

Special Feature. To Protect Our Lives from Large-Scale Disasters

In recent years, there have been a series of large-scale natural disasters in Japan. Especially since the Kumamoto Earthquake in 2016 (hereinafter referred to as the “2016 Kumamoto Earthquake”), large-scale disasters, such as the Heavy Rain Event of July 2018, Typhoon Hagibis in 2019 (T1919), and the Heavy Rain Event of July 2020, have occurred almost every year. In light of those disasters, starting with the amendments of various laws and regulations, several measures have been taken in order to further strengthen the disaster management system. Nevertheless, last year, the heavy rain from July 1 of 2021 caused a massive debris flow in Atami City, Shizuoka Prefecture, which resulted in tragic disaster with many victims.

One of the things which was fully recognized through a series of disaster responses is the importance of “protecting lives.” Indeed, it is of significant importance to mitigate damage to homes and infrastructure, and maintain social and economic activities. However, the importance of connecting lives saved from disasters toward the future as well as protecting precious lives from disasters through a series of disaster responses was fully recognized: appropriate evacuation actions by residents, supplying necessary information regarding disasters for such evacuation, prompt life rescue measures right after a disaster occurs, improvement of evacuation shelter conditions to prevent disaster-related deaths, and COVID-19 countermeasures.

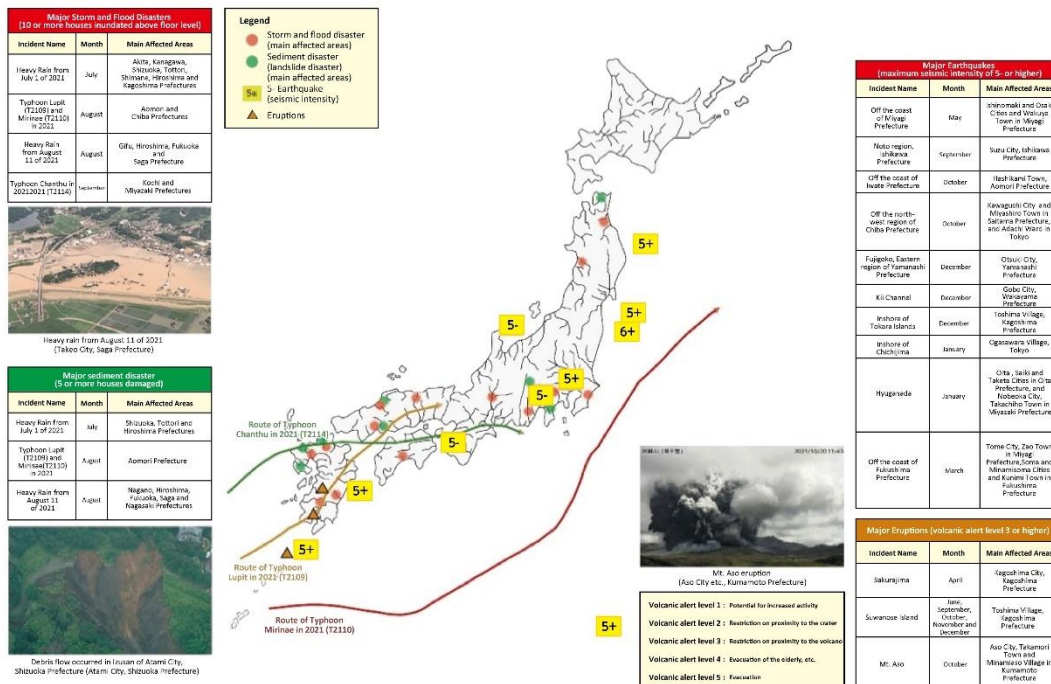
Therefore, the White Paper of 2022 starts with the theme of “To Protect Our Lives from Large-Scale Disasters” in its first section of “Special Feature,” reviewing the major disasters that occurred in FY2021, the damages from each disaster, and the measures taken by the government (Chapter 1). In the next chapter, there is a summary of the progress concerning measures which the government has been undertaking in response to the debris flow disaster in Atami City, which marked a turning point for the government to give a series of considerations such as the prevention of disasters caused by embarkment, the disclosure of personal information including the names of missing people at times of disaster, and measures to encourage residents to evacuate appropriately (Chapter 2). The last chapter of this section introduces an outline of the latest efforts being taken by the government to strengthen disaster management systems. For instance, the Revised Basic Act on Disaster Management was enforced in May 2021 (“Act for Partial Amendment of the Basic Act on Disaster Management” (Act No. 30 of 2021)). This Act obliges municipalities to make a sincere effort to prepare individual evacuation plans for those who require assistance evacuating, and the current status in response to this amendment is reported. In addition, the damage estimation caused by the Megaquake in the Vicinity of the Japan and Chishima Trenches, and other points are described (Chapter 3).

