Information note on the content and characteristics of the EU Article 17 data

- Descriptive and spatial databases for the period 2001-2006 -

Introduction

The 1992 EU Habitats Directive requests Member States to undertake surveillance of habitats and species of Community interest (Article 11), i.e. those listed in its Annexes I, II, IV and V. Article 17 requires that Member States prepare reports to be sent to the European Commission every six years on the implementation of the Directive following an agreed format. The report for the period 2001-2006 for the first time includes assessments on the conservation status of the habitats and species of Community interest.

This note aims to provide contextual information in order to help an appropriate use of the data of the descriptive database and the GIS datasets available at the EEA data service.

A contribution to the knowledge of a selected part of European biodiversity

- As specified under Article 17 of the Habitats Directive, Member States (MS) have to report on the assessments of conservation status of habitats and species of Community interest. For the period 2001-2006 it was done by 25 EU Member States. Note that this is only a selection of habitat types and species of high importance at EU level;
- The above selection includes 216 habitat types and 1 182 species present in one or more of the EU25[1] MS. Although this is far from representing all biodiversity features in the EU, the resulting assessment represents one of the most comprehensive and coordinated biodiversity-related assessment made at EU level so far**;**
- Assessment of conservation status of targeted species and habitats has been made and collected within the whole distribution range of respective habitats and species and thus does not only relate to Natura 2000 sites;
- In 2013, a second round of reporting (2007-2012) will lead to a new version of the database with improved methodology and format based on the previous reporting; results will become available in 2015, covering this time EU27 (Croatia was not yet concerned by this reporting).

How assessments are made?

- Conservation status is assessed using a standard methodology to facilitate aggregation and comparisons between Member States and biogeographical/marine regions;
- Conservation status assessments are made at two geographical scales: at MS level for each of the biogeographical or marine region present in the Member State; at EU level, also for each of the biogeographical or marine region[2];

[1] Bulgaria and Romania are not included in the 2001-2006 period of reporting, and Croatia only joined the EU in July 2013

[2] Alpine, Atlantic, Boreal, Continental, Macaronesia, Mediterranean and Pannonian and marine Atlantic, marine Baltic, marine Macaronesian and marine Mediterranean

- Where a Member State is entirely within one region, only one habitat/species assessment is made for that MS. If a habitat/species is present in two or more biogeographical regions within a Member State, an assessment is made for each biogeographical region where the habitat/species is present;
- Each EU biogeographical habitat/species assessment corresponds to one of the seven biogeographical regions and four marine seas;
- As a consequence, there may be several assessments for a given habitat/ species within a same Member State:
  - at the EU level there are 701 habitat and 2 240 species assessments;
  - at the MS level there are 2 756 habitat and 6 064 species assessments;
- Assessments are symbolized with a 'traffic light' system: FV = favourable (green), U1 = unfavourable-inadequate (yellow), U2 = unfavourable-bad (red), XX = unknown (grey).

What type of data can we find in the EU Article 17 descriptive and spatial databases (2001-2006 period)?

- These databases contain information on the habitat types and species listed in the Annexes of the Habitats Directive collected in the framework of the Article 17 reporting;
- **Descriptive data** are available in an Access database as described below;
  Each habitat assessment includes at EU biogeographical/marine level: habitat name; name of the region; information on the range, surface area of the habitat; conservation status at the EU biogeographical level or marine region level and additional information (trends, threats/pressures, typical species,…). The database also includes similar information for the MS biogeographic/marine level;
  Each species assessment includes at EU biogeographical/marine level: species name; name of the region; information on the range, population, habitat of the species; conservation status at the EU biogeographical level or marine region level and additional information (trends, threats/pressures, …). The database also includes similar information for the MS biogeographic/marine level;
- **GIS data:** two zipped shapefiles with the distribution of habitat types and species and their biogeographic and marine assessments both at MS and EU levels. Please note that the national distribution data was transposed into a 10 x 10 km grid (or equivalent) due to the heterogeneity of the data sets received. The projection is ETRS LAEA 5210 and the coverage is the EU 25;
- Data for the 2007-2012 period will be reported on this standard grid and should be more homogenous.

