

ISC GeoUnions Standing Committee on Disaster Risk Reduction (DRR)

The Committee for DRR seeks to strengthen the long-standing International Science Council (ISC) leadership in advancing Disaster Risk Reduction

<http://www.iscgdrr.com>

What is Disaster Risk Reduction?

Each year disasters arising from storms, floods, volcanoes, and earthquakes cause thousands of deaths and tremendous damage to property around the world, displacing tens of thousands of people from their homes and destroying their livelihoods.

What is disaster risk?

Disaster risk is often considered to be a function of:

$$\text{Risk} = \text{Hazard} \times \text{Elements at risk} \times \text{Vulnerability}$$

e.g. landslide, flood, storm, earthquake individuals and infrastructure exposed to the hazard or protection of the elements at risk

How to reduce it?

Different strategies can be applied to the components of the risk equation to reduce disaster risk, e.g.:



Controlling the hazard



Avoiding the hazard



Reducing vulnerability

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To achieve DRR, a solid base of political support, laws and regulations, institutional responsibility, and trained people is required in the world scale. Early warning systems should be established and supported as a matter of global policy. Preparedness to respond to the type of hazard a country is vulnerable for should be engrained in society. Education, capacity building and training of support personnel must be part of education systems at various levels. This will allow to prepare a strategy, which will have to be shared with the population to understand decisions and policy made under such conditions. It will significantly strengthen the human resilience from the psychological side, which is a basic condition to face such situations with milder impacts.



Flooded campground in Australia after heavy rainfall in 2021.
Photo: Sisi Zlatanova

Mission

The ISC GeoUnions Standing Committee for Disaster Risk Reduction (DRR) seeks to strengthen the long-standing International Science Council (ISC) leadership in advancing Disaster Risk Reduction (DRR). The International Council of Scientific Unions (the predecessor to ISC) coordinated and represented the science and technology communities in preparation to the 3rd World Conference on Disaster Risk Reduction that reported the Sendai Framework for Disaster Risk Reduction. The ISC and the UN Office on Disaster Risk Reduction co-sponsored the Sendai Hazard Definition and Classification Review to further define the Sendai Framework to provide consistent awareness and terminology to strengthen and clarify actions in support of the Sendai Framework and improved societal well-being.

The GeoUnions Standing Committee of DRR is chaired by Orhan Altan (ISC, ISPRS) and Alexander Rudloff (IUGG).

The Committee consists of appointed members of the following GeoUnions:

- ▶ 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),
- ▶ International Union of Quaternary Research (INQUA),
- ▶ International Union of Radio Sciences (URSI), and
- ▶ International Union of Soil Sciences (IUSS).

Find more information on the ISC GeoUnions here:

<http://www.icsu-geounions.org/>



Flow-like detachment area on the Sarno slope.
Photo: Fabio Terribile



Damaged building after the 2016 Amatrice earthquake in Italy.
Photo: Carlo Doglioni

Committee Goals and Activities

Through its Terms of Reference the Committee has dedicated itself to the following goals and activities:

- ▶ **Facilitate communications** amongst international geo-science bodies, governmental and non-governmental organizations to identify, support and advance initiatives to implement the Sendai Framework through interdisciplinary action.
- ▶ **Organize conferences and workshops** at regional and global level to advance disaster risk management initiatives.
- ▶ **Coordinate and support implementation initiatives** for disaster risk management in accord with the principles and goals of the Sendai Framework.
- ▶ Advise on the **rationale and role that science should play** in the disaster risk management and work to strengthen that rationale and role.
- ▶ **Increase the awareness** and action by the GeoUnions in Disaster Risk Reduction and the implementation of the Sendai Framework as further defined by the ISC report and focus that interest through the publications of the periodic reports on its progress.
- ▶ **Seek for proper financing** to continue its activities. The Committee will work with the ISC and possible other donors and/or agencies to consider options for adequate funding.
- ▶ **Release statements on DRR** from time to time on changing situation.



Engineered structure for debris flow mitigation in Sichuan Province, China.
Photo: Anika Braun

Policy Briefs

As one instrument to facilitate communication between different stakeholders, the Committee releases policy briefs in the context of current DRR challenges. The following policy briefs have been published on the Committee website.

Policy Brief #1: Meteorological Observation and Upper Atmospheric Climate Data Share

Policy Brief #3: Vaccination Against Covid-19

Policy Brief #4: Urgent Call to Save our Waterways and Seas (sea snout outbreak)

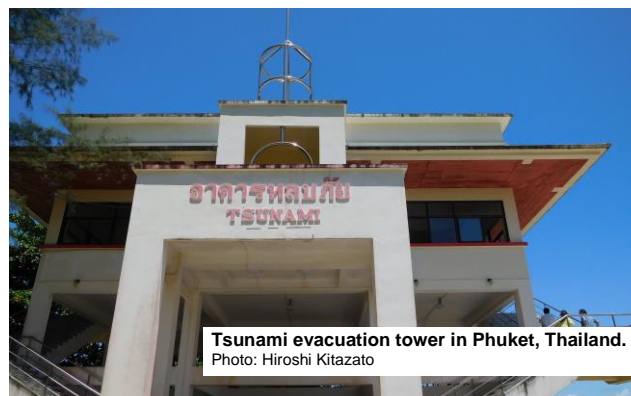
Policy Brief #5: Transdisciplinary approaches for cooperation

Policy Brief #6: Lessons from the Tonga Volcanic Eruption

Conference

Geo-information for Disaster management (Gi4DM) is an annual conference devoted to the use and application of geo-information technology in disaster management. The fundamental goal of the conference is to provide a forum where disaster managers, stakeholders, researchers, data providers and system developers can discuss challenges, share experience, discuss new ideas, demonstrate technology and analyse future research toward better support of risk and disaster management activities. Eleven editions of the conference have taken place since 2005 at different locations around the world. It is organised annually under the auspices of the Committee.

You can find more information and updates on the upcoming Gi4DM on the website: <https://www.gi4dm.net/>



Tsunami evacuation tower in Phuket, Thailand.
Photo: Hiroshi Kitazato

Get in touch with us

You can find more information on the Committee and its activities on the website:

<http://www.iscgdrr.com>

Join our group on LinkedIn:

<https://www.linkedin.com/groups/9064079/>

Follow us on ResearchGate:

<https://www.researchgate.net/project/ISC-GeoUnions-Standing-Committee-on-Disaster-Risk-Reduction>

ISC GeoUnions Standing Committee on DRR

Chair: Orhan Altan, ISPRS, Turkey

Co-Chair: Alexander Rudloff, IUGG, Germany

Headquarters:

Jie Jiang
Yang Deng

Beijing University of Civil Engineering and Architecture
No. 1, Zhanlanguan Road, Beijing 100044, China.



Collapsed bridge after the 2021 Maduo earthquake in China.
Photo: Shi Peijun