

Section 2: Disaster Management Frameworks, Disaster Response, and Preparation

2-1 Revision of the Basic Plan for Disaster Risk Reduction

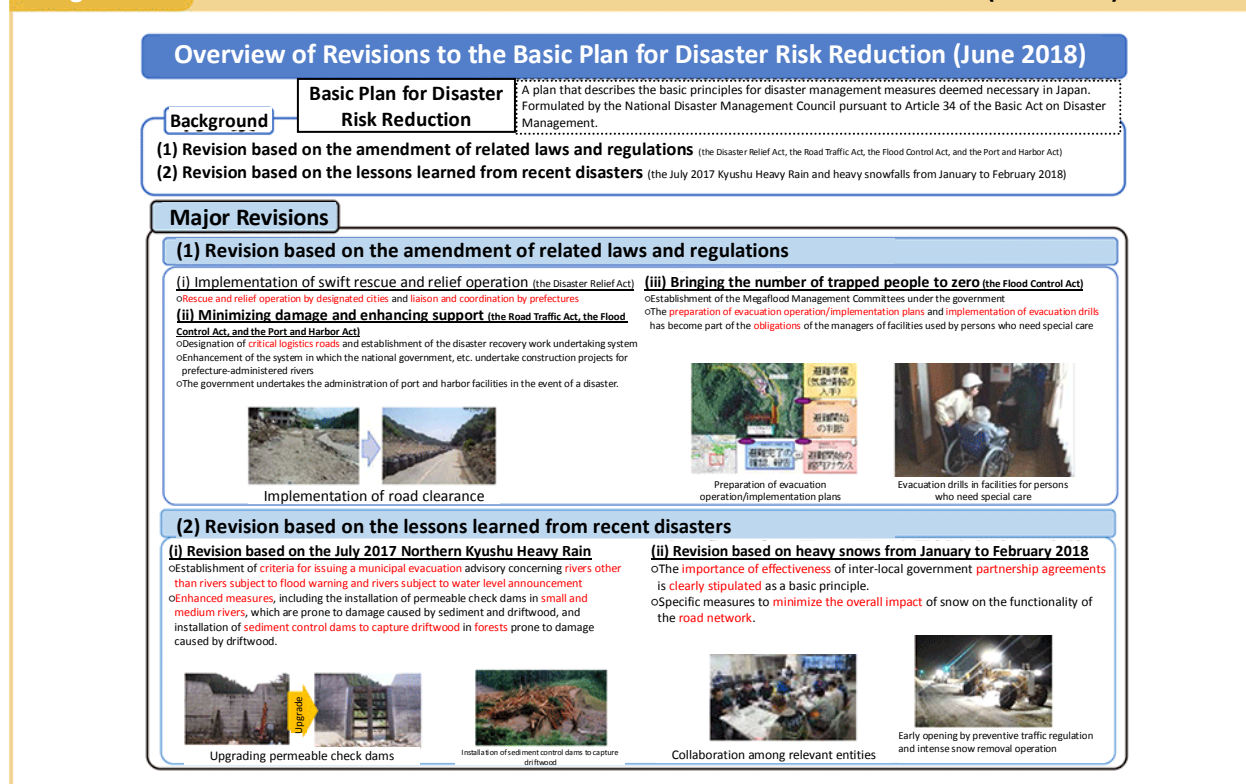
The Basic Plan for Disaster Risk Reduction is decided by the National Disaster Management Council in accordance with Article 34 of the Basic Act on Disaster Management. It is reviewed annually and revised when deemed necessary, to take account of the findings from scientific research concerning disasters and their prevention, as well as disasters that have occurred and the effects of emergency disaster management measures implemented in response. Local governments are required to develop Local Plans for Disaster Risk Reduction, while Designated Administrative Organizations and Designated Public Corporations are required to develop Disaster Management Operations Plans, which must be based on the Basic Plan for Disaster Risk Reduction.

In FY2018, the Basic Plan for Disaster Risk Reduction was revised in June 2018 (Fig. 2-1-1). The revision included (1) change to systems in relation to the amendment of the Disaster Relief Act and other relevant laws and regulations, and (2) the addition of countermeasures for challenges identified in the July 2017 Northern Kyushu Heavy Rain and heavy snows from January to February 2018. More specifically, the revised version of the Basic Plan refers to disaster relief activities by cities and liaison and coordination by prefectures, which are to be conducted based on the amended Disaster Relief Act.

