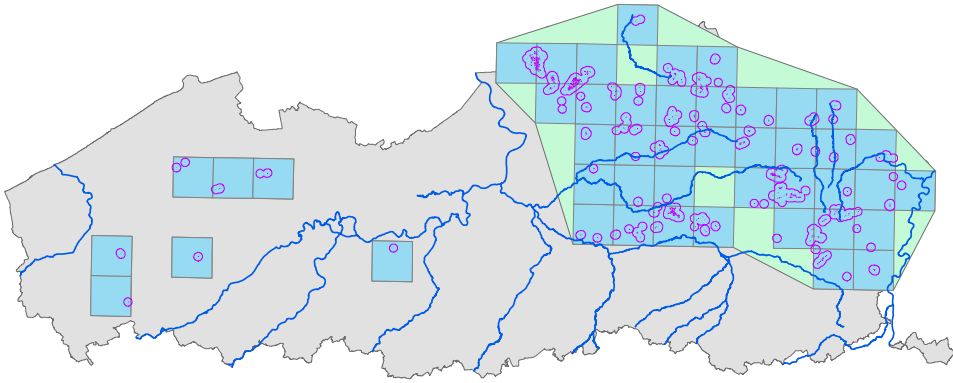
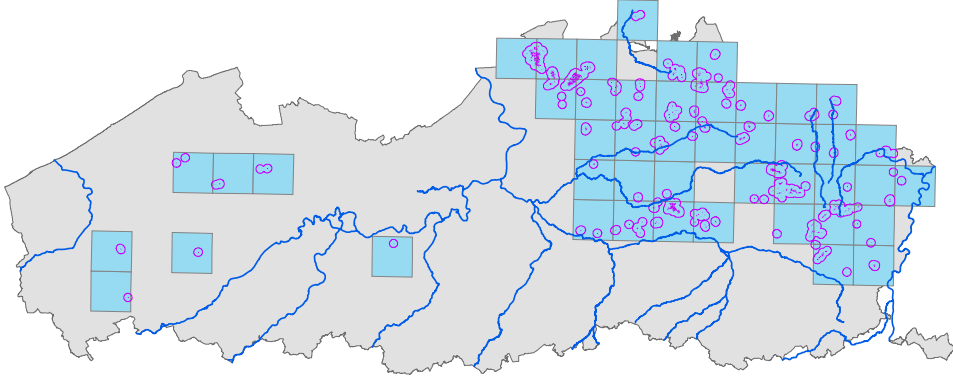






