

# Chapter 44

## Sendai Framework for Disaster Risk Reduction and the Global Centre for Disaster Statistics

Field of expertise: International Policy for Disaster Risk Reduction

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### Summary

Each country needs to develop a statistical system to monitor disaster loss and damage, but few countries, including developed countries, have such a system in place. Therefore, the International Research Institute of Disaster Science (IRIDeS) at Tohoku University established the Global Centre for Disaster Statistics in April 2015 to support the development of disaster loss and damage statistics, mainly in collaboration with the United Nations Development Programme (UNDP). This chapter reviews the activities of the Centre and summarizes the prospects for future activities.

**Keywords:** United Nations World Conference on Disaster Risk Reduction, Sendai Framework for Disaster Risk Reduction, disaster statistics, United Nations Development Programme, SDGs, Paris Agreement

### Introduction

The Sendai Framework for Disaster Risk Reduction is an official document adopted by the United Nations at the Third United Nations World Conference on Disaster Risk Reduction on March 18, 2015. It is valid for 15 years, until 2030, which is five years longer than its predecessor, the Hyogo Framework for Action (2005-2015). The SDGs were adopted at the UN Summit in New York in September 2015, six months after the Sendai Framework for Disaster Risk Reduction was adopted. Three months later, in December, the UN adopted the Paris Agreement, which is effective from 2020.

### 1: Three International Agendas Related to Disaster Risk Reduction in 2015

These three international frameworks/agendas are closely interconnected. Both climate change mitigation and adaptation approaches are essential for disaster risk reduction as well, since disasters are expected to intensify due to the effects of climate change. Disaster risk reduction is essential for achieving the SDGs because the human and economic losses caused by major disasters that occur once every hundreds of years and minor disasters that occur over and over again hinder sustainable development and social progress. Although it is now a matter of course, the Millennium Development Goals (MDGs), the predecessor of the SDGs adopted in 2000, did not include disaster risk reduction. The Hyogo Framework for Action, on the other hand,

was ambiguously written on the relationship between climate change and disaster risk reduction because some countries were skeptical of it.

## 2: Sendai Framework for Disaster Risk Reduction

The matters on which Japan's diplomacy should lead the world would be peace, nuclear disarmament, and disaster risk reduction. What happened after World War II, when much of the country was turned into scorched earth and all activities were stagnant because of the priority given to military spending? Looking at the disaster loss and damage statistics after the defeat, it is clear that major disasters occurred frequently. With many major cities located on alluvial plains and at high risk of flooding and earthquakes, disaster risk reduction was an unavoidable and urgent issue for Japan in order to rebuild its economy after the war. This was because stable economic development could not be expected if windstorms and floods such as the Toyamaru and Ise Bay typhoons, which caused extensive damage, were frequent. The Basic Plan for Emergency Preparedness, enacted after the Ise Bay typhoon, is of course a domestic law, but its DNA can be seen in the Yokohama Strategy adopted at the first United Nations World Conference on Disaster Reduction in Yokohama in 1994, where Japan served as host country, and has been passed down in the Sendai Framework for Disaster Risk Reduction.

These international disaster risk reduction frameworks are, simply put, international guidelines and prescriptions for disaster risk reduction. What should be done to reduce human and economic loss and damage, and how can socioeconomic development be expected to result from this? Table 44-1 shows a comparison of the three international disaster risk reduction frameworks. One of the features of the Sendai Framework for Disaster Risk Reduction is that it sets seven global targets (Table 44-2).

Table 44-1. Comparison among International Frameworks for Disaster Risk Reduction

	Yokohama Strategy and Plan of Action	Hyogo Framework for Action	Sendai Framework for Disaster Risk Reduction
Term	1994-2004	2005-2015	2015-2030
Key points or Priorities for Action	<ul style="list-style-type: none"> <li>• Disseminate the importance of disaster reduction efforts from the political level to the general public level</li> <li>• Develop risk assessment methods</li> <li>• Promote cooperation among other sectors such as media, science and technology, business, and NGOs in disaster reduction</li> <li>• Disaster monitoring and early information dissemination</li> <li>• Promote cooperation on disaster reduction at the regional level</li> <li>• Promote focused disaster reduction in the Least Developed Countries</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure that disaster risk reduction (DRR) is a national and a local priority with a strong institutional basis for implementation</li> <li>• Identify, assess and monitor disaster risks and enhance early warning</li> <li>• Use knowledge, innovation and education to build a culture of safety and resilience at all levels</li> <li>• Reduce the underlying risk factors</li> <li>• Strengthen disaster preparedness for effective response at all levels</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Understanding disaster risk</li> <li><input type="checkbox"/> Strengthening disaster risk governance to manage disaster risk</li> <li><input type="checkbox"/> Investing in disaster risk reduction for resilience</li> <li><input type="checkbox"/> Enhancing disaster preparedness for effective response, and to "Building Back Better" in recovery, rehabilitation and reconstruction</li> </ul>
Targets	None	None	7 Global Targets

