

Disaster Risk Reduction Plan; Business Continuity Plan(BCP)

[Background]

The Great East Japan Earthquake caused substantial damage to coastal areas, disrupting critical infrastructure in many areas. In addition, we encountered many unexpected issues, including interruptions in fuel supply and a large number of evacuees.

[Response]

The City of Sendai reviewed its Regional Disaster Risk Reduction Plan, and is taking measures against disasters as a united city, based on the basic principles of Self-help, Mutual aid, and Public assistance. In addition, in preparation for major disasters, the City has formulated a business continuity plan by deciding what services should be given priority in times of a disaster.

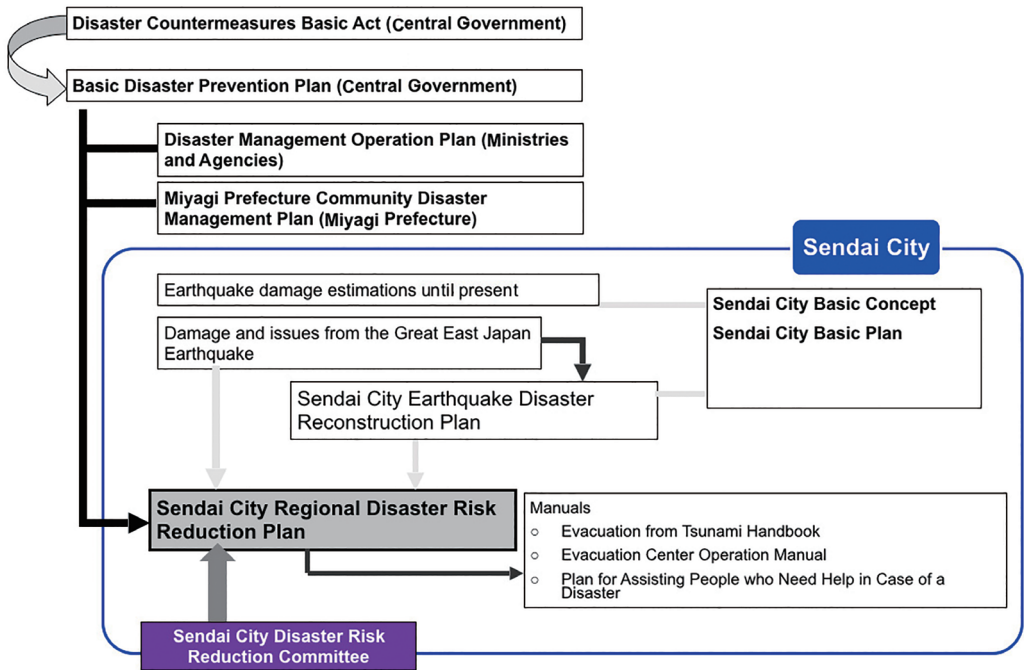
What is Sendai City’s Regional Disaster Risk Reduction Plan?

In Japan, municipal governments are required by law (i.e., the Disaster Countermeasures Basic Act) to formulate a regional disaster risk reduction plan and revise it as necessary. A disaster risk reduction plan states a city’s disaster prevention measures, disaster emergency measures, emergency response preparations, and disaster recovery/restoration plans.

Disaster risk reduction plans aim to prevent disasters from spreading, mitigate damage, and protect citizens’ lives, safety, and property.

Sendai City’s Regional Disaster Risk Reduction Plan is based on its Basic Plan and Earthquake Disaster Reconstruction Plan. The City also has an Evacuation from Tsunami Handbook and an Evacuation Center Operation Manual, which are based on its regional disaster risk reduction plan. Therefore, when working with partner organizations, it is able to maximize the effectiveness of collaboration by finding a balance between its plan and its partner organizations’ disaster management plans.

Furthermore, when formulating and revising its Regional Disaster Risk Reduction Plan, the City convenes its Sendai City Disaster Risk Reduction Committee, which is described below, so that it can incorporate the ideas of various stakeholders.



Overview of Sendai City’s post-earthquake Regional Disaster Risk Reduction Plan

1 Summary of revisions

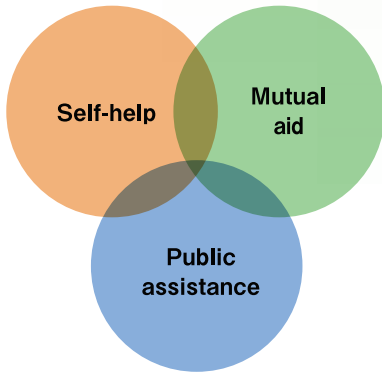
Like other municipal governments, the City of Sendai had a regional disaster risk reduction plan before the earthquake, which was comprised of two sections: one for earthquakes and another for storms and floods. However, the City substantially revised its plan’s structure and content following the earthquake. Its plan now encompasses a general section on the basics common to all disasters and individual sections on measures for responding to “Earthquakes and tsunami waves,”

“Storms and floods,” and “Nuclear disasters.”

