

Preface

Tectonic activity, apart from being a healthy manifestation of the living Earth, has far reaching consequences in human social, economic as well as physical life, since it results often in destructive earthquakes in residential areas. Thus, seismic hazard mitigation turns out to be of imperative concern to the society. For this reason, a great deal of research is directed not only toward our understanding of the complete tectonic evolution of the Earth, but also toward the tectonic activity in relation to the resulting seismicity and the possible alteration of the various geophysical parameters in an effort to deduce meaningful warning signals for potential, oncoming destruction.

It is well-known that tectonic activity results in a number of permanent and/or temporal alterations of geophysical, geodetical, geochemical and geohydrological parameters of the Earth's crust. These alterations reflect the changes in the crustal state of stress and may indicate that critical stresses have been reached. As a consequence, different methods of geosciences are in operation in order to monitor tectonic activity with the purpose of detecting regions and phases of critical stress on the basis of earthquake precursory phenomena. Although the problem of earthquake prediction has not been solved so far, some of the precursory information could probably be used to improve the existing methods of earthquake hazard assessment towards a high resolution, time dependent assessment strategy.

For a fourth successive year, the International Working Group II of EGS sponsored the Symposium "Seismic Hazard Evaluation, Precursory Phenomena and Reliability", in the framework of the Annual General Assembly of EGS in Nice. The aim of this Symposium was to bring together scientists who are involved in monitoring earthquake prone areas with those who are working on earthquake hazard assessments in order to discuss the possibility of obtaining better degree of confidence in seismic hazard estimation by combining the know-how of both groups. This Symposium succeeded, as it does every year, updating a significant and representative sample of the work done in different disciplines with the same purpose, i.e. seismic hazard evaluation all over the world.

This volume contains a part of the papers which were presented in the framework of the symposium, namely those that have successfully completed the peer review procedure according to the international standards, up to the date of publication. They succeed in offering to the reader, in a representative way, a snapshot of the research that is currently in progress in the field of seismic hazard evaluation. The papers which are still under the peer review procedure will be published in a supplementary volume.

M. E. Contadakis and P. F. Biagi