# Chapter 3 Strategy for Enhancing the Synergy between Climate Action and Disaster Risk Reduction

## 1-1 The Status of Steps to be taken for Strategy for Enhancing the Synergy between Climate Action and Disaster Risk Reduction

Recentry, the country has been struck by frequent floods, inundations and sediment disasters of extreme severity involving heavy rain and typhoons, including Typhoon Faxai and Hagibis in 2019, Torrential Rain of September 2015 in the Kanto and Tohoku Regions, consecutive typhoons of August 2016 in Hokkaido and Tohoku regions, the Heavy Rain Event of July 2017 in Northern Kyushu and the Heavy Rain Event of July 2018.

Observations by the Japan Meteorological Agency have shown that the number of days of heavy rain exceeding 200mm has increased about 1.7 times compared to recent 30-year period (1990-2019) and the 30-year period from the time when statistics were first compiled (1901-1930). Both the frequency and intensity of heavy rain has increased. This climate change is thought to be linked to global warming and the increased frequency and intensity are considered attributable to increased airborne water vapor associated with rising temperatures. The global average temperature is increasing and rose 0.85 °C between 1880 and 2012 based on the IPCC Fifth Assessment Report. Based on observations by the Japan Meteorological Agency, the average temperature of our country has risen 1.24 °C per century from 1898 to 2019.



#### Annual Average Temperature in Japan



Source: Japan Meteorological Agency (website)

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The Paris Agreement set a long-term global objective that the rise in global average temperatures from the pre-industrial era should remain far below 2 °C. For example, if the average temperature were to rise by 2 °C in Japan, rainfall would increase 1.1 times and the frequency of flooding, including rainfall and volume within the scope of the current river planning, would roughly double according to the Ministry of Land, Infrastructure, Transport and Tourism calculations (the Review Committee on flood control plan for climate action (2019 October)). Worldwide, concerns are also growing regarding damage caused by flooding, storm surges due to rising sea levels, heat waves, cold waves and drought associated with climate change.

In the future, risks of climate disasters nationally and globally may increase due to the influence of climate

change. Accordingly, each member of society must recognize how climate change may impact on his/her daily life and raise disaster awareness, e.g. through self-help and mutual support in readiness for disasters. In DRR measures centered on public support, a system must be established, taking into account that disasters caused by climate change are becoming increasingly frequent and severe.

Under the initiative of Mr. Takeda, Minister of State for Disaster Management and Mr. Koizumi, Minister of the Environment, the Disaster Management Bureau of the Cabinet Office and the Ministry of the Environment have convened successive dialogues with experts since February 2020 to discuss policies on the synergy between climate action and DRR. Through this process, both intended to clarify the direction of efforts on enhancing drastic DRR and climate actions, and show what kind of DRR measures adaptive to climate change should be put in place, while ensuring people have a heightened sense of crisis on climate change and DRR.

Collaborative implementation between climate change and disaster management measures has been focused on, even in international politics. Meanwhile, greenhouse gas emission controls (mitigation measures) are progressing as part of efforts to adapt to climate change, given that disasters caused by climate change are becoming increasingly frequent and severe. Accordingly, there has been a greater focus on adaptation measures for climate change. The United Nations also underlined the importance of implementing adaptation measures for climate change and disaster management measures collaboratively rather than in a vertical hierarchy, given the common objective and approach taken to the measures. This collaborative implementation between the Disaster Management Bureau of the Cabinet Office and the Ministry of the Environment is in line with such international trend. Ms. Mizutori, Special Representative of the Secretary-General for Disaster Risk Reduction and the Head of the United Nations Office for Disaster Risk Reduction, participated in the review committee.

This climate change and disaster management measures overlap with some of the Sustainable Development Goals (SDGs) regarding the objectives. Namely, unless the risks of disasters and climate change are reduced, achieving Sustainable Development Goals will be difficult. For example, people affected by disasters come into the poor category (SDG1 (No Poverty)), prevention of water-related disasters (SDG6 (Clean Water and Sanitation), disasters bringing economic losses (SDG 8 (Decent Work and Economic Growth)), disaster and climate change affecting infrastructure, industry and cities (SDG9 (Industry, Innovation and Infrastructure), (SDG11 (Sustainable Cities and Communities), SDG13 (Climate Action). The simultaneous achievements of climate change (The Paris Agreement), disaster prevention and mitigation measures (Sendai Framework for Disaster Risk Reduction) and SDGs (Agenda 2030) are seen as important internationally.

### Review Committee (as of 24 March 2020)



Mr. Takeda, Minister of State for Disaster Management exchanging views



Online conference with the United Nations Office for Disaster Risk Reduction (in Geneva)

1-2 Directions of Reviewing Strategy for Enhancing the Synergy between Climate Action and Disaster Risk Reduction

- Introducing disaster management perspectives taking climate change into consideration with various measures and strategies

Climate change and disaster management measures are cross-cutting challenges and need to be addressed on all fronts. For instance, disaster management measures considering climate change in the community can strengthen community ties and vitalize the regions while measures by companies help improve business continuity and credit of the companies and make employment and the regional economy more stable. Accordingly, there is a need to enhance disaster prevention and mitigation capacity holistically and build a sustainable and resilient society.

- Promoting awareness of self-help and mutual support plus collaboration of stakeholders

It is important for all citizens and companies to understand the increased risk of disaster caused by climate change, raise disaster management awareness and take concrete actions in readiness for such disasters, such as reliable evacuation activities. To promote this, measures to enhance awareness of self-help and mutual support must be taken. Here, collaboration of various stakeholders such as citizens, companies, associations and the government can improve comprehensive capabilities to prevent and mitigate disasters.

- Arranging systems to prevent and mitigate disasters in response to increasing disaster risks

Systems to prevent and mitigate disasters via various structural and non-structural methods must be arranged. These include, for example, improving disaster-related facilities in response to increasing disaster risks due to climate change, discouraging residence in places at high risks of disasters, or – when living in such areas – aiming to ensure all residents are fully aware of the disaster risks and design to live safely.

- Creating new business and market opportunities

There are international trends of increasing awareness of disaster risk caused by climate change and prioritization of adaptation measures. Our structural and non-structural measures for disaster management taking climate change into consideration can also be accepted and utilized overseas as measures to contribute to several SDGs. From this perspective, it is important to seize this opportunity to improve our technologies and insights, leverage them globally and create an environment where climate change × DRR measures are addressed more positively.

## - Accelerating measures for climate change

A fundamental measure to reduce the disaster risks caused by climate change is to control global warming and further measures toward a decarbonized society must be promoted. Moreover, some global warming is unavoidable, even with no additional greenhouse gas emissions. Accordingly, it is important to upgrade climate change risk information taking social vulnerabilities and others into consideration and utilize this information to address mainstreaming climate change in various fields. It should be acknowledged that these can also help measures used to prevent and mitigate disasters.

When reviewing Climate Action and DRR perspective, the above directions will be summarized and stated. Based on this, related ministries and agencies including the Cabinet Office's Disaster Management Bureau, Cabinet Secretariat, National Resilience Promotion Office, Cabinet Secretariat and the Ministry of the Environment will review and take measures to be able to respond to disaster risks at a new stage due to climate change.