

**RECOVERY AND RECONSTRUCTION
PROCESS
STANDARDS DOCUMENT**

**THE STUDY OF
RECONSTRUCTION PROCESSES
FROM LARGE-SCALE DISASTERS**

FINAL REPORT AS A SEPARATE DOCUMENT

NOVEMBER 2013

Japan International Cooperation Agency (JICA)

**Capital Region Comprehensive Planning Institute Co., Ltd.
Regional Planning International Co., Ltd.**

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Abbreviations

JICA	Japan International Cooperation Agency
NPO	Not-for-Profit Organization
3.11 Earthquake	Great East Japan Earthquake

- Names of earthquakes which refer to “actual examples” are indicated as follows:

	Name	Date	Country
[A]	Great East Japan Earthquake	2011	Japan
[B]	Mid. Niigata Prefecture Earthquake	2004	Japan
[C]	Eruption of Mt.Oyama on Miyake Island	2000	Japan
[D]	Great Hanshin-Awaji Earthquake	1995	Japan
[E]	Southwest-off Hokkaido Earthquake	1993	Japan
[F]	Kashmir Earthquake	2005	Pakistan
[G]	Sumatra-Andaman Earthquake	2004	Indonesia
[H]	Marmara Earthquake	1999	Turkey

Section 1 Purpose and Structure of the Recovery and Reconstruction Process Standards Document

1. Purpose

This Recovery and Reconstruction Process Standards Document (hereinafter referred to as the standards document) has been developed from the vast number of disasters experienced in Japan and from the lessons learned from the said disasters. This standards document outlines what sort of standard recovery and reconstruction processes to perform and what sort of recovery and reconstruction policies to develop in the event of a disaster.

The standards document has been created with the purpose of using it as a guide for JICA representatives to use when performing disaster recovery support in developing countries and with the purpose of, in the future, using it as a check list for recovery and reconstruction representatives in disaster afflicted countries supported by JICA.

However, because the details contained herein correspond to the legislative system and structures of Japan in terms of recovery and reconstruction, it is important that the standards document will be provided and used while noting the fact that there are framework differences between Japan and the supported disaster afflicted country such as the legislative systems of the countries being different.

2. Recovery and reconstruction process

In this standards document, a diagram that combines sections on the time axis in the direction of recovery (that is, the steps toward recovery) and the policy goals corresponding to these sections is positioned as the recovery and reconstruction process.

- Sections on the time axis in the direction of recovery
 - There are the following four sections: (1) ordinary times, (2) the period of living in evacuation shelters, (3) the period of starting reconstruction, and (4) the period of full-fledged reconstruction.
- Policy goals
 - Policies are organized into the following 6 items: (1) providing emergency first-aid, (2) constructing systems for recovery and reconstruction, (3) rebuilding housing and lifestyles, (4) creating safe areas, (5) reconstructing industries and the economy, and (6) implementing countermeasures prior to disasters.
- Recovery and reconstruction process
 - The recovery and reconstruction process is formed by combining the two items above, as shown in Figure 1. This figure even includes the policy items that give shape to the policy goals defined in the standards document.

