



Human impact on karst in southern Italy: a case study from the Murge plateau (Apulia)

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The Murge plateau is a morphostructural high of the Apulian foreland (southern Italy) and is characterised by karst morphology due to widespread outcrops of Cretaceous carbonate rocks. The natural landscape is typical of a low-relief karst very rich in natural cavities and slightly incised valleys, the latter locally called “lame”. These karst valleys act as water flow channels only during and immediately after heavy rainstorms and, in the coastal area, generally, reach the shoreline. Human activity, such as urbanization, land use change and quarrying, with time, produced irreversible degradation of the natural landscape, and severe damage to the anthropogenic environment, also in terms of loss of human life. Recently, in the night between 22 and 23 October, 2005, exceptional rainfalls (160 mm in a few hours, in an area where the mean annual rainfall is about 600 mm), hit the city of Bari and the neighbouring towns, belonging to the same catchment area. The heavy rainfall caused a flood event with disastrous results: six dead and the destruction of roads, railways and bridges. The principal causes are due to the human activities (stone clearing, quarrying, inadequate hydraulic structures, modification of the surficial and underground drainage) which induced severe changes both in the karst landscape and in the hydraulic balance.

The goal of this contribution is to highlight examples about the negative role played by man in causing irreparable damage on both the natural landscape and the built-up structures, and the importance of environmental management and land use planning in karst area.