	Local consultation on the development and execution of nature directive plans – including the organisation of workshops, publication of consultation outcomes, network activities, …	All species, habitats and sites	National public, Private sources
	The different stakeholders need to be well structured and possess a staff well versed on Natura 2000 to be able to participate in the deliberation and implementation a satisfactory fashion and to accept the realisation of the nature conservation objectives as one of their own goals. The government will provide the means to make sure every relevant stakeholder can participate meaningfully.	All species, habitats and sites	National public
Review of management plans, strategies and schemes	Review and updating of management plans and strategies.	All species, habitats and sites	EAFRD, ERDF, LIFE, National public, Private sources
Staff (conservation/project officers, wardens/rangers, workers)	On-going staff costs.	All species, habitats and sites	ERDF, LIFE, National public, Private sources
Conservation management measures – maintenance and improvement of species' favourable conservation status	Measures to remove migration and dispersion barriers and bottlenecks, such as the construction of wildlife passages ("eco-tunnels" and "eco-passages"), the provision of fauna exit points on canals and the removal of fish migration barriers.	All species, habitats and sites	ERDF, LIFE, National public, Private sources
Land purchase, including compensation for development rights	Land purchase by government and NGOs to achieve environmental protection and management schemes. Priorities are: – Habitats demanding a specialised or less profitable management; – Terrains to complete existing nature reserves and forests to create coherent management units providing benefits of scale with regard to management and internal edge effects; – Forests development to increase the speed of the afforestation needed. Measures to stimulate the ground mobility will be taken by the Flemish Land Bank, especially with regard to afforestation.	All species, habitats and sites	ERDF, LIFE, National public, Private sources

Monitoring and surveying	Development and execution of monitoring plans, development of methods, acquisition of equipment and training of personnel.	All species, habitats and sites	EAFRD, National public, Private sources
Site surveillance	On-going surveillance, wardening and patrolling activities. This includes personnel costs, consumables, travel, etc in order to implement surveillance and guarding activities, including surveillance to control harmful recreational or economic activities and protect against wildfires.	All species, habitats and sites	National public, Private sources
Provision of information and publicity material	A coordinated and sustained communication effort will done in implementation of a Natura 2000 communication plan, including the establishment of communication networks, the production of newsletters and awareness-raising and information materials, the setting-up and maintenance of a specialised website etc.	All species, habitats and sites	ERDF, LIFE, National public, Private sources
Training and education	Including production of handbooks, seminars, workshops and communication materials.	All species, habitats and sites	EAFRD, ERDF, LIFE, National public, Private sources
Infrastructure needed for habitat or species restoration	Creation and construction of specific infrastructure for the management of the environment, e.g. for water management in peat bogs and mines. This can include equipment acquisition.	All species, habitats and sites	EAFRD, ERDF, LIFE, National public, Private sources
Infrastructure for public access, interpretation, observatories and kiosks, etc	Construction, maintenance and running costs of infrastructure for public use that is conducive to environmental protection and management (e.g. infrastructure to increase the amenity value of sites such as signage, trails, observation platforms and visitor centres).	All sites	ERDF, LIFE, National public, Private sources

**Funding sources: EAFRD, ERDF, EFF; ESF, LIFE, National public, Private sources*

G.1.b Priority Measures for Natura 2000 agricultural and forest habitats and species

Type of activity	Description of measure	Target species / habitats / sites	Potential Financing sources*
Conservation management measures – maintenance and improvement of habitats' favourable conservation status	Development of new forest habitats, such as: – Afforestation and creation of woodland on agricultural land – Afforestation and creation of woodland on non-agricultural land	6430, 9110, 9120, 9130, 9150, 9160, 9190, 91E0, 91F0	EAFRD, ERDF, LIFE, National public, Private sources
	Restoration of degraded forest habitats, such as: – Measures to promote sustainable forest management	6430, 9110, 9120, 9130, 9150, 9160, 9190, 91E0, 91F0	EAFRD, ERDF, LIFE, National public, Private sources

	– Investments improving the resilience and environmental value of forest ecosystems		
	Management of forest habitats in a favourable conservation status, such as: – Measures to promote sustainable forest management – Investments improving the resilience and environmental value of forest ecosystems	6430, 9110, 9120, 9130, 9150, 9160, 9190, 91E0, 91F0	EAFRD, National public, Private sources
	Development of new grassland habitats, such as: – Practical activities: removal of stumps, sod cutting, filling-up ditches,… – Measures to deplete the phosphate stock of agricultural soils	6120, 6210, 6230, 6410, 6430, 6510	EAFRD, ERDF, LIFE, National public, Private sources
	Restoration of degraded grassland habitats, such as: – Maintenance, restoration and upgrading of high nature value sites and natural heritage – Measures to deplete the phosphate stock of agricultural soils	6120, 6210, 6230, 6410, 6430, 6510	EAFRD, ERDF, LIFE, National public, Private sources
	Management of grassland habitats in a favourable conservation status, such as: – Maintenance of high nature value sites and natural heritage – Measures to promote sustainable grassland management	6120, 6210, 6230, 6410, 6430, 6510	EAFRD, National public, Private sources
	Restoration of natural or appropriate groundwater levels and / or flooding regime, such as: – Delaying the drainage of water through small-scale infrastructure: placement of adjustable dams, earthen, wooden or stone dams, the placement of gated weirs, level controlled drainage, adjustment of ditch profiles, … – Small and large-scale nature development projects: excavating, sod cutting, filling-up ditches, … – Construction or removal of large-scale infrastructure: dikes, sluices,… – Promotion of efficient water use	6120, 6230, 6410, 6430, 6510, 91E0, 91F0	EAFRD, ERDF, LIFE, National public, Private sources
	Mitigation of N or P influx, such as: – Optimisation of fertilizer use: improved fertilization techniques, time management, precision fertilization, sowing catch crops, removal of crop remains, ...	6120, 6210, 6230, 6410, 6430, 6510, 9110, 9120, 9130, 9150, 9160, 9190, 91E0, 91F0	EAFRD, ERDF, LIFE, National public, Private sources

	– Maintenance, restoration and upgrading of wooded and other small landscape elements – The use of buffer strips		
Conservation management measures – maintenance and improvement of species' favourable conservation status	Development of new forest habitats, such as: – Afforestation and creation of woodland on agricultural land – Afforestation and creation of woodland on non-agricultural land	All forest species	EAFRD, ERDF, LIFE, National public, Private sources
	Restoration of degraded forest habitats, such as: – Measures to promote sustainable forest management – Investments improving the resilience and environmental value of forest ecosystems	All forest species	EAFRD, ERDF, LIFE, National public, Private sources
	Management of forest habitats in a favourable conservation status, such as: – Measures to promote sustainable forest management – Investments improving the resilience and environmental value of forest ecosystems	All forest species	EAFRD, National public, Private sources
	Development of new grassland habitats, such as: – Practical activities: removal of stumps, sod cutting, filling-up ditches,… – Measures to deplete the phosphate stock of agricultural soils – Species protection measures	All grassland species, extra effort on top of habitat goals for *Botaurus stellaris, Crex crex, Lanius collurio, Porzana porzana*	EAFRD, ERDF, LIFE, National public, Private sources
	Restoration of degraded grassland habitats, such as: – Maintenance, restoration and upgrading of high nature value sites and natural heritage – Species protection measures – Measures to deplete the phosphate stock of agricultural soils	All grassland species, extra effort on top of habitat goals for *Botaurus stellaris, Crex crex, Lanius collurio, Porzana porzana*	EAFRD, ERDF, LIFE, National public, Private sources
	Management of grassland habitats in a favourable conservation status, such as: – Maintenance of high nature value sites and natural heritage – Species protection measures	All grassland species	EAFRD, National public, Private sources
	Development, restoration and management of small landscape elements (hedge rows, solitary trees, tree lines,…)	Bat species	EAFRD, ERDF, LIFE, National public, Private sources
	Restoration of natural or appropriate groundwater levels and / or flooding regime, such as:	All grassland species	EAFRD, ERDF, LIFE, National public, Private sources

	– Delaying the drainage of water through small-scale infrastructure: placement of adjustable dams, earthen, wooden or stone dams, the placement of gated weirs, level controlled drainage, adjustment of ditch profiles, … – Small and large-scale nature development projects: excavating, sod cutting, filling-up ditches, … – Construction of large-scale infrastructure: dikes, sluices,… – Promotion of efficient water use		
	Mitigation of N or P influx, such as: – Optimisation of fertilizer use: improved fertilization techniques, time management, precision fertilization, sowing catch crops and cover crops, removal of crop remains, ... – Maintenance, restoration and upgrading of wooded and other small landscape elements – The use of buffer strips	All grassland species + all forest species	EAFRD, ERDF, LIFE, National public, Private sources
Conservation management measures in relation to invasive alien species (IAS)	Adapted counter measures against invasive alien species (IAS)	9110, 9120, 9130, 9150, 9160, 9190, 91E0, 91F0, 6430	EAFRD, ERDF, LIFE, National public, Private sources
Implementation of management schemes and agreements with owners and managers of land or water to follow particular prescriptions.	Agri-environmental measures: wildlife-friendly production methods, habitat restoration on agricultural land, extensive livestock breeding, conservation of meadows, establishment of small landscape features, mitigation of N or P outflux, erosion control, etc. • Agri-environmental agreements aimed at the activities and measures above • Agri-environmental agreements aimed at erosion prevention, the use of green cover or cover crops, an appropriate crop rotation, the use of legumes as protein source, improving the carbon stock in soils • Advisory services	All grassland species + 6510 + *Circus pygargus*	EAFRD, National public
	Forest-environmental measures: creation of exploitation-free zones, improvement of forest structure, retention of dead wood, control or eradication of invasive alien species, afforestation or reforestation activities, management of specific	9110, 9120, 9130, 9150, 9160, 9190, 91E0, 91F0, 6430 + all forest species	EAFRD, National public

	vegetation, etc. • Forest environmental agreements, grants and subsidies aimed at the activities and measures above, including investments for soil and resource friendly harvesting machinery and practices • Advisory services		
Provision of services: compensation for rights foregone and loss of income and developing acceptability 'liaison' with neighbours	Costs of compensation, e.g. to farmers, foresters or other land owners or users for income forgone as a result of management prescriptions needed for Natura 2000	6120, 6210, 6230, 6410, 6430, 6510, 9110, 9120, 9130, 9150, 9160, 9190, 91E0, 91F0 + all forest species + all grassland species	EAFRD, National public
Risk management (fire prevention and control, flooding etc)	Includes the preparation of wardening and fire-control plans, development of relevant infrastructure, and equipment purchase	6230, 9120, 9190	National public, Private sources

**Funding sources: EAFRD, ERDF, EFF; ESF, LIFE, National public, Private sources*

The forest species group consists of:
Lucanus cervus, Barbastella barbastellus, Eptesicus serotinus, Muscardinus avellanarius, Myotis bechsteini, Myotis brandtii, Myotis dasycneme, Myotis daubentonii, Myotis emarginatus, Myotis myotis, Myotis mystacinus, Myotis nattereri, Nyctalus leisleri, Nyctalus noctula, Pipistrellus nathusii, Pipistrellus pipistrellus, Pipistrellus pygmaeus, Plecotus auritus, Plecotus austriacus, Rhinolophus ferrumequinum, Caprimulgus europaeus, Dendrocopos medius, Dryocopus martius, Lullula arborea, Nycticorax nycticorax, Pernis apivorus.

The grassland species group consists of:
Hamatocaulis vernicosus, Apium repens, Callimorpha quadripunctaria, Vertigo moulinsiana, Triturus cristatus, Eptesicus serotinus, Myotis emarginatus, Myotis mystacinus, Myotis nattereri, Plecotus auritus, Plecotus austriacus, Rhinolophus ferrumequinum, Anas acuta, Anas clypeata, Anas crecca, Anas Penelope, Anas strepera, Anser albifrons, Anser anser, Anser brachyrhynchus, Anser fabalis, Botaurus stellaris, Ciconia ciconia, Circus aeruginosus, Circus cyaneus, Crex crex, Cygnus bewickii, Egretta alba, Emberiza hortulana, Falco peregrinus, Lanius collurio, Numenius arquata, Numenius phaeopus, Pernis apivorus, Philomachus pugnax, Pluvialis apricaria, Porzana porzana, Tadorna tadorna.

