Chapter 3 Major Disasters in FY 2023

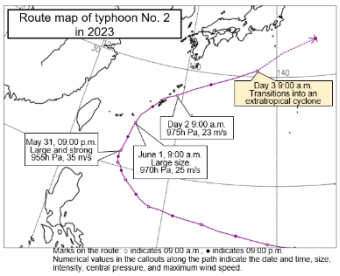
Due to its natural conditions, Japan is prone to various disasters, such as floods, landslides, earthquakes, tsunamis and other natural disasters occurring almost yearly. In recent years, large-scale disasters have occurred, including the 2011 off the Pacific coast of Tohoku Earthquake, the 2016 Kumamoto Earthquake, the July 2018 Heavy Rains, the 2019 East Japan Typhoon, the July 2020 Heavy Rains, the heavy rains that began on July 1, 2021, and Typhoon No. 14 in 2022. Even in FY 2023, damage occurred across Japan due to heavy rains caused by the 2023 rainy season front, Typhoon No. 6 of 2023, Typhoon No. 7 of 2023, Typhoon No. 13 of 2023, and the 2024 Noto Peninsula Earthquake. The 2024 Noto Peninsula Earthquake is summarized in Special Feature 2.

Section 1 Disasters Related to Heavy Rainfall, etc., Caused by the Baiu Rainy Season Front in 2023

(1) Overview

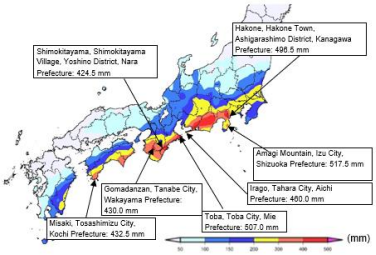
Between May 31 and June 2, 2023, Typhoon No. 2 approached the Okinawa region. The typhoon caused heavy rain in some areas of Okinawa and Amami, with very strong winds creating extremely rough seas. In addition, the rainy season front stagnated near Honshu from June 1 until the morning of June 3. The front became more active on June 2 as the typhoon's very warm and humid air flowed toward it. Heavy rain fell mainly on the Pacific side of Western and Eastern Japan, with stationary linear mesoscale convective systems occurring in Kochi, Wakayama, Nara, Mie, Aichi, and Shizuoka prefectures. Some locations recorded the highest one-hour rainfall ever observed. Additionally, the total rainfall from the start of the rain exceeded 500 mm in the Tokai region and 400 mm in the Shikoku, Kinki, and Kanto regions. Some locations experienced more than twice the average monthly rainfall for June.

Route map of typhoon No. 13 in 2023



Source: Japan Meteorological Agency document

Total rainfall distribution map for the period (June 1 to June 3)



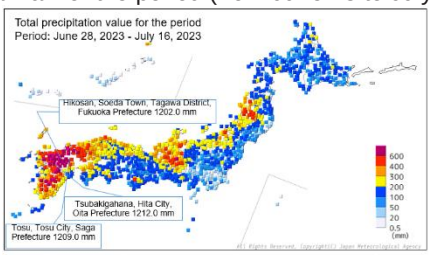
Source: Japan Meteorological Agency document

From June 28 to July 6, widespread heavy rainfall occurred across Japan, excluding the Okinawa region, due to the influence of the rainy season front and cold air aloft. From July 1 to July 3, a stationary linear mesoscale convective system to developed in Yamaguchi Prefecture, Kumamoto Prefecture, and Kagoshima Prefecture (Amami region). The total rainfall from June 28 to July 6 exceeded 700 mm in Kyushu, with some areas surpassing the average July rainfall for the region, particularly in the northern part of Kyushu. Additionally, from July 7 to 10, the rainy season front stalled from western Japan to around the Tohoku region, causing heavy rainfall, particularly in the northern part of Kyushu and the Chugoku region. On July 8, a stationary linear mesoscale convective system developed in Shimane Prefecture, while on July 10, it formed in Fukuoka, Saga, and Oita Prefectures. On the morning of July 10, the Japan Meteorological Agency issued a special emergency warning for heavy rain in Fukuoka and Oita Prefectures. Total rainfall exceeded 600 mm in the northern part of Kyushu. In some parts of northern Kyushu and the Chugoku region, rainfall over four days surpassed the average monthly rainfall for July.