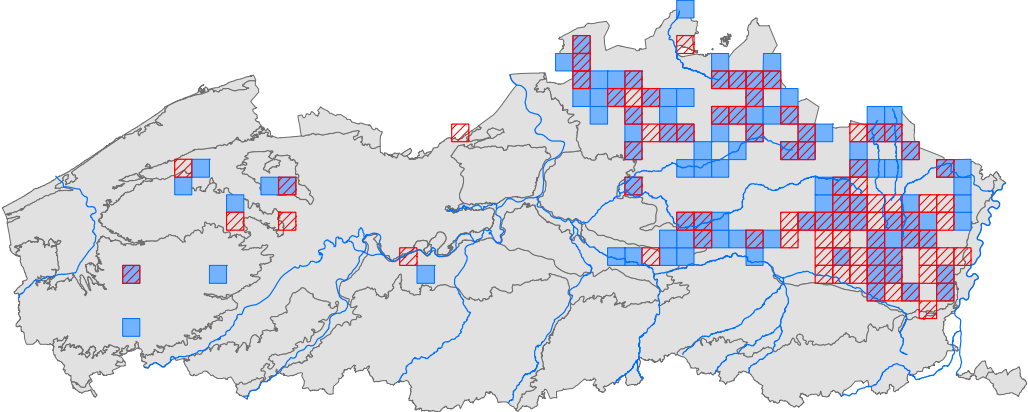





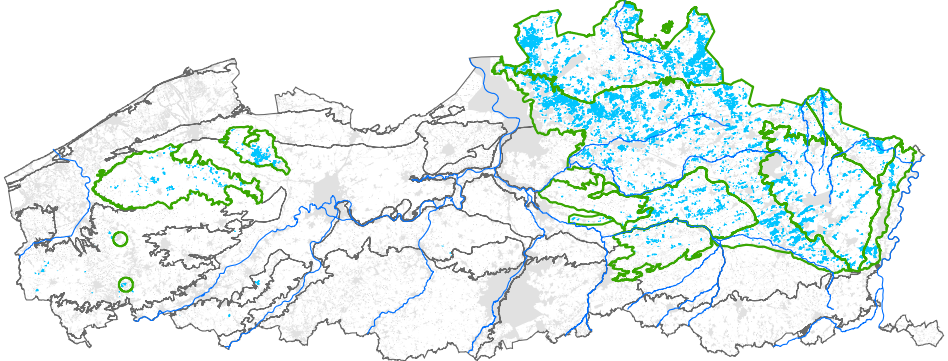
## APPENDIX 2 - Example for habitat 4010 in Flanders (BE)

Example provided by Desiré Paelinckx ([desire.paelinckx@inbo.be](mailto:desire.paelinckx@inbo.be)), Instituut voor Natuur- en Bosonderzoek.

National level	
Habitat Code	4010
Member State	Flanders, BE
Biogeographic region concerned within the MS	Atlantic (ATL) and Continental (CON) All 4010 habitat in Flanders is situated in the Atlantic biogeographic Region.
Biogeographic region	Atlantic (ATL)
Published sources	<ol style="list-style-type: none"> <li>1. Heutz G; &amp; Paelinckx D. (red.).2005. Natura 2000 habitats:doelen en staat van instandhouding. Versie 1.0 (ontwerp). Onderzoeksverslag Instituut voor Natuurbehoud en Afdeling Natuur, IN.O.2005.03, Brussel</li> <li>2. Van landuyt et al. in press, 2006. Atlas van de flora van Vlaanderen.</li> <li>3. Ecoregios en ecodistricten, systematiek van de natuurtypen, Wouter Van Landuyt in prep, Wouter Van Landuyt Vlina project, ...</li> </ol>
Range	<p>Actual range derived from Biological Valuation Map projected on a 10 km UTM grid (IUCN methodology).</p> <p><b>Legend</b></p> <ul style="list-style-type: none"> <li>— hoofdrivieren</li> <li>□ Buffer (indicative)</li> <li>■ 4010 from BVM2.1</li> <li>■ utm10vl selection</li> <li>■ Naturalrange4010</li> <li>■ flanders</li> </ul>  <p>Gaps between grid cells are part of the range only when the abiotic conditions are suitable for 4010, in other words when that gap is situated in the same ecodistrict. A more detailed approach is possible with a 4km IFBL or UTM grid.</p>
Surface area	Total surface area of the range within biogeographical region concerned in km <sup>2</sup> Approximately 4600 km <sup>2</sup> (number of gridcells x 100 km <sup>2</sup> ) or 5800 km <sup>2</sup> (area polygone derived from gridcells)
Date	1997-2005 field survey for BVM
Quality of data	3 = good
Trend	Stable
Trend-Period	1994-2006
Quality of trend data	1 = poor (best professional judgement)
Reasons for reported trend	No changes

