

G.I.S. AS TOOL FOR HYDROGEOLOGICAL RISK EVALUATION IN ARCHAEOLOGICAL AREAS

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In the general context of hydrogeological risk evaluation, the special branch concerning the protection of cultural heritage exhibits peculiar features which in turn impose special solutions and methods. Among the former are especially noteworthy, i) the high vulnerability of archaeological heritage, ii) their "a priori" location in the environment and iii) their desired operational or functional time, which should of course be as long as possible, theoretically infinite. In this framework some modifications to the classical methodology of risk assessment should be considered, for which the use of a relatively new tool as a Geographic Information System may represent the correct approach. In this paper, after a short but rather complete review of the methodological aspects concerning these special features, a series of sample applications of GISs to risk assessment on cultural heritage are shown. It is also showed that, with the systematic use of such instruments, it would be possible to overcome the impasse due to the peculiar aspects of this kind of risk analysis, in every phase from prediction up to prevention and protection. Results not only clearly demonstrate the usefulness of such instruments as well as their flexibility in applications concerning archaeological sites, but also the paramount importance of the knowledge of both natural phenomena and cultural heritage which absolutely require to be exhaustive in their representation and kept up-to-date to the best of our possibilities.