

RECOMMENDATION

INTERNATIONAL WORKSHOP
"RECENT GEODYNAMICS, GEORISK AND SUSTAINABLE DEVELOPMENT IN THE
BLACK SEA TO CASPIAN SEA REGION",
3-6 JULY 2005, BAKU, AZERBAIJAN

Adopted by consensus on the 6th of July, 2005

Whereas, natural hazards are an integral component of life from the Black Sea to Caspian Sea region (hereinafter "Region"), and earthquakes, landslides, floods, mud volcanoes, tsunamis and other extreme natural events hit the Region on a regular basis resulting in tragic loss of life and property;

The International Workshop "Recent Geodynamics, Georisk and Sustainable Development in the Black Sea to Caspian Sea Region"

Acknowledging the long-standing and ongoing contributions of
the Commission on Geophysical Risk and Sustainability of the International Union of Geodesy and Geophysics (IUGG) of International Council of Science (ICSU);
the International Geoscience Programme (IGCP) and the International Hydrological Program (IHP) of UNESCO;
as well as contributions by the Azerbaijan, Georgian, Armenian, Russian and Heidelberg Academies of Sciences, respectively;
the American Geophysical Union;
the German Geological Survey (BGR);
the Earthquakes and Megacities Initiative of the International Lithosphere Program (ILP);
the International Science and Technology Center;
the INTAS Program of the European Union;
the U.S. CRDF Program; and
the NATO Science for Peace Program;

Recalling the relevant recommendations of the World Conference on Disaster reduction (WCDR), held in Kobe, Japan, January, 2005;

Noting the valuable contributions to and intensive discussion during the Workshop;

Recognizing that

- (1) the Region is a gateway which connects Europe and Asia, therefore, the safety and security of the Region is of crucial importance;
- (2) the Region plays a key role in the energy supply for many countries, and natural disasters are pending dangers for vulnerable lifelines and constructions such as water supply and reservoirs, pipelines, and power plants;
- (3) An extreme natural event can trigger major social disorder or even conflicts in the Caucasian republics that may have an impact of global significances;

Emphasizing that

- (1) The economic impacts of natural disasters usually, by orders of magnitude, exceed the cost of mitigation;
- (2) Existing technology for satellite observations (e.g., GPS and InSAR), real-time geophysical and environmental monitoring, and natural hazard prediction models (e.g., earthquake, mud volcano, landslide, flood and tsunami warning models and quantitative predictions of extreme events) could prevent loss of life in the Region due to the natural disastrous events if their predictions were timely prepared and delivered and warnings were heeded by the disaster management authorities;
- (3) For an improved management of disaster relief efforts, adequate scientific knowledge, existing technology, and data could provide Regional rescue agencies and national civil

defence managers immediate quantitative estimates of the occurrence, extent and severity of the disaster;

Recommends to governments and funding institutions in cooperation with the relevant UN agencies, ICSU bodies and other international entities, that

- (1) Disaster Management Centre(s) be established in the Region in order to:
 - (i) catalogue and continuously update information on the population and infrastructure at risk and other hazard-relevant data;
 - (ii) monitor land, water, sea and atmospheric processes, and their interaction, in relation to all kinds of natural hazards that can occur, and
 - (iii) assist emergency agencies during disasters by providing timely information;
 - (iv) facilitate regional and international cooperation and coordination;
- (2) Regional earthquake warning system(s) be set up and expanded in order to generate and disseminate timely and accurate information needed by decision makers, media, and the public;
- (3) International and interdisciplinary research programs and networks on geohazards and risks be developed with a view to (i) integrate and provide free-access diverse data streams, (ii) improve understanding of natural phenomena associated with disasters, and (iii) develop predictive modelling capability;
- (4) An efficient collaboration be encouraged between natural and social scientists and engineers, medical professionals as well as with mass-media and policy-makers;
- (5) As a contribution to the UN Decade on Educating for Sustainable Development (UN DESD), education at all levels on natural hazards, disaster mitigation and post-disaster recovery should become a priority topic of the national disaster mitigation policies of the Region;
- (6) Insurance industry be more actively developed and involved in disaster reduction efforts of the Region;
- (7) A partnership be promoted between the corporate industries and the scientific community towards establishing observation systems to enhance the application of geosciences in disaster mitigation; and

Resolves to promote fundamental research on geodynamics and natural and technological hazards in the Region. Namely,

- (1) To develop and to maintain a regional seismic network combining local seismic networks, to monitor earthquake activity and deformation, and to intensify studies on quantitative predictions of large seismic events;
- (2) To develop (i) seismic hazard and seismic risk maps and (ii) tectonic stress map for the Region;
- (3) To concentrate on studies of mud volcanoes combining the monitoring of gas flux, crustal deformation, volcano seismicity, gravity, electromagnetic and radioactivity anomalies with theoretical and numerical modeling;
- (4) To analyze instability of the Black Sea and Caspian Sea bottom sediments using various geophysical techniques and tools (e.g. multibeam bathymetry, high resolution seismic, sea-bottom seismographs); the instability can be associated with the activities of mud volcanoes, landslides, underground flow and seismicity and may result in a considerable damage of offshore platforms, gas and oil pipelines;
- (5) To study the rapid change of the Caspian Sea level and associated sea water intrusion into coastal sweet water;
- (6) To update continuously geological and geophysical data streams made available from scientific and industry sources.