<p><b>Area covered by habitat</b> Distribution map</p> <p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="color: blue;">—</span> hoofdrivieren</li> <li><span style="border: 1px solid magenta; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Buffer (indicative)</li> <li><span style="background-color: magenta; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> 4010 from BVM2.1</li> <li><span style="background-color: cyan; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> utm10vl selection</li> <li><span style="background-color: lightgrey; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> flanders</li> </ul>	<p>Area covered by habitat within the range in the biogeographic region concerned (km<sup>2</sup>)</p> 
<p>Surface area</p>	<p>650ha or 6,5 km<sup>2</sup> with minimum 450ha en maximum 910 ha (or 4,5 km<sup>2</sup> or 9,1 km<sup>2</sup>)  <span style="background-color: yellow;">Vgl met cijfers NARA</span></p>
<p>Date</p>	<p>1997 - 2005</p>
<p>Method used</p>	<p>3 = ground based survey (BVM)</p>
<p>Quality of data</p>	<p>3 = good</p>
<p>Trend</p>	<p>Expert opinion: area in the period 1994 to 2005 is rather stable</p> <p>Optionally (trend inside and outside SACs)          Area at time of designation (1994): xx km<sup>2</sup>???          Area at time of correction of designated area: xx km<sup>2</sup>???          Actual area: xx km<sup>2</sup>???</p>
<p>Trend-Period</p>	<p>1994 - 2006</p>
<p>Reasons for reported trend</p>	<p>No changes</p>
<p>Justification of % thresholds for trends</p>	<p>In case a MS is not using the indicative suggested value of 1% per year when assessing trends, this should be duly justified in this free text field</p>
<p>Main pressures</p>	<p>List main pressures impacting on the habitat in the past or at the moment (past/present impacts)          Use codes from Appendix E to the Standard Data Forms to 2<sup>nd</sup> or 3<sup>rd</sup> level (<i>these may need to be revised in the near future</i>)</p> <ul style="list-style-type: none"> <li>141abandonment of pastoral systems</li> <li>161 forestry planting</li> <li>690 other leisure and tourism impacts (burning)</li> <li>701 water pollution</li> <li>702 air pollution</li> <li>720 trampling, overuse</li> <li>730 military manoeuvres</li> <li>800 landfill, land reclamation and drying out, general</li> <li>810 drainage</li> <li>954 invasion by a species (evolution to forest)</li> </ul>

<p>Threats</p>	<p>List threats affecting long term viability of the habitat (future/foreseeable impacts)                  Use codes from Appendix E to the Standard Data Forms to 2<sup>nd</sup> or 3<sup>rd</sup> level (<i>these may need to be revised in the near future</i>)</p> <p>701                  702                  800                  810</p>
<p><b>Favourable Reference Range (Ecodistrict approach)</b>                  Map</p> <p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="color: blue;">—</span> Main rivers</li> <li><span style="color: red;">■</span> ifbluur_K41_39_71</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> poor survey</li> <li><span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Historical_Range4010</li> <li><span style="background-color: lightgrey; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> ecodistricts</li> </ul>	<p><b>Historical distribution</b> for CML ecotope-group K41 derived from FLOWER (period 1930-1971)                  K41 CML ecotope is regarded equivalent to habitat 4010.                  Ecodistricts/regions with K41 ecotopes are assigned to historical range when gridcells are not isolated within the district/region and when there are sufficient potentials for 4010. Historical range is shown in amber. Note that the Brabants Diestiaanheuvelluggendistrict is lost compared to the actual range.</p>

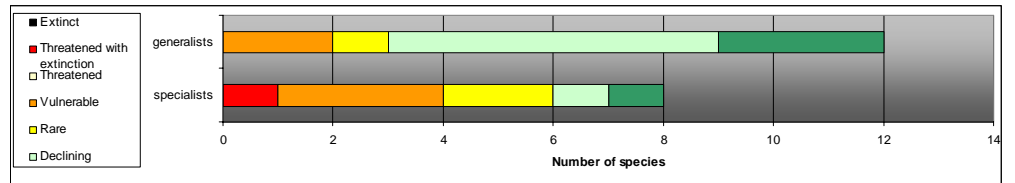
<p><b>Legend</b></p> <ul style="list-style-type: none"> <li> Main rivers</li> <li> ifbluur_K41_72_99</li> <li> ifbluur_BWKv2.1</li> <li> ecodistricts</li> </ul>	<p>Differences in distribution between BVM and IFBL approach can be explained in three ways:</p> <ol style="list-style-type: none"> <li>1. Since BVM survey was realised from 1997 and 2005 and the ifbl grid cells date from 1972 till 1999 part of the habitat from IFBL is lost</li> <li>2. Typical species of the habitat type can also occur in other habitat types or in small relics of the habitat in banks, borders, ... not detected in BVM survey (legend unit ifbluur_K41_72_99 of the distribution map).</li> <li>3. False K41 species combinations can arise from grid cell approach.</li> </ol> <p>Therefore the distribution of the BVM is the most correct and is used for surface area calculation. Historical range determination is based on IFBL approach.</p> 
<p><b>Legend</b></p> <ul style="list-style-type: none"> <li> Main rivers</li> <li> Favourable Reference Range</li> <li> ecodistricts</li> <li> HogePotenties4010</li> <li> Potenties_4010_geenuitspraak</li> </ul>	<p>Both actual and historical range are combined to the <b>favourable reference range</b>. Isolated historical sites are not included. Isolated actual sites are included when potentials are sufficient.</p> <p>Favourable reference range</p> 
<p>Favourable reference area</p>	<p>Approach????</p>