How data have been collected and gathered?

- The data were entirely collected from the Member States. Subsequently, in order to produce the EU25 biogeographical assessments, they were aggregated to provide the single habitat type or species record per biogeographical/marine region in EU25;
- The data and assessments at the EU25 level were created by the ETC/BD based on the data submitted by Member States.

What are the main limitations of the data sets?

- Harmonisation across MS data was done as best as possible, but several inconsistencies remained;
- An iterative process of quality assurance/quality check was applied by the EEA-ETC/BD on the data transmitted by the Member States. A public consultation was held and over 100

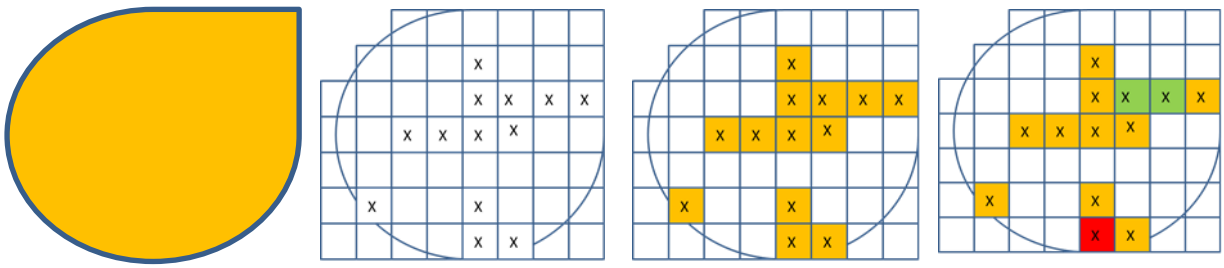
organisations and individuals made observations and provided comments on the Member State and the biogeographical/marine region assessments;

But some limitations must be underlined:

- Not all of the Member States reported for all of the habitats and species they are expected to do due to their presence in their territory (Spain and Portugal); however this is a very small percentage of all of the habitats and species;
- Some Member States, as Greece and Italy, only used information on targeted species and habitats from protected areas and not on the whole distribution range of these species and habitats;
- For some species and habitats there is a lack of information, either for individual countries or more generally. For instance, marine habitats and species are less well known than most terrestrial habitats and species;
- In some cases there are differences in the conservation status of a habitat or species between adjacent countries; of course this can be due to ecological reasons but in many cases it reflects different methodological approaches between the two countries in assessing conservation status;

What should be known about spatial data?

- Member States have reported maps of both range and distribution of species and habitats. Although guidance was given, it is clear that different approaches were taken in determining range. Some maps were based on point data, polylines, other as grids of varying sizes or polygons. A variety of projections were used. Subsequently, the maps have been re-projected by ETC/BD to a standard projection (ETRS LAEA 5210) and the data were harmonized to give range and distribution on a 10 km x 10 km or equivalent grid;
- With the purpose to correlate information on conservation status with e.g. information on pressures such as changes in land-cover, it is tempting to combine the conservation status information reported at biogeographical level (figure a) with information on species/ habitat distribution which is available at a 10 x 10 km grid (figure b); then to assume that the conservation status of a species/ habitat reported at biogeographical level is the same in each individual grid where the species/ habitat occurs within the boundary of the biogeographic region (figure c). However, this is unlikely to represent the reality. It may well be that the status of a habitat/ species is very bad in one grid and quite good in two others (for instance in a grid that includes Natura 2000 sites designated for that species/ habitat) (figure d).