From July 11 to 13, the rainy season front stalled near Honshu, while a low-pressure system passed near Hokkaido, causing heavy rainfall, particularly in the Sanin, Hokuriku, and Hokkaido regions. Late on the night of July 12, stationary linear mesoscale convective systems developed in Ishikawa and Toyama prefectures.

From July 14 to 16, the rainy season front stalled in the Tohoku region, and the influx of warm, moist air toward the front intensified its activity, leading to heavy rainfall, particularly in the northern part of the Tohoku region. In multiple locations in Akita Prefecture, the 24-hour rainfall recorded the highest amount ever observed. Additionally, total rainfall exceeded 400 mm in some areas. In Aomori and Akita Prefectures, the rainfall significantly exceeded the average monthly rainfall for July, resulting in a record-breaking heavy rain event. Furthermore, from July 18 to 19, the frontal activity intensified, causing heavy rainfall in Iwate and Akita Prefectures, with some areas receiving over 100 mm of rain in a single day.

Total rainfall for the period (from June 28 to July 16).



Ranking	Prefecture	Municipality	Location Name (Reading)	Precipitation Amount (mm)
1	Oita Prefecture	Hita City	Tsubakigahana	1212.0
2	Saga Prefecture	Tosu City	Tosu	1209.0
	Fukuoka Prefecture	Soeda Town, Tagawa District	Hikosan	1202.0

Source: Japan Meteorological Agency document

(2) State of Damage

Due to heavy rainfall from May 31 to June 3, 2023, landslides occurred in various areas. In Aichi Prefecture and other regions, 44 rivers managed by the national and prefectural governments overflowed, causing flood damage. As a result, there were 6 fatalities (2 in Shizuoka Prefecture, 1 in Aichi Prefecture, 2 in Wakayama Prefecture, including 1 disaster-related death, and 1 in Okinawa Prefecture), 2 missing persons, 5 seriously injured, and 44 slightly injured. The damage to residential buildings included 21 destroyed buildings, 733 partially destroyed or damaged buildings, and 9,359 buildings flooded above or below the floors (Fire and Disaster Management Agency information as of March 6, 2024). Additionally, lifelines were affected, and a maximum of 1,670 households experienced suspension of water supply and power outages, affecting approximately 17,000 households in the Tokyo Electric Power Company area and about 7,500 households in the Chubu Electric Power Company area. Damage also occurred to transportation infrastructure such as roads and railways.

Heavy rainfall from June 28 to July 13 caused flooding in 15 prefectures, with 119 rivers managed by the national and prefectural governments overflowing, leading to flood damage. In particular, landslides occurred in Kurume City, Fukuoka Prefecture, Karatsu City, Saga Prefecture, and Nanto City, Toyama Prefecture, causing casualties. Additionally, there were human casualties related to submerged vehicles. As a result, there were 13 fatalities (1 in Toyama Prefecture, 1 in Shimane Prefecture, 1 in Yamaguchi Prefecture, 5 in Fukuoka Prefecture, 3 in Saga Prefecture, and 2 in Oita Prefecture), 1 missing person, 10 seriously injured, and 9 slightly injured. The damage to residential buildings included 63 destroyed buildings, 1,592 partially destroyed or damaged buildings, and 6,255 buildings with flooding above or below the floors (Fire and Disaster Management Agency information as of March 6, 2024). Lifelines were also affected, and a maximum of 8,997 households experienced suspension of water supply and power outages, affecting approximately 5,000 households in the areas served by Chugoku Electric Power and Kyushu Electric Power.

Heavy rainfall from July 14 to 19 caused inland flooding and other damage, primarily in Akita City, Akita Prefecture. Additionally, 16 rivers under Akita Prefecture's control overflowed, causing flood damage. As a result, there was 1 fatality (in Akita Prefecture), 1 seriously injured person, and 4 people were slightly injured. The damage to residential buildings included 11 destroyed buildings, 2,912 partially destroyed or damaged buildings, and 4,097 buildings flooded above or below the floors (Fire and Disaster Management Agency information as of March 6, 2024).

