

A catalogue of national importance geosites in Greece

N. Zouros¹, C. Fasoulas², E. Moraiti³, P. Paschos³, G. Iliopoulos⁴.

1. University of Aegean
2. University of Crete
3. Hellenic Survey for Geology and Mineral Exploration (H.S.G.M.E.)
4. University of Patras

Greece is characterized by a complex geological setting and evolution and was subjected to a variety of geological and geomorphological processes, resulting in a high geodiversity. As a result a large number of spectacular landscapes and rock outcrops form today a great number of geosites, some of them indicative and representative of the geological evolution of Greece, characterized thus as of national importance.

In spite of their intrinsic value for the natural and human environment and the legal framework created by the L.1650/1986 for the protection of the environment and especially its revision law 3937/2011, till now the majority of geosites has not been awarded any kind of legal protection due to their scientific, educational and aesthetic value.

The Committee for the Conservation and Enhancement of the Geological Heritage of the Geological Society of Greece took an initiative in October 2016 and invited all its members to identify and register in form proposals of geosites which present special geological interest and needs for protection. In December 2018 a special committee was created by the Ministry of Environment and Energy aiming to a proposal of measures for the protection of the geological heritage. Among the proposal was the establishment of a catalogue of the 100 geosites of national importance as a first step for the protection of the most important geosites of Greece.

The Committee for the Conservation and Enhancement of the Geological Heritage of the Geological Society of Greece contributed to this effort with the submission of a catalogue including 108 geosites. This Catalogue was formed taking into account the existing geosites catalogues: the geosite catalogue of IGME (2016), the Atlas of Geological Monuments of the Aegean (2002), the catalogues of the five areas recognized as UNESCO Global Geoparks, published scientific papers as well as the list of the geosites submitted by the Committee members.

The catalogue includes the following geosite categories:

- a. Geomorphological geosites
- b. Stratigraphic geosites
- c. Tectonic geosites
- d. Palaeontological geosites
- e. Mining geosites
- f. Petrological geosites
- g. Volcanic geosites
- h. Human made geosites

To select the sites which were included in the Catalogue six criteria have been used: 1) scientific and educational value (integrity, rarity, representativeness, and exemplarity); 2) natural beauty and aesthetic value; 3) cultural value; 4) geodiversity; 5) potential threats and protection needs (legal protection, vulnerability); and 6) potential for use (recognizability, geographical distribution, accessibility, and potential for generating economic activities).

The proposed catalogue is a first effort for the legal protection of the important geological heritage sites of Greece and should be further developed and increased.