<p><b>Typical species</b></p>	<p>Species used for trend-index calculation  <i>Erica tetralix</i>, <i>Gentiana pneumonanthe</i>, <i>Juncus squarrosus</i>, <i>Narthecium ossifragum</i>, <i>Scirpus cespitosus</i>, <i>Drosera rotundifolia</i>, <i>Drosera intermedia</i>, <i>Erica cinerea</i>, <i>Carex binervis</i>, <i>Genista anglica</i>, <i>Genista pilosa</i>, <i>Polygala serpyllifolia</i>, <i>Pedicularis sylvatica</i>                  Other typical species:  <i>Sphagnum compactum</i>, <i>Sphagnum tenellum</i>, <i>Sphagnum molle</i>, <i>Calluna Vulgaris</i>, <i>Lycopodiella inundata</i>, <i>Molinia caerulea</i>, <i>Carex panacea</i>, <i>Eriophorum angustifolium</i>, <i>Rynchospora fusca</i>, <i>Rynchospora alba</i>, <i>Dactylorhiza maculate</i>, <i>Myrica gale</i>, <i>Salix repens</i>, <i>Vaccinium oxycoccus</i>, <i>Gymnocolea inflata</i>, <i>Pohlia nutans</i>, <i>Cladina spec.</i></p>																
<p><b>Other relevant information</b></p>	<p>Nowadays only 5% of the total heath area of 1850 still remains. (Odé B., De Blust G., Groen K, 2001)</p>																
<p><b>Specific structures and functions (incl. typical species)</b></p>	<p>BVM applicable for determining conservation status (in and outside SACs)???</p> <p>And/or</p> <p>% of SACs surveyed on conservation status</p> <p style="padding-left: 40px;">% favourable % unfavourable</p> <p>Expert opinion of SACs and parts of it.</p> <table border="1" data-bbox="480 994 1370 1135"> <thead> <tr> <th></th> <th>Number of sites</th> <th>% by sites</th> <th>% by area (*)</th> </tr> </thead> <tbody> <tr> <td>Favourable</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Unfavourable</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Unclassified</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>(*) taken into account the surface area of the habitat type in the mentioned SACs.</p>		Number of sites	% by sites	% by area (*)	Favourable				Unfavourable				Unclassified			
	Number of sites	% by sites	% by area (*)														
Favourable																	
Unfavourable																	
Unclassified																	

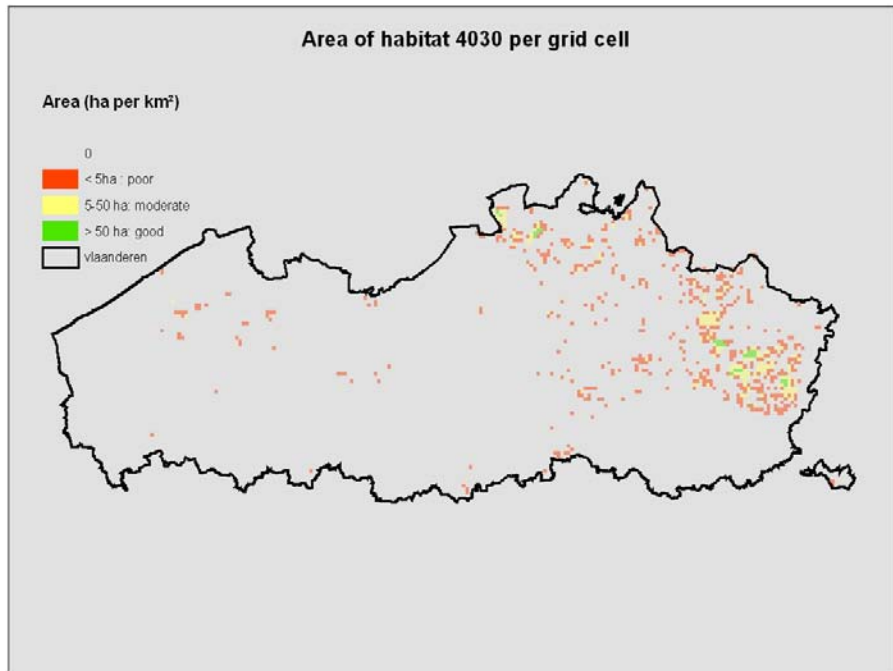
Specific structures and functions (incl. typical species)