G.1.c Priority Measures for Natura 2000 marine and coastal habitats and species

Type of activity	Description of measure	Target species/habitats/sites	Potential Financing sources*
Conservation management measures – maintenance and improvement of habitats' favourable conservation status	Restoration and management of estuaries	1130, 1140	ERDF, LIFE, National public, Private sources
	Development of new coastal habitats	1310, 1320, 1330, 2110, 2120, 2130, 2170, 2180, 2190	ERDF, LIFE, National public, Private sources
	Restoration of degraded coastal habitats	1310, 1320, 1330, 2110, 2120, 2130, 2170, 2180, 2190	ERDF, LIFE, National public, Private sources
	Management of coastal habitats in a favourable conservation status	1310, 1320, 1330, 2110, 2120, 2130, 2160, 2170, 2180, 2190	National public, Private sources
	Restoration of natural or appropriate groundwater levels and / or flooding regime, such as – Delaying the drainage of water through small-scale infrastructure: placement of adjustable dams, earthen, wooden or stone dams, the placement of gated weirs, level controlled drainage, adjustment of ditch profiles, … – Small and large-scale nature development projects: excavating, sod cutting, filling-up ditches, … – Construction of large-scale infrastructure: dikes, sluices,… – Promotion of efficient water use	1310, 1320, 1330, 2160, 2170, 2180, 2190	EAFRD, ERDF, LIFE, National public, Private sources
	Mitigation of N or P influx, such as – Optimisation of fertilizer use: improved fertilization techniques, time management, precision fertilization, sowing catch crops, removal of crop remains, ... – Maintenance, restoration and upgrading of wooded and other small landscape elements – The use of buffer strips	1130, 1140, 1310, 1320, 1330, 2110, 2120, 2130, 2170, 2180, 2190	EAFRD, ERDF, LIFE, National public, Private sources
Conservation management measures – maintenance and improvement of species' favourable conservation status	Restoration and management of estuaries	All marine species	ERDF, LIFE, National public, Private sources
	Development of new coastal habitats	All coastal species	ERDF, LIFE, National public, Private sources
	Restoration of degraded coastal habitats	All coastal species	ERDF, LIFE, National public, Private sources

	Management of coastal habitats in a favourable conservation status	All coastal species	National public, Private sources
	Restoration of natural or appropriate groundwater levels and / or flooding regime, such as – Delaying the drainage of water through small-scale infrastructure: placement of adjustable dams, earthen, wooden or stone dams, the placement of gated weirs, level controlled drainage, adjustment of ditch profiles, … – Small and large-scale nature development projects: excavating, sod cutting, filling-up ditches, … – Construction of large-scale infrastructure: dikes, sluices,… – Promotion of efficient water use	All coastal species	EAFRD, ERDF, LIFE, National public, Private sources
	Mitigation of N or P influx, such as – Optimisation of fertilizer use: improved fertilization techniques, time management, precision fertilization, sowing catch crops, removal of crop remains, ... – Maintenance, restoration and upgrading of wooded and other small landscape elements – The use of buffer strips	All coastal species	EAFRD, ERDF, LIFE, National public, Private sources
Conservation management measures in relation to invasive alien species (IAS)	Adapted counter measures against invasive alien species (IAS)	1130, 1140, 1310, 1320, 1330, 2110, 2120, 2130, 2170, 2180, 2190	ERDF, LIFE, National public, Private sources
Implementation of management schemes and agreements with owners and managers of land or water to follow particular prescriptions.	Agri-environmental measures: wildlife-friendly production methods, habitat restoration on agricultural land, extensive livestock breeding, conservation of meadows, establishment of small landscape features, mitigation of N or P outflux, erosion control, etc. • Agri-environmental agreements aimed at the activities and measures above • Agri-environmental agreements aimed at erosion prevention, the use of green cover or cover crops, an appropriate crop rotation, the use of legumes as protein source, improving the carbon stock in soils • Advisory services	1310, 1320, 1330, 2110, 2120, 2130, 2170, 2180, 2190 + all coastal species	EAFRD, National public, Private sources
	Forest-environmental measures: creation of exploitation-	2180	EAFRD, National public, Private

	free zones, improvement of forest structure, retention of dead wood, control or eradication of invasive alien species, afforestation or reforestation activities, management of specific vegetation, etc. • Forest environmental agreements, grants and subsidies aimed at the activities and measures above, including investments for soil and resource friendly harvesting machinery and practices • Advisory services		sources
Provision of services: compensation for rights foregone and loss of income and developing acceptability 'liaison' with neighbours	Costs of compensation, e.g. to farmers, foresters or other land owners or users for income forgone as a result of management prescriptions needed for Natura 2000	1310, 1320, 1330, 2110, 2120, 2130, 2170, 2180, 2190 + all coastal species	EAFRD, National public

**Funding sources: EAFRD, ERDF, EFF; ESF, LIFE, National public, Private sources*

The marine species group consists of:
Ardea purpurea, Arenaria interpres, Charadrius alexandrinus, Egretta garzetta, Larus argentatus, Larus canus, Larus melanocephalus, Larus ridibundus, Numenius arquata, Numenius phaeopus, Nycticorax nycticorax, Platalea leucorodia, Recurvirostra avosetta, Sterna albifrons, Sterna hirundo, Sterna sandvicensis, Tadorna tadorna.

The coastal species group consists of:
Vertigo angustior, Ardea purpurea, Arenaria interpres, Charadrius alexandrinus, Egretta garzetta, Larus argentatus, Larus canus, Larus melanocephalus, Larus ridibundus, Numenius arquata, Numenius phaeopus, Nycticorax nycticorax, Platalea leucorodia, Recurvirostra avosetta, Sterna albifrons, Sterna hirundo, Sterna sandvicensis, Tadorna tadorna.

G.1.d Priority Measures for Natura 2000 wetlands habitats and species (including peatlands)

Type of activity	Description of measure	Target species/habitats/sites	Potential Financing sources*
Conservation management measures – maintenance and improvement of	Development of new wetland habitats	3110, 3130, 3140, 3150, 3160, 3260, 3270, 7110, 7120, 7140, 7150, 7210, 7220, 7230	ERDF, LIFE, National public, Private sources
	Restoration of degraded wetland habitats	3110, 3130, 3140, 3150, 3160, 3260,	ERDF, EFF, LIFE, National pub-

habitats' favourable conservation status		3270, 7110, 7120, 7140, 7150, 7210, 7220, 7230	lic, Private sources
	Management of wetland habitats in a favourable conservation status	3110, 3130, 3140, 3150, 3160, 3260, 3270, 7110, 7120, 7140, 7150, 7210, 7220, 7230	EFF, National public, Private sources
	Restoration of natural or appropriate groundwater levels, such as: – Delaying the drainage of water through small-scale infrastructure: placement of adjustable dams, earthen, wooden or stone dams, the placement of gated weirs, level controlled drainage, adjustment of ditch profiles, … – Small and large-scale nature development projects: excavating, sod cutting, filling-up ditches, … – Construction of large-scale infrastructure: dikes, sluices,… – Promotion of efficient water use	7110, 7120, 7140, 7150, 7210, 7220, 7230, 3110, 3130, 3140, 3150, 3160	EAFRD, ERDF, LIFE, National public, Private sources
	Restoration watercourse structure and / or flooding regime, such as: – Delaying the drainage of water through small-scale infrastructure: placement of adjustable dams, earthen, wooden or stone dams, the placement of gated weirs, level controlled drainage, adjustment of ditch profiles, … – Construction of large-scale infrastructure: dikes, sluices,… – Restructuring of watercourses: removal of artificial embankments, construction of natural river banks, reconstruction of natural river beds,…	3110, 3130, 3140, 3150, 3160, 3260, 3270	EAFRD, ERDF, EFF, LIFE, National public, Private sources
	Improvement of surface water quality and water bottom, such as: – The use of buffer strips – Water purification installations, … – Restructuring of watercourses: removal of artificial embankments, construction of natural river banks, reconstruction of natural river beds,…	3110, 3130, 3140, 3150, 3160, 3260, 3270	EAFRD, ERDF, EFF, LIFE, National public, Private sources
	Mitigation of N or P influx, such as – Optimisation of fertilizer use: improved fertilization	3110, 3130, 3140, 3150, 3160, 3260, 3270, 7110, 7120, 7140, 7150, 7210,	EAFRD, ERDF, LIFE, National public, Private sources

	techniques, time management, precision fertilization, sowing catch crops, removal of crop remains, ... – Maintenance, restoration and upgrading of wooded and other small landscape elements – The use of buffer strips	7220, 7230	
Conservation management measures – maintenance and improvement of species' favourable conservation status	Development of new wetland habitats	All wetland species, extra effort on top of habitat goals for *Cottus gobio, Lampetra planeri, Hyla arborea, Botaurus stellaris, Lanius collurio, Porzana porzana*	ERDF, EFF, LIFE, National public, Private sources
	Restoration of degraded wetland habitats	All wetland species, extra effort on top of habitat goals for *Cottus gobio, Lampetra planeri, Hyla arborea, Botaurus stellaris, Lanius collurio, Porzana porzana*	ERDF, EFF, LIFE, National public, Private sources
	Management of wetland habitats in a favourable conservation status	All wetland species	EFF, National public, Private sources
	Restoration of natural or appropriate groundwater levels, such as: – Delaying the drainage of water through small-scale infrastructure: placement of adjustable dams, earthen, wooden or stone dams, the placement of gated weirs, level controlled drainage, adjustment of ditch profiles, … – Small and large-scale nature development projects: excavating, sod cutting, filling-up ditches, … – Construction of large-scale infrastructure: dikes, sluices,… – Promotion of efficient water use	All wetland species	EAFRD, ERDF, LIFE, National public, Private sources
	Restoration watercourse structure and / or flooding regime, such as: – Delaying the drainage of water through small-scale infrastructure: placement of adjustable dams, earthen, wooden or stone dams, the placement of gated weirs, level controlled drainage, adjustment of ditch profiles, … – Construction of large-scale infrastructure: dikes, sluices,… – Restructuring of watercourses: removal of artificial embankments, construction of natural shores, recon-	All wetland species	EAFRD, ERDF, EFF, LIFE, National public, Private sources

	struction of natural river bed,…		
	Improvement of surface water quality and water bottom, such as: – The use of buffer strips – Water purification installations, … – Restructuring of watercourses: removal of artificial embankments, construction of natural shores, reconstruction of natural river bed,…	All wetland species	EAFRD, ERDF, EFF, LIFE, National public, Private sources
	Mitigation of N or P influx, such as – Optimisation of fertilizer use: improved fertilization techniques, time management, precision fertilization, sowing catch crops, removal of crop remains, ... – Maintenance, restoration and upgrading of wooded and other small landscape elements – The use of buffer strips	All wetland species	EAFRD, ERDF, LIFE, National public, Private sources
Conservation management measures in relation to invasive alien species (IAS)	Adapted counter measures against invasive alien species (IAS)	3110, 3130, 3140, 3150, 3160, 3260, 3270, 7110, 7120, 7140, 7150, 7210, 7220, 7230	ERDF, LIFE, EFF, National public, Private sources
Implementation of management schemes and agreements with owners and managers of land or water to follow particular prescriptions.	Agri-environmental measures: wildlife-friendly production methods, habitat restoration on agricultural land, extensive livestock breeding, conservation of meadows, establishment of small landscape features, mitigation of N or P outflux, erosion control, etc. • Agri-environmental agreements aimed at the activities and measures above • Agri-environmental agreements aimed at erosion prevention, the use of green cover and cover crops, an appropriate crop rotation, the use of legumes as protein source, improving the carbon stock in soils • Advisory services	1310, 1320, 1330, 2110, 2120, 2130, 2170, 2180, 2190 + all coastal species	EAFRD, National public, Private sources
Provision of services: compensation for rights foregone and loss of income and developing acceptability 'liaison' with neighbours	Costs of compensation, e.g. to farmers, foresters or other land owners or users for income forgone as a result of management prescriptions needed for Natura 2000.	3110, 3130, 3140, 3150, 3160, 3260, 3270, 7110, 7120, 7140, 7150, 7210, 7220, 7230 + all wetland species	EAFRD, National public

Risk management (fire prevention and control, flooding etc)	Includes the preparation of wardening and fire-control plans, development of relevant infrastructure, and equipment purchase.	7110, 7120, 7140, 7150	National public, Private sources

**Funding sources: EAFRD, ERDF, EFF; ESF, LIFE, National public, Private sources*

The wetland species group consists of:
Liparis loeselii, Luronium natans, Anisus vorticulus, Gomphus flavipes, Leucorrhinia pectoralis, Alosa fallax, Cobitis taenia, Cottus gobio, Lampetra fluviatilis, Lampetra planeri, Misgurnus fossilis, Rhodeus sericeus amarus, Salmo salar, Alytes obstetricans, Bufo calamita, Hyla arborea, Pelobates fuscus, Rana arvalis, Rana lessonae, Triturus cristatus, Castor fiber, Lutra lutra, Myotis dasycneme, Myotis daubentonii, Nyctalus leisleri, Nyctalus noctula, Pipistrellus nathusii, Pipistrellus pipistrellus, Pipistrellus pygmaeus, Acrocephalus paludicula, Alcedo atthis, Anas acuta, Anas clypeata, Anas crecca, Anas Penelope, Anas strepera, Ardea purpurea, Aythya farina, Aythya fuligula, Botaurus stellaris, Chlidonias niger, Ciconia ciconia, Circus aeruginosus, Circus cyaneus, Egretta alba, Himantopus himantopus, Ixobrychus minutus, Lanius collurio, Luscinia svecica, Numenius arquata, Numenius phaeopus, Nycticorax nycticorax, Philomachus pugnax, Platalea leucorodia, Porzana porzana, Recurvirostra avosetta, Sterna hirundo, Tadorna tadorna, Tetrao tetrix.