Reference: <http://www.bousai.go.jp/taisaku/keikaku/kihon.html>

The revised Basic Plan describes measures based on the July 2017 Northern Kyushu Heavy Rain, including the installation of permeable check dams in small and medium rivers and sediment control dams to capture driftwood, as well as measures based on the lessons learned from the heavy snowfalls from January to February 2018, including a measure to minimize the overall impact of snow on the functionality of the road network.

Fig. 2-1-1 Overview of Revisions to the Basic Plan for Disaster Risk Reduction (June 2018)



Source: Cabinet Office

2-2 Establishment of the System for Designating Cities Conducting Relief Operations Pursuant to the Amended Disaster Relief Act

The Disaster Relief Act provides that the governor of a prefecture is responsible for commanding relief operations pursuant to the Act, such as setting up shelters and supplying temporary housing, on behalf of the mayor of municipality (including the mayor of special zone) in the event of disaster on a certain scale. The Act also provides that expenses for such relief operations are to be partly aided by the national government.

Regarding this relief operation system, the report from the Working Group for Studying Emergency Responses and Livelihood Support Measures (an organization established with the aim of discussing tactics to improve responses to earthquake nationwide based on the lessons learned from the Kumamoto Earthquake in April 2016) stated, “a practical system of implementing rescue operations under the current laws and an effective approach to regional coordination must be developed from the viewpoint of ensuing faster and more accurate rescue operations and smoother execution of disaster rescue-related administrative work” (Reference: http://www.bousai.go.jp/updates/h280414jishin/h28kumamoto/okyuseikatu_wg.html).

In readiness for upcoming large-scale disasters, the Cabinet Office has held meetings of the Task Force on Practical Procedures for Rescue Operation since December 2016 to study a practical system of implementing rescue operation and the suitability of regional coordination from the perspective of smooth public rescue operation. Following a number of discussions, the Task Force issued the final report in December 2017 suggesting that “in preparation for large-scale, widespread disasters, a designated city capable of coordinating with the prefecture to which it belong may be assigned as the new main body of relief operation, alongside the current commissioning system, to expedite and streamline administrative work,” and “to settle various concerns of prefectures, adequate functioning of the right of each prefecture to regional coordination must be clearly described in the law.” It also suggested that suitable measures must be taken in future to bring the designation criteria into shape (Reference: <http://www.bousai.go.jp/kaigirep/saigaikyujou/index.html>).

For further discussions, the Cabinet Office launched a meeting involving representatives from Miyagi, Aichi, Hyogo and other prefectures in February 2018 with a view to strengthening collaboration in disaster relief administrative work in the event of a large-scale and widespread disaster. The members of the meeting discussed a system to facilitate the procurement and distribution of disaster relief supplies based on wide-area coordination on a prefectural level, as well as measures for collaboration with relief supplies-related industries (Reference: <http://www.bousai.go.jp/kaigirep/kyuujorenkei/index.html>).

Based on what was discussed in the above meetings, the government amended the Disaster Relief Act in 2018 (entered into force on April 1, 2019) to create a system for disaster relief operations conducted by city mayors designated by the Prime Minister and thereby ensure smooth and swift implementation of relief operations in the event of a sudden disaster. (Fig. 2-2-1)

Fig. 2-2-1

Act Partially Amending the Disaster Relief Act (Entered into Force on April 1, 2019)**Overview of the Act Partially Amending the Disaster Relief Act****Disaster Relief Act**

Promulgated on June 15, 2018

Provides that the governor of a prefecture is responsible for commanding relief operations pursuant to the Act, such as setting up shelters and supplying temporary housing, on behalf of the mayor of municipality in the event of disaster on a certain scale and that expenses for such relief operations are to be partly aided by the state

Outline of the amended Act

The amended Act established a system, which allowed cities to carry out relief operations on their own discretion, with an aim to ensure smooth and swift implementation of relief operations.

1. Designation of cities conducting relief operations

The Prime Minister shall designate cities conducting relief operations* when requested, taking into account each city's disaster preparedness and financial capabilities. The Prime Minister shall hear opinions of the governor of the relevant prefecture prior to such designation.

*Designated cities. The criteria for the designation of a city conducting relief operations are to be provided in a Cabinet Office Order.

