



## **Geosites and geoheritage representations - a cartographic approach**

Joao Rocha (1) and José Brilha (2)

(1) University of Coimbra, Geosciences Centre, Department of Earth Sciences, Coimbra, Portugal (joaorocha@uc.pt), (2) Institute of Earth Sciences, Pole of the University of Minho, Braga, Portugal (jbrilha@dct.uminho.pt)

In recent years, the increasing awareness of the importance of nature conservation, particularly towards the protection, conservation and promotion of geological sites, has resulted in a wide range of scientific studies. In a certain way, the majority of geodiversity studies, geoconservation strategies and geosites inventories and geoheritage assessment projects will use, on a particular stage, a cartographic representation – a map - of the most relevant geological and geomorphological features within the area of analyses. A wide range of geosite maps and geological heritage maps have been produced but, so far, a widely accepted conceptual cartographic framework with a specific symbology for cartographic representation has not been created.

In this work we debate the lack of a systematic and conceptual framework to support geoheritage and geosite mapping. It is important to create a widely accepted conceptual cartographic framework with a specific symbology to be used within maps dedicated to geoheritage and geosites. We propose a cartographic approach aiming the conceptualization and the definition of a nomenclature and symbology system to be used on both geosite and geoheritage maps.

We define a symbology framework for geosite and geoheritage mapping addressed to general public and to secondary school students, in order to be used as geotouristic and didactic tools, respectively.

Three different approaches to support the definition of the symbology framework were developed: i) symbols to correlate geosites with the geological time scale; ii) symbols related to each one of the 27 geological frameworks defined in the Portuguese geoheritage inventory; iii) symbols to represent groups of geosites that share common geological and geomorphological features. The use of these different symbols in a map allows a quick understanding of a set of relevant information, in addition to the usual geographical distribution of geosites in a certain area.