

GEO Geohazards Community of Practice

Hans-Peter Plag, University of Nevada, Reno, Nevada Bureau of Mines and Geology and Seismological Laboratory, Reno, Nevada, USA, hpplag@unr.edu

Increased exposure to natural hazards in combination with limited preparedness and risk reduction leads to a rapidly growing number of major disasters and loss of property and human lives. The concept of the risk management cycle with the four phases of mitigation and preparedness, early warning, response, and recovery captures the steps necessary to reduce the disaster risk. Comprehensive information about natural hazards is a prerequisite for a successful implementation of this concept, but information alone is not sufficient: it needs to be made available to decision makers in an actionable way; decision makers need to have the mandate and will to act on this information; and society needs to be informed and thus enable to judge the decisions made in terms of their potential for success.

Recognizing this complex interplay between available information and eventual disaster risk reduction, the Geohazards Community of Practice (GHCP) of the Group on Earth Observations (GEO) has developed a road map towards the target “by 2020 to put in place all building blocks for comprehensive monitoring of geohazards and the provision of timely information on spatio-temporal characteristics, risks, and occurrence of geohazards, in support of all phases of the risk management cycle, and as a basis for increased resilience and disaster reduction.” In many regions, including those of the growing megacities, geohazards dominate the spectrum of natural hazards. Understanding the associated processes and gaining knowledge of the location and characteristics of these hazards is pivotal for informed risk management. The GHCP road map lays the ground for utilizing the Global Earth Observation System of Systems (GEOSS) in support of all phases of the risk management cycle. To a large extent, the road map is generic and applicable to all natural hazards. The road map is consistent with the declaration of a recent conference on extreme geohazards, which are the agents of the largest disasters. The threat posed by these extremes to an interconnected and exposed society is being addressed in a community white paper.

A key element of the implementation of the road map with a focus on end-to-end links is the “Global Geohazards Information System for Disaster Risk Reduction” (GGIS-DRR), which is developed as a scalable globally available cyber-infrastructure for the sharing of information, data, and next practices, as well as the integration of expert knowledge and crowd sourcing.