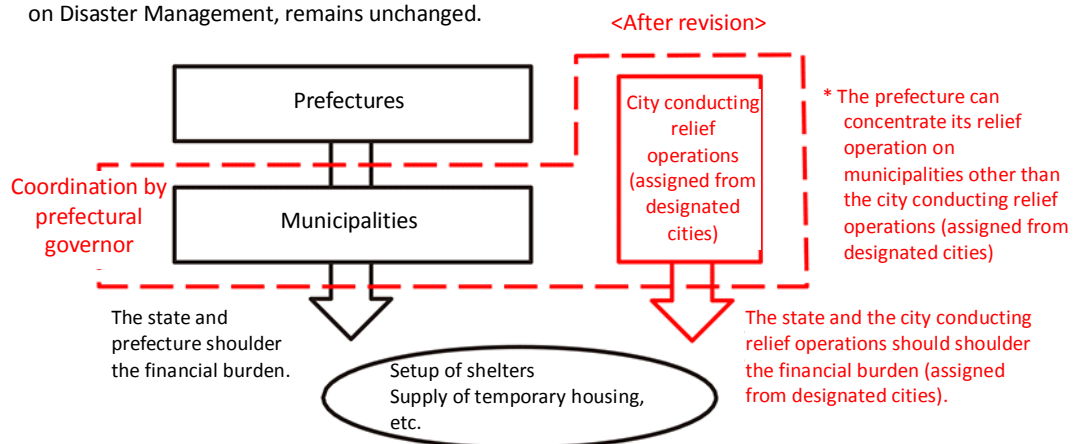
2. Coordination by Prefectures

The governor of the prefecture encompassing the city conducting relief operations shall be responsible for liaison and coordination with the city mayor, relief supply manufacturers, and other relevant parties in order to ensure the appropriate and smooth delivery of relief supplies (food, materials for housing, etc.)

3. Disaster relief fund

A city conducting relief operations shall reserve a disaster relief fund to aid relief operations, in the same manner as a prefecture.

* The right of the prefectural governor to give instructions, etc., stipulated in Article 72 (1) of the Basic Act on Disaster Management, remains unchanged.

**Impact of the amendment**

The amended Act will promote swift and smooth relief operations for 270 million people (the total population of 20 designated cities across Japan), while also ensuring faster rescue for other municipalities.

Date of entry
into force

April 1, 2019

Source: Cabinet Office

The amended Act stipulates that cities that fulfill the criteria provided in the Cabinet Office Order and are designated by the Prime Minister are to conduct relief operations for affected people who need rescue in their jurisdiction. If a disaster occurs in a designated city conducting relief operations or other areas in the same prefecture, the governor of the prefecture is responsible for liaison and coordination with the city mayor, relief

supply manufacturers, and other relevant parties in order to ensure the appropriate and smooth delivery of relief supplies.

Moreover, when the total expenses of relief operations conducted by a designated city exceed 1 million yen, part of such expenses is covered by the national treasury under the amended Act. In addition, a city conducting relief operations has an obligation to reserve a disaster relief fund to aid expenses of relief operations. The minimum amount a city needs to reserve is calculated based on the closing accounts of general tax income as provided under the Local Tax Act applicable to the prefecture encompassing the designated city conducting relief operations. When the disaster relief fund has not yet reached the required minimum amount, the city needs to reserve an amount as provided in a Cabinet Order.

In August 2018, the Cabinet Office established the Review Meeting on the Criteria for Designating Cities Conducting Relief Operations as a platform for prefectures, designated cities, the Japanese Red Cross Society, and other relevant entities to discuss the criteria for designating cities conducting relief operations, a system for smooth procurement and distribution of relief supplies based on wide-area coordination on a prefecture level, and collaborative measures with relevant entities. In October 2018, after the members reached a broad agreement on the designation criteria, the Report of the Review Meeting on the Criteria for Designating Cities Conducting Relief Operations was published.

Reference: <http://www.bousai.go.jp/kaigirep/shishiteikijun/index.html>

Based on the above Report, the Cabinet Office issued on December 28, 2018 the Order on Cities Conducting Relief Operations under the Disaster Relief Act, which provided for the criteria for the designation of cities conducting relief operations.

As the designation criteria, the Cabinet Office Order provides that a city conducting relief operations must be an ordinance-designated city (as provided under the Local Autonomy Act) that fulfills the following four requirements:

- The city that intends to become a city operating relief operations (ordinance-designated city) has an established collaborative system with the prefecture encompassing it.
- The city has organizational structures required of a city conducting relief operations
- The city has a financial foundation required of a city conducting relief operations
- Coordination with related administrative and other organizations has been done.