Additionally, in Akita Prefecture, a maximum of 10,840 households experienced suspension of water supply, and the Self-Defense Forces and Japan Coast Guard provided water supply support. The Self-Defense Forces also transported patients and removed disaster waste in Akita City.

(3) Response by the Government

Regarding the heavy rainfall from May 31 to June 3, 2023, the government established an information contact office at the Prime Minister's Office at 3:30 p.m. on June 1. The office held an Inter-Agency Disaster Alert Meeting. An Inter-Agency Disaster Management Meeting was held at 4:00 p.m. on June 2. On June 9, Nakano, then Parliamentary Vice-Minister of the Cabinet Office, visited the disaster-affected areas in Ibaraki and Saitama Prefectures.

The "Disaster Relief Act" was applied to 6 cities and towns in 4 prefectures, and the "Act on Support for Reconstructing Livelihoods of Disaster Victims" was applied to 4 cities and towns in 2 prefectures.

Regarding the heavy rainfall from June 28 to July 13, the government established an information contact office at the Prime Minister's Office at 3:00 p.m. on June 29. The office held an Inter-Agency Disaster Alert Meeting. Subsequently, an Inter-Agency Disaster Management Meeting was held at 3:30 a.m. on July 3, and 5 such meetings were held by July 14. Additionally, the information contact office established on June 29 was reorganized into the Emergency Contact Office in the Prime Minister's Office at 6:40 a.m. on July 10. On July 13, then Minister of State for Disaster Management, Tani, visited the disaster-affected areas in Fukuoka and Saga Prefectures. On July 24, he visited the disaster site in Toyama Prefecture. Furthermore, on July 27, Prime Minister Kishida visited the disaster-affected areas in Fukuoka Prefecture.

Regarding the heavy rainfall from July 14 to 19, the government established an information contact office at the Prime Minister's Office at 3:45 p.m. on July 13. The office held an Inter-Agency Disaster Alert Meeting. Additionally, an Inter-Agency Disaster Management Meeting was held at 11:15 a.m. on July 18. On July 21, then Minister of State for Disaster Management Tani visited the disaster site in Akita Prefecture.

The "Disaster Relief Act" was applied to 39 municipalities in 9 prefectures, and the "Act on Support for Reconstructing Livelihoods of Disaster Victims" was applied to 9 municipalities in 5 prefectures.

Regarding the designation of a disaster of extreme severity, a cabinet decision was made on August 25, 2023, to designate the disasters caused by heavy rain and storms between May 28 and July 20, 2023, as severe disasters.

Inspection of the disaster site in Toyama Prefecture by then Minister of State for Disaster Management, Tani (Cabinet Office data)

Then Minister of State for Disaster Management, Mr. Tani, inspected the disaster site in Akita Prefecture (Cabinet Office data)

Section 2 Disaster Due to Typhoon No. 6 in 2023

(1) Overview

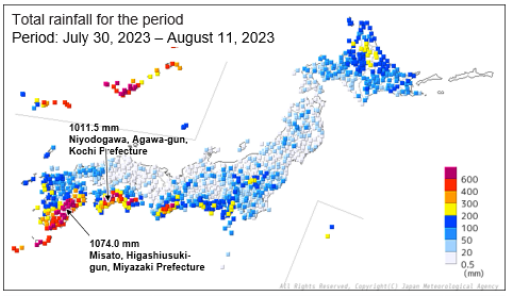
Typhoon No. 6, which formed east of the Philippines on July 28, 2023, approached the Okinawa region with a large size and very strong intensity between August 2 and 3. Afterward, the typhoon moved west, stalled almost completely in the East China Sea, and on August 4, it changed its course eastward. It then approached Okinawa and Amami again at a slow speed between August 5 and 6. On August 7, the typhoon changed its course to the north, moved northward over the sea west of Kyushu on August 9, and transformed into an extratropical cyclone over the Korean Peninsula on August 10.