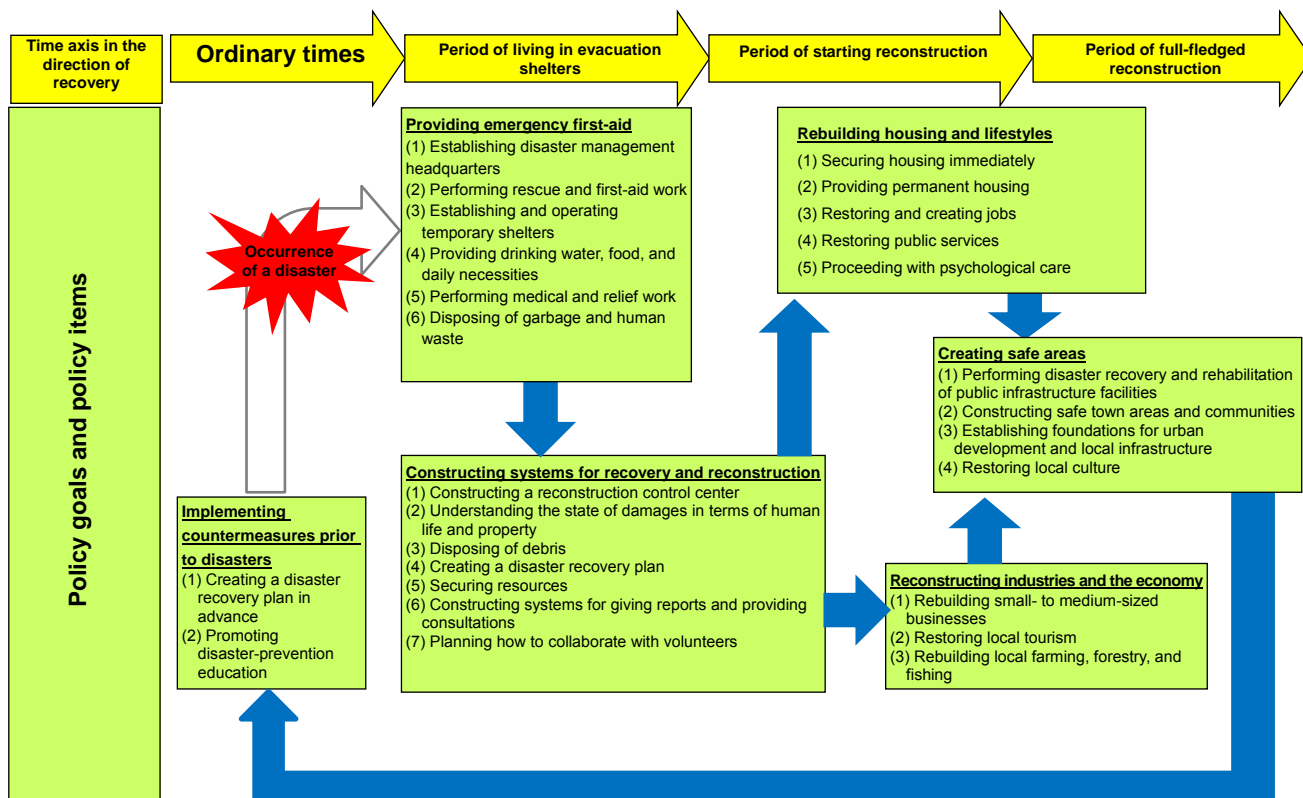


Figure 1. Recovery and Reconstruction Process

3. Structure

The standards document is structured according to the items and contents in Table 1.

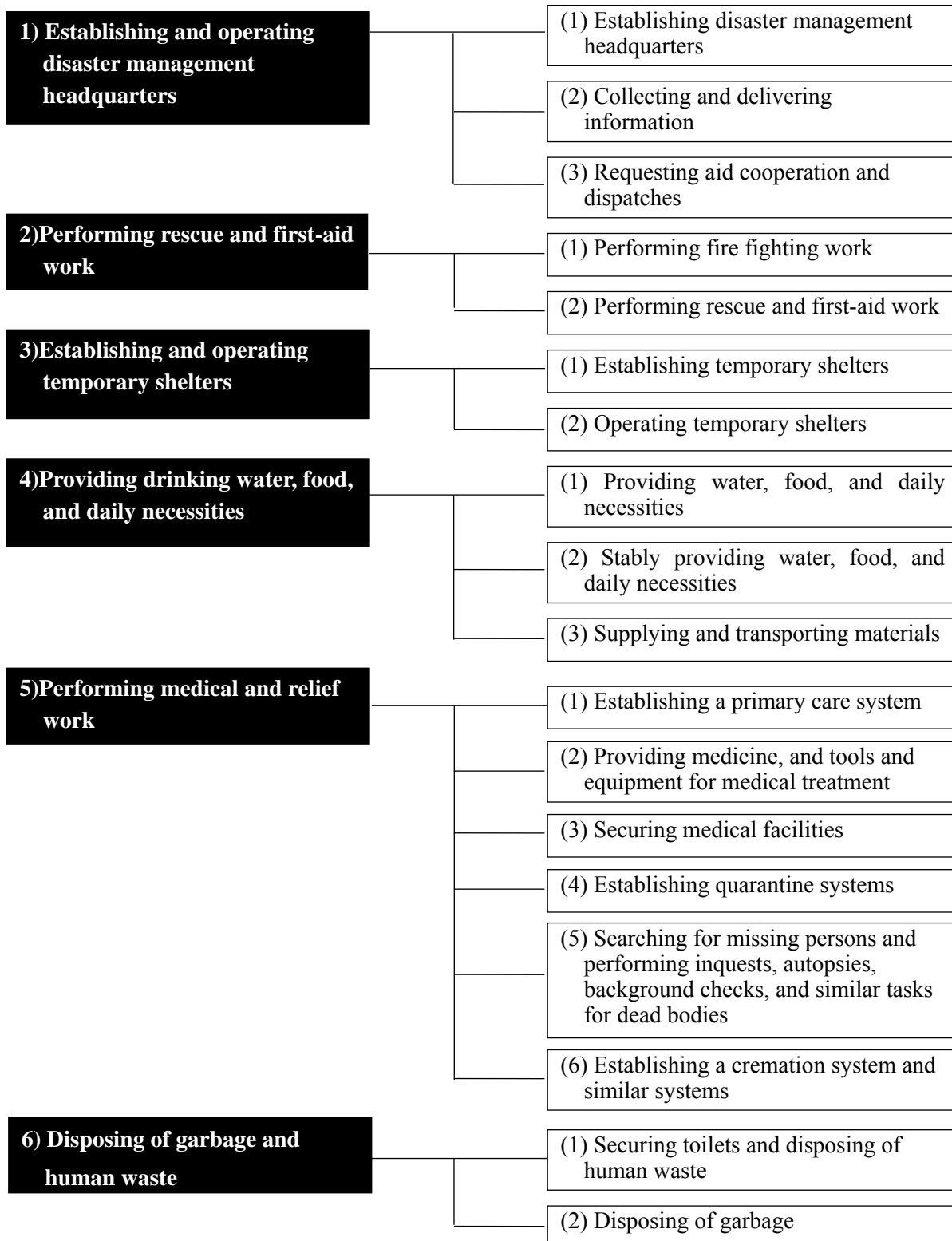
Table 1. Items and Contents of the Standards Document