In addition, Build Back Better was also specified among the priorities in Sendai, the site of the Great East Japan Earthquake and Tsunami. The importance of investment in disaster risk reduction was also pointed out, as the concentration of population and overdevelopment due to rapid urbanization, combined with the effects of climate change, will increase the risk of disasters. Other new points include the clarification of the relationship between disasters and health, the inclusion of epidemics, and the importance of sustaining livelihoods in addition to protecting lives from disasters in relation to the SDGs.

Table 44-2. Seven global targets of the Sendai Framework for Disaster Risk Reduction

Global target A	Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality between 2020–2030 compared with 2005–2015.
Global target B	Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 between 2020–2030 compared with 2005–2015
Global target C	Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030
Global target D	Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030
Global target E	Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020.
Global target F	Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030.
Global target G	Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030.

### 3: Global Centre for Disaster Statistics

The International Research Institute of Disaster Science (IRIDsS) welcomed the 3rd United Nations World Conference on Disaster Risk Reduction (WCDR3) to be held in Sendai, and acted from the standpoint of a disaster risk reduction expert to take a bird's eye view of what should be incorporated into the new framework and what should be left behind in Sendai after the conference. Specifically, we envisioned that the setting of numerical targets for disaster risk reduction would be discussed at the conference, lobbied relevant stakeholders, and held several expert meetings at Tohoku University with the United Nations, Japan International Cooperation Agency (JICA), and disaster risk reduction experts, recognizing the need for each country to prepare disaster loss and damage statistics. The aim was to establish a Global Centre for Disaster Statistics at the International Research Institute of Disaster Science in collaboration with the United Nations.

The Global Centre for Disaster Statistics aims to "collect and store disaster loss and damage data from national governments, analyze the data in collaboration with partner institutions, and return the results to national governments for their use in planning disaster risk reduction policies. Existing disaster loss and damage statistics have not been effectively used for planning disaster risk reduction policies in various countries because it was not official and originated from the governments of the countries. It was insufficient in quality and quantity, or countries had unstable systems and limited analytical capabilities. The Centre is innovative in that it aims to collect data managed by governments in a comprehensive and systematic manner. Over the long term, in line with the Sendai Framework for Disaster Risk Reduction, we hope to make a significant contribution to reducing global disaster casualties and economic losses by 2030, when the framework will be effective.

Specifically, the Centre has established a partnership with the United Nations Development Programme (UNDP) to complement/promote the development of national disaster loss and

damage statistics. The Centre will carry out two activities: "Construction of a Global Database (GDB) to consolidate disaster loss and damage statistics of each country in a unified format" and "Support for disaster risk reduction capacity building in developing countries". The GDB to be constructed will be a database that accepts information collected in each country and uses common items as prototypes to enable comparisons among countries. The data will then be analyzed based on the expertise of the International Research Institute of Disaster Science's various research fields in disaster risk reduction, and returned to each country as information that can be used for policy making and development planning. As an example, we are considering contributing to the creation of a report that summarizes the current status of disaster loss and damage and the results of analysis, similar to Japan's White Paper on Disaster Risk Reduction, and building a system that will enable developing countries to easily utilize disaster loss and damage statistics for policy making purposes.

Fujitsu Limited has provided significant support for the construction of the GDB, which will be upgraded in stages. For analysis, we are conducting joint research with Pacific Consultants Co., Limited. In this way, the activities of the Centre are being carried out in collaboration with UNDP, JICA, the private sector, research institutes, and disaster risk reduction-related organizations in Japan and abroad.



Figure 44-1. The launch ceremony of the Global Centre for Disaster Statistics (March, 2015 )

## Conclusion - from the author

The target year for achieving the Sendai Framework for Disaster Risk Reduction which includes the lessons learned from the Great East Japan Earthquake and Tsunami, and the SDGs is 2030, which is only 8 years away. However, the year 2020 delayed the achievement of these goals as the COVID-19 pandemic has been causing a significant drop in the value of gross domestic product around the world. The Global Centre for Disaster Statistics as well as the "2030 Global DRR Agenda Office" of IRIDeS will conduct surveys and research in international disaster risk reduction policy, mainly at the United Nations. At the same time, we would like to actively disseminate effective international disaster reduction policies for the next generation.

## References

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