

# Global Forum on Science and Technology for Disaster Resilience 2017

Science Council of Japan, Tokyo, Japan  
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[日本語]

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## Concept Note

### Sendai Framework for Disaster Risk Reduction 2015-2030

The goal of the Sendai Framework is to prevent new and reduce existing disaster risk, increase preparedness for response and recovery, and thus strengthen resilience. The role of science and technology for implementing the Sendai Framework should not be limited to understanding of risk but to provide sound knowledge and evidence to support actions for implementation for all four priorities of action of the Sendai Framework. The role of the science and technology community is outlined as to focus "on the disaster risk factors and scenarios, including emerging disaster risks, in the medium and long term; increase research for regional, national and local application; support action by local communities and authorities; and support the interface between policy and science for decision-making" (36 (b)).

Public and private investment in disaster risk prevention and reduction was highlighted under priority three "investing in disaster risk reduction for resilience" to save lives and livelihood, reduce losses and ensure effective recovery and rehabilitation. We must encourage wise and informed investment decision making based on scientific evidence and better use of technology. We also need to promote better cooperation between science entities and private sector to develop new products and services to help reduce the risks.

The guiding principles of the Sendai Framework identify States as the primary responsibility to prevent and reduce disaster risk at national level and advocate an effective and meaningful global partnership and the further strengthening of international cooperation.

### The 2016 UNISDR International Science and Technology Conference

To discuss how the science and technology community can best support the implementation of the Sendai Framework, the UNISDR Science and Technology Conference held in Geneva, January 2016, brought together the full diversity of the science and technology community, policy makers, practitioners and researchers from all geographical regions, at local, national, regional and international levels, launched the UNISDR Science and Technology Partnership to build collaboration between major institutions, research centres, and academia working on the different disciplines in developing and applying science and technology to reduce disaster risk.

The conference also adopted the Science and Technology Road Map, which presents under each of the four priority of actions outlined in the Sendai Framework the expected outcomes and proposes key areas of actions that the UNISDR Science and Technology Partnership will undertake to fulfill in order to achieve the goal of Sendai Framework. It also highlights systems for monitoring progress and reviewing needs.

### DRR Indicators and Terminology

The Open-ended intergovernmental expert working group developed a set of possible indicators to measure global progress in the implementation of the Sendai Framework and the updated terminology related to disaster risk reduction. They will be discussed at the UN General Assembly in its seventy-first session.

### Concrete Actions for the way forward

We have now got a DRR framework, science and technology roadmap, and organizing mechanism and tools to operationalize the implementation. There are also important connections for DRR with the Sustainable Development Goals (SDGs) and the Paris Agreement on Climate Change (Paris Agreement). We urgently need to take concrete actions to advance the work of the science and technology in 2017 and beyond.

### DRR National Platform

As a basic strategy to achieve effective disaster risk reduction and build resilience, disaster risk governance should be strengthened at national, regional, and global levels. The Sendai Framework calls for establishment and strengthening of government coordination forums at all levels that are multi-sectoral and stakeholders and all hazards, such as national and local platforms. It is crucial to strengthen the roles of national platforms in disaster risk reduction by providing them with scientific knowledge so that evidence-based policies, strategies, and plans for disaster risk reduction can be developed and implemented more effectively. Furthermore, UN agencies, international development organizations, international scientific and technological initiatives should develop a system to provide support for DRR national platforms and coordination mechanisms. To accelerate efforts for strengthening national platforms at national, regional and global levels, there is a need to develop guidelines for promoting science and technology contributions to DRR national platforms and enhance the interface of science and decision making authorities.

### Science Synthesis

To promote the use of science in DRR policy making and to promote coordination among scientific and technological research activities at national, regional and global levels, Synthesis of scientific evidence should be produced in a timely, accessible and policy-relevant manner; this include comprehensive knowledge on the state of science and technology related to the identification of disaster risks, the assessment of the socio-economic impact of disasters, the approaches to substantial reduction of human and economic losses should be presented in a clear, easy-to-understand way for the worldwide application of disaster risk reduction policies. Integrated synthesis reports should be produced periodically (i.e., mid-term and final reports during the period of the Sendai Framework) and by thematic areas of work under the Sendai Framework priorities of action by coordinating international scientific and technological research initiatives. Collaboration should be strengthened not only among disaster risk reduction community but also with other areas closely related to disaster risk reduction, such as those concerning climate change mitigation and adaptation measures and the achievement of the sustainable development goals.

### Planning Strategy

Increasing disaster resilience and developing sustainability involve many stakeholders. To develop science contribution to

DRR national platform guidelines and synthesis reports, we need to maximize the use of existing knowledge and create new types of science and technology that serve broad and collective societal needs. Building this new approach requires interdisciplinary research, collaboration, and cooperation among all disciplines of natural sciences including Physical, Chemical, and Earth and related Environmental sciences and biological sciences; engineering and technology; medical and health sciences, social and political sciences; and the humanities. Transdisciplinary collaboration and excellent communication between scientists, practitioners, and policy-makers are essential.

Further knowledge of science and technology should be made publicly available and used for practice by strengthening the ties between the science and technology community and private corporations for developing and use of facilities, products and financial mechanisms related to disaster risk reduction. Stronger cooperation between the science and technology community and the private sector are pursued at the following areas: disseminating of risk knowledge better understanding of risks by articulating specific risk factors; promoting public-private partnership for investment in DRR; and monitoring progress of risk-sensitive investment.

### ***Objectives of the Forum***

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To pursue steady implementation of the four priorities for action of the Sendai Framework, the Forum aim to promote all stakeholders to develop plans for the following two outputs through working together in interdisciplinary and transdisciplinary way:

1. Guidelines for Strengthening DRR National Platforms and coordination mechanisms through enhanced contribution of Science and Technology
2. Periodic Synthesis Reports on the state of Science and Technology for Reducing Disaster Risk