Item	Content
Policy name	• Actions and policy items that the disaster afflicted local government should implement in order to achieve the policy goal
Details	• Details pertaining to what to consider when carrying out the actions and policy
Base laws and systems	• Names of laws and systems in Japan that the actions and policy are based on
Detailed actions, procedures, and methods	• Detailed actions and policy that the disaster afflicted local government should implement as well as the implementation period, procedures, and methods
Major roles categorized by bearers of responsibility	• Major roles of the disaster afflicted local government as well as other participants
Notes	• Items to be noted while implementing the policy
Actual examples	• Actual examples that are considered useful as references for the corresponding policy; examples taken from six historical earthquake disasters in Japan, the Great East Japan Earthquake, and examples of support provided by JICA in locations outside of Japan
What can be done outside of Japan	• Items that are considered applicable in developing countries

Section 2

Chapter 1 Providing Emergency First-aid

- Framework for implementing policies



Policy	1) Establishing and operating disaster management headquarters		
Details	<ul style="list-style-type: none"> • When a disaster occurs, the disaster afflicted local government must immediately collect information such as information that indicates the scope of the damage. Then, on the basis of this information, the government must establish the disaster management headquarters and take measures to deal with the highest priority problem such as performing rescue and first aid work, providing medical treatment, and performing fire fighting work. • The disaster management headquarters of the disaster afflicted local government will deal with the various emergency situations that arise while staying in close contact with other local governments in a wide area and with the national government. 		
Base laws and systems	The Basic Act on Disaster Control Measures, the Disaster Relief Act, the Act on Special Measures Concerning Countermeasures for Large-Scale Earthquakes, and regional emergency plans		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Establishing disaster management headquarters	Immediately after the disaster	(1) Immediately after the disaster, establish the disaster management headquarters within the government office building. (2) Various disaster management organizations (such as administrative bodies, fire fighters, and police) start emergency activities in accordance with their readiness for a swift initial response.
	(2) Collecting and delivering information	Immediately after the disaster	(1) At the time of the disaster, each disaster management organization readies to convey information in order to understand and report on the state of damages.
	(3) Requesting aid cooperation and dispatches	Immediately after the disaster	(1) If damage has occurred over a wide area, request cooperation from other local governments and private organizations that have not been affected in providing aid. (2) If necessary, request that the military be dispatched for disaster relief.
Major roles categorized by bearers of responsibility			From the time of the disaster to approximately 1 month later
	Sufferer	• Rescue work	
	NPO, etc.	• Rescue work	
	Business, etc.	• Rescue work	
	Neighborhood council, etc.	• Rescue work	
	Local government	• Rescue work and understanding the state of damages • Requesting aid cooperation and dispatches	
Local governments over a wide area and the national government	• Coordinating rescue and relief work		
Notes	<ul style="list-style-type: none"> • It is very likely that administrative body staff may be late to assemble and that there may be disruptions in the systems for collecting information, so, prior to the occurrence of a disaster, it is necessary to determine staff assembly rules and create a variety of methods for collecting and delivering information. • It is necessary to strengthen collaboration with relevant organizations starting in ordinary times prior to the occurrence of a disaster. 		
Actual examples	<p>The citizens themselves establish the disaster management headquarters.</p> <ul style="list-style-type: none"> • Kirikiri ward, Otsuchi-cho in Iwate prefecture was heavily damaged by the tsunami, but immediately thereafter, the citizens banded together and established the disaster management headquarters (the head of the disaster management headquarters was the former president of the fire department and other key members were the president of the neighborhood association, the president of the voluntary residents association, and the principal of the elementary school). The citizens in this community made use of a strong sense of unity to pull through their time spent living in evacuation shelters. Examples of 		