Graph

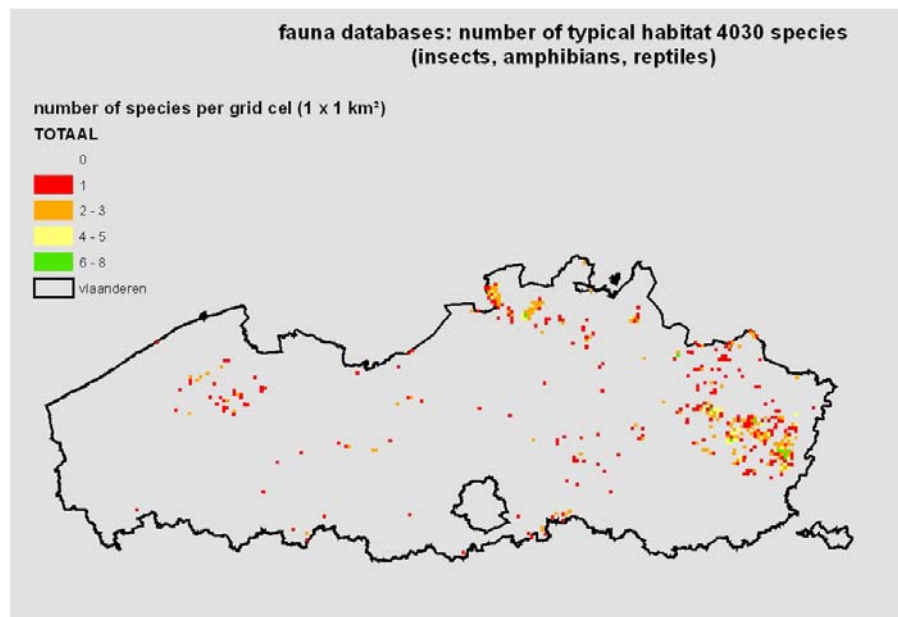
Distribution of the vascular plants of 4010 over Red List categories



Area size (example for 4030!)



Fauna (example for 4030!)

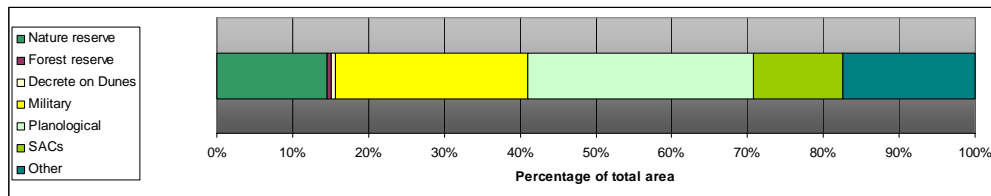


**Future prospects**

Future prospect are depend on:

**Legal Conservation Status:**

Percentage of area heath and bogs in different categories of conservation measures. From left to right there is a decrease in the conservation status of the habitat.