G.1.e Priority Measures for Natura 2000 heathland habitats and species

Type of activity	Description of measure	Target species/habitats/sites	Potential Financing sources*
Conservation management measures – maintenance and improvement of habitats' favourable conservation status	Development of new heathland habitats	2310, 2330, 4010, 4030, 5130, 6230, 7150	ERDF, LIFE, National public, Private sources
	Restoration of degraded heathland habitats	2310, 2330, 4010, 4030, 5130, 6230, 7150	ERDF, LIFE, National public, Private sources
	Management of heathland habitats in a favourable conservation status	2310, 2330, 4010, 4030, 5130, 6230, 7150	National public, Private sources
	Restoration of natural or appropriate groundwater levels and / or flooding regime, such as – Delaying the drainage of water through small-scale infrastructure: placement of adjustable dams, earthen, wooden or stone dams, the placement of gated weirs, level controlled drainage, adjustment of ditch profiles, … – Small and large-scale nature development projects: excavating, sod cutting, filling-up ditches, … – Construction of large-scale infrastructure: dikes, sluic-	4010, 7150	EAFRD, ERDF, LIFE, National public, Private sources

	es,… – Promotion of efficient water use		
	Mitigation of N or P influx, such as – Optimisation of fertilizer use: improved fertilization techniques, time management, precision fertilization, sowing catch crops, removal of crop remains, ... – Maintenance, restoration and upgrading of wooded and other small landscape elements – The use of buffer strips	2310, 2330, 4010, 4030, 5130, 6230, 7150	EAFRD, ERDF, LIFE, National public, Private sources
Conservation management measures – maintenance and improvement of species' favourable conservation status	Development of new heathland habitats	All heathland species, extra effort on top of habitat goals for *Coronella austriaca, Circus pygargus, Lanius collurio*	ERDF, LIFE, National public, Private sources
	Restoration of degraded heathland habitats	All heathland species, extra effort on top of habitat goals for *Coronella austriaca, Circus pygargus, Lanius collurio*	ERDF, LIFE, National public, Private sources
	Management of heathland habitats in a favourable conservation status	All heathland species	National public, Private sources
	Restoration of natural or appropriate groundwater levels and / or flooding regime, such as – Delaying the drainage of water through small-scale infrastructure: placement of adjustable dams, earthen, wooden or stone dams, the placement of gated weirs, level controlled drainage, adjustment of ditch profiles, … – Small and large-scale nature development projects: excavating, sod cutting, filling-up ditches, … – Construction of large-scale infrastructure: dikes, sluices,… – Promotion of efficient water use	All heathland species	EAFRD, ERDF, LIFE, National public, Private sources
	Mitigation of N or P influx, such as – Optimisation of fertilizer use: improved fertilization techniques, time management, precision fertilization, sowing catch crops, removal of crop remains, ... – Maintenance, restoration and upgrading of wooded and other small landscape elements – The use of buffer strips	All heathland species	EAFRD, ERDF, LIFE, National public, Private sources
Conservation management measures in	Adapted counter measures against invasive alien species (IAS)	2310, 2330	ERDF, LIFE, National public, Private sources

relation to invasive alien species (IAS)			
Provision of services: compensation for rights foregone and loss of income and developing acceptability 'liaison' with neighbours	Costs of compensation, e.g. to farmers, foresters or other land owners or users for income forgone as a result of management prescriptions needed for Natura 2000.	2310, 2330, 4010, 4030, 5130, 6230, 7150 + all heathland species	EAFRD, National public
Risk management (fire prevention and control, flooding etc)	Includes the preparation of wardening and fire-control plans, development of relevant infrastructure, and equipment purchase.	2310, 2330, 4010, 4030, 5130, 6230, 7150 + all heathland species	National public, Private sources

**Funding sources: EAFRD, ERDF, EFF; ESF, LIFE, National public, Private sources*

The heathland species group consists of:
Coronella austriaca, Anthus campestris, Caprimulgus europaeus, Circus cyaneus, Circus pygargus, Lanius collurio, Lullula arborea, Numenius arquata, Numenius phaeopus, Tetrao tetrix.

G.2 Other priority measures

G.2.a Priority Measures for securing ecosystem benefits of Natura 2000, especially in relation to climate change mitigation and adaptation [20]

Ecosystem services group	Description of measure	Most important associated habitats	Potential Financing sources*
Provisioning			
Water	Increasing ground water quantity through enhanced infiltration by interventions such as: – restoration and improvement of heathland vegetation) and grasslands; – transformation of resinous into deciduous	4010, 4030, 5130, 6120, 6210, 6230, 6410, 6430, 6510, 7150 9120, 9190	EAFRD, ERDF, LIFE, National public, Private sources

[20] For more information on the benefits of the Flemish Natura 2000 network, consult Broekx Steven, De Nocker Leo, Poelmans Lien, Staes Jan, Jacobs Sander, Van der Biest Katrien, Verheyen Kris. 2013. Raming van de baten geleverd door het Vlaamse NATURA 2000-netwerk. Studie uitgevoerd in opdracht van: Agentschap Natuur en Bos (ANB/IHD/11/03) door VITO, Universiteit Antwerpen en Universiteit Gent. 2012/RMA/R/1 (in preparation)

	forests.		
Regulation and Maintenance			
Regulation of wastes, pollution and nutrients	Improvement of ground water quality through enhanced denitrification by interventions aimed at an increase of the ground water levels.	3110, 3130, 3140, 3150, 3260, 3270, 6410, 6430, 6510, 91E0, 91F0	EAFRD, ERDF, LIFE, National public, Private sources
	Improvement of ground water quality through enhanced nutrient retention by interventions aimed at restoration and expansion of peat and marshland vegetation, wet forests, wet grasslands and fresh water habitats.	3110, 3130, 3140, 3150, 3160, 3260, 3270, 4010, 6410, 6430, 6510, 7110, 7140, 7150, 7210, 7220, 7230, 91E0, 91F0	EAFRD, ERDF, LIFE, National public, Private sources
Water & mass flow regulation	Protection of flooding by the sea by interventions aimed at the dissipation of wave energy, physical barrier effects and increasing friction between water and vegetation.	1140, 1310, 1320, 1330, 2110, 2120, 2130, 2150, 2160, 2170, 2180, 2190	ERDF, LIFE, National public, Private sources
	Protection of flooding by rivers by interventions aimed at: – increasing the capacity of temporary water storage in natural river valleys; – reducing drainage; – restoration of watercourse structure to slow down water discharge; – increasing the roughness of the landscape.	3260, 3270, 6430, 6510, 91E0, 91F0 + all other terrestrial habitats + small landscape elements	EAFRD, ERDF, LIFE, National public, Private sources
Regulation of climate	Regulation of climate through measures aimed at the storage of carbon in biomass by development, restoration and management of forest habitats.	9110, 9120, 9130, 9150, 9160, 9190, 91E0 91F0	EAFRD, ERDF, LIFE, National public, Private sources
	Regulation of climate through measures aimed at the storage of carbon in the soil by: – raising water tables, – restoration and development of peat and marshland vegetation, wet forests, wet grasslands and fresh water habitats.	3110, 3130, 3140, 3150, 3160, 3260, 3270, 4010, 6410, 6430, 6510, 7110, 7140, 7150, 7210, 7220, 7230, 91E0, 91F0	EAFRD, ERDF, LIFE, National public, Private sources
Cultural			
Natural environment suitable for outdoor activities	See G.2.b Priority Measures for promoting sustainable tourism and employment in relation to Natura 2000	All habitats	EAFRD, ERDF, LIFE, National public, Private sources

Natural surroundings	All kinds of measures aimed at the restoration and development of more natural vegetation.	All habitats	EAFRD, ERDF, LIFE, National public, Private sources

**Funding sources: EAFRD, ERDF, EFF; ESF, LIFE, National public, Private sources*

G.2.b Priority Measures for promoting sustainable tourism and employment in relation to Natura 2000[21]

Type of activity	Description of measure	Target species/habitats/sites	Potential Financing sources*
Maintenance of facilities for public access and use of the sites, interpretation, observatories and kiosks etc. Staff (conservation/project officers, wardens/rangers, workers) Site surveillance Provision of information and publicity material Training and education Facilities to encourage visitor use and appreciation of Natura 2000 sites	The Agency for Nature and Forests wants to welcome the visitor in the nature and forest areas of the Flemish government. The ADA-GIO-project aims to improve the recreational value of these terrains within their ecological boundaries through an upgrade of the recreational infrastructure and better coordinated and comprehensive information and communication.	All sites	ERDF, LIFE, National public
	Financial support / compensation for public access to private nature reserves and privately owned forests, with a special focus on "play-forests".	All sites	EAFRD, ERDF, LIFE, National public
	Integrated management of the nature and forest areas of 'Nationaal Park Hoge Kempen' in the province of Limburg by the Agency for Nature and Forest in association with Regionaal Landschap Kempen en Maasland vzw and local and provincial authorities, combined with area branding and a P.E.S. approach coordinated by Kempen en Maasland aimed at the optimal recreational co-use within the ecological boundaries.	BE2200035, BE2200727	EAFRD, ERDF, LIFE, National public, Private sources
	Integrated management of the nature and forest areas of 'Bosland' in the province of Limburg by all concerned authorities (local, provincial,	BE2200029, BE2218311	EAFRD, ERDF, LIFE, National public, Private sources

[21] Based on Broekx Steven, De Nocker Leo, Poelmans Lien, Staes Jan, Jacobs Sander, Van der Biest Katrien, Verheyen Kris. 2013. Raming van de baten geleverd door het Vlaamse NATURA 2000-netwerk. Studie uitgevoerd in opdracht van: Agentschap Natuur en Bos (ANB/IHD/11/03) door VITO, Universiteit Antwerpen en Universiteit Gent. 2012/RMA/R/1 (in preparation)

	regional) aimed at the optimal recreational co-use within the ecological boundaries.		

**Funding sources: EAFRD, ERDF, EFF; ESF, LIFE, National public, Private sources*

G.2.c Priority Measures to promote innovative approaches in relation to Natura 2000

Type of activity	Description of measure	Target species/habitats/sites	Potential Financing sources*
	Development of a "Temporary Nature" scheme: a scheme aimed at nature development of an impermanent character on industrial and other built-up sites, which are not yet in use, to contribute at the improvement of (the connectivity between) Natura 2000 sites and / or other sites.	Pioneer species and other species in need of admittedly temporary corridors and stepping stones to enhance connectivity.	National public, Private sources
	A programmatic approach to end the negative impact off atmospheric nitrogen depositions will be set up by the end of 2015. This approach aims at the systematic reduction of depositions to ensure favourable conservation status for sensitive habitats and species by 2050 and prevent further deterioration. This program will comprise both generic and area-specific policy measures. Simultaneously, a recovery package will be defined, budgeted and executed. This can lead to room for new local development whereby renewal of permits and limited expansions might be possible.	All sites, all species and habitats affected by eutropfication.	EAFRD, ERDF, LIFE, National public, Private sources

**Funding sources: EAFRD, ERDF, EFF; ESF, LIFE, National public, Private sources*

G.3 Summary table of priority measures per habitat type and species

Feature (habitat type)	Conservation status (code from HD Article 17 report)	Pressures (P) and threats (T) (codes from HD Article 17 report)	Priority measure (from section G)

Habitats			
1130 - Estuaries	U2	P. 221, 300, 504, 507, 520, 621, 701, 801, 830, 850, 852, 860, 870, 900, 910, 943 T. 504, 507, 520, 621, 701, 703, 852, 853, 860, 870, 890, 900, 943, 954	G.1.c
1140 - Mudflats and sandflats not covered by seawater at low tide	FV	P. 221, 290, 300, 504, 520, 620, 621, 701, 703, 850, 860, 870, 871, 900 T. 221, 300, 520, 701, 703, 850, 860, 870, 871, 900	G.1.c
1310 - Salicornia and other annuals colonizing mud and sand	U1	P. 110, 120, 221, 621, 622, 810, 820, 900, 943 T. 110, 120, 221, 504, 520, 701, 709, 810, 820, 900, 920	G.1.c
1320 - Spartina swards (*Spartinion maritimae*)	U2	P. 504, 520, 621, 622, 701, 801, 900, 943 T. 520, 701, 709, 900, 943	G.1.c
1330 - Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	U2	P. 101, 120, 150, 250, 810, 820, 860 T. 120, 504, 701, 709, 803, 810, 820, 851, 853, 870, 920, 979	G.1.c
2110 - Embryonic shifting dunes	U2	P. 620, 720, 871 T. 620, 720, 900	G.1.c
2120 - Shifting dunes along the shoreline with Ammophila arenaria (‘white dunes’)	U2	P. 400, 620, 622, 720, 871, 971 T. 620, 622, 720, 971	G.1.c
2130* - Fixed coastal dunes with herbaceous vegetation (“grey dunes’)	U2	P. 400, 620, 720, 971 T. 620, 622, 720, 971	G.1.c
2150* - Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)	U2	P. 120, 400, 620, 720, 971 T. 120, 620, 622, 720, 971	G.1.c
2160 - Dunes with *Hippophaë rhamnoides*	FV	P. 102, 400, 954, 971 T. 102, 954, 971	G.1.c
2170 - Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)	U2	P. 400, 850, 971 T. 971	G.1.c
2180 - Wooded dunes of the Atlantic, Continental and Boreal region	U2	P. 162, 164, 400, 501, 601, 608, 701, 702, 720, 853, 871, 890 T. 720, 853, 890	G.1.c
2190 - Humid dune slacks	U2	P. 400, 850, 971, 990 T. 850, 971, 990	G.1.c