To be more specific, the first requirement refers to the following matters, for example:

- Clearly defined liaison and coordination channels between the city and the prefecture
- A communication system that allows the city to share information with the prefecture on the special standards applied to it
- Developing a draft resource distribution plan of the prefecture encompassing the city

As the amended Disaster Relief Act entered into force on April 1, 2019, nine cities (Sendai, Yokohama, Kawasaki, Sagami-hara, Kobe, Okayama, Kita-Kyushu, Fukuoka, and Kumamoto Cities) were designated as cities conducting relief operations (as of April 1, 2019).

2-3 Publication of the Case Studies on the Formulation of Evacuation Plans for Volcanic Eruptions, Etc.

Following the amendment of the Act on Special Measures for Active Volcanoes in 2015, the Cabinet Office revised the Guide to Develop Concrete and Practical Evacuation Plans for Volcanic Eruption (hereinafter referred to as the “Guide”) in 2016 with a view to supporting local governments with the formulation of evacuation plans. Also, the Cabinet Office has worked with local governments composing Volcanic Disaster

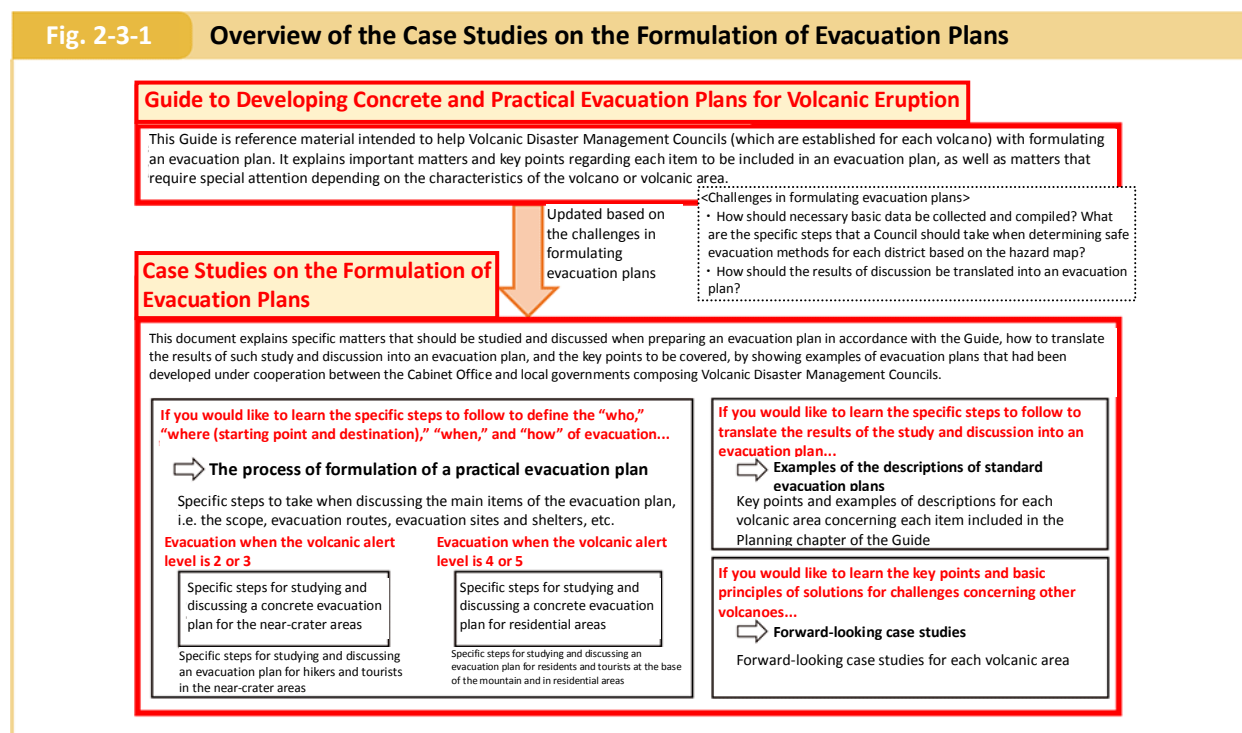
Management Councils on reviewing evacuation plans since FY2016.

In order to provide reference materials to refer to when formulating or revising evacuation plans based on the Guide, the Cabinet Office released in October 2018 the Case Study on the Formulation of Evacuation Plans for Volcanic Eruptions (Fig. 2-3-1), which summarized the insights and results of the abovementioned reviews for the following three categories:

- (1) The process of formulation of a practical evacuation plan (explanation on specific steps that should be taken)
- (2) Examples of the descriptions of standard evacuation plans (explanation on how to translate what has been discussed into an evacuation plan)
- (3) Forward-looking case studies (explanation on the points that should be addressed in relation to unique challenges for volcanic areas).