Chapter 1 Major Disasters in FY2021

Natural conditions in Japan are characterized by features promoting various types of disasters. Due to such conditions, a lot of natural disasters including flood, sediment disaster (landslide disaster), and "earthquake/tsunami" occur almost every single year. In recent years, Japan has suffered greatly from large-scale disasters, such as the 2011 off the Pacific coast of Tohoku Earthquake (hereinafter referred to as the “Great East Japan

Earthquake”), the 2016 Kumamoto Earthquake, the Heavy Rain Event of July 2018, Typhoon Hagibis in 2019 (T1919), and the Heavy Rain Event of July 2020. In FY2021, Japan suffered damages from heavy rain from July 1 of 2021, heavy rain in August of 2021, the Earthquake Centered Off the North-West region of Chiba Prefecture on October 7 of 2021, the Earthquake Centered Off the Coast of Fukushima Prefecture on March 16 of 2022, and so on. In particular, the heavy rain event from July 1 to 3, 2021 caused many fatalities in Shizuoka Prefecture and damaged numerous houses and infrastructures in several prefectures throughout Japan. Notably, damage due to debris flow in Atami City, Shizuoka Prefecture was significant.

Major Disasters in FY 2021



Source: Formulated by Cabinet Office on the basis of "Report of Water-Related Disaster in 2021" conducted by Ministry of Land, Infrastructure, Transport and Tourism

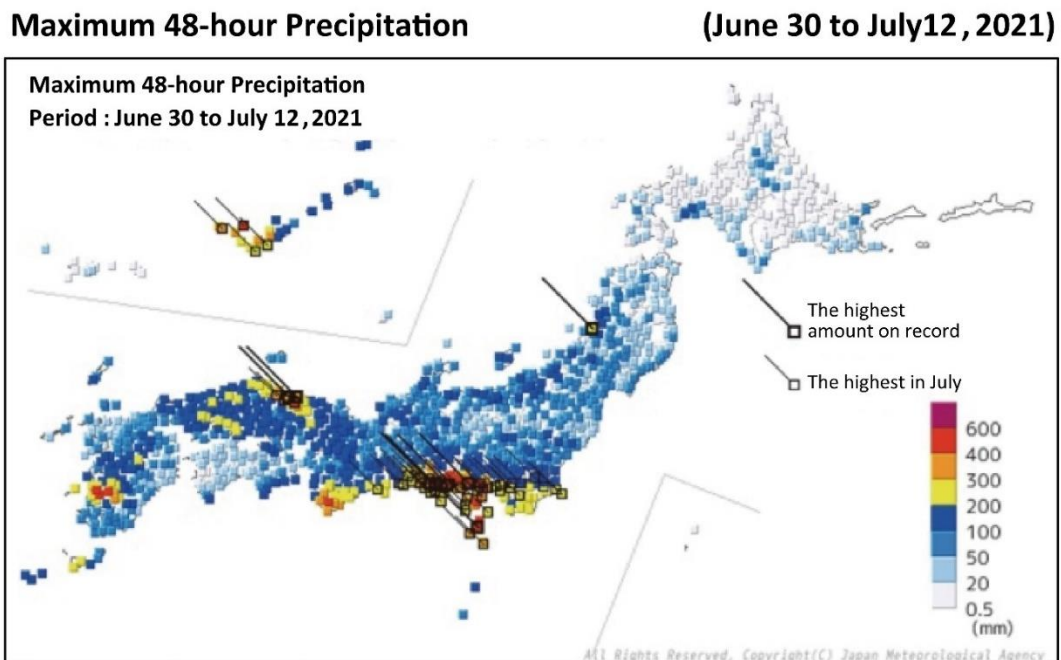
Section 1 Disasters due to Heavy Rain from July 1 of 2021

