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NATURAL DISASTER MANAGEMENT IN THE URBAN COMPLEX OF ATHENS (GREECE)

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Athens has repeatedly been the reference point of important political, cultural and financial activities, of regional or even global scale, since antiquity. It has experienced a population boom in the last few decades, a fact that has resulted in its accommodating for over 4,000,000 inhabitants, or the 40% of the total population of Greece; and this in an area of approximately 200 sq. km. The city complex is built on a basin that is filled mainly with post-alpine sediments and bounded by mountains consisting mainly of Alpine rocks. The dramatic increase in the area of the urban complex took place without prior consideration of the suitability of expansion land. This resulted in increased vulnerability, mainly in cases of earthquakes and floods.

Seismic risk in Athens is high because of numerous earthquake foci and active faults lying, not so much in the complex itself but, in the nearby Evoikos, Saronikos and Korinthiakos Gulfs, all of which are neotectonic grabens. These facts, coupled with the occurrence of loose sediments in the plains, increases the vulnerability, especially of the large number of high-rise buildings. A recent example of a serious shock was the 1981 Alkyonides earthquake ($M_s=6.1$), which could prove far more disastrous, should it occur a few years from now, when the large-scale project for the gas supply of Athens is fully implemented. In addition to this, the denudation of forests all around the urban complex, as well as human intervention along streams led to high flooding risk. Actually, there has been a number of cases in the last decade of flood disasters, the occurrence rate and the severity of which has increased.

The management of seismic risk in the urban complex of Athens is a multidisciplinary procedure, calling for specialised planning that includes a multitude of data: geological, geotechnical, seismological, urban-planning and land-use. All these can be combined only through the development of a G.I.S.-based data base. Earthquake-risk planning pilot projects have already been accomplished, for two major municipalities in Athens. The management of flooding risk includes a combination of geomorphological, hydrological, environmental and hydraulic research, which can point out the correct measures to be taken. All of them should conform to the ongoing environmental processes, which, have not been successfully dealt with the so far constructed large-scale flood-prevention works. All the same, major projects covering two suburbs of Athens have been carried out, with the aim of reducing flooding risk through systematised intervention and administrative proceedings.