



Some examples of geomorphodiversity in Italy

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The concept of geomorphodiversity (Panizza, 2009) is presented: “the critical and specific assessment of the geomorphological features of a territory, by comparing them in a way both extrinsic (comparison of the geomorphological characteristics with those from other territories) and intrinsic (comparison of the geomorphological characteristics with other areas within the territory itself) and taking into account the level of their scientific quality, the scale of investigation and the purpose of the research”.

A first example concerns the Dolomites: they have been included in the UNESCO World Heritage List because of their exceptional beauty and unique landscape, together with their scientific importance from the geological and geomorphological point of view. They are of international significance for geomorphodiversity, as the classic site for the development of mountains in dolomite limestone and present a wide range of landforms related to erosion, tectonics and glaciation. They represent a kind of high altitude, open air laboratory of geomorphological heritage of exceptional global value, among the most extraordinary and accessible in the world and ideal for researching, teaching, understanding and developing Earth Science theories.

The second example concerns the Emilia-Romagna Apennines, candidate for enrolment in the List of European Geoparks: they show a multifaceted and complex image from the international and regional geomorphological (extrinsic and intrinsic geomorphodiversity) point of view and are an educational example for illustrating morpho-tectonic evolution, stratigraphic and sedimentological sequences and morpholithological peculiarities connected with gypsum karst and clay mass wasting phenomena.

The third example concerns the Vesuvius, one of the National Italian Parks: it shows an extrinsic geomorphodiversity mainly referred to the type of eruptions, with some exemplary processes inserted in international volcanic nomenclature; it makes up an important geoheritage that can be considered a field laboratory for research on volcanic geomorphology. At a regional level, intrinsic geomorphodiversity includes typical examples ascribable to lahars, relief inversion and pseudo-karst morphology.