

Section 6 Working Group to Consider Future Disaster Prevention and National Resilience Measures

In recent years, natural disasters have become more frequent and devastating, and mega-disasters such as the Nankai Trough Earthquake and the Tokyo Inland Earthquake are becoming more imminent. Five years after the Kumamoto Earthquake, ten years after the Great East Japan Earthquake, and a quarter of a century after the Great Hanshin Awaji Earthquake, it is time to consider new measures to drastically reduce the number of lives lost due to massive natural disasters. To this end, various working groups were established in December 2020 under the private advisory body of the Minister of State for Disaster Management and the Panel on National Resilience (Disaster Prevention and Mitigation), with the participation of experts and related ministries and agencies. The working groups will examine matters related to digital technologies, reducing the disaster risk in advance, Disaster Risk Reduction (DRR) Education and disaster volunteers (The status of the discussions in the following working groups is as of April 30, 2021.).

6-1 Working Group Concerning Technology of Digital and Disaster Prevention

Currently, much of the data that could be useful for reducing disaster risk in advance and rescuing lives after a disaster is scattered and buried. Such data needs to be digitized and analyzed to detect and eliminate problems, and to support decision-making for preemptive action.

To this end, the Cabinet Office has decided to convene a "Digital and Disaster Management Technology Working Group" to study measures to promote digitalization in the area of disaster management.

This working group consists of two teams: the "Future Vision Team" and the "Social Implementation Team". The former discusses the future picture of digital and disaster management technologies that should be pursued on a medium- to long-term (10 years or more) time scale with an eye to future technological innovations, even if they are difficult to realize with current technologies. The latter discusses the implementation of technologies that are already in use on a medium- to short-term (5 years or more) time scale from both technological and institutional perspectives, by identifying issues and suggesting improvements.

The Future Vision Team started its examination on December 21, 2020, and is currently studying the feasibility of digitalization in reducing disaster risks in advance and lifesaving situations such as the ones below.

- Simulation of disaster and response using digital twins
- Real-time information collection and sharing of spatial and infrastructure data using drones, and sensors.
- Digital relocation of administrative organizations, etc., to enable online completion of meetings and administrative procedures.

In addition, the Social Implementation Team started its review on January 18, 2021, and has been studying the problems of digitization in the field of disaster management, such as

- Standardization of data items and acquisition time required in case of disaster.
- Organizing the handling of personal information related to disaster response by local governments.
- Establishment of a system that enables related organizations to collect, analyze, process, and share necessary information without human intervention, as well as the direction of improvement and sophistication of the usability and functions of various systems.



Digital and Disaster Management Technology Working Group
Future Vision Team (The 1st meeting)

6-2 Working Group Concerning Pre-Disaster Prevention-Complex Disasters

Recent flood disasters, such as the Typhoon Hagibis in 2019 (T1919) and the Heavy Rain Event of July 2020, have caused damage to elderly welfare facilities in the flood-prone areas, and have raised issues in terms of reducing disaster risk in advance in disaster hazard areas. In addition, in preparation for an intense tropical cyclone hitting Tokyo Bay, it is necessary to accelerate countermeasures against storm surges in the lowlands of the Tokyo Bay waterfront area, etc., while gaining widespread understanding of the scale of the anticipated disaster.

Furthermore, initiatives for reducing disaster risk in advance of catastrophic natural disasters such as the Nankai Trough Earthquake and the Tokyo Inland Earthquake, as well as responses to complex disasters such as catastrophic natural disasters and infectious diseases, are also urgent issues.

For this purpose, the Cabinet Secretariat established the Working Group on Reducing Disaster Risk in Advance and Complex Disasters under the the Advisory Committee on National Resilience (Disaster Reduction and Mitigation) to discuss the direction of future initiatives in response to the above issues.

Starting with the first working group meeting on January 19, 2021, discussions are now underway on items such as:

- Based on the current status of measures against storm surges in Tokyo Bay, it is necessary to focus on measures in the coastal areas of Tokyo Bay, including the zero-meter zone and areas outside the embankment, where the risk of disaster will increase due to future climate change. The significance of storm surge countermeasures needs to be recognized and measures are to be taken in the same manner as earthquake and flood disaster management.
- With regard to issues and measures for flood control and land use in the basin, it is necessary to focus on the development of areas where the level of development is relatively low in the sections managed by local governments, such as the confluence of tributary rivers, in order to improve the flood control safety of the basin as a whole. In terms of land use, it is important to take a long-term perspective of coexisting with risks and promoting cooperation with urban development. There are also significant differences between regions, so it is necessary to take careful measures to deal with existing facilities and new locations, both long-term and short-term.

- With regard to reducing disaster risk in advance of large-scale earthquakes such as the Nankai Trough Earthquake, there is a need for all parties concerned to work together to consider countermeasures for each type of earthquake, since the characteristics and damage of Nankai Trough Earthquakes, a Tokyo Inland Earthquake, and Subduction Zone Earthquakes in the Vicinity of the Japan and Chishima Trenches differ. It is also necessary to consider countermeasures for recovery based on the assumption of complex natural disasters such as earthquakes and storm surges, floods.
- Regarding the issue of disaster response under conditions of infectious disease epidemics, disaster management is needed to cope with the combined effects of natural disasters and infectious diseases, including measures other than shelter management that take into account countermeasures against new coronavirus infections.
- Enhancement of the vulnerability assessment for national resilience so that it can lead to region-specific measures based on the assumption of multi-hazards and local characteristics.

