



Hazards in urban areas, with selected case studies from Apulia (southern Italy)

M. Parise

Institute of Research for Hydrogeological Protection, National Research Council, Bari, Italy (m.parise@ba.irpi.cnr.it, +39 080 592 9611)

Natural and anthropogenic hazards are at the origin of huge economic losses for the society, causing both casualties and severe damage to human infrastructures and lifelines. When hazards occur in urban areas, or immediately at the margins of inhabited territories, the consequences are even more serious, and an heavy toll of lives has often to be registered.

Italy is well known as one of the most hazard-prone areas in the world, being affected by a variety of natural disasters, from different types of slope movements to earthquakes, volcanic activity, floods and sinkholes. Further, other hazards are often directly or indirectly caused by man as a consequence of a number of human activities and/or mismanagement of the territory. Even a region as Apulia, the south-eastern heel of the Italian boot, mostly characterized by an overall flat topography, is heavily affected by various types of hazards.

The present paper illustrates some case studies from Apulia, aimed at highlighting the severity of the effects produced by different categories of hazards, their high impacts on the life and development of many towns in the region, and eventually the need to develop a real policy of prevention and monitoring of the urban areas at risk. With such a goal, some case studies of natural and anthropogenic hazards in urban areas of Apulia will be dealt with. These include:

- analysis of sinkholes related to old underground quarries at Gallipoli and Altamura, where in the last decades several events had to be registered, below the built-up areas as well as in the proximity of important communication routes;
- occurrence of landslides affecting the villages of the Daunia Apennines (north-western Apulia), including some considerations about the historical evolution of the most significant phenomena, and the damage produced by slope movements on buildings and roads;
- flooding events at Castellana-Grotte and Bari, with a particular emphasis on flash flood in typical karst environments, characterized by extreme fragility and where the effects of natural disasters are often strongly exacerbated by land mismanagement.