In addition, each section is organized into subsections on “Self-help/Mutual aid” and “Public assistance” to help citizens and organizations understand their roles in the plan.

2 Basic principles: Self-help, Mutual aid, and Public assistance

Mitigating disaster damage requires not only measures relating to facility maintenance but also individual disaster preparedness and community support. Efforts to protect yourself and your family by “Self-help” and to assist one another in your community by “Mutual aid” build the foundation for promoting disaster risk reduction through community collaboration when integrated with “Public assistance” from your municipal government.



3 Basic policy: Six basic policies

- Disaster countermeasures prioritizing the lives of all people and basically aimed at disaster mitigation**
Since disaster risks can only be reduced and not eliminated, Sendai City’s plan prioritizes the protection of people’s lives from natural disasters and basically aims to minimize disaster damage.
- Disaster countermeasures with care for people who need help in case of a disaster**
Sendai City’s plan is formulated with consideration for the individual conditions and needs of people who may not be able to evacuate without help or access the necessary information in case of a disaster, including the elderly, physically challenged, parents with babies and toddlers, pregnant women, and foreigners.
- Disaster countermeasures incorporating the perspective of gender equality**
The City of Sendai encourages women to participate in its decision-making processes for disaster countermeasures, including those relating to evacuation center operation, so that its plan fully responds to the needs of both sexes.
- Disaster countermeasures securing city functions**
Sendai City’s plan includes measures for recovering essential utilities and public transportation systems quickly and ensuring fuel supply by establishing cross-regional fuel supply routes.
- Disaster countermeasures effectively using human resources and requesting help from other municipal governments**
The City of Sendai keeps track of the number of human resources needed for its disaster response services, makes daily efforts to reinforce cross-regional collaboration, and is prepared to secure enough human resources for its plan by requesting help from other municipal governments and partner organizations as necessary.
- Disaster countermeasures individually designed for disasters of different scales**
The City of Sendai prepares for disasters of different scales by clarifying what measures will need to be taken in response to the scale of the disaster.



Participation of stakeholders in regional disaster risk reduction

1 Sendai City Disaster Risk Reduction Committee

In accordance with the Disaster Countermeasures Basic Act and a bylaw for the Sendai City Disaster Risk Reduction Committee, the City of Sendai established the Sendai City Disaster Risk Reduction Committee, which has jurisdiction over formulating the City's regional disaster risk reduction plan and promoting its implementation.

In accordance with the philosophy of the Sendai Framework for Disaster Risk Reduction on the importance of having various stakeholders participate in disaster risk reduction, the City incorporates the ideas of various stakeholders into its regional disaster risk reduction plan by welcoming committee members from not only government agencies (i.e., the central government, prefectural government, municipal government, Self-Defense Forces, police department, and fire department) but also infrastructure companies (i.e., electricity, communications, and transportation companies), media companies (i.e., newspaper, television, and radio companies), and other organizations (i.e., the Sendai Medical Association; Union Neighborhood Association; Social Welfare Council; associations for the physically challenged; Sendai Tourism, Convention, and International Association; and Sendai Gender Equal Opportunity Foundation).

2 The roles of stakeholders

① Citizens and local organizations

Citizens and local organizations are to protect their lives by themselves, be prepared for disasters at all times, and take measures for securing the safety of themselves and their family. They should also put effort into maintaining friendly relationships with other community members by actively participating in disaster drills and fulfilling their responsibilities as community members.

② Companies and universities

Companies and universities are to fulfill their social responsibility of securing the safety of their employees and students, regularly update their disaster risk reduction systems, and cooperate in community disaster drills. In case of a disaster, they should also prevent confusion and secondary disasters by preventing employees/students from leaving for home all at once.

③ Sendai City

Assuming primary responsibility for disaster risk reduction, the City is to protect the lives, safety, and property of citizens and the region's assets by cooperating with partner organizations in conducting disaster drills and promoting Self-help and Mutual aid measures.

④ Other organizations

Miyagi Prefecture and other organizations (including Sendai District Meteorological Observatory, Self-Defense Forces, communications companies, and electricity companies) will also cooperate in the City's disaster risk reduction activities.

