

## GENERAL OUTLINE FOR ECOREGION DESCRIPTIONS

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**Ecoregion Name:** Alps conifer and mixed forests

**Bioregion:**

**Major Habitat Type:** Temperate Coniferous and Mixed Forests

**Ecoregion Number:** 77

**Political Unit(s):** France, Italy, Germany, Austria, Slovenia, Switzerland, Liechtenstein, Monaco

**Ecoregion Size (km<sup>2</sup>):**

**Introduction**

### **Location and General Description**

The Alps represent one of the most important biodiversity hot spots in Europe. An ecotonal mountain system, placed between the Eurosiberian and the Mediterranean biogeographic regions in Europe, divided in three major sectors: the western one influenced by the mild and humid Atlantic air streams, the central and continental one, and the eastern one Mediterranean they cover an area that is about 1200 km long, and belongs to seven different countries, with a total population of 11,1 million people. They are a rather young mountain system, whose “steplike” morphology was contoured by the Pleistocene glaciation. Alpine bedrocks can be divided into two major groups: calcareous rocks and siliceous material. The climate is mainly cold and temperate, with slight local variations (e.g. in border “Mediterranean character” areas). Three relevant ecological patterns can be identified:

- 1) deep valleys, rich of different habitats and important migration corridors (their potential natural vegetation is deciduous forest - *Quercus robur*, *Q. petraea*, *Q. pubescens* and other broad-leaved trees; sclerophyllous evergreen Mediterranean trees occur in the above mentioned “Mediterranean” border areas);
- 2) mountain forests: mixed beech (*Fagus sylvatica*) and silver fir (*Abies alba*) forests, pure spruce (*Picea abies*) forests or prostrate pine (*Pinus mugo*) forests in the outer regions. Larch (*Larix decidua*) and arrolla pine (*Pinus cembra*) and scotch pine (*Pinus sylvestris*) in the inner parts);
- 3) “strictly” alpine zones, hosting many relict species (within a belt of alpine grasslands). There are also some major river systems that influence (and are influenced by) the Alpine ecosystems: Rhine, Rhone, Danube, Po. The Alps are representative of the high habitat diversity that can be found in mountains, as 200 habitat types can be classified throughout the mountain range.

### **Outstanding or Distinctive Biodiversity Features**

The Alps are an interzonal mountain system (orobiome), a “transition area” between Central and Mediterranean Europe, with a still high degree of naturalness and large almost pristine areas. About 4500 species of vascular plants (up to 400 of which are endemic – genera *Campanula*, *Draba*, *Pedicularis*, *Phyteuma*, *Primula*, *Ranunculus*, *Saxifraga* and *Viola*), 800 species of mosses, 300 liverworts, 2500 lichens and more than 5000 fungi can be found. Mammalians (most of them small ones) belong to about 80 species, none of which is “strictly” endemic; large carnivore populations have been reduced in size or fragmented in small remaining groups. Large herbivores are largely distributed. About 200 breeding bird species can be identified, and as many migratory species. Only one species of amphibian in 21 is endemic (*Salamandra lanzai*); reptiles are present with 15 species, while invertebrates’ diversity overrules that of the vertebrate species by a factor of almost twenty (about one third of invertebrate species are considered as threatened).

### **Status and Threats**

Wilderness areas can still be found almost all over the Alpine territory: the main problem is their excessive fragmentation and loss of habitats and populations. This threatens mainly the permanence of large carnivores (who are naturally returning or are being reintroduced in the Alps). Moreover, Alpine conservation has not only to do with difficulties in protecting a rather big area, but also with the necessity of dealing with an area that is inhabited and exploited by man (through tourism, agriculture, power plants/industry) and where the air and water pollution factor becomes more and more dangerous. Conservation policies must therefore deal with trends such as the decreasing importance of traditional agriculture, the high intensity of tourism, the expansion of urban centres and the development of commuter systems. This means that any conservation action will have to have many facets (topics dealing with wilderness, education, ecological networks).

**Characteristic and Focal Species:** Large carnivores (lynx, wolf, brown bear)

**Primary Sources and Justification for Ecoregion Delineation:**