	<p>activities performed by the citizens include clearing debris from roads and distributions of rice done by women in temporary shelters. [A]</p> <p>Disruptions in systems for collecting information</p> <ul style="list-style-type: none"> • The major problem that was seen in the collecting and delivering of disaster information was that the initial response systems of disaster management organizations such as national and local governments, police departments, and fire departments did not start quickly, which made it difficult to understand the whole scope of damage during the initial stages after the disaster. Prior to the Great Hanshin-Awaji Earthquake, there had been no disruptions to this degree in the systems of administrative bodies for collecting information. It is a fact that these disruptions in systems for collecting information made it extremely difficult to understand the state of damages. [D] <p>Information transmitted by Hyogo prefecture during initial stages after a disaster</p> <ul style="list-style-type: none"> • At 06:20 on January 18, the governor held an emergency press conference. Thereafter, until the 22nd, information such as the state of damages, the state of evacuees, the provision of emergency goods, the provision of housing, and the state of lifelines was released regularly from the disaster management headquarters two or three times each day at the end of meetings. From the 20th, information pertaining to resident's lifestyles was transmitted regularly by Nippon Housou Kyokai, SUN-TV, AM-KOBE, and Kiss-FM on the basis of broadcasting arrangements indicated in the regional emergency plans. However, it took approximately one week after the disaster for televisions and radios to be distributed to the temporary shelters. Also, the number of people who took radios with them when they evacuated was approximately 8% of all evacuees. [D] <p>Failure to transmit information from local governments due to the loss of physical objects</p> <ul style="list-style-type: none"> • When the disaster occurred, problems such as interruptions in communication and damage to government office buildings caused a great number of obstacles that prevented the understanding of the state of damages and the reporting or transmission of such information. Examples of this case were seen in the disaster prevention government office building of Minamisanriku-cho and the government office building of Otsuchi-cho. [A] <p>Work of liaisons (on-site disaster management information liaisons)</p> <ul style="list-style-type: none"> • Liaisons are individuals who work for the Ministry of Land, Infrastructure, Transport and Tourism and who are dispatched to local public bodies upon the occurrence of a large-scale natural disaster such as an earthquake, flood, or landslide. Liaisons perform activities such as collecting information, such as that pertaining to the state of damages, and providing support for emergency disaster countermeasures. In the 3.11 Earthquake, the varied support provided by the head of the Tokuyama bureau of the Tohoku region maintenance office to disaster afflicted local governments (the activities of the "old man working as a black marketer") drew much attention. [A]
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> • Establishing disaster management headquarters as a control center for the state of emergency • Receiving information at and transmitting information from the disaster management headquarters and coordinating with relevant organizations

Policy	2) Performing rescue and first-aid work		
Details	<ul style="list-style-type: none"> • When large-scale damage occurs, an appropriate and fast initial response immediately after the occurrence of the disaster will save many lives. To this end, it is necessary for local governments to respond flexibly to the state of the disaster and to strengthen systems that enable smooth collaboration with related rescue and disaster management organizations. • There are limits to the extent that local governments working by themselves can respond to disasters, so it is necessary to smoothly coordinate support efforts over a wide area from the initial period after a disaster. Also, it is necessary to secure a base of operations and other required items so that relief teams can do their work smoothly. • As a goal, provide emergency countermeasures immediately after an earthquake within 72 hours after the occurrence of the disaster and recovery countermeasures after an earthquake within 1 week after the occurrence of the disaster. 		
Base laws and systems	The Disaster Relief Act, the Basic Act on Disaster Control Measures, regional emergency plans, and arrangements with related business persons		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Performing fire fighting work	Immediately after the disaster	<ul style="list-style-type: none"> (1) If fire spreads, exercise all available fire fighting capabilities to put out the fires. (2) If systems for fighting fires after a disaster have been established, perform other activities such as rescue and first-aid work concurrently with the fire fighting work. (3) If the spread of fire is small in scale, focus on rescue and first-aid work.
	(2) Performing rescue and first-aid work	Immediately after the disaster	<ul style="list-style-type: none"> (1) The rescue and first-aid units will make use of rescue and first-aid equipment to perform their work as an organization with the goal of saving human lives. Make effective use of mobile first-aid teams. (2) Perform effective work by planning to quickly supply the necessary equipment by way of actions such as collaborations with related business persons in the event that there are insufficiencies in the emergency equipment required to perform rescue and first-aid work. (3) Perform first-aid work by establishing first-aid stations and providing relief to injured or sick persons by way of collaborations with medical personnel organizations, members of fire departments, disaster support volunteers, and other individuals and organizations. (4) Assign priorities to injured or sick persons according to the immediacy of their injuries or sickness on the basis of the triage assessments provided by paramedics and other medical personnel. Then, use vehicles such as ambulances and helicopters to quickly transport high-priority patients to medical institutions.
Major roles categorized by bearers of responsibility		From the time of the disaster to approximately 72 hours later	Approximately 1 week after the time of the disaster
	Sufferer	<ul style="list-style-type: none"> • Securing one's own safety and performing rescue work 	—
	NPO, etc.	<ul style="list-style-type: none"> • Rescue work 	—
	Business, etc.	<ul style="list-style-type: none"> • Rescue work 	—
	Neighborhood council, etc.	<ul style="list-style-type: none"> • Rescue work 	—
	Local government	<ul style="list-style-type: none"> • Rescue work and understanding the state of damages 	<ul style="list-style-type: none"> • Removal of obstacles from roads