6-3 Working Group Concerning Disaster Prevention Education-Public Awareness

In order for all citizens to be able to protect their own lives from disasters, it is important to educate them and raise their awareness of disaster risk reduction so that they can acquire the necessary disaster prevention knowledge and proactive disaster risk reduction behavior from childhood. In addition, to ensure that lives saved from disasters are not lost as disaster-related deaths during post-disaster evacuation life, etc., and that the affected people can lead a dignified evacuation life, raising public awareness of mutual support while enhancing support for evacuees by motivated disaster volunteers, and creating an environment conducive to improving life in evacuation are effective measures.

The Cabinet Office has established the Working Group on Disaster Risk Reduction Education and Public Awareness to consider these issues. In this context, 2 teams have been set up. One is the "Disaster Risk Reduction Education Team" that examines the contents and impact of disaster risk reduction education that needs to be enhanced and how to disseminate the contents of such education. The other is the "Disaster Volunteer Team" that examines the systems to motivate local disaster volunteers to improve their skills in supporting evacuees and play an active role in improving evacuees' lives, including the operation of local shelters.

The Disaster Risk Reduction Education Team began its deliberations on December 18, 2020. So far, they have been studying the situation and issues in schools and communities surrounding disaster risk reduction education, as well as the best practices of disaster risk reduction education actually implemented in schools and communities. Also, they are examining the content of disaster risk reduction education that should be aimed for in the future to enable all children to acquire the ability to protect their lives from disasters, such as:

- Implementation of practical disaster risk reduction education and evacuation drills in all elementary and junior high schools to teach the necessary knowledge about local disaster risks and normalcy bias.
- Fostering a proactive and self-motivated attitude toward evacuation, as well as a compassionate attitude toward others through disaster risk reduction education
- Enhancing disaster risk reduction education at the early childcare education level, where parents are highly receptive to disaster risk reduction education and a relatively flexible on-site response is possible.

Implementing seamless disaster risk reduction education from the early childcare to elementary, middle, and high school levels.

- Implementing disaster risk reduction education through cooperation between local communities and schools.

They are also discussing concrete ways to develop such disaster risk reduction education in schools and communities. The significance and necessity of disaster risk reduction education is being examined through the study of its wide-ranging effects, including non-cognitive skills such as resourcefulness and survival skills, love for one's hometown, and a sense of responsibility for the community.

The Disaster Volunteer Team began deliberations on December 25, 2020. So far, they have summarized the following: the lack of manpower and specialized skills of local government officials in managing shelters during large-scale disasters; the fact that although limited in number, disaster volunteers and NPOs with excellent skills are contributing to the improvement of evacuees' living environment; and the fact that in the event of a disaster under the current pandemic conditions or in the event of a mega-disaster, local disaster volunteers will be the main players. In order to improve the support for evacuees' daily lives, the following points are being considered as mechanisms to harness the power of local disaster volunteers:

- Support for disaster volunteer personnel, including systematic training, career path models, and the establishment of a system for certifying the completion of training so that they can improve their skills in supporting evacuees on their own initiative and motivation.
- Establishing local systems to match disaster volunteers with advanced support skills with local communities, developing a database to register such volunteers, and promoting support activities to improve evacuees' living environment through cooperation and collaboration among municipalities, local residents, and disaster volunteers.

In the future, the team will summarize the contents of these activities to determine the necessity of establishing an overall system for evacuation life support and human resource development for disaster volunteers, as well as the specifics of such a system.

【Column】

About the Women's Association for Disaster Management

Disaster response from a woman's perspective is essential for disaster prevention and mitigation, and for building a disaster-resistant society. Women have been involved in the management of shelters and the provision of relief supplies that take women's needs into consideration.

Since FY 2020, the Government has strengthened its efforts by adding the Gender Equality Bureau of the Cabinet Office as a member of the Panel of related ministries and agencies on disaster response, and by including staff of the Gender Equality Bureau in the Cabinet Office Survey Team that is dispatched to affected areas when a disaster occurs.

To further enhance these efforts, the Women's Association for Disaster Management was formed in December 2020 by female employees from the Cabinet Office's Disaster Management Bureau and from the Gender Equality Bureau.

The Women's Association for Disaster Management conducted a survey to find out the needs and challenges of women in times of disaster and how to respond to them. The survey was based on the opinions of the affected and interviews with local government officials, NPOs and other staff members who are involved in disaster response. In addition, from the perspective of ensuring the diversity of the staff, an important factor in responding to disasters from the perspective of women, a questionnaire survey was conducted on the staff at the Cabinet Office Disaster Management Bureau asking about the issues surrounding the staff and their solutions, given the current situation where there are few female members in the Cabinet Office Disaster Management Bureau.

Based on the above, the association is planning to make recommendations on promotion of support for the affected from the viewpoint of women and strengthening of the disaster management system to incorporate women's perspectives in disaster management (as of April 30, 2021).