



## Summary of the Midterm Review of the Sendai Framework for Disaster Risk Reduction

As we approach the midpoint in the implementation of the “**Sendai Framework for Disaster Risk Reduction 2015 – 2030**” (hereafter as to Sendai Framework for DRR), which was adopted at the 3rd WCDRR in 2015 and has been used a global policy guidance for DRR since, Midterm Reviews of the implementation progress are been taken on a national level around the globe.

The Sendai Framework outlines four “**Priorities for Action**” that should be implemented by all stakeholders, and seven “**Global Targets**” which are concrete goals to be achieved.

The City of Sendai, as the place where the Sendai Framework for DRR was adopted, worked together with the International Research Institute of Disaster Science (IRIDeS) at Tohoku University to assess the progress and achievements of the “**Priorities for Action**” and the “**Global Targets**” in Sendai City.

➤ **Priorities for Action** are initiatives that were implemented mainly after FY 2011.

➤ **Global Targets** are being compared to data between 2005-2014, and data between 2015-2021.

### Priorities for Action

...there is a need for focused action within and across sectors by States at local, national, regional and global levels in the following four priority areas

- 1 Understanding disaster risk
- 2 Strengthening disaster risk governance to manage disaster risk
- 3 Investing in disaster risk reduction for resilience
- 4 Enhancing disaster preparedness for effective response, and to “Build Back Better” in recovery, rehabilitation and reconstruction

### Global Targets

...the seven targets have been agreed for measuring achievements, in order to substantially reduce loss caused by disasters

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

March 2023

### < Issued >

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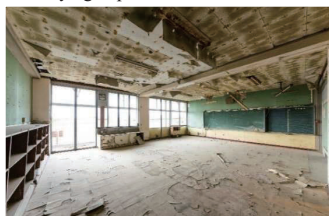
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# 1 Results of Evaluation

## (1) Implementation Status of the Priorities for Action

Priorities for Action		Content of Initiatives	Evaluation
1	Understanding disaster risk	<ul style="list-style-type: none"> <li>Conveying experience of the Great East Japan Earthquake and the lessons learned from the disaster</li> <li>Promoting Sendai's Disaster Risk Reduction Education</li> <li>Sharing disaster risk information (using hazard maps, etc.)</li> <li>Hosting seminars about the Sendai Framework for DRR</li> </ul>	Contribution to <b>the effective access of</b> information about disaster risk (Contributing to <b>Target G</b> )
2	Strengthening disaster risk governance to manage disaster risk	<ul style="list-style-type: none"> <li>Sendai City DRR Strategies (Overall plan, national land resilience regional plan, regional DRR plan, etc.)</li> <li>Creating Areal Evacuation Center Operation Manuals</li> <li>Training of Sendai City Community Disaster Preparedness Leaders (SBL: Sendaishi chiiki Bosai Leaders in Japanese)</li> </ul>	<b>Strengthening regional disaster risk governance</b> by adopting DRR strategies and assigning roles to stakeholders (Contributing to <b>Target E</b> )
3	Investing in disaster risk reduction for resilience	<ul style="list-style-type: none"> <li>Earthquake-resilient pipelines and city-owned facilities, etc.</li> <li>Promotion of earthquake-resilient wooden houses and condominium building</li> <li>Introduction of the Disaster-Resistant Solar Power Generation System in evacuation centers</li> <li>Promotion of green infrastructure</li> <li>Furusato-no-Mori Regeneration Project</li> </ul>	Prior investment can help <b>reduced damages</b> and is linked to <b>the realization of a sustainable society</b> (Contributing to <b>Targets A~D</b> )
4	Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction	<ul style="list-style-type: none"> <li>Implementing Comprehensive Disaster Preparedness Drills, etc. / Registration System for People Requiring Assistance in Times of Disaster</li> <li>Multiple layer defenses against tsunamis</li> <li>Disaster Prevention Collective Relocation and Utilizing Areas Vacated by Collective Relocation Project</li> <li>Restoration of the Minami-Gamo Wastewater Treatment Plant</li> <li>Revitalization of agriculture in eastern Sendai (large scale field development, consolidation and boosting value)</li> <li>Supporting system during times of disaster making use of the experience from the Great East Japan Earthquake</li> </ul>	<b>Strengthening advance preparedness</b> in the recovery and reconstruction process by promoting hard measures which include land use, and soft measures through the cooperation among Self-Help, Mutual Aid and Public Assistance (Contributing to <b>Targets A~D</b> )
Guideline for implementation	Importance of the role of stakeholders	<ul style="list-style-type: none"> <li>Hosting the Sendai Symposium for DRR and the Future</li> <li>Women and DRR City Planning</li> <li>BOSAI-TECH innovation</li> <li>Collaboration and arrangements with other municipalities, private sectors, research institutions, etc.</li> </ul>	"Mainstreaming DRR" through the participation of various stakeholders (Contributing to <b>all Targets</b> )
	International cooperation and global partnership	<ul style="list-style-type: none"> <li>Disseminating information through giving presentations at international conferences and hosting study tours</li> <li>Cooperation in hosting the World BOSAI Forum</li> </ul>	<b>Sharing</b> experiences and lessons learned from the Great East Japan Earthquake <b>with the world</b> (Contributing to <b>Target F</b> )

<Conveying experiences and lessons learned through memorial facilities and DRR education>



<Revitalization of the eastern coastal area which embody the principles of Build Back Better>



<Promotion of DRR via self-help, mutual aid and public assistance>



<Collaboration with various domestic and international stakeholders>



## (2) Implementation Status of Global Targets

✓ : Achieved    ✗ : Not Achieved

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

- Based on regulations of the Sendai Framework for DRR, the results are being compared to data between 2005-2014, and data between 2015-2021 in terms of increases and decreases.
- We assessed targets E, F and G by comparing changes in numbers regarding Sendai City's measures, as these three targets are national level regulations.
- Referred to [the supplementary volume <data edition>](#) for details of the assessment.