Details of Sendai City's post-earthquake regional disaster risk reduction plan

1 Tsunami preparedness <for details, refer to practice ①>

[Self-help/Mutual aid]

Confirmation of evacuation centers and routes based on the City's Evacuation from Tsunami Handbook

[Public assistance] <budget: approx. 437 million yen (for system introduction)>
<budget: approx. 2.22 billion yen (for evacuation center construction)>

Multiplexing public relations by updating the City's tsunami information dissemination system, and also maintaining evacuation centers



▲ Evacuation from Tsunami Map

2 Evacuation center operation <for details, refer to practice ⑤>

[Self-help/Mutual aid]

Developing each community's evacuation center operation manual with thought to the roles of evacuees, local organizations, facility staff, and evacuation center supervisors, and also cooperating in evacuation center operation

[Public assistance]

Dispatching evacuation center supervisors



▲ Evacuation Center Operation Manual

3 Measures for assisting people who need help in case of a disaster <for details, refer to practice ②>

[Self-help/Mutual aid]

Developing a community support system for assisting people who need help in case of a disaster and making necessary preparations for assisting them at evacuation centers so that they will be able to basically take care of themselves

[Public assistance] <budget: approx. 1 million yen/year (for preparations related to evacuation centers for people with disabilities)>

Formulating an evacuation support plan for people who need help in case of a disaster, informing the public of the City's registration system for people who need help in case of a disaster, and assisting people who need help at home



▲ Evacuation drill for people with disabilities

4 Measures for helping stranded commuters <for details, refer to practice ④>

[Self-help/Mutual aid]

Preventing commuters from leaving for home all at once and informing the public of the City's policy on its measures for helping stranded commuters

[Public assistance] <budget: approx. 0.2 million yen/year (for matters relating to informing the public of the City's policy on helping stranded commuters)>

Informing companies of the need to prevent people from leaving for home all at once, building Commuter Assistance Stations that provide traffic/disaster reports and restrooms, and securing places for temporarily accommodating stranded commuters and providing them with food, drink, and information on operational conditions of public transportation



▲ Drill for helping stranded commuters

5 Stockpiling emergency supplies <for details, refer to practice ⑤>

[Self-help/Mutual aid]

Stockpiling a one-week supply of food and water at home for one's family and also at companies for employees

[Public assistance] <budget: approx. 70 million yen/year>

Stockpiling food and water enough for 106,000 people, i.e., the number of evacuees from the Great East Japan Earthquake, with attention to food allergies



▲ Emergency supply warehouse

6 Disaster Risk Reduction Education

[Self-help/Mutual aid]

Having Sendai City's disaster risk reduction advisors encourage citizens to actively perform disaster risk reduction activities by providing them with disaster risk reduction education through all types of public relations media, also with the aim of cultivating Sendai City Community Disaster Preparedness Leaders

[Public assistance]

Providing elementary and junior high school students with Sendai City's Disaster Preparedness Education



▲ Sendai City's Disaster Preparedness Education



Overview of Sendai City's Business Continuity Plan(BCP)

1 Background

In the aftermath of the Great East Japan Earthquake, we experienced a serious shortage of staff, which affected its provision of services, including operating designated evacuation centers. On the other hand, some of its departments recovered business operations faster than others, creating an unbalance in workload between departments. Therefore, to be ready to quickly secure enough human and material resources for responding to earthquakes and tsunami damage of similar scales, the City of Sendai formulated a BCP by prioritizing services and listing them chronologically.

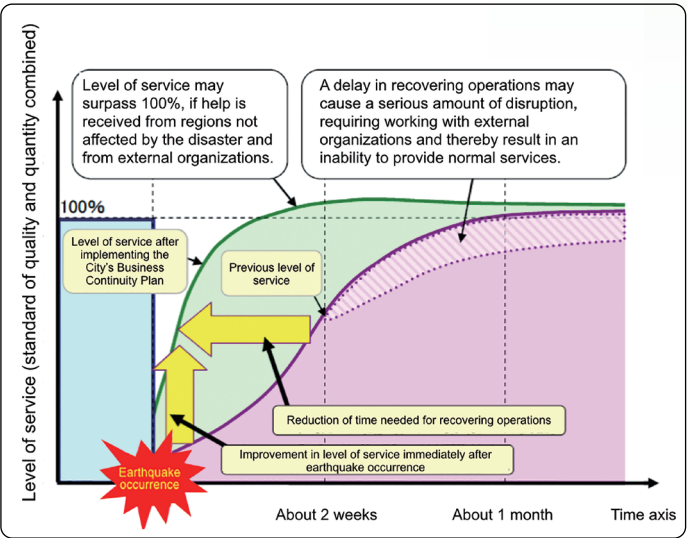
2 Aim

- ① Protecting citizens' lives and property
- ② Minimizing disruption to daily life by responding to disasters as quickly as possible
- ③ Maintaining provision of basic administrative services, and recovering business operations as soon as possible

Sendai City's BCP in relation to its regional disaster risk reduction plan

Sendai City's BCP is based on its regional disaster risk reduction plan. In addition, since we noticed a shortage of staff while formulating the BCP, we also developed a Plan for Requesting Help at the Time of a Disaster.

