

# 32<sup>nd</sup> IGC - Florence, 2004

## Abstract title

GEOMORPHOLOGICAL FRAMEWORKS IN PORTUGAL - A CONTRIBUTION FOR THE CHARACTERIZATION OF THE GEOLOGICAL HERITAGE

## Authors

PEREIRA DIAMANTINO <sup>1</sup>, PEREIRA PAULO JORGE <sup>1</sup>, CAETANO ALVES ISABEL <sup>1</sup>, BRILHA JOSÉ <sup>1</sup>

presenter's e-mail: paolo@dct.uminho.pt

1 - Earth Sciences Centre, University of Minho, Portugal

## Keywords

geomorphological frameworks

geomorphological assets

geological heritage

landforms

Portugal

## Abstract

Portugal presents a rich geodiversity in spite of its reduced area. Along 92 152 km<sup>2</sup>, the last 1000 Ma are recorded on different types of rocks. This lithological diversity together with major tectonic structures and specific Quaternary climatic conditions had developed several geomorphological features with high scientific, didactic, and aesthetic values. The concept of Geomorphological Heritage, part of what is considered Geological Heritage, has been developed by many authors during the last decade. The present work constitutes the first attempt for the definition of Portuguese geomorphological frameworks with national relevance, according to the objectives of the IAG's Geomorphological Sites Working Group and ProGEO. The emphasis is given to major landforms, with landscape value. Minor landforms and features shall be considered in the scope of a following detailed inventory and characterisation. The proposed frameworks cover all the Portuguese territory including Azores and Madeira archipelagos. For each framework some representative geosites were selected, based upon the spectacularity of the landforms, its rareness (in the Portuguese context), and essentially on its scientific and didactic values.

The proposed frameworks include: i) granite landforms (Gerês and Estrela mountains); ii) carbonate and evaporite landforms (Aire and Candeeiros karsts); iii) volcanic landforms (Azores and Madeira Archipelagos); iv) residual landforms (Monsanto inselberg); v) tectonic landforms (Vilarica valley); vi) fluvial landforms as canyons (Douro) and alluvial plains (Lower Tejo); vii) coastal landforms like beaches (Quiaios-Aveiro), dunes (Porto Santo), lagoons (Obidos), estuaries (Tejo estuary), cliffs (Alentejo SW coast), and coastal platforms (Aveiro region); viii) glacial and periglacial landforms (cirques, glacial troughs, grooves, moraines and others in Estrela and Gerês mountains). Cultural landscapes are also considered, as the Alto Douro Wine Region and the Pico Island Vineyard Culture (respectively, inscribed and submitted to the World Heritage List). These examples are only indicative due to space restrictions.

Until the present moment about sixty sites and areas with high geomorphological interest were considered. A significant number of those are included in protected areas, having therefore some kind of protection. Nevertheless, many others should be considered in geoconservation strategies to be implemented by Portuguese authorities.

## **ACCEPTED as Poster Presentation**

**in session: "T17.01 - Geomorphological sites in a cultural integrated landscape"**

## **Reference:**

**32nd International Geological Congress, Abs. Vol., pt. 1, abs. 27-26, p. 142.**