2310 - Dry sand heaths with *Calluna* and *Genista*	U2	P. 150, 161, 402, 620, 622, 702, 720, 730, 953, 979 T. 150, 161, 402, 620, 622, 702, 720, 730, 979	G.1.e
2330 - Inland dunes with open *Corynephorus* and *Agrostis* grasslands	U2	P. 150, 161, 620, 622, 702, 720, 730, 954, 979 T. 161, 620, 622, 702, 720, 730, 954, 979	G.1.e
3110 - Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)	U2	P. 100, 101, 141, 190, 400, 701, 920, 951, 952, 953 T. 701, 952, 953	G.1.d
3130 - Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*	U2	P. 161, 200, 220, 290, 400, 620, 629, 701, 810, 853, 890, 951, 952, 953, 954, 979 T. 290, 701, 952, 953	G.1.d
3140 - Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.	U2	P. 110, 190, 290, 400, 420, 620, 629, 701, 790, 803, 850, 920, 951, 952, 971, 979 T. 290, 701, 790, 952	G.1.d
3150 - Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* - type vegetation	U2	P. 110, 190, 290, 400, 420, 620, 629, 701, 803, 810, 811, 870, 951, 952, 954, 976, T. 290, 420, 701, 952, 954	G.1.d
3160 - Natural dystrophic lakes and ponds	U2	P. 190, 220, 400, 629, 701, 810, 920, 952, 953, 979 T. 701, 952, 953	G.1.d
3260 - Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation	U2	P. 110, 190, 620, 701, 790, 800, 810, 811, 820, 830, 840, 852, 853, 870, 890, 900, 910, 951, 952, 954, 970 T. 110, 701, 790, 810, 820, 830, 852, 870, 890	G.1.d
3270 - Rivers with muddy banks with *Chenopodion rubri* p.p. and *Bidention* p.p. vegetation	U2	P. 300, 520, 701, 820, 850, 852, 853, 870, 900, 979 T. 300, 520, 701, 820, 850, 870, 900	G.1.d
4010 - Northern Atlantic wet heaths with *Erica tetralix*	U2	P. 141, 161, 702, 709, 730, 810, 890, 952, 953, 979 T. 702, 709, 810, 890, 953, 979	G.1.e
4030 - European dry heaths	U2	P. 141, 161, 620, 702, 730, 953, 979	G.1.e

		T. 620, 702, 953, 979	
5130 - *Juniperus communis* formations on heaths or calcareous grasslands	U2	P. 141, 161, 702, 720, 979 T. 161, 702, 720, 979, 990	G.1.e
6120* - Xeric sand calcareous grasslands	U1	P. 101, 120, 300, 820, 870 T. 101, 300, 870	G.1.b
6210 - Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)	U1	P. 120, 141, 702, 979 T. 120, 141, 702, 979	G.1.b
6230* - Species-rich *Nardus* grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	U2	P. 101, 120, 702, 720, 810, 853, 979 T. 101, 120, 702, 720, 810, 853, 979	G.1.e
6410 - *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)	U2	P. 101, 120, 161, 702, 810, 853, 941, 979 T. 101, 120, 161, 702, 810, 853, 941, 979	G.1.b
6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	U2	P. 810, 811, 830, 860, 870, 951, 954, 979 T. 810, 811, 830, 860, 870, 951, 954, 979	G.1.b
6510 - Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*)	U2	P. 101, 110, 120, 140, 141, 161, 701, 702, 810, 850, 870, 979 T. 101, 110, 120, 140, 141, 161, 701, 702, 810, 850, 870, 979	G.1.b
7110* - Active raised bogs	U2	P. 162, 300, 702, 720, 800, 810 T. 702, 720, 810	G.1.d
7120 - Degraded raised bogs still capable of natural regeneration	U2	P. 162, 310, 311, 620, 622, 626, 702, 720, 810, 850, 920, 952, 953, 954 T. 162, 620, 702, 850, 920, 952, 953, 954	G.1.d
7140 - Transition mires and quaking bogs	U2	P. 701, 702, 709, 730, 810, 979 T. 162, 701, 702, 709, 730, 810, 979	G.1.d
7150 - Depressions on peat substrates of the *Rhynchosporion*	U1	P. 141, 701, 702, 730, 810, 890, 979 T. 701, 702, 810, 890, 979	G.1.d, G.1.e
7210* - Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*	U2	P. 200, 300, 709, 853, 951 T. 709, 853, 951	G.1.d
7220* - Petrifying springs with tufa formation (*Cratoneurion*)	U1	P. 160, 701, 720, 810, 890 T. 160, 701, 720, 810, 890	G.1.d
7230 - Alkaline fens	U2	P. 300, 702, 709, 810, 890, 910, 951, 952, 953	G.1.d

		T. 890, 951, 952, 953	
8310 - Caves not open to the public	FV	P. 301, 620, 624, 701, 703 T.301, 620, 624, 701, 703	-
9110 - *Luzulo-Fagetum* beech forests	U1	P. 160, 162, 166, 952, 953, 954 T.160, 162, 166, 952, 953, 954	G.1.a
9120 - Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*)	U2	P. 150, 151, 160, 162, 163, 164, 165, 166, 167, 400, 410, 500, 702, 952, 953 T. 162, 163, 164, 400, 410, 702, 952, 953	G.1.a
9130 - *Asperulo-Fagetum* beech forests	U1	P. 150, 151, 160, 162, 163, 164, 165, 166, 167, 400, 410, 500, 702, 952, 953 T. 162, 163, 164, 400, 410, 702, 952, 953	G.1.a
9150 - Medio-European limestone beech forests of the *Cephalanthero-Fagion*	U2	P. 160, 163, 166 T.160, 163, 166	G.1.a
9160 - Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*	U1	P. 150, 160, 162, 163, 164, 165, 166, 167, 400, 410, 702, 950, 952, 953 T. 162, 163, 400, 410, 702, 950, 952, 953	G.1.a
9190 - Old acidophilous oak woods with *Quercus robur* on sandy plains	U2	P. 150, 160, 162, 163, 164, 165, 166, 167, 300, 400, 410, 702, 950, 952, 953 T. 162, 163, 400, 410, 702, 950, 952, 953	G.1.a
91E0* - Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)	U2	P. 160, 162, 163, 164, 165, 166, 167, 400, 410, 701, 702, 801, 803, 810, 830, 852, 853, 870, 952, 954 T. 162, 163, 164, 400, 410, 701, 702, 810, 852, 853, 952, 954	G.1.a
91F0 - Riparian mixed forests of *Quercus robur*, *Ulmus laevis* and *Ulmus minor*, *Fraxinus excelsior* or *Fraxinus angustifolia*, along the great rivers (*Ulmenion minoris*)	U2	P. 164, 166, 167, 300, 520, 701, 801, 803, 830, 852, 853, 870 T. 701, 852, 853, 870	G.1.a

Feature (habitat species)	**Ecological group in reference to section G.1**	**Conservation status (code from HD Article 17 report)**	**Pressures and threats (codes from HD Article 17 report or BD Article 12 report)**	**Priority measure (from section G)**
Plants				
Hamatocaulis vernicosus	Grassland	U2	P. 120, 130, 190, 702, 810, 853, 952, 971	G.1.a

			T. 952, 953, 971	
Apium repens	Grassland	U1	P. 141, 810, 971 T. 141	G.1.a
Liparis loeselii	Wetland	U2	P. 810, 952, 953, 971 T. 810, 952, 953, 971	G.1.d
Luronium natans	Wetland	U2	P. 110, 120, 290, 402, 701, 810, 952 T. 110, 120, 290, 402, 701, 853, 952, 953, 971	G.1.d
Invertebrates				
Anisus vorticulus	Wetland	XX	P. 000 T. 000	G.1.d
Callimorpha quadripunctaria	Grassland	FV	P. 101, 150, 151, 241, 400, 410, 502, 965 T. 101, 150, 151, 400, 410, 502, 965	G.1.a
Gomphus flavipes	Wetland	U1	P. 710, 852, 870 T. 710, 852, 870	G.1.d
Leucorrhinia pectoralis	Wetland	U2	P. 701, 802, 810, 811, 853, 910, 952 T. 701, 810, 811, 853, 910, 952	G.1.d
Lucanus cervus	Forest	U2	P. 101, 150, 151, 164, 166, 167, 190, 241, 400, 410, 502, 965, 967 T. 101, 150, 151, 166, 190, 400, 410, 502, 965, 967	G.1.a
Vertigo angustior	Coastal	XX	P. 101, 150, 161, 190, 400, 410 T. 810, 830, 840, 852, 853	G.1.b
Vertigo moulinsiana	Grassland	XX	P. 101, 150, 190, 400, 410, 502 T. 810, 830, 852, 853	G.1.a
Fish				
Alosa fallax	Wetland	U2	P. 400, 504, 530, 701, 802, 803, 830, 852, 870, 871, 952 T. 400, 504, 530, 701, 802, 803, 830, 852, 870, 871, 952	G.1.d
Cobitis taenia	Wetland	U1	P. 120, 400, 701, 803, 811, 830, 852, 870, 952 T. 120, 400, 701, 803, 811, 830, 852, 870, 952	G.1.d
Cottus gobio	Wetland	U1	P. 400, 701, 803, 820, 830, 852, 952	G.1.d

			T. 400, 701, 803, 820, 830, 852, 952	
Lampetra fluviatilis	Wetland	U2	P. 820, 400, 952, 701, 852, 870, 830, 801 T. 820, , 400, 952, 701, 852, 870, 830, 801	G.1.d
Lampetra planeri	Wetland	U2	P. 120, 400, 701, 803, 820, 830, 852, 952 T. 120, 400, 701, 803, 820, 830, 852, 952	G.1.d
Misgurnus fossilis	Wetland	U2	P. 811, , 820, 400, 952, 810, 120, 803, 701 T. 811, 820, 400, 952, 810, 120, 803, 701	G.1.d
Rhodeus sericeus amarus	Wetland	FV	P. 853, 701, 811, 820, 400, 952 T. 853, 701, 811, 820, 400, 952	G.1.d
Salmo salar	Wetland	U2		G.1.d
Amphibians & Reptiles				
Alytes obstetricans	Wetland	FV	P. 160, 800 T. 160, 800	G.1.d
Bufo calamita	Wetland	FV	P. 701, 810, 850, 952, 953 T. 701, 810, 850, 952, 953	G.1.d
Coronella austriaca	Heathland	XX	P. 160, 850 T. 160, 850	G.1.e
Hyla arborea	Wetland	U2	P. 150, 151, 701, 803, 853, 990 T. 150, 151, 701, 803, 853, 990	G.1.d
Pelobates fuscus	Wetland	U2	P. 150, 151, 701, 803, 853, 990 T. 150, 151, 701, 803, 853, 990	G.1.d
Rana arvalis	Wetland	FV	P. 701, 810, 850, 952, 953 T. 701, 810, 850, 952, 953	G.1.d
Rana lessonae	Wetland	XX	P. 701, 810, 850, 952, 953 T. 701, 810, 850, 952, 953	G.1.d
Triturus cristatus	Wetland, grassland	U2	P. 150, 151, 701, 803, 853, 990 T. 150, 151, 701, 803, 853, 990	G.1.d, G.1.a
Mammals				
Barbastella barbastellus	Forest	XX	P. 110, 162, 166 T. 162, 166	G.1.a
Castor fiber	Wetland	U2	P. 150, 401 T. 243, 401, 701, 740, 790, 830	G.1.d
Cricetus cricetus	Arable land	U2	P. 100, 101, 102, 110, 150, 190, 401, 502, 990	G.1.a

			T. 100, 101, 102, 110, 150, 190, 401, 502, 990	
Eptesicus serotinus	Forest, grassland	FV	P. 110, 150, 151, 164, 165, 401, 990 T. 110, 151, 990	G.1.a
Lutra lutra	Wetland	U2	P. 110, 150, 151, 243, 220, 502, 621, 701, 801, 803, 830, 870, 967 T. 110, 150, 151, 243, 220, 502, 621, 701, 870, 967	G.1.d
Muscardinus avellanarius	Forest	U2	P. 101, 150, 151, 164, 165, 401 T. 101, 151	G.1.a
Myotis bechsteini	Forest	XX	P. 164, 165 T. 164, 165	G.1.a
Myotis brandtii	Forest	FV	P. 101, 110, 150, 151, 164, 165, 401, 990 T. 101, 110, 151, 990	G.1.a
Myotis dasycneme	Forest, wetland	FV	P. 110, 701, 990 T. 110, 701, 990	G.1.a, G.1.d
Myotis daubentonii	Forest, wetland	FV	P. 110, 701, 990 T. 110, 701, 990	G.1.a, G.1.d
Myotis emarginatus	Forest, grassland	FV	P. 101, 110, 150, 151, 164, 165, 401, 990 T. 101, 110, 151, 990	G.1.a
Myotis myotis	Forest	XX	P. 101, 110, 151, 990 T. 110, 151, 990	G.1.a
Myotis mystacinus	Forest, grassland	FV	P. 101, 110, 150, 151, 164, 165, 401, 990 T. 101, 110, 151, 990	G.1.a
Myotis nattereri	Forest, grassland	FV	P. 110, 150, 151, 164, 165, 401, 990 T. 101, 110, 151, 990	G.1.a
Nyctalus leisleri	Forest, wetland	XX	P. 164, 110, 165, 990 T. 164, 110, 990	G.1.a, G.1.d
Nyctalus noctula	Forest, wetland	XX	P. 164, 110, 165, 990 T. 164, 110, 990	G.1.a, G.1.d
Pipistrellus nathusii	Forest, wetland	FV	P. 110, 150, 151, 164, 165, 990 T. 101, 110, 151, 990	G.1.a, G.1.d
Pipistrellus pipistrellus	Forest, wetland	FV	P. 101, 110, 150, 151, 164, 990 T. 101, 110, 151, 990	G.1.a, G.1.d
Pipistrellus pygmaeus	Forest, wetland	XX	See Pipistrellus pipistrellus	G.1.a, G.1.d

