

Concept Note of FBAS DRR Session

New data technologies for DRR early warning and early actions

Rationale and Objectives:

The Report of the Midterm Review of the Implementation of the Sendai Framework for Disaster Risk Reduction 2015 – 2030 indicated that “new technology is helping overcome data gaps to enable better decisions”. This has been reflected in the DRR efforts of Sendai Target G “Increase availability and access to early warning systems and risk information”. The new and emerging technologies, including earth observation techniques, artificial intelligence and open science infrastructure, have the potential to provide more timely and reliable data for early warning. The progress in the development of multi-hazard early warning system (MHEWS) has been slow as one in three people globally is not adequately covered by any early warning systems. There is an increasing recognition on this global challenge and UN therefore has been calling for joint efforts in early warning and early actions.

The overall objective of this session is to provide a platform to share the innovations, insights, knowledge and experiences of new data technology for early warning and early actions. The participants will identify the challenges and opportunities for the intersectoral and interdisciplinary collaboration and practice required. The session will contribute to the Priority 5 “Harness technologies, data and knowledge for risk reduction” and Priority 6 “Support regional and national science and knowledge for policy and action” identified in the [*A Framework for Global Science in support of Risk Informed Sustainable Development and Planetary Health*](#) (ISC-UNDRR-IRDR, 2021, hereafter as “Research Framework”). The output of this session will be a concrete contribution to the follow-up actions for the Sendai Midterm Review, the implementation of the Research Framework and the inputs toward IRDR 2024 Conference.

Key questions to be addressed:

- How can DRR community maximize the benefits of new data technologies in forms of information service especially the early warning systems?
- How to best contextualize the development of the early warning systems in the national and regional levels?
- What actions should be taken to improve the public trust on the service of the early warning systems so that the better early actions can take place?

Expected outputs:

- Recommendations on the use of new data technology for the development of MHEWS.
- Suggestions and proposals on collaborative actions for future integrated research and policy supports.

Date and Time:

The session will be a parallel session of the 3rd International Forum on Big Data for Sustainable Development Goals (FBAS2023), scheduled at 17:00-18:30, 6 September 2023.

Proposed Agenda:

Chair:

Yang Saini, Secretary-General of UNDRR APSTAG

Items:

- Brief opening by co-chair (5 min in total)
- Panel presentations (10 min each, 60 min in total)
 - **Long Jiang, Technical Coordinator, WMO-IOC in-situ Observations Programme Support Centre (Ocean-OPS)**
WMO-IOC efforts in MHEWS (pre-record)
 - **Bapon Fakhrudin, Water Sector Lead, Division of Mitigation and Adaptation, Green Climate Fund**
Transforming Disaster Risk Reduction: Innovations in Risk Informed Action & Multi-Hazard Warning Systems
 - **Amod Dixit, President, National Society for Earthquake Technology - Nepal (NSET), Nepal**
The use of digital data and remote sensing for natural hazard and risk assessments and development planning in Nepal (tbc)
 - **Feng Zhang, Professor, Department of Atmospheric and Oceanic Sciences, Fudan University, China**
FuXi: A cascade machine learning forecasting system for 15-day global weather forecast (tbc)
 - **Nurfashareena Muhamad, Head, Southeast Asia Disaster Prevention Research Initiative (SEADPRI-UKM), Malaysia**
Early warning in the urban context (tbc)
 - **Tun Wang, Director, Institute of Care-life, China**
Some progress of & MHEW system in China
- Q&A and discussion from the audience (20 min)
- Summary by co-chair (5 min)

Co-organized by:

Integrated Research on Disaster Risk (IRDR), IRDR-China, Digital Belt and Road (DBAR) Programme DRR Working Group

Conference Link:

<https://fbas2023.scimeeting.cn/en/web/index/17586>