From July 30 to August 11, the total rainfall in Okinawa and Amami exceeded 700 mm in some areas, more than 4 times the average rainfall for August. Additionally, in the southern part of Kyushu and Shikoku, where rain was falling even before the typhoon approached, some areas recorded over 1,000 mm of rainfall, exceeding twice the average August monthly rainfall.

Stationary linear mesoscale convective systems were formed in Okinawa, Kagoshima, Kumamoto, Miyazaki, Oita, Ehime, and Kochi prefectures.

In the Okinawa region, the maximum wind gust speed exceeded 50 m/s, breaking the all-time record for August in some areas. Strong winds persisted as they approached again, with their effects lasting for an extended period. After August 8h, as the typhoon moved north, strong winds intensified, particularly in the Kyushu and Shikoku regions. In southern Kyushu, some areas recorded maximum wind gust speed exceeding 40 m/s.

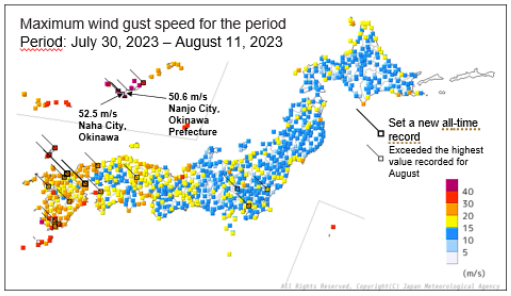
Total rainfall for the period (July 30 to August 11)



Ranking	Prefecture	Municipality	Location Name (Reading)	Precipitation Amount (mm)
1	Miyazaki Prefecture	Misato Town, Higashiusuki District	Mikado	1074.0
2	Agawa District, Kochi Prefecture	Niyodogawa Town	Torigatayama	1011.5

Source: Japan Meteorological Agency document

Maximum wind gust speed for the period (July 30 to August 11)



Ranking	Prefecture	Municipality	Location name (Reading)	Wind speed (m/s)	Wind direction	Date and time
1	Okinawa Prefecture	Naha City	Naha	52.5	ESE	Day 2, 4:14 p.m.
2	Okinawa Prefecture	Nanjo City	Itokazu	50.6	E	Day 2, 1:55 p.m.

Source: Japan Meteorological Agency document

(2) State of Damage

Typhoon No. 6 of 2023 caused landslides in 5 prefectures, including Okinawa, and flooding in nine rivers managed by prefectural governments in Kagoshima Prefecture and other areas. As a result, there was 1 fatality (in Okinawa), 7 serious injuries, and 96 minor injuries. Damages to residential buildings included 5 completely destroyed buildings, 273 buildings partially destroyed or damaged, and 145 buildings with flooding above or below the floor (The Fire and Disaster Management Agency data, as of March 6, 2024). Additionally, a maximum of 215,800 households experienced power outages in the Okinawa Electric Power service area. Due to the prolonged impact of the typhoon, power restoration took approximately one week.

(3) Response by the Government

The government established an information contact office at the Prime Minister's Office at 3:45 p.m. on July 31, 2023. The office held an Inter-Agency Disaster Alert Meeting. Additionally, on August 3 at 3:45 p.m., an Inter-Agency Disaster Management Meeting was held, and by August 7, two such meetings had been conducted. On August 4, then Minister of State for Disaster Management, Tani, held a disaster response consultation with Okinawa Governor Tamaki.

On August 7, the Japan Coast Guard and the Self-Defense Forces transported materials and personnel by aircraft to Tokashiki Island and Izena Island to restore power to the remote islands.

The "Disaster Relief Act" was applied to 34 cities, towns, and villages in Okinawa Prefecture.

