

Declaration on Disaster Risk Reduction Through Research and Assessments

The following Declaration, made by Partners of the Project EXTREME NATURAL HAZARDS AND SOCIETAL IMPLICATION (ENHANS), aims to reinforce the vital link between the scientific community, national governments and the public to mitigate disasters caused by extreme natural events and to contribute to sustainable development of society.

The first decade of the XXIst century has been marked by a significant number of disasters triggered by natural and human-induced hazards, such as devastating earthquakes (e.g. 2004 Sumatra-Andaman in the Indian Ocean, 2005 Kashmir, 2008 Sichuan in China, 2010 Haiti, and 2011 Great East Japan), which triggered tsunamis and landslides; floods (e.g. in western and central Europe in 2002, China in 2007; Taiwan and Philippines in 2009; Pakistan in 2010; and Australia in 2010); cyclones, hurricanes, and severe storms (e.g. Katrina in 2005; and Nargis in 2008); wildfire, and some other natural events resulting in tragic loss of life, property and a nuclear emergency.

The Partners of the Project “Extreme Natural Hazards and Societal Implication – ENHANS” (*in alphabetic order*)

- American Geophysical Union (AGU);
- Global Oceanic Observing System (GOOS) of the Intergovernmental Oceanographic Commission (IOC);
- Integrated Research on Disaster Risks (IRDR) Programme;
- International Geographical Union (IGU);
- International Society for Photogrammetry and Remote Sensing (ISPRS);
- International Union of Geodesy and Geophysics (IUGG);
- International Union of Geological Sciences (IUGS); and
- International Union of Theoretical and Applied Mechanics (IUTAM)

Acknowledging the long-standing and ongoing contributions of the International Council for Science (ICSU); the International Social Sciences Council (ISSC); the United Nations Educational, Scientific and Cultural Organization (UNESCO); the United Nations Environment Programme (UNEP); the United Nations International Strategy for Disaster Reduction (UNISDR); the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER); the World Meteorological Organization (WMO); and other United Nations, intergovernmental, international and national organizations dealing with natural hazards and disaster risks;

Recalling the relevant recommendations of the World Conference on Disaster Reduction in Kobe, Hyogo, Japan, 2005, in particular the Hyogo Framework for Action (2005-2015): Building the Resilience of Nations and Communities to Disasters (HFA); the 2011 IPCC Special Report on Managing the Risk of Extreme Events (SREX); the 2011 Beijing Declaration on Integrated Research on Disaster Risk; and the 2011 ESF-COST Declaration on Extreme Geohazards and the Reduction of Disaster Risks

Considering the rapidly increasing vulnerability to natural and human-induced hazards at global, regional, and local levels; and

2. The number of people affected, and property damage caused by natural events;

Realizing, That disaster risk reduction (prevention, mitigation and preparedness) needs long term planning of scientific research and implementation; and

2. That reducing the impact of disasters should be addressed with higher priority from global background to local levels;

Noting, that the scientific knowledge and expertise in the relevant topics of extreme natural hazards and disaster risks exist in many hazard-prone regions;

2. That existing scientific knowledge and technology for disaster risk assessment and mitigation could provide impetus to more effective preventive measures and recovery processes; and

3. That the research on why, when and how natural hazards turn to be disasters and reduction of predictive uncertainty are the most important scientific agenda items in natural hazard and disaster risk reduction;

4. That the economic impact of disasters exceeds the cost of mitigation by orders of magnitude; and

Call for a reduction of disaster risk through scientific research on disaster risks and through risk assessments; namely,

1. a promotion of comprehensive holistic inter- and trans-disciplinary approaches to natural hazard and disaster risk research, which have to integrate knowledge from natural and social sciences, mathematics, engineering, disaster management, insurance, climate change, sustainable development sectors and other stakeholders dealing with disaster risk;

2. a help in networking existing regional research and educational centers as well as new institutions with the aim to establish regional centers of excellence in disaster risk research and management (e.g., sub-Saharan Africa, Latin America and Caribbean); and

3. a negotiation on setting up a process of assessing and synthesizing the policy-relevant results of peer-reviewed published research on (i) the understanding of the natural phenomena and the social vulnerability associated with disasters; (ii) the capability of predictive systems to disseminate timely and accurate information needed for policy and decision making; (iii) methodologies and approaches for reducing vulnerability and increasing resilience of societies; and (iv) the overall ability of societies to reduce risk (prevent, mitigate and prepare for the increasing impact of natural events). The assessment would contribute to enhance the knowledge of disaster risk at global, regional, and local levels and the awareness of the people living with risk. A high-level intergovernmental body comprising of experts on natural hazards and disaster risk analysis should be set up and undertake the assessment.