(1) Overview

The seasonal rain front stagnated over west to east Japan from the end of June to early July in 2021. A constant flow of warm and humid air toward the seasonal rain front caused unsettled atmospheric conditions, bringing about heavy rain over a wide area from west Japan to the Tohoku region.

From July 1 to 3, the seasonal rain front stagnated in the southern coast of the main island of Japan. On July 1, stationary linear mesoscale convective systems occurred over Izu Islands, resulting in rainfall exceeding 300 mm/day. From July 2 to 3, there was intermittent rain mainly in the Tokai and southern area of the Kanto region, which became the highest 72-hour precipitation on record at several sites in Shizuoka Prefecture.

Since July 4, the seasonal rain front gradually moved northward, and this brought rain to the Sea of Japan side from west to east Japan. In particular, on July 7, stationary linear mesoscale convective systems occurred over the Sea of Japan side of Chugoku region, resulting in rainfall exceeding 300 mm/day. On July 8, there was rainfall exceeding 200 mm/day mainly in Hiroshima Prefecture. From the night of July 9 to 10, hazardous and very violent rains fell intermittently with thunder, centering on the southern Kyushu region. This caused record-breaking rainfall as the total amount of rainfall from July 9 exceeded 500 mm in Satsuma Town and Isa City in Kagoshima Prefecture. In response to such heavy rains, the Japan Meteorological Agency issued a heavy rain emergency warning for Kagoshima, Miyazaki and Kumamoto Prefectures. On July 12, the heavy rains became widespread across Japan, resulting in the highest 1-hour precipitation on record in Aomori, Mie, Shimane, and Tottori Prefectures.



Major Precipitation during the Period (June 30-July 12, 2021)

Prefectures	Municipalities	Location Name	Precipitation (mm)
Kanagawa	Hakone-machi, Ashigarashimo County	Hakone	911.5
Kagoshima	Satsuma-cho, Satsuma County	Shibisan	631.0
Kagoshima	Satsuma-cho, Satsuma County	Satsumakashiwabarū	619.5
Shizuoka	Gotenba City	Gotenba	611.5
Kagoshima	Isa City	Okuchi	607.0

Source : Formulated by the Cabinet Office from the Japan Meteorological Agency website

(2) State of Damage

The heavy rain from July 1 of 2021 caused damage due to debris flow mainly in Atami City, Shizuoka Prefecture and other kinds of disasters in different regions, which resulted in 27 deaths (Shizuoka Prefecture), 2 missing (1 in Kanagawa Prefecture and 1 in Shizuoka Prefecture), 2 seriously injured (1 in Shizuoka Prefecture and 1 in Tottori Prefecture) and 10 slightly injured. As for damage to homes, 59 were completely destroyed, 440 were half or partially destroyed, and 2,945 were flooded above or below floor level (Source: Fire and Disaster Management Agency information, as of March 25, 2022).

(Reference: <https://www.fdma.go.jp/disaster/info/items/210701baiuzennsenn36.pdf>)

Human and Housing Damage (as of March 25, 2022)

■ Human Damage

	Death	Missing Persons	Major and Minor Injuries
Gunma	0	0	1
Kanagawa	0	1	1
Shizuoka	27	1	4
Tottori	0	0	4
Okayama	0	0	1
Kagawa	0	0	1
Total	27	2	12

■ Housing Damage

	Completely Destroyed	Half Destroyed	Partial Damage	Inundation above Floor Level	Inundation below Floor Level
Kanagawa	2	1	12	21	438
Shizuoka ^(*1)	54	13	42	147	205
Hiroshima	0	78	155	98	512
Shimane	3	26	86	81	611
Kagoshima	0	0	3	64	182
Other	0	1	23	88	498
Total	59	119	321	499	2,446

(*1) In Atami City, 98 residential homes were reported damaged (as of March 25 by the Fire and Disaster Management Agency), and 128 including non-residential buildings (as of Sep 3 by Atami City).