Plecotus auritus	Forest, grassland	FV	P. 101, 110, 150, 151, 164, 165, 990 T. 101, 110, 151, 990	G.1.a
Plecotus austriacus	Forest, grassland	XX	P. 110, 150, 151, 164, 165, 401, 990 T. 101, 110, 151, 990	G.1.a
Rhinolophus ferrumequinum	Forest, grassland	U2	P. 101, 110, 150, 151, 164, 165, 401, 990 T. 101, 110, 151, 990	G.1.a
Birds[22]				
Acrocephalus paludicula	Wetland	U2		G.1.d
Alcedo atthis	Wetland	FV		G.1.d
Anas acuta	Wetland, grassland	U1		G.1.d, G.1.a
Anas clypeata	Wetland, grassland	FV		G.1.d, G.1.a
Anas crecca	Wetland, grassland	FV		G.1.d, G.1.a
Anas penelope	Wetland, grassland	FV		G.1.d, G.1.a
Anas strepera	Wetland, grassland	FV		G.1.d, G.1.a
Anser albifrons	Grassland	FV		G.1.a
Anser anser	Grassland	U1		G.1.a
Anser brachyrhynchus	Grassland	FV		G.1.a
Anser fabalis	Grassland	FV		G.1.a
Anthus campestris	Heathland	U2		G.1.e
Ardea purpurea	Coastal, marine, wetland	U2		G.1.c, G.1.d
Arenaria interpres	Coastal, marine	FV		G.1.c
Aythya ferina	Wetland	U1		G.1.d
Aythya fuligula	Wetland	FV		G.1.d
Botaurus stellaris	Wetland, grassland	U2		G.1.d, G.1.a
Caprimulgus europaeus	Heathland, forest	FV		G.1.e, G.1.a
Charadrius alexandrinus	Coastal, marine	U2		G.1.c
Chlidonias niger	Wetland	U2		G.1.d
Ciconia ciconia	Wetland, grassland	U2		G.1.d, G.1.a
Circus aeruginosus	Wetland, grassland	FV		G.1.d, G.1.a

[22] For the selection of the bird species and the approach to the evaluation can be referred to 'B.1.b Bird species of Birds Directive'. Because of this approach the codes of the Habitats Directive are used. However, the threats and pressures a such were not evaluated in the same manner. This will have to be complemented based on the coming evaluation.

Circus cyaneus	Grassland, wetland, heathland	U1		G.1.d, G.1.a, G.1.e
Circus pygargus	Heathland, arable land	U2		G.1.e, G.1.a
Crex crex	Grassland	U2		G.1.a
Cygnus bewickii	Grassland	U1		G.1.a
Dendrocopos medius	Forest	FV		G.1.a
Dryocopus martius	Forest	FV		G.1.a
Egretta alba	Wetland, grassland	FV		G.1.d, G.1.a
Egretta garzetta	Coastal, marine	FV		G.1.c
Emberiza hortulana	Grassland	U2		G.1.a
Falco peregrinus	Grassland	FV		G.1.a
Himantopus himantopus	Wetland	FV		G.1.c
Ixobrychus minutus	Wetland	U2		G.1.c
Lanius collurio	Grassland, heathland, wetland	U2		G.1.a, G.1.e, G.1.d
Larus argentatus	Coastal, marine	FV		G.1.c
Larus canus	Coastal, marine	FV		G.1.c
Larus melanocephalus	Coastal, marine	FV		G.1.c
Larus ridibundus	Coastal, marine	FV		G.1.c
Lullula arborea	Heathland, forest	FV		G.1.e, G.1.b
Luscinia svecica	Wetland	FV		G.1.d
Numenius arquata	Grassland, heathland, coastal, marine, wetland	FV		G.1.b, G.1.e, G.1.c, G.1.d
Numenius phaeopus	Grassland, heathland, coastal, marine, wetland	U2		G.1.b, G.1.e, G.1.c, G.1.d
Nycticorax nycticorax	Coastal, marine, forest, wetland	U2		G.1.c, G.1.b, G.1.d
Pernis apivorus	Forest, grassland	FV		G.1.b
Philomachus pugnax	Grassland, wetland	FV		G.1.b, G.1.d
Platalea leucorodia	Coastal, marine, wetland	U2		G.1.c, G.1.d
Pluvialis apricaria	Grassland	U1		G.1.b
Porzana porzana	Wetland, grassland	U2		G.1.d, G.1.b
Recurvirostra avosetta	Coastal, marine, wetland	U1		G.1.c, G.1.d
Sterna albifrons	Coastal, marine	FV		G.1.c

Sterna hirundo	Coastal, marine, wetland	FV		G.1.c, G.1.d
Sterna sandvicensis	Coastal, marine	FV		G.1.c
Tadorna tadorna	Grassland, wetland, coastal, marine	FV		G.1.b, G.1.d, G.1.c
Tetrao tetrix	Heathland, wetland	U2		G.1.e, G.1.d

H. MONITORING, EVALUATION AND UPDATING OF PAFS

H.1 Monitoring

A decent monitoring scheme is crucial to measure the progress of the Nature Conservation Objectives (NCOs) implementation programme and to ensure an efficient deployment of the available resources. Only adequate monitoring allows continual improvement of our approach. A monitoring scheme is being set up in which four factors will be observed: support (administrative and social), engagements (agreements to implement the NCOs), output (execution of the agreements), outcome (ecological results of the output). It should be operational by the end of 2013.

Support
By the end of 2013 a structural observation of the support for Natura 2000 should be in place. The monitoring of the support will allow improvement of the approach to implementation of Natura 2000 and communication about Natura 2000.

Engagements
The different public and private engagements on nature development and maintenance will be recorded in a central georeferenced database. This registration will allow monitoring the progress of the Nature Conservation Objectives (NCOs) implementation programme on both site and regional level and adjusting when necessary.

Engagements regarding environmental conditions will be registered too, especially the identified priorities. When these priorities are translates in concrete action plans, it will be recorded to what extend they are executed through legislation, public initiatives and voluntary agreements. They should be recorded in such a way that the contribution and impact of every policy instrument can be assessed.

Output
Next to supervision of the registered engagements, efficiency and effectiveness of the different measures in execution of these should be measured through a number of simple indicators. This allows feedback on management plans and can be instrumental for policy decisions on the allocation of resources. The same goes for efforts to address environmental conditions. Synergy with the existing monitoring systems of e.g. agri-environmental schemes will be sought.

Outcome
Monitoring of the evolution of the habitat area and habitat quality in Flanders will be set up in a uniform way.
Every twelve year the habitat map of the whole of Flanders will be updated to monitor the evolutions in habitat area. This involves determining the local conservation status of all habitats and species both in Natura 2000 and on known sites outside Natura 2000. Every six year the habitat quality will be determined via a monitoring network in known locations in step with the obligations under article 17 of the Habitats Directive. Besides this national approach an indicator based management monitoring system will be set up to support the management of the different sites.

The existing environmental monitoring networks will be complemented to monitor the Natura 2000 environmental conditions. This is essential to localise concrete goals, adjust manage-

ment of these conditions and determine the local and regional conservation state, besides making appropriate assessments. The following networks are concerned: surface water quality (both standing and running water bodies), surface water dependent habitats, Flemish emission inventory, continual air quality monitoring, continual wet and dry atmospheric depositions, VLOPS-model for atmospheric depositions.

H.2 Evaluation and updating of PAFS

The Flemish Prioritised Action Framework (PAF) for Natura 2000 will be evaluated and, if necessary, updated accordingly in step with the various phases of the strategic management plans and the compulsory evaluation according article 17 of the Habitats Directive and article 12 of the Birds Directive. As mentioned in section F.0 Setting priorities having regard to the to the need for measurable progress on the nature sub-target under EU 2020 biodiversity strategy and for ensuring good functioning of Natura 2000 network (SACs + SPAs), the strategic management plan will run through four phases:

- SMP 1.0: 'starting distribution' – completion on adoption of the specific Nature Conservation Objectives;
- SMP 1.1: 'the obvious phase' – completion mid 2014;
- SMP 1.2: 'the voluntary phase' – completion end 2017;
- SMP 1.3: 'the compulsory phase' – completion after 2017 (where appropriate).

SMP 1.2 and the next evaluation of the conservation status in 2019 are the most obvious moments.

ANNEX I. OVERVIEW OF THE HABITATS PROTECTED BY HABITATS DIRECTIVE IN FLANDERS AND THEIR CONSERVATION STATUS

Code		Scientific name	Range	Area	Struc-ture	Future Pro-spects	Global
1130		Estuaries	U2	U1	U2	FV	U2
1140		Mudflats and sandflats not covered by seawater at low tide	FV	FV	XX	FV	FV
1310		*Salicornia* and other annuals colonizing mud and sand	U1	U2	U1	U1	U2
1320		*Spartina* swards (*Spartinion maritimae*)	U1	FV	U2	U2	U2
1330		Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	U1	U1	U2	U1	U2
2110		Embryonic shifting dunes	U2	FV	U2	U1	U2
2120		Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes')	U1	FV	U2	U1	U2
2130	*	Fixed coastal dunes with herbaceous vegetation ("grey dunes')	U2	FV	U2	FV	U2
2150	*	Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)	U2	U2	U2	FV	U2
2160		Dunes with *Hippophaë rhamnoides*	FV	FV	FV	FV	FV
2170		Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)	U2	FV	U2	U1	U2
2180		Wooded dunes of the Atlantic, Continental and Boreal region	FV	FV	U2	FV	U2
2190		Humid dune slacks	U2	FV	U2	FV	U2
2310		Dry sand heaths with *Calluna* and *Genista*	FV	FV	U2	U2	U2
2330		Inland dunes with open *Corynephorus* and *Agrostis* grasslands	U1	FV	U2	U2	U2
3110		Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)	U2	U2	U1	U2	U2
3130		Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*	U1	U2	U2	U2	U2
3140		Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.	U1	U2	U2	XX	U2
3150		Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* - type vegetation	U1	U1	U2	U1	U2
3160		Natural dystrophic lakes and ponds	U1	U1	U2	U1	U2
3260		Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation	U2	U2	U2	U2	U2
3270		Rivers with muddy banks with *Chenopodion rubri* p.p. and *Bidention* p.p. vegetation	U1	U1	U2	FV	U2
4010		Northern Atlantic wet heaths with *Erica tetralix*	U2	FV	U2	U1	U2
4030		European dry heaths	U1	FV	U2	U1	U2
5130		*Juniperus communis* formations on heaths or calcareous grasslands	U2	U2	U2	U2	U2
6120		Xeric sand calcareous grasslands	U1	FV	U1	FV	U1
6210		Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)	FV	FV	U1	U1	U1
6230	*	Species-rich *Nardus* grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	U2	U1	U2	U1	U2
6410		*Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)	U2	U2	U2	U2	U2
6430		Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	FV	FV	U2	FV	U2
6510		Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*)	U1	FV	U2	U1	U2
7110	*	Active raised bogs	U2	U2	U2	U1	U2
7140		Transition mires and quaking bogs	U1	U1	U2	U2	U2
7150		Depressions on peat substrates of the *Rhynchosporion*	FV	FV	FV	U1	U1
7210	*	Calcareous fens with Cladium *mariscus* and species of the *Caricion davallianae*	U1	U1	U1	U1	U1
7220	*	Petrifying springs with tufa formation (*Cratoneurion*)	U1	FV	XX	U1	U1
7230		Alkaline fens	U1	U2	U1	U1	U2
8310		Caves not open to the public	FV	FV	XX	XX	XX

9110		*Luzulo-Fagetum* beech forests	U1	FV	U2	U2	U2
9120		Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*)	FV	FV	U2	FV	U2
9130		*Asperulo-Fagetum* beech forests	FV	FV	U1	FV	U1
9150		Medio-European limestone beech forests of the *Cephalanthero-Fagion*	FV	FV	U2	U1	U2
9160		Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*	FV	FV	U1	FV	U1
9190		Old acidophilous oak woods with *Quercus robur* on sandy plains	FV	FV	U2	FV	U2
91E0	*	Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)	U2	FV	U2	U2	U2
91F0		Riparian mixed forests of *Quercus robur*, *Ulmus laevis* and *Ulmus minor*, *Fraxinus excelsior* or *Fraxinus angustifolia*, along the great rivers (*Ulmenion minoris*)	FV	FV	U2	FV	U2