			<ul style="list-style-type: none"> • Provision of food and other items to disaster victims
	Local governments over a wide area and the national government	<ul style="list-style-type: none"> • Coordinating rescue and relief work • Dispatch of disaster assistance teams 	<ul style="list-style-type: none"> • Transportation of support goods • Reception of relief teams and other teams from countries outside of Japan
Notes	<ul style="list-style-type: none"> • It is necessary to form hypotheses on items such as the occurrence of the disaster and the state of damages on the basis of the actual circumstances of the area, and then establish plans for rescue and first-aid work in ordinary times. • The disaster situation will change according to the source of the occurrence and with the passage of time, so it is important to adjust to the situation when responding to the disaster. 		
Actual examples	<p>Impossibility of fighting fires in all affected areas</p> <ul style="list-style-type: none"> • In the Great Hanshin-Awaji Earthquake, there were 197 separate instances of fires occurring on the day of the disaster. Not only that, approximately 100 of these instances occurred by 06:00. In addition, the fires occurred over a wide area and a great many of them occurred at the same time. This led to insufficiencies in terms of both personnel and equipment, which showed the fact that it is impossible for the fire fighting personnel to rush from one location to another in order to fight all the fires. [D] <p>Occurrence of isolated communities and evacuation of entire villages by helicopter</p> <ul style="list-style-type: none"> • It took a long time for relevant organizations—such as the prefectural and municipal governments, the prefectural police, and fire departments—and for the press to understand the state of damages in semi mountainous areas to which communication became impossible both by land line and mobile phone. For example, no information regarding Yamakoshi village reached the prefectural government and the press until the day following the occurrence of the disaster. There were also cases of representative citizens from other isolated communities braving aftershocks and walking multiple kilometers along crumbling and dangerous mountain roads to request relief from administrative bodies. The citizens of Yamakoshi village, which was evacuated in full, started to be rescued by Self Defense Force helicopters 4 days after the disaster from the 24th. [B] <p>Using anything at hand to perform rescue work when first-aid equipment became insufficient</p> <ul style="list-style-type: none"> • In the Great Hanshin-Awaji Earthquake, a great number of houses and other buildings collapsed, which led to a flood of people making requests to the local fire and police departments for rescue and relief work. Also, there was an extreme insufficiency of rescue equipment and a great many people demanded rescue equipment from fire fighters and other workers. As a result, people used a variety of equipment in the rescue work such as shovels, crowbars, rotary saws, chain saws, saws, hammers, and jacks. [D] 		
What can be done outside of Japan	<ul style="list-style-type: none"> • Establishing disaster-prevention facilities in government office buildings of administrative bodies (making safe government office buildings, establishing rescue bases, making emergency stores of necessary materials, and equipping facilities with information systems) • Implementing disaster reducing drills for administrative bodies and for citizens • Creation of a business continuity plan (BCP) and business continuity management (BCM) by the administrative body • Arrangements with other local governments for mutual aid • Arrangements with related business persons (non-governmental organizations such as those related to food, construction, transportation, medical treatment, and information) • Construction of systems for receiving relief teams from countries outside of Japan 		

Policy	3) Establishing and operating temporary shelters		
Details	<ul style="list-style-type: none"> • A temporary shelter is a building such as a school or community center that is used to take in and shelter for a limited period of time those who have lost their homes due to collapse, fire, or other damage caused by earthquake or other disaster or those who are at risk of suffering damages. Local governments will indicate temporary shelters in advance and will make this common knowledge for all citizens. • In ordinary times, the earthquake resistance of buildings that are indicated as temporary shelters will be checked in order to secure the safety of disaster victims. • It is important to endeavor to operate temporary shelters in a way that secures the privacy of citizens and maintains each person's living environment in a favorable manner. Also, it is important to give careful thought to the temporary shelter from the view point of the different genders, such as by promoting women's participation and by considering the different needs of men and women. One example of achieving this is by posting women in the group that is in charge of the temporary shelter. • In advance, create a manual for the operation of the temporary shelter so that the temporary shelter can be operated smoothly and without confusion. 		
Base laws and systems	The Disaster Relief Act, the Basic Act on Disaster Control Measures, the Flood Control Act, the Landslide Prevention Law, and regional emergency plans		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Establishing temporary shelters	From the time of the disaster to within 72 hours later	<ul style="list-style-type: none"> (1) Receive disaster victims into the temporary shelter in units of communities with each community made up of groups according to collaboration with organizations such as organizations of citizens for disaster prevention. (2) Place people in charge of the temporary shelter while considering the opinions of women and vulnerable people. (3) Make use of a variety of aspects of information media to provide disaster victims with accurate and quick information. (4) If the number of temporary shelters is insufficient, establish facilities outdoors in which to temporarily receive disaster victims.
	(2) Operating temporary shelters	From 72 hours after the time of the disaster	<ul style="list-style-type: none"> (1) Provide and loan to disaster victims at the temporary shelter food, drinks, and daily necessities. (2) Perform necessary actions to maintain the health and hygiene of all evacuees. (3) Encourage women's participation in the operation of the temporary shelter, (4) Proceed with the reception of volunteers at the temporary shelter.
Major roles categorized by bearers of responsibility		From the time of the disaster to within 72 hours later	From 72 hours after the time of the disaster
	Sufferer	• Moving to a temporary shelter	• Participating in the operation of the temporary shelter
	NPO, etc.	—	• Supporting the operation of the temporary shelter
	Business, etc.	—	—
	Neighborhood council, etc.	• Guiding disaster victims	• Participating in the operation of the temporary shelter
	Local government	<ul style="list-style-type: none"> • Securing temporary shelters • Guiding disaster victims • Provision of food and other items to disaster victims 	<ul style="list-style-type: none"> • Supporting the operation of the temporary shelter • Provision of food and other items to disaster victims
	Local governments over a wide area	<ul style="list-style-type: none"> • Supporting the securing of temporary shelters • Understanding the state of the 	• The same as to the left