Reference: <http://www.bousai.go.jp/kazan/tebikisakusei/jireisyu/index.html>

Fig. 2-3-1 Overview of the Case Studies on the Formulation of Evacuation Plans



Source: Cabinet Office website

Reference: <http://www.bousai.go.jp/kazan/tebikisakusei/jireisyu/index.html>

2-4 Enhancement of the Training Contents for Local Government Heads and Officials

The ability to respond swiftly and accurately to a disaster largely relies on the knowledge and experience of the head of a local government and officials in charge of disaster management. Accordingly, in FY2013, the Cabinet Office began offering Disaster Management Specialist Training Courses for national and local government employees, to build capacity to respond swiftly and accurately to crises and to develop networks of national and local government organizations.

With a view to promoting the fostering of disaster management human resources among local government officers, the content of one of the above courses, the Training Course at the Ariake-no-Oka Core Wide-area Disaster Prevention Base, was greatly enhanced in FY2018, such as introducing lectures incorporating the latest insights on disaster risk reduction based on the experience of the Heavy Rain Event of July 2018 and an e-learning program that helped participants prepare for the lectures and effectively learn the knowledge.

The Cabinet Office and Fire and Disaster Management Agency jointly held a National Seminar on Disaster Prevention and Crisis Management for Heads of Local Government to improve the capacity of mayors who would spearhead the municipality in the event of a disaster to make decisions faster and more accurately. In the seminar held in FY2018, which specifically encouraged those newly in office, 221 new mayors joined and learned about the proper initial responses as the head of a municipality and actual examples of initial responses taken by the disaster-affected local governments.

In addition, the Cabinet Secretariat, Cabinet Office and Fire and Disaster Management Agency co-sponsored a Special Training Course on Disaster Prevention and Crisis Management for persons overseeing disaster and crisis management at related ministries and agencies, prefectural governments and ordinance-designated cities over two days in April 2019 at the Local Autonomy College.

These training courses and seminars should be further enhanced to improve the national capability of disaster management and response now and in future.



The Training Course at the Ariake no Oka Core Wide-area Disaster Prevention Base in FY2018



The National Seminar on Disaster Prevention and Crisis Management for Heads of Local Government in FY2018

2-5 Securing Designated Emergency Evacuation Sites and Designated Shelters

Designated emergency evacuation sites are positioned as facilities or places to which local citizens and others should evacuate urgently to safeguard their lives in the event of imminent danger from a tsunami, flood, or other such hazard. Designated shelters are facilities for accommodating people who have evacuated until the danger posed by a disaster has passed or for accommodating them temporarily when a disaster prevents their returning home.

The distinction between evacuation sites and shelters was not entirely clear at the time of the Great East Japan Earthquake, which was a factor that increased the harm. Accordingly, the Cabinet Office revised the Basic Act on Disaster Management in 2013 to require mayors of municipalities to designate both kinds of evacuation facility in advance, making a distinction between designated emergency evacuation sites and designated shelters, and issue a public notice to notify citizens of details of these facilities. Fig. 2-5-1 shows the designation status of designated emergency evacuation sites as of April 1, 2018.

Fig. 2-5-1 Designated Emergency Evacuation Sites

	Number of designated emergency evacuation sites by type of anomalous phenomenon								Total
	Flood	Sediment disaster	Storm surge	Earthquake	Tsunami	Widespread fire	Rain inundation	Volcanic phenomena	
Number of designated evacuation sites (sites)	65,185	60,209	18,375	77,609	35,155	36,349	35,190	9,688	106,956
Expected capacity (10,000 people)	12,129	12,205	5,139	21,535	8,059	14,490	6,934	2,185	

Source: Formulated by the Cabinet Office based on the Fire and Disaster Management Agency report "Status of Regional Disaster Management Administration" (multiple responses permitted for each category)
Reference: <https://www.fdma.go.jp/publication/bousai/>

Along with the Fire and Disaster Management Agency, the Cabinet Office is encouraging local governments to specify their designated emergency evacuation sites without delay. As local governments are required to specify designated emergency evacuation sites for each type of disaster, the Cabinet Office is calling on local governments nationwide to lose no time in starting to install signs that comply with the Hazard Specific Evacuation Guidance Sign System (JIS Z 9098), which was instituted in March 2016 to enable evacuees to clearly identify such facilities (Fig. 2-5-2).

Reference: <http://www.bousai.go.jp/kyoiku/zukigo/index.html>



Example of a sign compliant with the Hazard Specific Evacuation Guidance Sign System

Fig. 2-5-2 Standardization of graphic symbols for evacuation sites, etc.

