



Land use change and loss of karst landscape in the Murge Plateau of Apulia, southern Italy

M. Parise (1, 2) and A. Trocino (2)

(1) CNR-IRPI, Bari, Italy (m.parise@ba.irpi.cnr.it), (2) Gruppo Puglia Grotte, Castellana-Grotte (Ba), Italy

Experiences from different areas in the world have highlighted the fragility of karst, and the negative effects of some anthropogenic activities which often produce irreversible degradation of the natural landscape. The Apulia region of southern Italy, due to cropping out for most of its extension of carbonate rocks, is particularly interested by karst processes and, in turn, affected by several natural and anthropogenic hazards in karst. The present work deals with analysis of the land use changes which have been registered during the last 50 years in the so-called “High Murge”, the inner part of the Murge Plateau, a wide and tabular highplain (maximum elevation 686 m a.s.l.) extending from the Bradanic Foredeep to the Adriatic Sea. This sector, poor developed and scarcely inhabited, was originally devoted to pasture, with limited additional activities as quarrying the limestone rocks, which are widely used in the region as building and ornamental materials. Two main activities spread in the area in the last decades, resulting in heavy changes in the natural landscape, and loss of many interesting caves and karst landforms: stone clearing and intensive quarrying. Stone clearing practice has strongly transformed the uncovered rocky landscape through crushing of the carbonate rocks by means of modern technologies. This practice, even favoured by public subsidy, led to transformation of some thousands of hectares of the original pastures in cornfields. The intensive use of bulldozers and machinery, besides destroying and removing rocks from the fields, acted to enhance erosion of both the soil and subsoil by runoff processes. In many cases, the rocks of greater size have been discharged into karst caves of the area, damaging them or, eventually, clogging the caves. Many other caves have been lost due to intensive quarrying activity, which proceeds with no respect for the preservation of caves, notwithstanding the existence of a regional law specifically devoted to protection of karst areas, and the recent establishment of a na-

tional park (Parco dell'Alta Murgia). This paper presents updated data about the karst caves inventoried in the surroundings of Minervino Murge and the land use changes in the High Murge, as a contribution to the effort for protecting and safeguarding the peculiar karst environment, including the caves, of this sector of Apulia.