	and the national government	establishment of temporary shelters	• Coordinating the transferring of disaster victims to other areas
Notes	<ul style="list-style-type: none"> • In consideration of the needs of vulnerable people such as elderly people, disabled people, infants, and expectant and nursing mothers, it is necessary to endeavor to secure a variety of temporary shelters such as by renting as temporary shelters privately rented housing, Japanese-style inns, and hotels within and in the neighborhood of the disaster afflicted area. • It is also important to understand information on and consider measures for providing support to home evacuees (disaster victims who do not live in temporary shelters and instead only come to them to receive food). 		
Actual examples	<p>Harsh shelter living conditions that had an effect on people's health</p> <ul style="list-style-type: none"> • The majority of specified temporary shelters were large-scale facilities such as auditoriums and gymnasiums of elementary and junior high schools. However, these shelters were harsh environments that had a negative effect on many individuals—especially those with weak constitutions, elderly people, and infants—from the moment that they took shelter there. [D] <p>Operation of temporary shelters with consideration given to a variety of people</p> <ul style="list-style-type: none"> • JICA was providing training in Nihonmatsu for members of the Japan Overseas Cooperation Volunteers (JOCV) before their dispatch. However, due to a request from the prefecture, the training facility was made available as a temporary shelter from March 14 to provide support to disaster victims. At maximum, 450 people stayed in the temporary shelter, and a large number of problems arose with the communal lifestyle. JICA held participatory workshops to plan how to improve the living environment in the temporary shelter together with the cooperation of the citizens. In the workshops, the makeup of the population of evacuees was analyzed and those who especially needed support such as elderly people and young mothers were identified. Support was provided especially by alumni who have experience giving support in developing countries as members of cooperating teams. The support provided by these alumni enabled to sustain the lifestyles of the evacuees for a number of months through activities such as the implementation of a lesson for the health and physical exercise of elderly people, support for the education of school-age and younger children, and the operation of a kid's room. It also enabled to provide concrete support by considering gender issues through the operation of group discussions including female leaders. [A] <p>Establishment and use of a space exclusively for women in temporary shelters</p> <ul style="list-style-type: none"> • BIG PALETTE FUKUSHIMA is a convention center that has capacity for large-scale events with participants numbering in the tens of thousands. At the time of the disaster, this held as many as 2,500 people making it the largest temporary shelter in Fukushima prefecture. During the operation of the temporary shelter, staff members of the prefectural government were told that there was nowhere for women to change their clothes. Due to this and other complaints, the staff established a space exclusively for women. Through the establishment of the exclusive space, the staff attempted to improve the living conditions of those suffering under harsh situations by doing a number of things such as providing a space in which people could relax and attain peace of mind, working to secure the safety of the female evacuees, providing goods for women, and providing an enjoyable space for stress reduction. [A] 		
What can be done outside of Japan	<ul style="list-style-type: none"> • Specifying temporary shelters in advance • Constructing the public facilities that will be used as temporary shelters, such as schools, in safe locations • Equipping the specified temporary shelters with emergency facilities such as rain water storage equipment and solar panels and making emergency stores of materials such as food and drinking water at the specified temporary shelters • Establishing a manual for the operation of temporary shelters with consideration given to vulnerable people and gender issues • Implementing training for the operation of temporary shelters • Forming agreements in advance for the renting of private lodging facilities 		