Disaster type in Basic Act	JIS symbol by disaster type	
Tsunami	Tsunami/storm surge (Old symbols are also used, symbols for general maps are created)	
Storm surge		
Flood	Flood	
Rain inundation	Rain inundation	
Slope failure	Slope failure	
Debris flow	Debris flow	
Landslide		
Fire disaster	Fire disaster	
Earthquake	Indicated by a disaster (tsunami, widespread fire, etc.)	
Volcanic eruption	A dissemination campaign is conducted for evacuation to designated sites.	

- Evacuation sites need to be specified for each disaster type by the revised Basic Act on Disaster Management.
- Related ministries and agencies decided to launch a liaison conference to standardize graphic symbols for evacuation sites, etc. The JIS Drafting Committee creates draft symbols, which are then reported to the Minister of Economy, Trade and Industry.
→ The graphic symbols were standardized by JIS on March 22, 2016.
- Discussion for international standardization is ongoing based on the proposal from Japan to the ISO.

(Reference: Graphic symbols specified by JIS)

Source: Cabinet Office

The number of shelters designated pursuant to Article 49-7 of the Basic Act on Disaster Management increased from 48,014 as of October 1, 2014 to 75,895 as of October 1, 2018, as a result of the government's effort to urge municipalities (including special zones) to swiftly complete designation, which had been continued since the establishment of the designation system in April 2014. As of October 1, 2018, the number of designated welfare shelters was 8,064, but the number of available welfare shelters, including facilities with which a partnership agreement has been concluded, was 22,579.

Following situations that have arisen in recent disasters, various problems have been pointed out in relation to efforts to provide an appropriate living environment at shelters, including the need to improve toilet facilities there. Even in the event of a disaster, when evacuees are compelled to lead their lives amid the inconvenient conditions of a shelter, it is important to improve the quality of life in shelters and seek to ensure a good living environment. Accordingly, since July 2015, the Cabinet Office has been holding meetings of the Study Group on Securing Shelters and Improving their Quality, to consider and take the necessary steps to deal with a wide range of issues, including encouraging municipalities to designate shelters and welfare shelters, improving toilet facilities at shelters, and developing support and consultation systems for persons requiring special care.

Based on discussions by this committee, the Guidelines for Ensuring Satisfactory Living Conditions at Shelters (published by the Cabinet Office in August 2013) were partially revised in April 2016. At the same time, based

on these revised guidelines, the Cabinet Office published three other sets of guidelines: the shelter Management Guidelines; the Guidelines for Securing and Managing Toilets at shelters; and the Guidelines for Securing and Managing Welfare Shelters (Fig. 2-5-3).

In addition, the FY2016 Report on Case Examples of Support for Affected People at shelters was compiled and published in FY2017. The Report on the Study on Measures for Ensuring Satisfactory Living Conditions at Designated Shelters was published in FY2018 as supplementary documents to the Shelter Management Guidelines (Fig. 2-5-3) (Reference: <http://www.bousai.go.jp/taisaku/hinanjo/index.html>).

Fig. 2-5-3 Guidelines on Shelters

Evacuation Shelter Management Guidelines (April 2016)

The guidelines emphasize the establishment of systems for internal and external partnership and cooperation before disaster occurs, as well as attaching importance to maintaining the health of evacuees. In addition, they provide a specific checklist of 19 tasks that should be carried out at each stage of disaster response (preparation, initial response, emergency response, and recovery), specifying detailed tasks that tend to be overlooked, such as arrangements for toilets, beds, baths, and pets.

Guidelines for Securing and Managing Toilets at Evacuation Shelters (April 2016)

The guidelines stress the importance of securing and managing toilets. This is because a growing number of affected people experience discomfort due to the unhygienic state of toilets in times of disaster, which leads them to refrain from using the toilet by restricting food and/or water intake to reduce the need to use the toilet, running the risk of adverse impacts on their health or even their lives in a worst-case scenario.

Guidelines for Securing and Managing Welfare Evacuation Shelters (April 2016)

These guidelines are the updated version of the Guidelines on the Establishment and Management of Welfare Shelters (June 2008) revised based on the lessons learned from the Great East Japan Earthquake. Based on an understanding that preparedness efforts are essential in bringing about effective response operations in the event of a disaster, these Guidelines stress the importance of promoting welfare shelters-related initiatives under the initiative of municipalities (including special zones) before a disaster occurs.

