

## Bio-geographical Regions – Executive Summary

The theme of *Bio-geographical Regions* is included under Annex III of the Directive. There is a strong linkage between this theme and the Annex I theme of *Protected Sites* and indeed between a number of other themes in Annex III particularly *Habitats and Biotopes and Species Distribution*.

The INSPIRE data specification on *Bio-geographical Regions* has been prepared following the participative principle of a consensus building process. The stakeholders, based on their registration as a Spatial Data Interest Community (SDIC) or a Legally Mandated Organisation (LMO) had the opportunity to bring forward user requirements and reference materials, propose experts for the specification development, and to participate in the review of the data specifications. The Thematic Working Group responsible for the specification development was composed of experts coming from across Europe and from a range of organisations, ranging from regional level, to national level, European level as well as from academia and private industry. The specification process took place according to the methodology elaborated for INSPIRE respecting the requirements and the recommendation of the INSPIRE Generic Conceptual Model, which is one of the elements that ensures a coherent approach and cross theme consistency with other themes in the Directive.

The INSPIRE Directive defined *Bio-geographical Regions* as “Areas of relatively homogeneous ecological conditions with common characteristics.”

The most important guiding document in regard to *Bio-geographical Regions* in Europe for this data specification is the Habitats Directive (EEC/92/43), which contains a list of ‘bio-geographical regions’ (Article 1.iii). These bio-geographical regions are the basis of a series of seminars evaluating the Natura 2000 network and for reporting on the conservation status of the habitats and species protected by the Directive as required every 6 years. These processes are linked to the implementation of the Habitats Directive. The Habitats Directive was the first EU legislation to introduce the concept of bio-geographical regions. There are currently 9 regions, covering the 27 Member States of the EU, and an additional 2 bio-geographical regions are added through the Bern Convention. Although the regions have been modified to make them easier to use administratively, they still form ecologically coherent units of similar environmental conditions as can be seen by comparing this map with other environmental classifications of Europe. Despite of their importance for this data specification, these bio-geographical regions will be represented by only one distinct data set, which will be provided by EEA. No Member State will have to provide data for this specific data set.

While these legally mandated bio-geographical regions fulfil administrative needs, there is further need amongst users for other types of ecological regions for various analyses at a European scale or for use at a regional, national or sub national level; see for example the ‘Environmental Stratification of Europe’ (Metzger et al. 2005). The needs of these users for a more detailed or conceptually different set of ecological regions are covered under the use of their code lists such as the ‘Environmental Stratification’ Classification values. Another example is the “European Map of Natural Vegetation” which uses a specific vegetation type classification. These more detailed ecological regions may also include local sub-categories of the bio-geographical regions outlined in the Habitats Directive (see use case 4).

The data model “Bio-geographicalRegions” thus provides a generic means for a common pan-European representation of bio-geographical regions. The spatial object “Bio-geographicalRegion” is the key spatial object of the application schema for representing regions or areas of relatively homogenous ecological conditions with common characteristics. It is this spatial object type that will allow for a proper description of the bio-geographical classification that has been applied to identify and classify the bio-geographical region each feature represents.

With this in mind it should be emphasized that the application schema not only supports the classification of bio-geographical regions as mandated by the European Habitats Directive, but also meets the requirements raised by INSPIRE stakeholders with regard to alternative or more precise ecological regions.