FV	Favourable
U1	Unfavourable – inadequate
U2	Unfavourable – bad
XX	Unknown

ANNEX II. OVERVIEW OF THE SPECIES PROTECTED BY HABITATS DIRECTIVE IN FLANDERS AND THEIR CONSERVATION STATUS

Group	Scientific name	Range	Population	Habitat	Future Prospects	Global
Amphibians	*Alytes obstetricans*	FV	FV	XX	FV	FV
Amphibians	*Bufo calamita*	FV	FV	XX	FV	FV
Amphibians	*Hyla arborea*	U2	U2	XX	U2	U2
Amphibians	*Pelobates fuscus*	U2	U2	XX	U2	U2
Amphibians	*Rana arvalis*	FV	FV	XX	FV	FV
Amphibians	*Rana lessonae*	XX	XX	XX	XX	XX
Amphibians	*Triturus cristatus*	U2	U2	XX	U2	U2
Reptiles	*Coronella austriaca*	FV	XX	XX	XX	XX
Fish	*Alosa falax falax*	U2	U2	U2	U2	U2
Fish	*Cobitis taenia*	FV	U1+	U1+	FV	U1+
Fish	*Cottus gobio*	FV	U1+	U1+	FV	U1+
Fish	*Lampetra fluviatilis*	U2	U2+	U1	FV	U2
Fish	*Lampetra planeri*	U2	U1	U2	U1	U2
Fish	*Misgurnus fossilis*	U2	U2	U2	U1	U2
Fish	*Rhodeus sericeus amarus*	FV	FV	FV	FV	FV
Insects	*Lucanus cervus*	FV	U2	U1	U1	U2
Insects	*Euplagia/Callimorpha quadripunctaria*	FV	FV	XX	FV	FV
Insects	*Gomphus flavipes*	FV	U1	U1	FV	U1
Insects	*Leucorrhinia pectoralis*	U2	U2	XX	U1	U2
Mammals	*Castor fiber*	FV	U1	XX	U2	U2
Mammals	*Cricetus cricetus*	U2	U2	U1	U2+	U2
Mammals	*Lutra lutra*	U2	U2	U2	U2	U2
Mammals	*Muscardinus avellanarius*	U2	U2	U2	U2	U2
Mammals	*Barbastella barbastellus*	FV	XX	XX	XX	XX
Mammals	*Eptesicus serotinus*	FV	FV	XX	FV	FV
Mammals	*Myotis bechsteinii*	FV	XX	XX	XX	XX
Mammals	*Myotis brandtii*	FV	FV	XX	FV	FV
Mammals	*Myotis dasycneme*	FV	FV	XX	FV	FV
Mammals	*Myotis daubentonii*	FV	FV	XX	FV	FV
Mammals	*Myotis emarginatus*	FV	FV	XX	FV	FV
Mammals	*Myotis myotis*	FV	XX	XX	XX	XX
Mammals	*Myotis mystacinus*	FV	FV	XX	FV	FV
Mammals	*Myotis nattereri*	FV	FV	XX	FV	FV
Mammals	*Nyctalus leisleri*	FV	XX	XX	XX	XX
Mammals	*Nyctalus noctula*	FV	U1	XX	FV	U1
Mammals	*Pipistrellus nathusii*	FV	U1	XX	FV	U1
Mammals	*Pipistrellus pipistrellus*	FV	FV	XX	FV	FV
Mammals	*Plecotus auritus*	FV	FV	XX	FV	FV
Mammals	*Plecotus austriacus*	FV	U1	XX	FV	U1
Mammals	*Rhinolophus ferrumequinum*	U2	U2	XX	U2	U2
Mammals	*Verspertilio murinus*	U1	U1	XX	FV	U1
Plants	*Apium repens*	U1	U1+	U1	U1	U1
Plants	*Hamatocaulis/Drepanocladus vernicosus*	U2	U2	U2	U2	U2
Plants	*Liparis loeselii*	U2	U2	U2	U2	U2
Plants	*Luronium natans*	FV	U2	U2	U2+	U2
Molluscs	*Anisus vorticulus*	XX	XX	XX	XX	XX
Molluscs	*Vertigo angustior*	U1	U2	U1	U1	U2
Molluscs	*Vertigo moulinsiana*	U1	U1	U1	U1	U1

FV Favourable

U1	Unfavourable - inadequate
U2	Unfavourable - bad
XX	Unknown

De zalm ontbreekt

ANNEX III. OVERVIEW OF THE BIRD SPECIES PROTECTED BY BIRDS DIRECTIVE IN FLANDERS AND THEIR CONSERVATION STATUS

Group	Scientific name	Range	Population	Habitat	Future Prospects	Global
	Acrocephalus paludicula	XX	XX	U1	U2	U2
	Alcedo atthis	FV	FV	FV	FV	FV
	Anas acuta	U1	FV	U1	U1	U1
	Anas clypeata	FV	FV	FV	FV	FV
	Anas crecca	FV	FV	FV	FV	FV
	Anas penelope	FV	FV	FV	FV	FV
	Anas strepera	FV	FV	FV	FV	FV
	Anser albifrons	FV	FV	FV	FV	FV
	Anser anser	FV	FV	FV	U1	U1
	Anser brachyrhynchus	FV	FV	FV	FV	FV
	Anser fabalis	FV	FV	FV	FV	FV
	Anthus campestris	U2	U2	U2	U2	U2
	Ardea purpurea	U2	U2	U1	U1	U2
	Arenaria interpres	FV	FV	FV	FV	FV
	Aythya ferina	FV	FV	FV	U1	U1
	Aythya fuligula	FV	FV	FV	FV	FV
	Botaurus stellaris	U2	U2	U2	U1	U2
	Caprimulgus europaeus	FV	FV	FV	FV	FV
	Charadrius alexandrinus	XX	U2	U2	U2	U2
	Chlidonias niger	U2	U2	U2	U2	U2
	Ciconia ciconia	U2	U2	U1	U1	U2
	Circus aeruginosus	FV	FV	FV	FV	FV
	Circus cyaneus	FV	XX	XX	U1	U1
	Circus pygargus	U2	U2	U2	U2	U2
	Crex crex	U2	U2	U2	U2	U2
	Cygnus bewickii	FV	FV	FV	U1	U1
	Dendrocopos medius	FV	FV	FV	FV	FV
	Dryocopus martius	FV	FV	FV	FV	FV
	Egretta alba	FV	FV	FV	FV	FV
	Egretta garzetta	FV	FV	FV	FV	FV
	Emberiza hortulana	U2	U2	U2	U2	U2
	Falco peregrinus	FV	FV	FV	FV	FV
	Himantopus himantopus	FV	FV	FV	FV	FV
	Ixobrychus minutus	U2	U2	U2	U1	U2
	Lanius collurio	U2	U2	U2	U2	U2
	Larus argentatus	FV	FV	FV	XX	FV
	Larus canus	FV	FV	FV	FV	FV
	Larus melanocephalus	FV	FV	FV	FV	FV
	Larus ridibundus	FV	FV	FV	FV	FV
	Lullula arborea	FV	FV	FV	FV	FV
	Luscinia svecica	FV	FV	FV	FV	FV
	Numenius arquata	FV	FV	FV	FV	FV
	Numenius phaeopus	FV	U2	U1	U2	U2
	Nycticorax nycticorax	U2	U2	U1	U1	U2
	Pernis apivorus	FV	FV	FV	FV	FV
	Philomachus pugnax	FV	FV	FV	FV	FV
	Platalea leucorodia	FV	U2	U1	U2	U2
	Platalea leucorodia	U1	U1	U1	U1	U1

Pluvialis apricaria	FV	FV	U1	FV	U1
Porzana porzana	XX	U2	U2	U1	U2
Recurvirostra avosetta	FV	FV	FV	FV	FV
Recurvirostra avosetta	FV	FV	U1	FV	U1
Sterna albifrons	FV	FV	FV	FV	FV
Sterna hirundo	FV	FV	FV	FV	FV
Sterna sandvicensis	FV	FV	FV	FV	FV
Tadorna tadorna	FV	FV	FV	FV	FV
Tetrao tetrix	U2	U2	U2	U2	U2

FV	Favourable
U1	Unfavourable - inadequate
U2	Unfavourable - bad
XX	Unknown

ANNEX IV. THE LAND COVER OF THE FLEMISH NATURA 2000 NETWORK

Table 4. Breakdown of the land cover in the different classes of the CORINE Land Cover layer (CLC) of the European Environment Agency for the Natura 2000 network in Flanders. For each class the surface in hectares and the relative surface in % is given.[23]

CLC code	CLC Label	surface in ha	surface %
Artificial surfaces			
112	Discontinuous urban fabric	6.094	3,68
121	Industrial or commercial units	1.685	1,02
122	Road and rail networks and associated land	337	0,20
123	Port areas	1.091	0,66
124	Airports	945	0,57
131	Mineral extraction sites	528	0,32
132	Dump sites	52	0,03
133	Construction sites	784	0,47
141	Green urban areas	110	0,07
142	Sport and leisure facilities	1.948	1,18
Arable land			
211	Non-irrigated arable land	18.713	11,31
Permanent crops			
222	Fruit trees and berry plantations	165	0,10
Pastures			
231	Pastures	20.584	12,45
Heterogeneous agricultural areas			
242	Complex cultivation patterns	20.836	12,60
243	Land principally occupied by agriculture, with significiant areas of natural vegetation	22.194	13,42
Forests			
311	Broad-leaved forest	18.323	11,08
312	Coniferous forest	14.676	8,87
313	Mixed forest	15.817	9,56
Scrub and/or herbaceous vegetation associations			
321	Natural grasslands	231	0,14
322	Moors and heathland	6.814	4,12
324	Transitional woodland-shrub	3224	1,95
Open spaces with little or no vegetation			
331	Beaches , dunes, sands	959	0,58
Inland wetlands			
411	Inland marshes	1878	1,14
412	Peat bogs	45	0,03
Maritime wetlands			
421	Salt marshes	384	0,23
423	Intertidal flats	129	0,08
Inland waters			
511	Water courses	293	0,18
512	Water bodies	2654	1,60
Marine waters			
522	Estuaries	3900	2,36
Total surface		**165.393,41**	**100,00**

[23] The source files for the raster based statistics on 100m resolution are:

- Natura 2000 end2011 (vector) (http://www.eea.europa.eu/data-and-maps/data/natura-2)
- EuroBoundaryMap v5 (http://www.eurogeographics.org/products-and-services/euroboundarymap)
- Corine land cover 2006 v16 (http://www.eea.europa.eu/data-and-maps/data/corine-land-cover-2006-raster-2)

Table 5. Breakdown of the land cover in the different classes of the CORINE Land Cover layer (CLC) of the European Environment Agency for the soon-to-be Special Areas of Conservation in Flanders. For each class the surface in hectares and the relative surface in % is given.[24]

CLC code	CLC Label	surface in ha	surface %
Artificial surfaces			
112	Discontinuous urban fabric	2.064	1,97
121	Industrial or commercial units	835	0,80
122	Road and rail networks and associated land	42	0,04
123	Port areas	60	0,06
124	Airports	598	0,57
131	Mineral extraction sites	292	0,28
132	Dump sites	51	0,05
133	Construction sites	1	0,00
141	Green urban areas	49	0,05
142	Sport and leisure facilities	1.532	1,47
Arable land			
211	Non-irrigated arable land	4.681	4,48
Permanent crops			
222	Fruit trees and berry plantations	165	0,16
Pastures			
231	Pastures	8.614	8,24
Heterogeneous agricultural areas			
242	Complex cultivation patterns	9.085	8,69
243	Land principally occupied by agriculture, with significiant areas of natural vegetation	16.621	15,90
Forests			
311	Broad-leaved forest	17.019	16,28
312	Coniferous forest	11.182	10,70
313	Mixed forest	13.815	13,22
Scrub and/or herbaceous vegetation associations			
321	Natural grasslands	212	0,20
322	Moors and heathland	6.086	5,82
324	Transitional woodland-shrub	3.017	2,89
Open spaces with little or no vegetation			
331	Beaches , dunes, sands	938	0,90
Inland wetlands			
411	Inland marshes	1.782	1,70
412	Peat bogs	45	0,04
Maritime wetlands			
421	Salt marshes	382	0,37
423	Intertidal flats	128	0,12
Inland waters			
511	Water courses	167	0,16
512	Water bodies	1.684	1,61
Marine waters			
522	Estuaries	3.386	3,24
Total surface		**104.533**	**100,00**

[24] The source files for the raster based statistics on 100m resolution are:

- Natura 2000 end2011 (vector) (http://www.eea.europa.eu/data-and-maps/data/natura-2)
- EuroBoundaryMap v5 (http://www.eurogeographics.org/products-and-services/euroboundarymap)
- Corine land cover 2006 v16 (http://www.eea.europa.eu/data-and-maps/data/corine-land-cover-2006-raster-2)

Table 6. Breakdown of the land cover in the different classes of the CORINE Land Cover layer (CLC) of the European Environment Agency for the Special Protection Areas in Flanders. For each class the surface in hectares and the relative surface in % is given.[25]

CLC code	CLC Label	surface in ha	surface %
Artificial surfaces			
112	Discontinuous urban fabric	4382	4,48
121	Industrial or commercial units	1028	1,05
122	Road and rail networks and associated land	306	0,31
123	Port areas	1063	1,09
124	Airports	624	0,64
131	Mineral extraction sites	344	0,35
132	Dump sites	1	0,00
133	Construction sites	783	0,80
141	Green urban areas	61	0,06
142	Sport and leisure facilities	651	0,67
Arable land			
211	Non-irrigated arable land	15.981	16,35
Permanent crops			
222	Fruit trees and berry plantations	1	0,00
Pastures			
231	Pastures	15.081	15,43
Heterogeneous agricultural areas			
242	Complex cultivation patterns	14.658	15,00
243	Land principally occupied by agriculture, with significiant areas of natural vegetation	10.458	10,70
Forests			
311	Broad-leaved forest	4.111	4,21
312	Coniferous forest	8.325	8,52
313	Mixed forest	5.614	5,74
Scrub and/or herbaceous vegetation associations			
321	Natural grasslands	89	0,09
322	Moors and heathland	5.799	5,93
324	Transitional woodland-shrub	2.079	2,13
Open spaces with little or no vegetation			
331	Beaches , dunes, sands	754	0,77
Inland wetlands			
411	Inland marshes	1.714	1,75
412	Peat bogs	45	0,05
Maritime wetlands			
421	Salt marshes	337	0,34
423	Intertidal flats	35	0,04
Inland waters			
511	Water courses	160	0,16
512	Water bodies	2093	2,14
Marine waters			
522	Estuaries	1.168	1,19
Total surface		**97.745**	**100,00**

[25] The source files for the raster based statistics on 100m resolution are:

- Natura 2000 end2011 (vector) (http://www.eea.europa.eu/data-and-maps/data/natura-2)
- EuroBoundaryMap v5 (http://www.eurogeographics.org/products-and-services/euroboundarymap)
- Corine land cover 2006 v16 (http://www.eea.europa.eu/data-and-maps/data/corine-land-cover-2006-raster-2)

ANNEX V. OVERVIEW OF PRESSURES AND THREATS TO SPECIES AND HABITATS

The mentioned figures (resulting from the 2007 report in accordance with article 17 of the Habitat Directive) give the number of habitats or species affected by the mentioned threats and pressures. They do not reflect on the importance of the impact.

