

## ASSESSMENT OF GEOSITES AT NATIONAL SCALE: INVENTORY OF THE IBERIAN MASSIF LANDSCAPE AND FLUVIAL NETWORK (PORTUGAL) FRAMEWORK

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The erosion of the Iberian Massif has resulted in a region of low relief known as Iberian Meseta, comprising a succession of cycles of erosion and weathering. The Iberian Massif designates the Variscan basement (granites and metamorphic rocks) and is the larger morphotectonic unit of Iberia, covering about 70% of the Portuguese mainland territory. Due to the different resistance to weathering of the basement, narrow NW-SE Ordovician quartzite ridges produced an Appalachian-type relief. Also the granite landscape shows a diversity of landforms at different scales.

During Cenozoic times, compressive tectonic events affected the Iberian Peninsula, creating relief and compressive structures interpreted as pop-ups, push-ups and strike-slip tectonic basins. Several allostratigraphic units occur over the Iberian Massif, mainly in the strike-slip basins and paleovalleys carved in the Paleozoic basement. These sediments are the records of the tectonic episodes and characterize several weathering and erosional cycles that are responsible by the multifaceted geomorphology.

Crossing an extensive area of the Iberian Massive, Douro and Tejo are the largest Iberian rivers. The geomorphological and sedimentary record of these rivers, as other rivers on the Atlantic western border, provides important information about the evolution of the fluvial network and landscape.

The diverse and rich geomorphological heritage provides evidence of a geological history with international relevance. Therefore, the *Iberian Massif Landscape and Fluvial Network* was selected as a geological framework of international relevance under the Portuguese inventory of the Geological Heritage (Brilha et al., 2005; 2010). A similar framework was previously considered in the Spanish inventory (Garcia-Cortes, 2001).

In the scope of this framework, five themes and 20 sub-themes were defined, taking into account the diversity of geomorphological elements in the Portuguese Iberian Massif. These themes are: Residual macro-landforms (quartzitic crests, inselbergs and plateaus sub-themes), Granite landforms (major and minor landforms sub-themes); Tectonic landforms (pop-up massifs, push-up blocks, fault valleys, tectonic basins, and fault scarps sub-themes); Cenozoic correlative sediments (Cretaceous, Paleogene, and Neogene sub-themes); Fluvial landforms (canyons, epigenic valleys, waterfalls, incised meanders, sedimentary terraces, and strath terraces sub-themes).

A total of 38 geosites of national and international relevance were selected based on the assessment of their scientific value. Representativeness, scientific use, scientific knowledge, integrity, diversity of interests and rarity of the geosite were the criteria used for the selection. Vulnerability of geosites was assessed in order to establish priorities in conservation actions.

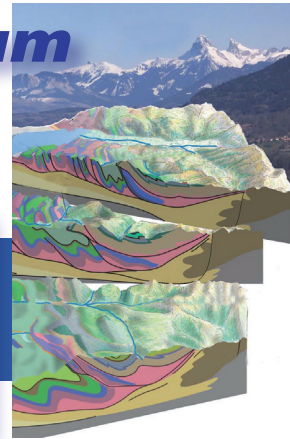
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ABSTRACT BOOKLET

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