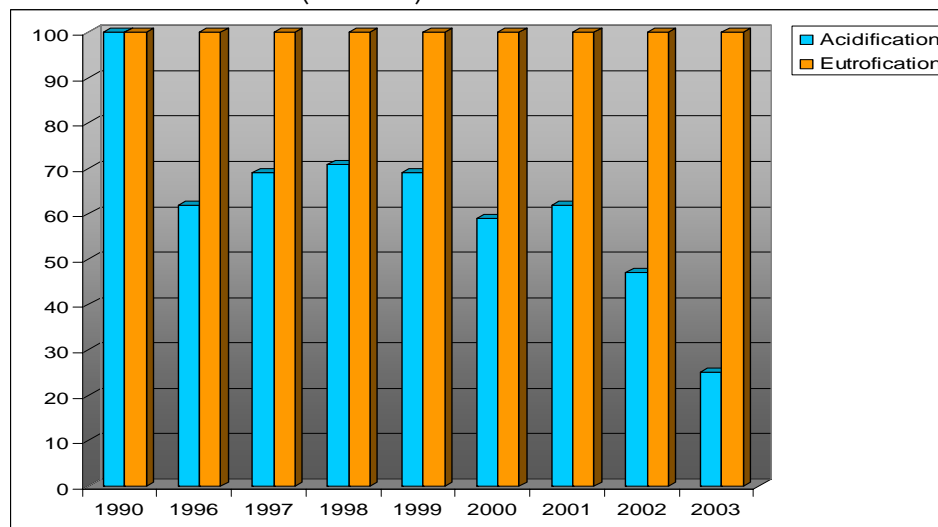
Although the remaining heaths in Flanders are well protected through different conservation initiatives the majority of the heaths is of poor quality. With the legal conservation status an appropriate management of the habitat is assumed. In situ abiotic conditions are also believed to be optimal or become optimal in near future.

**Ex- situ environmental threats:**

Eutrofication, acidification, dessication, ...

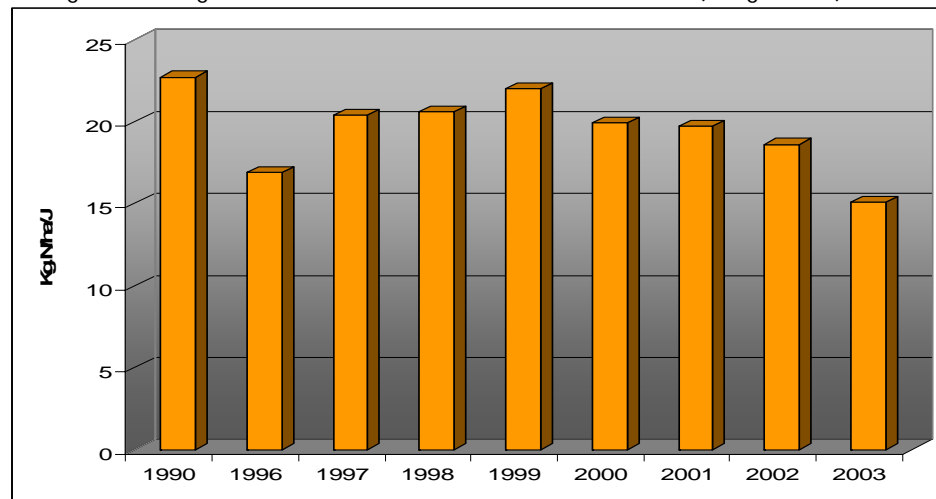
Graph

Percentage of total heath area in flanders where the critical loads for acidification and eutrofication are exceeded. (Mira 2004)



Graph

Average exceeding of the critical loads for eutrofication for heath (in Kg N/ha/J)



	Actual levels are still exceeding critical loads. A positive trend towards declining effects of acidification is noted. For eutrofication this effect is less significant. These effects are nevertheless very global and weather-dependent. Thus making hard to predict future prospects.
	Short-Term
Range	Unfavourable (U1) (smaller than FRR)
Area	Unfavourable (U1) ??? FRA???
Specific structures and functions (incl. typical species)	Bad (U2)
Future prospects	Unfavourable (U1)
Overall assessment of CS	Bad (U2)

Bibliografie

**Biesbrouck, B. *et al.*** (2001). Een ecologisch register voor hogere planten als instrument voor het natuurbehoud in Vlaanderen: Vlaams Impulsprogramma Natuurontwikkeling. *VLINA*, 00/01. Instituut voor Natuurbehoud: Brussel. 49 pp.