FY2016 Report on Case Examples of Support for Affected People at shelters (April, 2017)

This report is based on the results of surveys with local governments, social welfare facilities, persons with disabilities, and evacuees from the Kumamoto Earthquake, as well as interviews with NPOs, disabled people's groups, persons with disabilities, and local government employees who were in charge of managing shelters. Based on the results of these surveys, the Report summarized facts and challenges concerning support for the affected people at shelters, as well as advanced examples of countermeasures promoted in various areas.

Report on the Study on Measures for Ensuring Satisfactory Living Conditions at Designated Shelters (August 2018)

Based on the experience of the July 2017 Northern Kyushu Heavy Rain and opinions from local governments, the government carried out a survey concerning the needs of affected people, interviews with experts, a survey and interviews with local governments. The Report summarizes measures to ensure good living conditions in designated shelters based on the results of the above surveys.

Source: Cabinet Office website

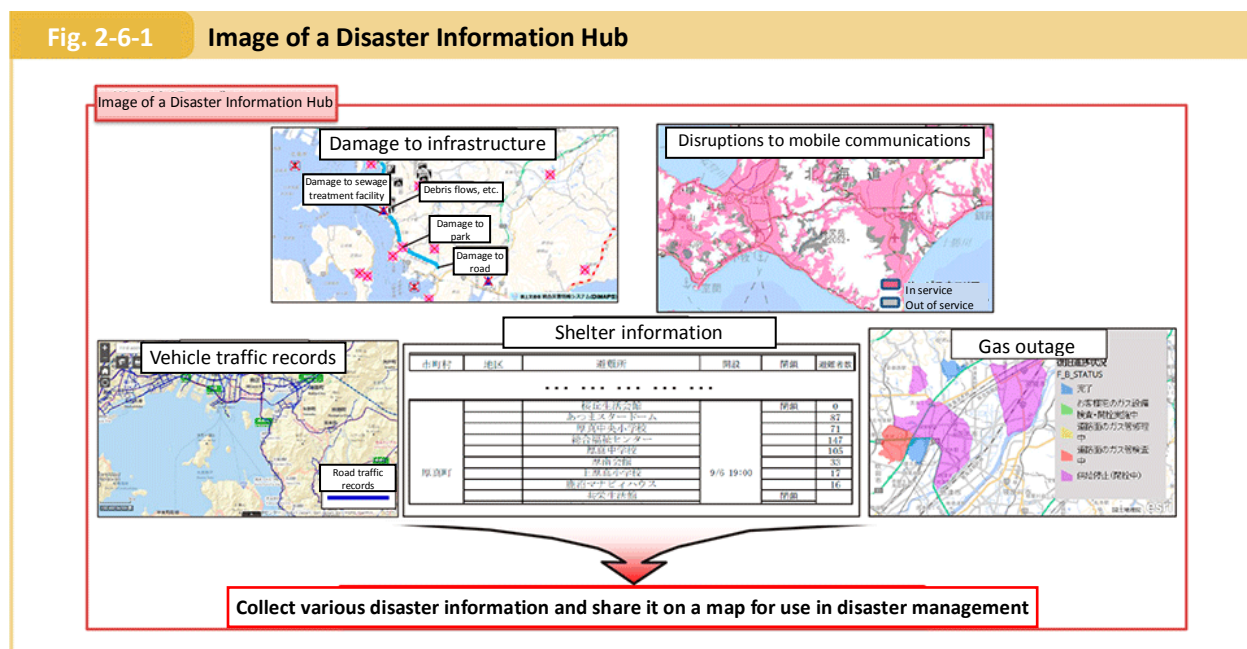
Reference: <http://www.bousai.go.jp/taisaku/hinanjo/index.html>

2-6 Use of ICT in Disaster Risk Management

As seen at the Kumamoto Earthquake in 2016, many of affected people would stay in their cars or elsewhere but not in shelters. This may hinder efforts to integrate information, including understanding the action of these people, the needs of evacuees at shelters and the distribution of supplies. In response, the national government, local governments and private companies and organizations must share information through public-private partnership at ordinal times and respond to disasters promptly.

For this reason, the Cabinet Office organized the National and Local Government Public-Private Disaster Information Hub Promotion Team under the Working Group for the Promotion of Standardization of Disaster Measures of the Disaster Management Implementation Committee, the National Disaster Management Council to utilize information and communication technology (ICT), which may be an effective means of sharing information, and promote rules for the methods and periods of sharing information between related agencies and the distribution of information according to these rules (“disaster information hub” (Fig. 2-6-1)).