Disaster response consultation between then Minister of State for Disaster Management, Tani, and Okinawa Governor Tamaki (Cabinet Office data)

Disaster relief activities (Air transport of personnel and relief supplies (Izenamura)) (August 7)
Source: Ministry of Defense Joint Staff Office website

Section 3 Disaster Due to Typhoon No. 7 in 2023

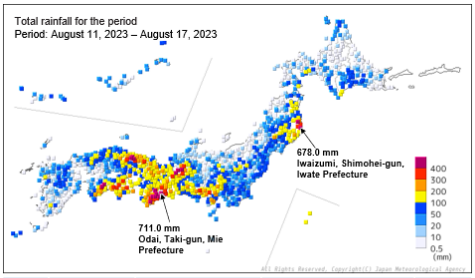
(1) Overview

Typhoon No. 7, which formed off the coast of Minamitorishima on August 8, 2023, moved westward and approached the Ogasawara Islands on August 11. From August 12 to 15, the typhoon moved northwest from the waters near the Ogasawara Islands to the south of Japan, resulting in landfall in Wakayama Prefecture before 5:00 a.m. on August 15. It then moved northward through the Kinki region and reached the Sea of Japan by the evening of August 15. It then moved north across the Sea of Japan and transitioned into an extratropical cyclone over the waters west of Hokkaido on August 17.

Heavy rainfall occurred primarily in the Tokai, Kinki, and Chugoku regions along the typhoon's path. From August 11 to 17, total rainfall exceeded 700 mm in some areas, and in parts of the Chugoku region, it surpassed three times the average monthly rainfall for August. Additionally, stationary linear mesoscale convective systems developed in Iwate Prefecture on August 12 and in Okayama and Tottori Prefectures on August 15.

Very strong winds were recorded in areas close to the typhoon's path. On August 11, a maximum wind gust speed exceeding 30m/s was recorded in Tokyo (Ogasawara Islands). Between August 14 and 15, Mie and Hyogo Prefectures recorded maximum instantaneous wind speeds over 30 m/s, setting new records for the highest values ever recorded in August. Furthermore, on August 15, tornadoes and other gusty winds caused damage in Aichi, Shizuoka, and Saitama Prefectures.

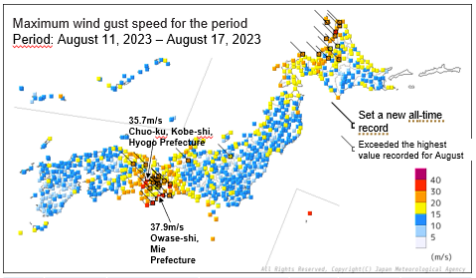
Total rainfall for the period (August 11 to August 17)



Ranking	Prefecture	Municipality	Location Name (Reading)	Precipitation Amount (mm)
1	Mie Prefecture	Odai Town, Taki District	Miyagawa	711.0
2	Iwate Prefecture	Iwaizumi Town, Shimohei District	Omoto	678.0

Source: Japan Meteorological Agency document

Maximum wind gust speed for the period (August 11 to August 17)



Ranking	Prefecture	Municipality	Location name (Reading)	Wind speed (m/s)	Wind direction	Date and time
1	Mie Prefecture	Owase City	Owase	37.9	East-northeast (ENE)	Day 15, 2:16 p.m.
2	Hyogo Prefecture	Chuo Ward, Kobe City	Kobe	35.7	North-northeast (NNE)	Day 15, 6:59 p.m.

Source: Japan Meteorological Agency document

(2) State of Damage

Typhoon No. 7 of 2023 caused 24 rivers under national and prefectural management to overflow in Kyoto Prefecture, Tottori Prefecture, and a total of one prefecture-level administrative division and nine prefectures, resulting in flood damage. The human casualties included 9 people severely injured and 59 people with minor injuries. Damages to residential buildings included 4 completely destroyed buildings, 258 buildings partially destroyed or damaged, and 692 buildings with flooding above or below the floor (The Fire and Disaster Management Agency data, as of March 6, 2024).

In addition, the impact on transportation was severe, including suspension of operations of highways, suspension of train services, and flight cancellations. Furthermore, landslides and other debris caused road closures on national highways and other routes, resulting in temporary isolation in one prefecture-level administrative division and two prefectures, including Tottori Prefecture.