## (3) Summary of Data Analysis Results

- Each target can be said **to be going well in terms of their achievements**. However, these results are greatly impacted by the fact that **they are being compared to severe damages caused by the Great East Japan Earthquake**.
- **As a part of the City of Sendai's original evaluation, assessment and analysis per types of disaster was conducted**. In terms of **storm and flood damage**, an increase in house damages and agricultural damages has been observed.
- A steady growth has been observed for international cooperation, however the number of overseas visits has dramatically decreased due to the COVID-19 pandemic.
- It is important to effectively deliver disaster risk information to as many people as possible and to improve the effectiveness of evacuation, including consideration for people requiring assistance in times of disasters. (Taking into account of opinions that were collected from citizens at the Sendai Framework for DRR special course seminar\*.) \* Refer to the next page
- **We were once again reminded of the importance of disaster statistics** in managing progress for the Sendai Framework for DRR and effective DRR investments. In addition, **locations and types of data that are useful for municipalities conducting disaster statistics analysis have been identified** through the approaches of this evaluation.

## 2 Summary and Directionality of Future Initiatives

Points confirmed by the analysis and evaluation	Future Directions
<p><b>To some degree, each of the Priority for Action contributed to the promotion of the Sendai Framework for DRR.</b></p> <p>Countermeasures against earthquake and tsunami achieved some results. However, it is necessary to come up with <b>measures against natural hazards that exceed the scale of the Great East Japan Earthquake.</b></p>	<p>As a Disaster-Resilient and Environmentally Friendly-City, we will continue to strengthen disaster resilient city planning and human capacity building, as well as continuing to promote the Sendai Framework for DRR so as to achieve its goals, while conveying our experience to future generations.</p> <p>With future natural hazards in mind, we will proceed with the implementation of DRR measurements while re-evaluating disaster risks such as tsunami inundation areas and tsunami flood estimates under adverse conditions and estimate potential damages if inland earthquakes were to occur.</p>
<p><b>The importance of countermeasures against storm and flood damages, for which an increase in severity is observed, has been confirmed.</b></p> <p>The importance of involving diverse stakeholders in disaster management and efforts to effectively communicate information to a larger number of people and increase the effectiveness of evacuation has been confirmed</p>	<p>Implementing countermeasures in cooperation with the central government, prefecture, etc.</p> <ul style="list-style-type: none"> <li>• Flood control measures around Sendai Station and development of storm (rainwater) drainage</li> <li>• Promotion of green infrastructure, development of rain gardens (temporary rain reservoirs)</li> <li>• DRR measures for agricultural facilities (High Risk Reservoir, Enhancement of facilities longevity, etc.)</li> </ul> <p>Implementing effective countermeasures to involve more stakeholders.</p> <ul style="list-style-type: none"> <li>• Promoting the creation of a “My Timeline”</li> <li>• Supporting the creation of an evacuation securing plan for facilities dedicated to persons requiring specialized care</li> <li>• Diversifying themes and participants of the Sendai Symposium for DRR and the Future.</li> </ul>
<p>Promotional efforts are required to kickstart international cooperation which halted because of COVID-19.</p> <p>In order to understand effective DRR investments and outcomes, the continuous maintenance of statistics and the collection and storage of records of natural hazards that occurred are important.</p>	<p><b>Sharing the approaches and assessment methods of the Sendai Edition Midterm Review for Sendai Framework for DRR domestically, internationally, and with the UN, while supporting other municipalities that plan to conduct similar evaluations, so as to promote global DRR.</b></p> <p>Future assessment and analysis can be conducted efficiently as a result of this evaluation. Implementing <b>effective DRR measurements that are based on continuous data collection and statistics.</b></p>

### <Opinions and Ideas from Citizens>

At the Sendai Framework for DRR special course seminar, citizens who participated in the seminar discussed the progress of the Sendai Framework for DRR.

- The seminar was held on November 26, 2022.
- There were about 30 participants consisting of people who are working on community DRR issue, people in charge of SDGs at work, and high school students, etc.
- The participants were lectured on the outline of the Sendai Framework for DRR and the summary of the Sendai City Edition Midterm Review for the Sendai Framework for DRR, and discussed present and future initiatives of their own.

### Pictures of the Seminar and Opinions of Participants

It is important for us to create a regional support system for people who require assistance and consideration, such as elderly and disabled persons. We need to encourage everyone to be engaged in DRR.



It is important for the younger generation to take over as leaders.



We need to think about DRR through environmental initiatives such as the sustainable usage of forests.