Reference: <http://www.bousai.go.jp/kaigirep/saigaiyouhouhub/index.html>



Source: Cabinet Office

In FY2018, the Cabinet Office continued the previous year’s effort to expand the scope of information to be shared among the national and local governments and private companies responding to disasters, while also discussing the use of big data to grasp the evacuation activities of affected people and the use of satellite data for disaster management. The government also deployed the ISUT (Information Support Team) to Disaster Management Headquarters in affected prefectures. During these deployments, the Shared Information Platform for Disaster Management (SIP4D) was used on a pilot basis to determine the situation of the local governments, private entities, and other organizations responding to the disasters.

In post-disaster settings, certain types of information (such as the damage and shelters) change from hour to hour (dynamic information) and thus are hard to share in an organized manner. In order to ensure relevant decision making by disaster response organizations, it is very important to indicate such dynamic information on the map and make sure that these organizations can grasp the overall situation of the disaster. If the ISUT could collect, organize and map such information and share it with disaster response organizations, it would greatly help their swift and relevant decision making.

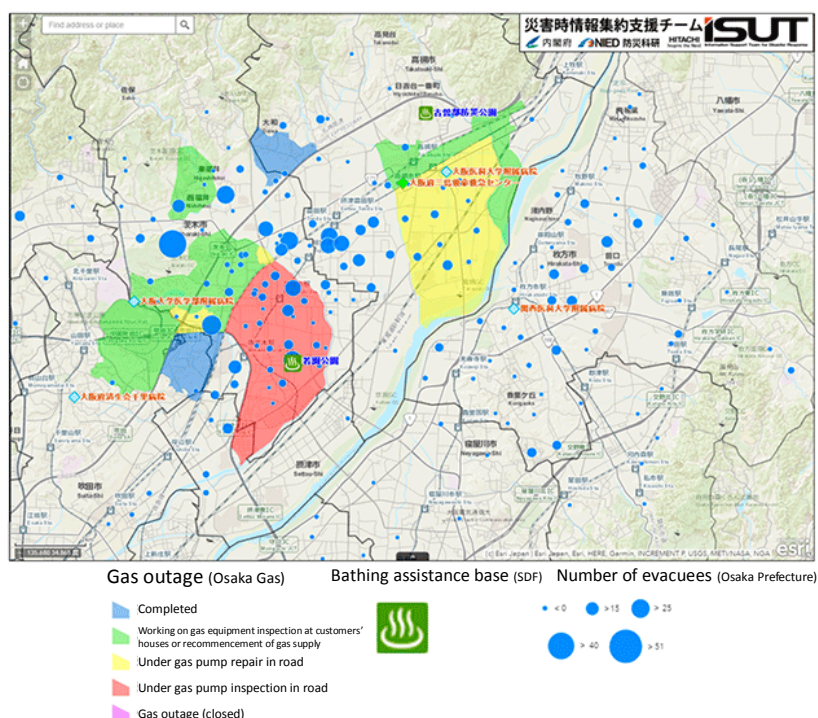
The ISUT have engaged in relief operations for three disasters to date, namely, the earthquake that hit the northern part of Osaka Prefecture on June 18, 2018 (Fig. 2-6-2), the Heavy Rain Event of July 2018, and the 2018 Hokkaido Eastern Iburu Earthquake. Especially, for the Heavy Rain Event of July 2018, the ISUT operated in the building of the Hiroshima Prefectural Government from July 7 (the day following the day of issuance of the emergency warning) to August 9, using the SIP4D for information gathering and organization and explaining the situation using the formulated map to the senior prefectural government officials, response organizations, and supported government employees deployed from other prefectures. This operation proved the effectiveness of the ISUT to a certain level.

On the other hand, there were also some challenges, such as the time-consuming manual data input, information gathering and organization processes, which delayed the sharing of map information with local government and other relevant organizations. To address this issue, the government held orientations on the ISUT for prefectures and ordinance-designated cities across Japan to explain the types of information the ISUT can provide, the types of information the ISUT needs, and the importance of compiling a database before a disaster.

The ISUT will start its full-fledged operation across Japan in FY2019. The government intends to work toward more effective operation of the ISUT and swift preparation and sharing of map information. Specifically, it plans to develop a system to automate as much data input work as possible, while also working with relevant organizations toward the expansion of the scope of information to be shared among disaster response organizations.

Fig. 2-6-2

Example of a Map Made by the ISUT for the Earthquake Centered in Northern Osaka Prefecture (Map for Bathing Assistance Planning)



Source: Cabinet Office