(3) Response by the Government

The government established an information contact office at the Prime Minister's Office at 3:00 p.m. on August 10, 2023. The office held an Inter-Agency Disaster Alert Meeting. (a second meeting was held on August 14). Subsequently, at 4:40 p.m. on August 15, the information contact office was reorganized into the Emergency Contact Office in the Prime Minister's Office. Additionally, on August 19, then Minister of State for Disaster Management, Mr. Tani, visited the disaster-affected areas in Kyoto, Hyogo, and Tottori Prefectures.

The "Disaster Relief Act" was applied to 3 prefectures and 7 cities and towns.

Regarding the designation of a disaster of extreme severity, a cabinet order was passed on October 6, 2023, to designate the disaster caused by the storms and heavy rain from August 12 to August 17, 2023, as a severe disaster.

Then Minister of State for Disaster Management, Mr. Tani, inspected the disaster sites in Tottori Prefecture (Cabinet Office Data)

Then Minister of State for Disaster Management, Mr. Tani, inspected the disaster sites in Hyogo Prefecture (Cabinet Office Data)

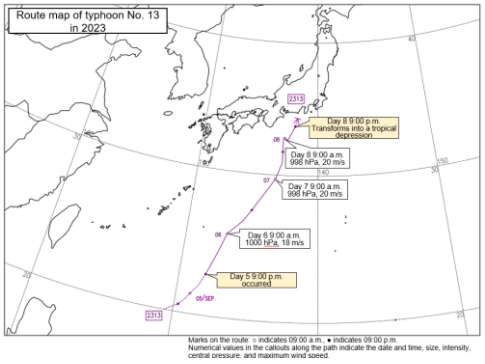
Section 4 Disaster Due to Typhoon No. 13 in 2023

(1) Overview

Typhoon No. 13, which formed south of Japan on September 5, 2023, moved northward south of Japan by September 7 and transitioned into a tropical depression off the coast of Tokaido on September 8. As the typhoon moved northward, warm and moist air from the south flowed in, leading to rain clouds away from the typhoon's center, resulting in heavy rainfall along the Pacific side of the Kanto-Koshin and Tohoku regions from September 8 to September 9.

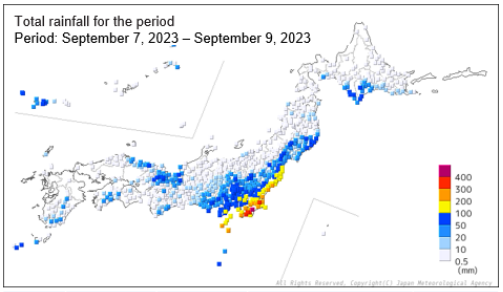
In Tokyo (Izu Islands), Chiba Prefecture, Ibaraki Prefecture, and Fukushima Prefecture, stationary linear mesoscale convective formed, resulting in intense rainfall exceeding 80 mm per hour in some areas. In these regions, some locations recorded the highest hourly rainfall ever observed, while others experienced total rainfall exceeding 400 mm from September 7 to September 9, surpassing the average September monthly rainfall.

Route map of typhoon No. 13 in 2023



Source: Japan Meteorological Agency document

Total rainfall for the period (September 7 to September 9)



Ranking	Prefecture	Municipality	Location Name (Reading)	Precipitation Amount (mm)
1	Chiba Prefecture	Mobara City	Mobara	405.0
2	Chiba Prefecture	Kimitsu City	Sakahata	387.5

Source: Japan Meteorological Agency document

(2) State of Damage

Typhoon No. 13 of 2023 caused 40 rivers managed by prefectural governments to overflow in Fukushima, Ibaraki, and Chiba prefectures, resulting in flood damage. Human casualties included 3 fatalities (1 in Fukushima Prefecture and 2 in Ibaraki Prefecture) and 21 people with minor injuries. The damage to residential buildings included 19 destroyed buildings, 2,257 partially destroyed or damaged buildings, and 4,125 buildings flooded above or below the floors (Fire and Disaster Management Agency information as of March 6, 2024). Furthermore, lifelines were also damaged; a maximum of 176 households experienced suspension of water supply, and approximately 10,000 households suffered power outages in areas serviced by Tokyo Electric Power Company and Chubu Electric Power Company. Additionally, there was damage to railroads, including the washing away of track beds.