Source: Prepared by the Cabinet Office from the Fire and Disaster Management Agency website.

This heavy rain caused damage to lifelines such as electrical blackouts and suspension of water supply, and 274 sediment disaster (landslide disaster) cases, including debris flow in Atami City.

In addition, the “Disaster Relief Act” (Act No. 118 of 1947) was applied to 9 cities and 2 towns in 4 prefectures due to this heavy rain.

Damage due to the Heavy Rain from July 1 of 2021



Damage of debris flow in Atami City, Shizuoka Prefecture (Source: Cabinet Office data)



Headwater of debris flow in Atami City, Shizuoka Prefecture (Source: Cabinet Office data)

(3) Response by the Government

The government held an Inter-Agency Disaster Alert Meeting at 12:30 p.m. of July 1, 2021. Then, after debris flow disaster in Atami City, Shizuoka Prefecture occurred around 10:30 a.m. of July 3, an Emergency Response Office in the Prime Minister’s Office was set up at 1:10 p.m. and a Cabinet Office Survey Team was dispatched to the Shizuoka Prefecture Government Office at 2:45 p.m. Furthermore, at 5:00 p.m. on the same day, a Ministerial Meeting (the first meeting) was held in the presence of then Prime Minister Suga, who instructed them “to pay attention to the secondary disasters, proceed with flexible and thorough correspondence, and promptly provide necessary support to shelters and other measures.” On the same day at 5:30 p.m., the Authorized Disaster Management Headquarters for Heavy Rain from July 1 of 2021 was established, and at 7:00 p.m., its first meeting was held. The same meeting was held twice in total by July 5.

At 11:00 a.m. on July 5, the Authorized Disaster Management Headquarters was reorganized into the Extreme Disaster Management Headquarters to reinforce the system, and its first meeting, “Disaster Management Headquarters for Heavy Rain from July 1 of 2021” (the first meeting) was held. At 11:30 a.m. in the presence of then Prime Minister Suga, the same meeting was held three times in total by July 30.

On July 6, then Minister of State for Disaster Management Tanahashi, and on July 12, then Prime Minister Suga visited the affected site in Shizuoka Prefecture respectively. In addition, then State-Minister of the Cabinet Office Akazawa conducted a site visit to 3 prefectures (Shimane Prefecture on July 20, Tottori Prefecture on July 21 and Kagoshima Prefecture on 28), and Minister of State for Disaster Management Ninoyu visited the affected site in Shizuoka Prefecture on November 22.

On July 6, the “Team to Support for Reconstructing Livelihoods of the Affected due to Heavy Rain from July 1 of 2021” was established under the direction of then Prime Minister Suga, consisting of officials at the level of vice-ministers from various ministries and agencies. On July 30, for the purpose of restoring the lives and livelihoods of the affected, the team established a “Set of Support Measures for the Heavy Rain from July 1 of 2021,” as a set of urgent measures to be taken, based on the needs of the affected areas and the characteristics of each area.

On August 31, 2021, the Cabinet approved a cabinet order to designate disasters caused by Heavy Rain from May 7 to July 14 in 2021 as a disaster of extreme severity, and on March 11, it admitted partially amending the cabinet order (See APPENDIX 14-1).



Extreme Disaster Management
Headquarters
for Heavy Rain from July 1 of 2021
(the second meeting)



The affected site visit to Shizuoka Prefecture
by then Minister of State for Disaster
Management from the Cabinet Office
Tanahashi (Source: Cabinet Office)