



UN World Conference on
Disaster Risk Reduction
2015 Sendai Japan



WORKING SESSION

Earth Observations and High Technology to Reduce Risks

Session information

Venue: Sendai International Centre. Exhibition Hall 1

Date/time: Sunday 15 March 2015 from 12:00 to 13:30

Chair: Mr. Mohammad Abdul Wazed, Director General, Department of Disaster Management Ministry of Disaster Management and Relief of Bangladesh.

Panel Moderator: Professor Ryosuke Shibasaki, Center for Spatial Information Science, University of Tokyo.

UNISDR focal point: Pedro Basabe

Speakers:

Ms. Barbara Ryan, Secretariat Director, Group on Earth Observations (GEO)

Mr. Toru Nagayama, Secretary General, International Steering Committee for Global Mapping.

Dr. Cosmas Zavazava, International Telecommunication Union, Chief of Department, Project Support and Knowledge Management Telecommunication Development Bureau (BDT).

Prof. Satoshi Tadokoro President-Elected, Institute of Electrical and Electronics Engineers - Robotics and Automation Society.

Panellists:

Ms. Simonetta Di Pippo, Director, United Nations Office for Outer Space Affairs (UNOOSA).

Ms. Sandra Wu, Chair, Private Sector Advisory Group of UNISDR.

Mr. Said Faisal, Executive Director, ASEAN Coordinating Centre For Humanitarian Assistance.

Dr. Renato U Solidum JR, Director of the Philippine Institute of Volcanology and Seismology (PHIVOLCS).

Prof. Gerald Steinbauer, Professor, Graz University of Technology, Austria.

Dr. Shamika Sirimanne, Director, Information and Communications Technology and Disaster Risk Reduction Division, UNESCAP.

Report

1. Introduction

The session focused on the roles of Earth Observation, Geospatial Information, Information and Communication Technologies (ICT) and Robotics in disaster risk reduction, and their contribution to quantitatively monitoring the progress in the implementation of the post-2015 framework for disaster risk reduction.

The session was used to:

- Showcase how these technologies have contributed to the implementation of the Hyogo Framework for Action and how they are actually used at local, national and regional levels, and provide knowledge and timely data and information.
- Present voluntary commitments to support the implementation of the post-2015 framework for disaster risk reduction that is being negotiated at the WCDRR.

Renowned speakers and panellists indicated that Earth observation and space-based technologies combined with in-situ observation technologies and their analysis tools are playing a commendable role in contributing to the generation of relevant information to support decision-making regarding risk and vulnerability reduction and to address underlying factors of disaster risks.

They also made the audience aware of the usefulness of hazard maps, including those targeting urban areas; and on the benefits of the use of the internet to facilitate access to those maps by relevant stakeholders, and to compile and disseminate examples of maps developed worldwide as a way to contribute to the generation of such maps in cities around the world.

Participants in this session were reminded of the great advances in information and communication technologies in recent years, and on the fact that through the use of such ICTs, there is now a huge amount of data to be used in disaster risk reduction. The ICT experts made participants aware that advances in ICTs are allowing more than three billion people to access the internet, and that these technologies, including the use of mobile devices in facilitating access to relevant information, including warnings about potentially catastrophic events.

Experts from the robotics community note the relevance of the use of such devices to collect relevant data particularly in situations where it would be too risky for people to attempt the collection of such data on site. They also made the audience aware of the benefits of such technologies, including unmanned aerial devices, to facilitate spatial awareness regarding events.

Panellist from UNESCAP highlighted the importance of regional cooperation and their efforts in promoting space-derived technology applications for disaster management, operational drought monitoring and preparedness, geoinformation management and institutional capacity development in Asia and the Pacific.

2. Commitments

The panellists and speakers recognized that it is the right time for these technologies to interconnect with each other, and enhance collaboration at regional and global levels; for providers, users and the stakeholders to support effective measures and operations in all phases of the disaster risk reduction cycle through the following voluntary commitments:

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i). **Partners involved in Earth Observation (EO) technologies** presented their voluntary commitment to launch an international partnership to respond to the requirements of the global DRR community which have been addressed in the post-2015 framework for disaster risk reduction. Through this partnership, they will commit to:

- Continue facilitating the dialogue among stakeholders in EO, satellite-based technologies and the global community of DRR experts and policy makers;
- Serve as a collective source and repository of information on efforts carried out worldwide by the EO and the satellite-based technology communities, including surveys and guidelines to improve the applications of existing and emerging technology to monitor hazards, exposure and risks;
- Generate policy-relevant advice to contribute to the integration of EO and satellite-based technologies into the development process and public policies relevant to DRR;
- Facilitate the use of EO and related satellite-based technology to monitor progress in the implementation of the post-2015 framework for DRR.

ii) **Representatives from Information and Communication Technologies (ICT)** presented the voluntary commitment to prepare a list of best practice regarding the deployment and use of ICT and to encourage the adoption of the best practices. The ICT community will convene workshops targeting all relevant stakeholders to develop or to update existing ICT development plans and national disaster management plans consistent with the Smart Sustainable Development Model proposed by ITU.

iii) **Institutions promoting the use of Geospatial information** presented the voluntary commitment to launch a web portal of urban hazard maps of major cities in the world and to update it regularly to monitor the progress of their development conducted by the Member States and other relevant organizations as a potential indicator for the post-2015 framework in order to reduce risks in rapidly expanding urban areas.

iv) **Institutions involved in Robotics and on the promotion of the use of Robotics** in disaster risk reduction, preparedness and emergency response committed to establish a committee of all relevant stakeholders as a way to accelerate the implementation of Robotics and ICT for national disaster management plans and national regulations.

v) **The private sector in the geospatial information industry** expressed its voluntary commitment to support governments and other relevant organizations, even to local communities, in the application of geospatial information technology to reduce disaster risks and increase resilience to disasters as part of the post-2015 framework for DRR, and transfer the best practices to other countries in need of this technology.

3. Discussion with the Audience and Conclusion

Through the discussion involving the floor participants, the session highlighted the importance of enhanced partnership among the technologies and disciplines, focusing on the user needs so that these technologies will play a leading role in implementing the post-2015 framework for disaster risk

reduction, particularly in the area of understanding disaster risks and enhancing the disaster preparedness.

Experts from the audience also pointed out that it is important to take note of synergies and promises scientific engagement for disaster early warning and risk reduction and to consider the role of emerging technologies, such as small satellites.

Discussion suggested that efforts for reinforcing synergies of sectors present at the working session: EO, Geospatial technology, ICT, Robotics and Private sector are necessary and should be encouraged to contribute to disaster risk reduction post-2015 agenda.

The session was concluded with a statement by the Chair that his country, Bangladesh, though being one of the LDC's and the most disaster prone countries in the world and without owning an Earth observation satellite, has been able to significantly reduce the number of casualties due to cyclones through the use of space technology and that further reduction of casualties and disaster risks will become a reality in many other areas of the world through the synergistic applications of these technologies in the implementation of the post-2015 framework for disaster risk reduction.