(3) Response by the Government

On September 7, 2023, at 3:00 p.m., the government established an information contact office at the Prime Minister's Office. The office held an Inter-Agency Disaster Alert Meeting. Additionally, on September 20, the Minister of State for Disaster Management, Mr. Matsumura, visited the disaster-affected areas in Fukushima and Ibaraki Prefectures. On September 27, he visited the disaster-affected areas in Chiba Prefecture.

The "Disaster Relief Act" was applied to 13 cities and towns in 3 prefectures, and the "Act on Support for Reconstructing Livelihoods of Disaster Victims" was applied to 5 cities and towns in 3 prefectures.

Regarding the designation of a disaster of extreme severity, a cabinet order was passed on November 7, 2023, to designate the disaster caused by a rainstorm from September 4 to September 9, 2023, in areas such as Otaki Town, Isumi District, Chiba Prefecture, as a severe disaster.

Minister of State for Disaster Management, Mr. Matsumura, visited disaster-affected areas in Ibaraki Prefecture (Cabinet Office data)

Minister of State for Disaster Management, Matsumura, visits disaster-affected areas in Fukushima Prefecture (Cabinet Office data)

Minister of State for Disaster Management, Matsumura, visits disaster-affected areas in Chiba Prefecture (Cabinet Office data)

Section 5 Response by volunteers and NPOs

(1) Volunteer Response to Major Disasters in 2023

In the disasters caused by heavy rains associated with the 2023 rainy season front, Disaster Volunteer Centers (hereinafter referred to as "Disaster VCs") were established by social welfare councils in 13 cities and towns in Ibaraki, Saitama, Shizuoka, Aichi, and Wakayama Prefectures. Approximately 5,900 volunteers participated in activities through these Disaster VCs (as of November 13, 2023). In addition, Disaster VC was established in 23 cities and towns in Akita Prefecture, Toyama Prefecture, Ishikawa Prefecture, Shimane Prefecture, Yamaguchi Prefecture, Fukuoka Prefecture, Saga Prefecture, and Kumamoto Prefecture by social welfare councils. Approximately 25,000 volunteers participated in activities (as of November 30, 2023) through these Disaster VCs.

In the disaster caused by Typhoon No. 13 of 2023, Disaster VCs were established by social welfare councils in 7 cities and towns in Fukushima, Ibaraki, and Chiba Prefectures. Approximately 11,000 volunteers participated in activities through these Disaster VCs (as of November 30, 2023).

In the affected areas, disaster victim support activities were carried out based on local circumstances. These included cleaning and tidying up damaged houses, removing disaster debris, transporting sediment from inside houses and waterways, distributing supplies at evacuation centers, and assisting with relocation from shelters.

Furthermore, in addition to volunteering support provided through disaster VCs, specialized NPOs and other organizations carried out a wide range of support activities. These included assistance with evacuation center operations, technical support for damaged houses such as debris and rubble removal, handling of disaster waste in the affected areas, support for evacuees at home, creating safe spaces for children, and providing mental health care.


Disaster relief activities by volunteers (Material from Akita Prefecture Council of Social Welfare)


Volunteer activities by NPOs, etc., with expertise (JVOAD data)

(2) Collaboration among government, volunteers, NPOs, etc.

In the disaster-affected areas of Akita and Saga Prefectures, various disaster support organizations, including the government, social welfare councils, and NPOs, held “Information Sharing Meetings”. These served as platforms to share information about support activities and coordination efforts. Through these meetings, coordinated support from the government, volunteers, and NPOs was implemented to address the needs of disaster victims and assist evacuees at home.

Additionally, on a national level, the Cabinet Office, the Japan Voluntary Organizations Active in Disaster (JVOAD), the National Council of Social Welfare, and the Disaster Volunteer Support Project Meeting (Support P) held the “National Information Sharing Meeting (Core Meeting)” In these meetings, information about the affected areas held by each organization was shared and discussed methods for future disaster support.

Information sharing meeting in Akita prefecture (JVOAD data)

Information sharing meeting in Saga prefecture (Saga Disaster Relief Platform data)