Overview of pressures and threats to the habitats of annex I of the Habitats Directive

Table 7 Overview of the most mentioned pressures and threats to the habitats of annex I of the Habitats Directive.

Pressures and threats	***Historic***	***Future***
Water pollution	18	19
Air pollution	18	17
Drainage	17	12
Mixed forms of flora competition (competition of trees and grasses on heathlands, succession in grasslands, succession in wetlands)	16	13
Expansion of urbanisation, urban sprawl	15	4
Eutrophication	14	12
Outdoor sports and activities	12	7
Acidification	12	11
Soil compaction, (over)recreation	10	10
Dikes, artificial water banks, artificial beaches	9	9
Sand and gravel quarries	9	3
Total number of species affected	**47**	**47**

Table 8 Overview of the most mentioned pressures and threats to forest habitats

Pressures and threats	***Historic***	***Future***
Eutrophication	6	6
Removal of dead and sick trees	6	1
Air pollution	5	5
Artificial plantations	5	5
Acidification	5	5
Forest clear cutting	5	2
General forest management	5	1
Exploitation without replanting	5	-
Expansion of urbanisation, urban sprawl	4	4
Replanting of forests	4	4
Industrial and commercial sites	4	4
Restructuring of agricultural lands (parcelling)	4	-
Removal of undergrowth	4	-
Total number of species affected	**9**	**9**

Table 9 Overview of the most mentioned pressures and threats to grassland habitats

Pressures and threats	***Historic***	***Future***
Mixed forms of flora competition (succession by trees, densely felted layer in the vegetation)	5	5
Eutrophication	5	4
Drainage	4	4
Air pollution	4	4
Change of agricultural practices	4	4
Dikes, artificial water banks, artificial beaches	3	3
Total number of species affected	**6**	**6**

Table 10 Overview of the most mentioned pressures and threats to heathland habitats

Pressures and threats	***Historic***	***Future***
Mixed forms of flora competition (competition by trees and grasses)	6	6
Air pollution	6	6
Afforestation	5	3
Military manoeuvres	5	2
Change of agricultural practices: extensive grazing	4	-
Soil compaction through (over)recreation	3	3
Outdoor sports and activities	3	3
Acidification	3	2
Total number of species affected	**6**	**6**

Table 11 Overview of the most mentioned pressures and threats to coastal habitats

Pressures and threats	***Historic***	***Future***
Mixed forms of flora competition (competition by trees, grasses and bushes)	6	6
Expansion of urbanisation, urban sprawl	6	-
Access and overuse	4	4
Outdoor sports and activities	4	4
Total number of species affected	**8**	**8**

Table 12 Overview of the most mentioned pressures and threats to marshland habitats

Pressures and threats	***Historic***	***Future***
Drainage	4	3
Change of hydrological characteristics	2	2
Pollution	3	2
Access and overuse	2	2
Air pollution	3	2
Total number of species affected	**5**	**5**

Table 13 Overview of the most mentioned pressures and threats to fresh water habitats

Pressures and threats	***Historic***	***Future***
Water pollution	7	7
Eutrophication	6	5
Impact on wind force, leaf fall and shading by planting trees	5	-
Expansion of urbanisation, urban sprawl	5	-
Accumulation of organic matter	5	-
Drainage	4	1
Natural succession	4	-
Outdoor sports and activities	4	-
Hunting, fishing and gathering techniques	3	3
Acidification	3	3
Dikes, artificial water banks, artificial beaches	3	2
Pesticide use	3	1
Invasive species	3	1
Water level management	3	-
Drying out	3	-
Total number of species affected	**7**	**7**

Table 14 Overview of the most mentioned pressures and threats to halophytic habitats

Pressures and threats	***Historic***	***Future***
Water pollution	4	4
Boating	3	3
Erosion	3	3
Navigation	3	3
Eutrophication	2	2
Dikes, artificial water banks, artificial beaches	2	2
Drainage	2	2
Harbour development	2	2
Worm catching	2	2
Landslides and slips		2
Removal of sediments	2	2
Dumping and deposition of dredging materials	2	1
Outdoor sports and activities	2	-
Total number of species affected	**4**	**4**

Overview of pressures and threats to the species of annexes II and III of the Habitats Directive

Table 15 Overview of the most mentioned pressures and threats to the species of annexes II and III of the Habitats Directive.

Pressures and threats	***Number of species affected***
Water pollution	23
Eutrophication	21
Removal of hedgerows and such	19
Pesticide use	18
Natural processes (genetic erosion through inbreeding, disappearance of prey)	18
Change of agricultural and forestry practices	13
Acidification	13
Drainage	12
Expansion of urbanisation, urban sprawl	9
Restructuring of agricultural lands (parcelling)	8
Water level management	8
Canalisation	8
Fill-up of ditches, lakes, ponds, dikes, marshes, mores and wells	8
Change of river structure	8
Total number of species affected	**59**

Table 16 Overview of the most mentioned pressures and threats to aquatic species.

Pressures and threats	***Historic***	***Future***
Water pollution	8	8
Eutrophication	8	8
Expansion of urbanisation, urban sprawl	7	7
Canalisation	5	5
Fill-up of ditches, lakes, ponds, dikes, marshes, mores and wells	5	5
Removal of sediment	5	5
Change of river structure	5	5
Management of water and river bank vegetation for drainage purposes	3	3
Modification of river banks (dikes, artificial beaches,…)	3	3
Total number of species affected	**10**	**10**

Table 17 Overview of the most mentioned pressures and threats to semi-aquatic species.

Pressures and threats	***Historic***	***Future***
Water pollution	12	12
Drainage	9	9
Eutrophication	7	7
Restructuring of agricultural lands (parcelling)	7	4
Acidification	6	6
Change in hydrological functions	6	6
Water level management	6	6
Removal of hedgerows and such	4	4
Fill-up of ditches, lakes, ponds, dikes, marshes, mores and wells	4	3
Natural processes (genetic erosion through inbreeding, disappearance of prey)	3	3
Canalisation	3	3
Change of river structure	3	3
Total number of species affected	**16**	**16**

Table 18 Overview of the most mentioned pressures and threats to terrestrial species.

Pressures and threats	***Historic***	***Future***
Forest clear cutting	17	4
Pesticide use	16	16
Natural processes (genetic erosion through inbreeding, disappearance of prey)	15	15
Removal of hedgerows and such	15	15
Restructuring of agricultural lands (parcelling)	15	4
Removal of undergrowth	13	1
Change of agricultural and forestry practices	10	13
Expansion of urbanisation, urban sprawl	9	1
Eutrophication	6	6
Competition (succession)	6	4
Acidification	5	6
Fragmentation by roads	5	5
Air pollution	5	4
Soil compaction, (over)recreation	4	4
Total number of species affected	**33**	**33**

ANNEX VI. OVERVIEW OF THE RELEVANT LEGAL PROVISIONS IN FLANDERS

This annex gives an overview of the different kinds of legal provisions in place in Flanders and the web links to the text of the laws and regulations. Most of these provisions are not specific for or limited to Natura 2000. The different provisions are assorted in different categories: coordination, nature development, support of management, mitigation of negative effects and scientific support and education. The last is a general category.

Delineation

Coordinated actual text of the **Decree for Nature Conservation** of 21 October 1997 – with a specific chapter (hoofdstuk V, afdeling 3bis, artikel 36bis) on the delineation of SPA and SAC: http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1005915&param=inhoud

Flemish Government Decision of 3 April 2009 on the designation of Special Areas of Conservation and Special Protection Areas and the adoption of nature conservation objectives, article 10:
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1017929&param=informatie

Flemish Government Decision of 24 may 2002 on the adoption of the sites which were proposed to the European Commission as Special Areas of Conservation implementing article 4, paragraph 1 of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1009444&param=inhoud

Setting targets

Coordinated actual text of the **Decree for Nature Conservation** of 21 October 1997 – with a specific chapter (hoofdstuk V, afdeling 3bis, artikel 36ter) on the adoption of nature conservation objectives:
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1005915&param=inhoud

Flemish Government Decision of 3 April 2009 on the designation of Special Areas of Conservation and Special Protection Areas and the adoption of nature conservation objectives:
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1017929&param=informatie

Flemish Government Decision of 23 July 2010 on the adoption of regional nature conservation objectives for European protected species and habitats:
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1019645&param=informatie

Coordination

Coordinated actual text of the **Decree for Nature Conservation** of 21 October 1997 – with a specific chapter (hoofdstuk V, afdeling 4, onderafdeling D, artikel 48 - 50) on nature directive plans: http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1005915&param=inhoud

Flemish Government Decision of 28 Februari 2003 on the nature objective plans:
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1010806&param=inhoud

Coordinated actual text of the **Decree for Nature Conservation** of 21 October 1997 – with a specific section (hoofdstuk VI, artikel 51) on species protection programmes:
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1005915&param=inhoud

Flemish Government Decision of 15 May 2009 on species protection and management ("*het Soortenbesluit*") – with a specific section (hoofdstuk III, afdeling 3, artikel 24 - 27) on species protection programmes
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1018227&param=inhoud

Nature development
Flemish Government Decision of 23 July 1998 on measures for the implementation of the Decree for Nature Conservation of 21 October 1997:
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1006311&param=inhoud&ref=search

Flemish Government Decision of 24 November 2008 on the reforestation of agricultural land:
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1017497&param=inhoud

Flemish Government Decision of 27 June 2003 on the recognition of and subsidies for nature reserves: http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1011567&param=inhoud

Flemish Government Decision of 21 November 2003 on measures for the implementation of site specific nature policy:
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1012005&param=inhoud

Flemish Government Decision of 28 May 2004 on the procedure to draft land development plans […]
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1013406&param=inhoud&ref=search

Law of 22 July 1970 on the consolidation of land estates by force of law
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1009135&param=inhoud&ref=search
Law of 12 July 1976 on special measures for land consolidation by force of law in major infrastructure projects
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1015513&param=inhoud&ref=search
Law of 10 January 1978 on special measures for amicable land consolidation of estates
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1019786&param=inhoud&ref=search
Flemish Government Decision of 11 January 2002 implementing articles 21, paragraph 4, 42 paragraph 4, and 55 of the law of 10 January 1978 on special measures for land consolidation of estates amicably
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1008777&param=inhoud&ref=search
Flemish Government Decision of 1 February 2002 implementing articles 44 paragraph 4 and 48 of the law of 22 July 1970 on the consolidation of land estates by force of law
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1009137&param=inhoud&ref=search

Management support
Flemish Government Decision of 27 June 2003 on the criteria for the sustainable management of forests: http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1011558&param=inhoud

Flemish Government Decision of 27 June 2003 on the recognition of and subsidies for nature reserves: http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1011567&param=inhoud

Flemish Government Decision of 27 June 2003 on subsidies for forest management: http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1011560&param=inhoud

Flemish Government Decision of 27 June 2003 on the forest management plans: http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1011559&param=inhoud

Flemish Government Decision of 27 June 2003 on the recognition of and subsidies for forest management groups: http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1011561&param=inhoud

Flemish Government Decision of 6 June 2008 on the closure of agro-environmental agreements and the awarding of compensations implementing Council Regulation (EC) No 1698/2005 of 20 September 2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1016866&param=informatie

Prevention and mitigation of negative effects

Coordinated actual text of the **Decree for Nature Conservation** of 21 October 1997 – with a specific chapter (hoofdstuk V, afdeling 3bis, artikel 36ter) on the adoption of nature conservation objectives: http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1005915&param=inhoud

Flemish Government Decision 23 July 1998 on measures for the implementation of the Decree for Nature Conservation of 21 October 1997: http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1006311&param=inhoud&ref=search

Flemish Government Circular LNW/98/01 of 10 November 1998 with general measures for nature conservation and the conditions for changing vegetation and small landscapes as indicated in the Flemish Governement Decision of 23 July 1998 on measures for the implementation of the Decree for Nature Conservation of 21 October 1997:http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1006515&param=inhoud&ref=search

Flemish Government Decision of 16 February 2001 on the compensation of deforestation: http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1007887&param=inhoud

Flemish Government Decision of 21 November 2003 on measures for the implementation of site specific nature policy: http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1012005&param=inhoud

Flemish Government Decision of 15 May 2009 on the protection and management of species: http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1018227&param=inhoud

Scientific support and education

p.m.

Overall legislation

Flemish Government Decision of 5 December 2008 on access to forests and nature reserves
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1017541&param=inhoud

Flemish Government Decision of 3 July 2009 on the compensation of damages caused by protected species:
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1018264&param=inhoud

ANNEX VII. REGIONAL NATURE CONSERVATION OBJECTIVES

The Regional Conservation Objectives for the priority habitats according to section F.1 and F.2 are mentioned. The objectives for the other habitats and species can be consulted in the Flemish Government Decision of 23 July 2010 on the establishment of Regional Conservation Objectives for European protected species and habitats[26].