A Plan for Providing Help at the Time of a Disaster was also devised, based on our experience of dealing with the Great East Japan Earthquake and also helping other regions respond to disasters.



Features of Sendai City's BCP

1 Basic policy

- ① To improve our business continuity capacity by securing enough human and material resources for disaster response and reinforcing our disaster response capacity, based on what we learned from earthquakes
- ② To prioritize the safety of citizens, and also perform services in order of priority by preparing a list of services to prioritize in chronological order in case of a disaster
- ③ To analyze issues and regularly assess progress made with measures taken

2 Effect

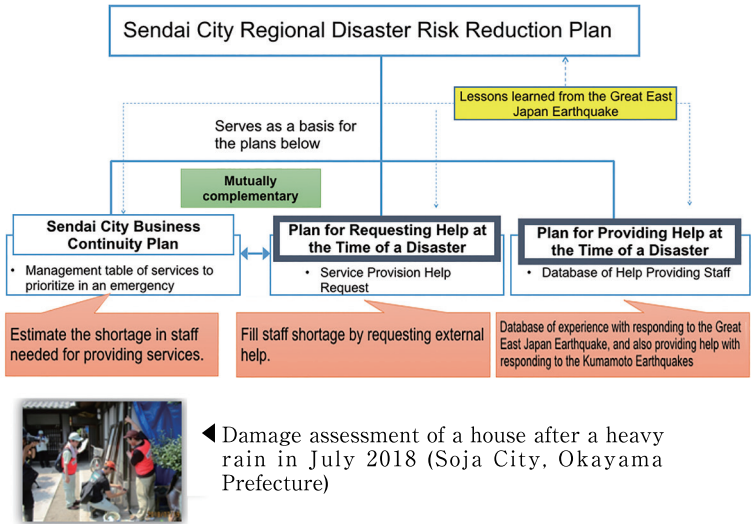
- ① Reduction of time needed to recover operations
- ② Improvement of service quality in the immediate aftermath of a disaster
- ③ Availability of sufficient human resources for providing disaster response services

3 Services to prioritize in an emergency

Disaster emergency services and urgently needed disaster recovery/restoration services (i.e., disaster response services), and normal services that, if unavailable, would greatly affect daily life and social activities (i.e., normal services requiring priority)

Services to prioritize in an emergency = (1) disaster response services + (2) normal services requiring priority

- (1) Disaster response services: Services only needed in case of a disaster(e.g., evacuation center operation, provision of emergency supplies, issuance of disaster certificates)
- (2) Normal services requiring priority: Services that require being provided even in the aftermath of disasters or as soon as possible(e.g., garbage disposal, family registration screening and acceptance, infection measures)



4 Estimated staff assemblage time (basic model)

The City of Sendai decides what services to prioritize in an emergency by calculating its performable workload based on staff assemblage rates measurable by estimating the amount of time staff members will need to commute on foot; it also uses this rate to decide whether it can provide other regions with help or needs to request help.

After disaster occurrence	Within 3 hours	Within 6 hours	Within 12 hours	Within 24 hours	Within 72 hours	After 72 hours
Staff assemblage rate	20%	60%	70%	75%	90%	95%

5 Service provision phases

- Phase (1) : Initial response for “saving citizens’ lives” (from disaster occurrence to about 72 hours)
- Phase (2) : Emergency measures for “returning to normal life” (from disaster occurrence to about one week)
- Phase (3) : Recovery/restoration activities for “rebuilding daily life” (from disaster occurrence to about one week and after)

Phase	Disaster response services	Normal services requiring priority
(1)	Damage assessment; rescue operations	Services needed to protect citizens' lives
(2)	Coordination of relief supply acceptance	Resumption of important health and hygiene services
(3)	Issuance of disaster certificates; coordination of emergency temporary housing	Certificate issuance services

Sendai City's staff availability in case of an emergency

To protect citizens' lives, safety, and property from disasters, the City of Sendai ensures staff availability based on the type and scale of disasters.

Category	Type and scale	Staff availability
Emergency deployment 1	Earthquake with a seismic intensity of 5 Lower; tsunami warning; emergency weather warning	About 1/3 of entire staff
Emergency deployment 2	Earthquake with a seismic intensity of 5 Upper; major tsunami warning	About 2/3 of entire staff
Emergency deployment 3	Earthquake with a seismic intensity of 6 Lower or greater	Entire staff