Policy	4) Providing drinking water, food, and daily necessities		
Details	<ul style="list-style-type: none"> • To protect the lives of evacuees even if the market distribution facilities of ordinary times are hindered by the disaster, it is necessary to secure daily necessities such as food, water, and blankets and to provide evacuees with these materials in a fast and accurate manner. • Due to the enlargement of the emergency stores and the expansion of suppliers, endeavor to store enough food and daily necessities for three days after a disaster. • Regarding water, if the waterworks are damaged by an earthquake, recover the damaged locations urgently. While the waterworks are damaged, secure the required amount of water from the emergency water supply. 		
Base laws and systems	The Disaster Relief Act, the Basic Act on Disaster Control Measures, and regional emergency plans		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Providing water, food, and daily necessities	From the time of the disaster to within 72 hours later	(1) Provide food and other similar supplies from temporary shelters and other similar locations. (2) Give or loan daily necessities to households afflicted by the disaster. (3) Provide emergency water supplies from water supply locations such as the emergency water supply tower, water purification plants, and water stations. Use vehicles to transport emergency water supplies to areas that are far away from the water supply location. (4) After a disaster occurs, for temporary shelters that are affected by water outages, use the water present in the school's pool, in the well for disaster prevention, or in a similar source.
	(2) Stably providing water, food, and daily necessities	From 4 days after the earthquake	(1) From the fourth day after the disaster, provide food by distributing rice to evacuees.
(3) Supplying and transporting materials	From 4 days after the earthquake	(1) Request and supply mass transport of materials over a wide area. (2) Proceed with the securing of market distribution of daily necessities. (3) Transport the supplied materials such as food and daily necessities to the wide-area transportation base and to the transportation locations within the area. (4) Transport the materials received at the transportation locations within the area to temporary shelters and other similar locations.	
Major roles categorized by bearers of responsibility		From the time of the disaster to 72 hours later	A few months after the disaster
	Sufferer	—	—
	NPO, etc.	—	• Supporting the distribution of relief supplies
	Business, etc.	—	• Collecting and transporting relief supplies
	Neighborhood council, etc.	• Receiving and distributing relief supplies	• The same as to the left
	Local government	• Providing water, food, and daily necessities • Receiving relief supplies	• The same as to the left • The same as to the left
Local governments over a wide area and the national government	• Supplying and transporting relief supplies	• The same as to the left	

<p>Notes</p>	<ul style="list-style-type: none"> • It is necessary to secure food and daily necessities for which considerations have been made for vulnerable people such as elderly people, for people with dietary restrictions, and for the different needs of men and women. • It is necessary to strengthen the material transport system with consideration given to the work performed by individuals such as material transporters so that materials can be transported appropriately in the event of a disaster.
<p>Actual examples</p>	<p>Food problems in temporary shelters</p> <ul style="list-style-type: none"> • In addition to difficulties present in understanding just how much food needed to be supplied, the system in place for receiving support from outside disaster afflicted areas was not sufficient. This led to problems such as food not reaching all evacuees. Also, some temporary shelters were far away from the transport routes, which led to problems such as food not reaching its destination and evacuees such as elderly people falling ill from cold rice balls and lunch boxes. [D] <p>Temporary shelters established by communities and the sharing of necessary materials</p> <ul style="list-style-type: none"> • In Nagahora district in Rikuzentakata city, residents of the divided peninsula put their existing community to good use by creating a temporary shelter. People brought materials from their own homes and organized what was available to overcome the disaster together. [A] <p>Difficulties at medical institutions due to water outages</p> <ul style="list-style-type: none"> • Problems such as shaking and liquefaction of landfill sites attributable to the earthquake damaged a large amount of waterworks, especially water pipes. In 10 cities and 7 towns of Hyogo prefecture, 1,265,730 houses (a value proportionate to 90% of all the houses supplied) suffered water outages. Especially at medical institutions, which require a large amount of water, it was difficult to even maintain the functionality of the institutions and it was necessary to secure emergency drinking water. [D] <p>Logistical support in Tono city, Iwate prefecture</p> <ul style="list-style-type: none"> • Tono city was used not only as the primary staging point (base camp) for wide-area support teams but also as a location for the accumulation and distribution of support supplies. Prior to the 3.11 Earthquake, large-scale disaster reducing drills were also held here on the basis of the “concept for maintenance of logistical support center for earthquake and tsunami (decided on in 2007).” [A]
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> • Making emergency stores of materials such as water, food, and daily necessities • Performing practical training in collaboration with relevant organizations such as material transporters to ensure that tasks such as material transportation coordination and vehicle provision can be performed smoothly • Establishing a system for the supply of petroleum fuel

