Sendai Agreement

The 2nd G-EVER International Symposium and the 1st IUGS & SCJ International Workshop on Natural Hazards was held in Sendai, Tohoku, Japan, 19-20 October 2013. The aim was to discuss how best to reduce the risks of disasters from natural geohazard events such as earthquakes, tsunamis, landslides, and volcanic eruptions. Ninety-four participants representing twelve nations and regions and thirty national and international institutes contributed. A broad consensus for future mitigation strategies was developed, as follows.

1. Study the processes leading to natural disasters through the support of international, broad-based, and inter-disciplinary scientific studies relevant to the entire System Earth.
2. Improve the methods and content of hazard maps, for society and hazard assessment activities in Asia-Pacific region.
3. Create or help build comprehensive international databases, including on past disasters and hazards, and also on geological and geophysical features of subduction zones of the world.
4. Promote scientific research on topics such as geodetic measurements, submarine landslides and predicting the maximum aftershocks from major earthquakes, including the 2011 Tohoku-oki earthquake.
5. Enhance systematic mapping/dating of paleo-tsunami deposits in all regions especially those with significant populations and infrastructure.
6. Promote innovative practical applications of monitoring data.
7. Strive for better hazard assessments by seeking convergence of a variety of methods and disciplines, and also try to understand any discrepancies.
8. Improve the quantity and quality of data on past events (paleo), recent events (modern analogues), including that from monitoring, and other precursors of future events, including better understanding and modeling of what controls occurrence and magnitude of events.
9. Promote better translations from hazard to risk – including damage curves, values at risk, etc.
10. Improve outreach mechanisms, including visualizations, to enhance communication with end users from early stages of research to outreach stages. Develop multidisciplinary teams and communicate uncertainty to end-users.
11. Improve methods for communicating authoritative information to underpin decision-making. Offer training to public officials and local people to reduce geo-risks.
12. Promote the optimum use of geoscientific information by public officials and other decision makers. Lessons-learned and best practices are the most useful types of warning information. Gather feedback from public officials and engage in dialogue about what decisions they need to make and what information they need to make those decisions.
13. Develop creative new options for mitigating impacts, based on scientific, technical and socio-economic expertise, and develop effective means to have advice used in policies/decisions. Engineers, social scientists and economists should be involved.
14. Play international leadership, coordination, and best practices through ICSU.
15. Participate in related global risk reduction efforts, such as Integrated Research on Disaster Risk (IRDR) Program, Future Earth, Global Earthquake Model (GEM), and Global Volcanic Model (GVM).

This agreement was produced and unanimously endorsed by participants at the 2nd G-EVER International Symposium and the 1st IUGS & SCJ International Workshop on Natural Hazards in Sendai, Tohoku, Japan, 19-20 Oct. 2013.