



Mapping Natura 2000 habitats across Europe

A recent study has described a way to accurately map the distribution of different habitats across Europe. These maps contribute to the development of a Pan-European Ecological Network¹ designed to conserve and manage the natural heritage of pan-Europe.

Destruction of natural habitats is a major cause of biodiversity loss and the EU has implemented a number of initiatives designed to combat this problem, notably the Habitats and Birds Directives². Central to the EU nature and biodiversity policy is the Natura 2000³ network, which covers more than 25,000 sites and makes up around 17 per cent of the total area of the EU. It is the largest network of protected areas in the world and the backbone of the Pan-European Ecological Network.

Habitats can be described by a number of different classification systems. This study used the habitat definitions given in Annex 1 of the Habitats Directive. Annex 1 currently defines 231 Natura 2000 habitat types, covering a range of marine and land-based habitats, including 71 priority habitats. Each habitat is classified under one of nine major categories: for example, forests or freshwater habitats.

Partly funded by the EU project EcoChange⁴, the researchers classified information about the living and physical characteristics of Natura 2000 habitats in Pan-Europe. This is the territory which would be covered by a Pan-European Ecological Network and covers around 11 million square kilometres, stretching from Iceland in the north-western corner of Europe, across to Turkey in the south-east.

In constructing the maps, the researchers included a wide range of information about regional characteristics. These included land cover types, elevation or altitude data, variability of soil conditions and the characteristic plant species for each habitat type. Images from satellites were especially useful for identifying the distribution of different habitats.

The researchers combined this information with rules derived from expert knowledge to model a separate distribution map for each of a sample of 27 of the types of European habitats.

The result was a series of maps, each detailing the areas where a specific habitat type could be found across Pan-Europe. They reveal the most likely occurrence of the distribution of the different habitats.

Habitats with large areas, such as some forests, were easier to identify than habitats that were localised and more widely dispersed, such as some freshwater habitats. Very specific and restricted habitats may need site visits or local knowledge to verify the accuracy of the maps. In the future, local expert knowledge on these distributions can be incorporated into the system and the reliability of the maps should improve, especially for habitats which are widely dispersed.

1. See: http://www.peblds.org/files/Conferences/Kyiv_peen_statement_e.pdf

2. Habitats Directive: http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm. Birds Directive: http://ec.europa.eu/environment/nature/legislation/birdsdirective/index_en.htm

3. See: http://ec.europa.eu/environment/nature/natura2000/index_en.htm

4. EcoChange was supported by the European Commission under the Sixth Framework Programme. See: www.ecochange-project.eu

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