1140 - Mudflats and sandflats not covered by seawater at low tide		
Parameter	Objective	Description
Range	=	Maintain the current area
Area	↑	Expand with 60 ha (planned and approved redevelopment Zwin)
Quality	=	Resolve inadequate water quality, pollution, inappropriate human use, lack of natural dynamics Maintain or realize good local quality

1310 - Salicornia and other annuals colonizing mud and sand		
Parameter	Objective	Description
Range	=	Maintain the current area
Area	↑	Expand with 3 ha
Quality	↑	Resolve inadequate water quality, pollution, inappropriate human use, lack of natural dynamics, change of vegetatio

2110 - Embryonic shifting dunes		
Parameter	Objective	Description
Range	=	Maintain the current area
Area	↑	Expand with 3 - 12 ha
Quality	↑	Resolve inappropriate human use, lack of natural dynamics

2120 - Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes')		
Parameter	Objective	Description
Range	=	Maintain the current area
Area	↑	Expand with 1 - 30 ha
Quality	↑	Resolve inappropriate human use, lack of natural dynamics, change of vegetation

2130* - Fixed coastal dunes with herbaceous vegetation ("grey dunes')		
Parameter	Objective	Description
Range	=	Maintain the current area
Area	↑	Expand with 100 - 150 ha
Quality	↑	Resolve alteration of the hydrological cycle, inappropriate human use, change of vegetation

[26] Besluit van de Vlaamse Regering van 23 juli 2010 tot vaststelling van gewestelijke instandhoudingsdoelstellingen voor Europees te beschermen soorten en habitats
http://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1019645&param=inhoud&ref=search

2160 - Dunes with *Hippophaë rhamnoides*		
Parameter	Objective	Description
Range	=	Maintain the current area
Area	=(↓)	Maintain the current area, some decrease in favour of other EU protected habitats in a local unfavourable conservation status is permissible
Quality	=	Resolve alteration of the hydrological cycle, change of vegetation

2170 - Dunes with Salix repens ssp. argentea (Salicion arenariae)		
Parameter	Objective	Description
Range	=	Maintain the current area
Area	↑	Expand with 7 - 10 ha
Quality	↑	Resolve alteration of the hydrological cycle, lack of natural dynamics, change of vegetation

2190 - Humid dune slacks		
Parameter	Objective	Description
Range	=	Maintain the current area
Area	↑	Expand with 36 - 66 ha
Quality	↑	Resolve alteration of the hydrological cycle, fragmentation, change of vegetation

3140 - Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.		
Parameter	Objective	Description
Range	↑	Expand current range strongly
Area	↑	Expand with 5 - 25 ha
Quality	↑	Resolve alteration of the hydrological cycle, inadequate water quality, eutrophication and / or acidification, inappropriate human use, change in vegetation

6210 - Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)		
Parameter	Objective	Description
Range	↑	Expand current range
Area	↑	Expand with 7 ha
Quality	=	Resolve eutrophication and / or acidification, change in vegetation

7110* - Active raised bogs		
Parameter	Objective	Description
Range	↑	Expand current range
Area	↑	Expand when possible, considering the long-term development and the limitations of the physical environment, through the development out of local elements of transition mires and quaking bogs (7140)
Quality	↑	Resolve alteration of the hydrological cycle, eutrophication and / or acidification, inappropriate human use, change in vegetation

7210* - Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*		
Parameter	Objective	Description
Range	↑	Expand current range strongly
Area	↑	Expand with 2 ha
Quality	=	Resolve alteration of the hydrological cycle, inadequate water quality, pollution, inappropriate human use, change of vegetation

7220* - Petrifying springs with tufa formation (*Cratoneurion*)		
Parameter	Objective	Description
Range	=	Maintain the current range
Area	↑	Expand where the physical environment permits
Quality	↑	Resolve alteration of the hydrological cycle, inadequate water quality, inappropriate human use

7230 - Alkaline fens		
Parameter	Objective	Description
Range	↑	Expand with 18%
Area	↑	Expand with 1 - 3 ha
Quality	↑	Resolve alteration of the hydrological cycle, inadequate water quality, eutrophication and / or acidification, pollution, change of vegetation

8310 - Caves not open to the public		
Parameter	Objective	Description
Range	=	Maintain the current range
Area	=	Maintain the current area of 106 ha
Quality	=	Resolve local fragmentation, inappropriate human use, change of vegetation Maintain the overall good quality by restoration tasks and further improvement of the characteristics of the surroundings

9150 - Medio-European limestone beech forests of the *Cephalanthero-Fagion*		
Parameter	Objective	Description
Range	=	Maintain the current area
Area	↑	Expand the current area of 3,7 ha strongly with 5 - 20 ha.
Quality	↑	Resolve eutrophication and / or acidification, fragmentation, inappropriate human use, change of vegetation

ANNEX VIII. PRIORITY SURFACE TARGETS FOR PROTECTED HABITATS IN VIEW OF THE ACHIEVEMENT OF THE RELEVANT REGIONAL NATURE CONSERVATION OBJECTIVES

A spatial model was used to distribute subtargets over the subareas in view of decreasing the social opportunity costs. The model assigned goals to the different stakeholders based the a "strongest shoulders, heaviest loads" principle. The Flemish government and the nature conservation NGO's who manage nature reserves will carry the brunt of the load. It is assumed that all surfaces in areas under their responsibility, on which local targets can be implemented, will be properly managed by 2020.

First the surface, that needs to be under appropriate management (confirmed by an officially sanctioned management plan) to reach favourable conservation status (FCS), is described for each habitat type. Then the 2020 target for the government and nature conservation NGOs is given, which leads to the remainder that needs to be done by 2050 (cf. F.0 Setting priorities having regard to the to the need for measurable progress on the nature sub-target under EU 2020 biodiversity strategy and for ensuring good functioning of Natura 2000 network (SACs + SPAs)). Finally an interim target is given for those habitats that will not achieve FCS by 2020.

	*2020 priority**	*Surface (ha) needed to reach FCS*	*Surface targets (ha) government, NGOs*	*Remainder 2050 (ha)*	*(Interim-) target 2020*
1130 - Estuaries	I	5975	1054	4921	2530
1140 - Mudflats and sandflats not covered by seawater at low tide	F	2335	182[27]	2153	2335
1310 - Salicornia and other annuals colonizing mud and sand	I	40	39	1	39
1320 - Spartina swards (*Spartinion maritimae*) [28]	F	0	0	0	0
1330 - Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	I	170	159	11	162
2110 - Embryonic shifting dunes	F	27	14	13	27
2120 - Shifting dunes along the shoreline with Ammophila arenaria ('white dunes')	F	500	372	128	500

[27] River beds are mainly public domain and therefore not recorded on ownership maps causing the artificially low proportion of habitat surface registered as governmental property.

[28] This habitat type is only present in small patches mixed in complexes with other coastal types. On its own it is incapable to expand in surface area large enough to reach a favourable local conservation status. To reach a favourable regional conservation status the complexes of which it is part, need to be brought in favourable conservation status.

2130* - Fixed coastal dunes with herbaceous vegetation ("grey dunes')	F	661	434	227	661
2150* - Atlantic decalcified fixed dunes (*Calluno-Ulicetea*) [29]	I	0	0	0	0
2160 - Dunes with *Hippophaë rhamnoides*	F	553	437	116	553
2170 - Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)	F	71	58	13	71
2180 - Wooded dunes of the Atlantic, Continental and Boreal region	I	252	191	61	209
2190 - Humid dune slacks	F	80	74	6	80
2310 - Dry sand heaths with *Calluna* and *Genista* 2330 - Inland dunes with open *Corynephorus* and *Agrostis* grasslands	I I	4421	3844	577	4017
3110 - Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)	I	21	19	2	20
3130 - Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*	I	818	546	272	628
3140 - Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.	F	269	258	11	269
3150 - Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* - type vegetation	I	667	380	287	466
3160 - Natural dystrophic lakes and ponds	I	113	107	6	109
3260 - Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation	I	2	1	1	1
3270 - Rivers with muddy banks with *Chenopodion rubri* p.p. and *Bidention* p.p. vegetation	I	53	18	35	29
4010 - Northern Atlantic wet heaths with *Erica tetralix* 7150 - Depressions on peat substrates of the *Rhynchosporion*	I	2563	2186	377	2299
4030 - European dry heaths	I	5173	4529	644	4722
5130 - *Juniperus communis* formations on heaths or calcareous grasslands	I	25	23	2	24
6120* - Xeric sand calcareous grasslands	I	117	51	66	71
6210 - Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)	F	16	8	8	16
6230* - Species-rich *Nardus* grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	I	939	675	264	754
6410 - *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)	I	166	86	80	110
6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	I	3384	1293	2091	1920
6510 - Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*)	I	3917	1383	2534	2143
7110* - Active raised bogs	F	4	4	0	4
7140 - Transition mires and quaking bogs	I	626	427	199	487
7210* - Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*	F	7	6	1	7
7220* - Petrifying springs with tufa formation (*Cratoneurion*)	F	1	0	1	1
7230 - Alkaline fens	F	19	13	6	19

[29] This habitat type is only present in small patches in complexes of protected dune habitats. The abiotic possibilities for surface expansion are very limited making the achievement of a favourable local conservation status impossible, even with the expansion featured in the specific nature conservation objective documents.

8310 - Caves not open to the public	F	0	0	0	0
9110 - *Luzulo-Fagetum* beech forests	I	446	298	148	342
9120 - Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*)	I	35442	23522	11920	27098
9190 - Old acidophilous oak woods with *Quercus robur* on sandy plains	I				
9130 - *Asperulo-Fagetum* beech forests	I	4087	1739	2348	2443
9150 - Medio-European limestone beech forests of the *Cephalanthero-Fagion*[30]	F	0	0	0	0
9160 - Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*	I	3123	1497	1626	1985
91E0* - Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)	I	17068	6607	10461	9745
91F0 - Riparian mixed forests of *Quercus robur*, *Ulmus laevis* and *Ulmus minor*, *Fraxinus excelsi-or* or *Fraxinus angustifolia*, along the great rivers (*Ulmenion minoris*)	I	34	32	2	33

* I: interim target for 2020 F: final target for 2020

[30] This habitat type is limited to calcareous soils. Given the geological situation the existing habitat (4 ha) can only be expanded with 9 ha, insufficient for reaching the surface requirements for a local favourable conservation status.

ANNEX IX. CURRENT ESTIMATE OF NEEDS FOR CO-FINANCING BY THE EAFRD

			Agri-environment measures (EAFRD art. 29) & Non-productive investments (EAFRD art. 18)								
			Species protection		Field border management		Small landscape elements			Zero-fertilization (ha)	Phosphate extraction (ha)
			Delayed mowing (ha)	Species rich grassland (ha)	Fauna borders (ha)	Erosion strips (ha)	Wooded banks (ha)	Hedges (km)	Ponds (number)		
		Maintenance (euro/ha or km of pond)	500	1,000	1,500	1,300	2,000	1,500	30	2,000	1,000
		Creation (euro/ha or km or pond)					4,000	3,000	80		
Maintenance or development of protected habitats or habitat of protected species	Habitat	Maintenance									
		Development		200							600
	Amphibian habitat	Maintenance			10		10		10		
		Development					1		20		
	Habitat *Cricetus cricetus* & *Circus spp.*	Maintenance									
		Development									
	Habitat *Muscardinus avellanarius*, *Lanius collurio* & bats	Maintenance		250			60	100			
		Development					10	10			
	Habitat *Philomachus pugnax* & Numenius phaeopus	Maintenance	200								
		Development									
	Leefgebied *Crex crex*	Maintenance	200								
		Development									
Buffering	Erosion					200					
	Overfertilisation									1,000	
	Verdroging										
Restoration of connectivity	Between woodlands						5	15			
	Between open areas				100						
	Between surface waters								10		
Total yearly expenditure (€) at cruising speed in 2020			200,000	450,000	990,000	260,000	264,000	360,000	22,800	2,000,000	600,000

			Afforestation (art 23)			Reforestation (art 26)	Development (art 21)		
			Afforestation of farmland (ha)	General afforestation private (ha)	General afforestation public (ha)		Land development for nature' (M€/y)	Nature project agreements (M€/y)	Grants for one-off works (M€/y)
		Maintenance (euro/ha or km of pond)	1,015	500		125			
		Creation (euro/ha or km of pond)	2,500	2,500	2,500	2,500			
Maintenance or development of protected habitats or habitat of protected species	Habitat	Maintenance	60	300	300	16,000			
		Development	10	50	50	500	1,9	0,7	0,7
	Amphibian habitat	Maintenance							
		Development							
	Habitat *Cricetus cricetus* & *Circus spp.*	Maintenance							
		Development							
	Habitat *Muscardinus avellanarius*, *Lanius collurio* & bats	Maintenance							
		Development							
	Habitat *Philomachus pugnax* & Numenius phaeopus	Maintenance							
		Development							
	Leefgebied *Crex crex*	Maintenance							
		Development							
Buffering	Erosion								
	Overfertilisation								
	Verdroging								
Restoration of connectivity	Between woodlands		5	25	25				
	Between open areas								
	Between surface waters								
Total yearly expenditure (€) at cruising speed in 2020			128,85	412,500	187,500	3,250,000	1,900,000	700,000	700,000