

Preface

Natural hazard and risk assessments can benefit from historical data as these informations enlarge the chronological window on past events. This gives rise to a better knowledge of the location and magnitude of natural phenomena, with a potential to derive social, economic and ecologic informations. A yearly session addressing the link between historical data and natural hazard and risk assessments is organized within the General Assembly of the European Geophysical Society since 1999. The available special issue contains a selection of presentations given to the session NH4 “The use of historical data in natural hazard and risk assessment”, organized within the 27th assembly of the EGS in Nice on 23 April 2002. The session was convened by Michel Lang, Paola Albini and Thomas Glade. A total of 20 oral communications and poster were presented, from which five are included in this special volume.

The presented set of papers focuses on two topics: the methodological framework for historical data collection on floods, earthquakes, landslides and snow avalanches, and the understanding of past variations over the last millennium. The volume gives three presentations on historical floods, an example of a historical analysis of seismic events and finally an overview of a database on natural hazard in a mountainous area.

Barriendos et al. show different methodological aspects concerning historical data collection on floods: critical evaluation of old documentary and instrumental sources, flood-event classification and hydraulic modeling, homogeneity and quality-control tests. Case studies are presented on 3 French rivers dating back 1600 and 3 Spanish rivers from 1300 to 1980. Parise illustrates the flood history in a classi-

cal karstic area of Southern Italy with the main events from the three last centuries. Such information can be used when dealing with the mitigation of flood risk. It enables to disseminate to the population the memory of the past occurrences of flood events and to improve the knowledge of flood hazard. Glaser and Stangl are using long historical flood series in the Dutch Rhine delta, dating back to AD 1350. This provided a valuable information about flood variability, with evidence of active phases. The authors present a first analysis towards the comprehensive understanding of past flood developments, from climatic factors or social aspects. Silveira et al. present an example of a seismic map on the Azores area, which has been updated, taking into account six major volcanic phenomena from 1522 to 1952. Historical information shows a non homogeneous spatial decreasing of local intensity from the eruptive center. Barnikel and Becht give a case study on a mountainous area in Bavaria, with the development of a historical database on natural hazard in the Alps, such as floods, debris-flows, geomorphological or geological events (rock falls, landslides) and snow avalanches. More than 400 references of historical events have been collected and will be used for hazard mitigation.

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Guest Editors