a) Biogeographic Conservation Status (CS) assessment of species A

b) Distribution of species A in that region

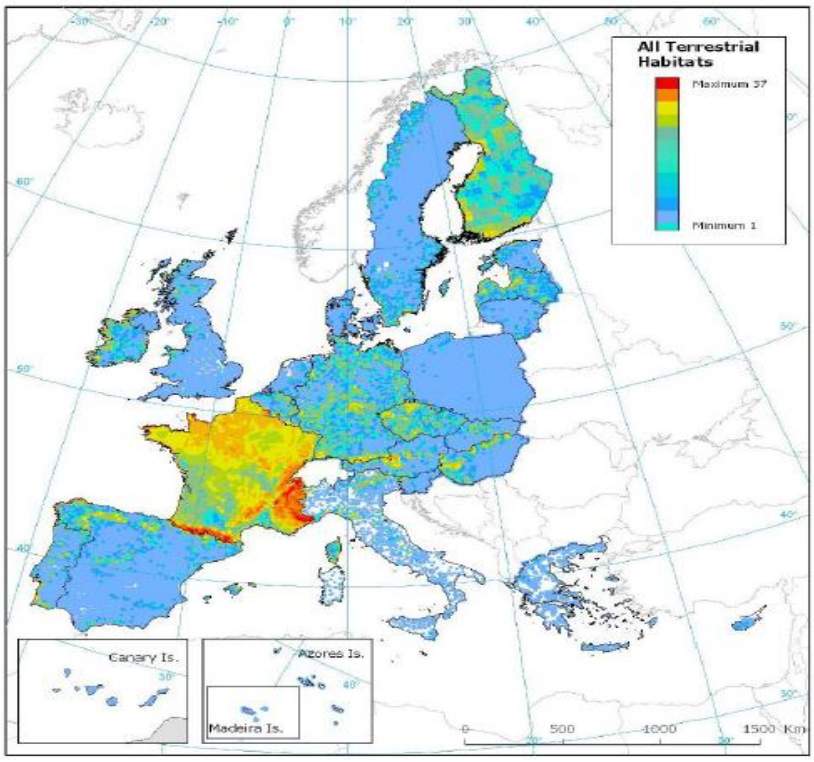
c) Downscaling artificially biogeographic CS to species A distribution grids

d) Possible reality of the CS of species A in the region

Therefore, downscaling the spatial information on conservation status originally available at biogeographical level to finer scales may lead to an oversimplification of the reality.

How can these data be interpreted?

- Many species and habitats have an unfavourable conservation status. It is important to know they were chosen to be part of the Annexes of the Habitats Directive because they were known to be threatened of extinction or in a poor conservation status. Recovery and restoration of species and habitats leading to an improvement of their conservation status can be a long process;
- Using the GIS data can show some limits: as shown in the figure below, habitat diversity (number of Annex I habitats present in each cell of a 10 x 10 km grid) was calculated using the 10x10 km2 grid maps of habitat distribution as reported by MS. Results show that some countries appear to be among the most 'Annex I-diverse' countries in the EU25. It should be an artefact because neighbouring countries have reported at different resolutions;



- Even if the best available data has been used, there are still important gaps in the distribution data for many habitats and species.

What are the differences in scope between the Article 17 database and the Natura 2000 database?

- the Natura 2000 database concerns about 26 000 Natura 2000 sites and only cover habitats listed in Annex I and species listed in Annex II of the Habitats Directive;
- Article 17 database concerns 216 habitat types listed in Annex I and 1 182 species listed in Annexes II, IV or V of the Habitats Directive within their full EU distribution range;

What are the main conclusions on the conservation status of habitat types and species in EU 25 based on the Article 17 descriptive and spatial databases 2008?

- For the first time the conservation status of a large number of EU's habitat types and species has been assessed using a standard methodology;
- Only 17% of habitat types assessments and 17% species assessments are " favourable";
- The Alpine region has the highest proportion of habitat types assessed as 'favourable' and the Atlantic the lowest;
- The Boreal region has the highest proportion of species assessed as 'favourable' and the Continental the lowest;
- Dunes, bogs and grasslands are the habitat groups with the worst conservation status;
- Habitat types associated with agriculture are particularly in need of conservation action;
- Wetlands and dunes may already be affected by climate change;
- A large number of 'unknown's, especially in southern Europe and especially for the marine habitat types and species;
- Better coordination between the Member States is required;
- Better knowledge is required for the Marine Environment.

More details in the following documents

Additional reference

Sipkova, Z. , Balzer, S. , Evans D. , Ssymank, A. (2010). Assessing the conservation status of European Union habitats – results of the Community report with a case study of the German national report. Annali di Botanica 1: 19-37.