Policy	5) Performing medical and relief work		
Details	<ul style="list-style-type: none"> • It is hypothesized that when a disaster occurs, a large number of casualties will arise from the destruction of houses and concrete-block walls, fires, landslides, and other events. Immediately after the occurrence of the disaster, medical and relief work must be performed quickly for this large number of casualties. It is also necessary to process dead bodies quickly and appropriately while giving sufficient consideration to the sanctity of the deceased and to the feelings of bereaved relatives. • It is necessary to efficiently collect information (in a centralized manner) on the damage to construct a system for coordinating the limited medical supplies to get the absolute best use out of these supplies immediately after the occurrence of the disaster in order to secure a quick initial medical response system, to strengthen the system for supplying materials such as medicine, to plan for the establishment of a cremation system, and to perform related operations. 		
Base laws and systems	The Disaster Relief Act, the Basic Act on Disaster Control Measures, and regional emergency plans		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Establishing a primary care system	From the time of the disaster to approximately 1 week later	(1) Efficiently collect information (in a centralized manner) on the state of the damage in order to construct a system for coordinating the limited medical supplies to get the absolute best use out of these supplies immediately after the occurrence of the disaster in order to secure a quick initial medical response system. (2) Perform quick coordination of details such as the transport destination and the transport method and implement transport over a wide area in collaboration with transportation locations over a wide area. (3) Provide medical treatment support through organizations such as healthcare activity groups and patrolling psychological care consultation teams.
	(2) Providing medicine and tools and equipment for medical treatment	The same as above	(1) Provide a stable supply of materials such as medicine.
	(3) Securing medical facilities	The same as above	(1) Through the disaster base hospital, secure medical facilities such as by planning for the use of empty beds in medical institutions and for the temporary expansion of the capacity of medical institutions. (2) Establish a system that can collect and analyze information from medical institutions, first-aid stations, and similar facilities.
	(4) Establishing quarantine systems	The same as above	(1) To prevent the outbreak and spread of infectious diseases, quickly and accurately implement quarantine countermeasures in disaster afflicted areas and temporary shelters.
	(5) Searching for missing persons and performing inquests, autopsies, background checks, and similar tasks for dead bodies	The same as above	(1) A place where a large number of dead bodies can be stored is necessary in order to perform searches for missing persons and inquests and autopsies (*) for dead bodies, so plan to secure such a location and quickly implement cremation procedures.

	(6) Establishing a cremation system and similar systems	The same as above	(1) Secure coffins and crematoriums, and then quickly transport dead bodies to the crematoriums. (2) Create a system for quick cremation that includes cremation over a wide area.
* An inquest refers to an investigation performed by a coroner (a police officer) into the cause of death of a body with the goal being to determine whether foul play was involved. An autopsy refers to an investigation performed by a medical examiner (a doctor) into the cause of death of a body.			
Major roles categorized by bearers of responsibility		From the time of the disaster to 72 hours later	Approximately 1 week after the disaster
	Sufferer	—	—
	NPO, etc.	—	—
	Business, etc.	—	—
	Neighborhood council, etc.	—	—
Local government	<ul style="list-style-type: none"> • Understanding the state of damages in terms of human life, the state of damages to and the state of operations of medical institutions • Establishing first-aid stations at temporary shelters 	<ul style="list-style-type: none"> • Implementing quarantine work • Issuing cremation permits 	
Local governments over a wide area and the national government	<ul style="list-style-type: none"> • Giving general commands pertaining to and performing general communication and coordination of medical and relief work 	<ul style="list-style-type: none"> • Supporting the quarantine work of local governments • Creating a system for cremation over a wide area 	
Notes	<ul style="list-style-type: none"> • Make sufficient emergency stores of items such as tools and equipment for medical treatment and strengthen systems, in which medicine manufacturers also participate, for the supplying of medicine and similar materials. • Strengthen medical foundations such as by promoting changes to medical facilities to make them earthquake-resistant buildings, securing lifelines, and sharing information. • Increase the speed with which cremations are carried out by implementing actions such as by training doctors to perform autopsies in collaboration with relevant organizations and by putting in place substantial systems for cremation over a wide area. <p>These are examples of the necessary actions.</p>		
Actual examples	<p>Confusion arising from mutual collaboration between medical institutions</p> <ul style="list-style-type: none"> • In addition to the fact that the system for receiving dispatched teams such as medical assistance teams was not ready, the collaboration between medical institutions and between medical institutions and other institutions was insufficient. As a result of this and other causes, there was confusion in the disaster afflicted areas. There were also examples of medical institutions within disaster afflicted areas themselves transporting critical patients to supporting healthcare organizations. [D] <p>The Japanese Red Cross Ishinomaki Hospital, preventing the collapse of medical care in the most heavily disaster afflicted area</p> <ul style="list-style-type: none"> • According to the manual prepared in advance, at the time of the disaster, all staff members of the Japanese Red Cross Ishinomaki Hospital took their stations and finished preparations for triage and medical care. In this way, the hospital functioned as a disaster base hospital. A large number of emergency patients were brought in. The number of patients brought in peaked at 1,251 on the second day after the disaster. In Ishinomaki city, the medical institutions within the city were supposed to collaborate with each other in the event of a disaster. However, due to the effect of the massive tsunami, nearly all the 		

	<p>medical institutions could not function. The massive tsunami did not reach the Japanese Red Cross Ishinomaki Hospital, which was equipped with facilities such as its own private power generators and emergency water, and this hospital alone shouldered the burden of the 200,000 people from the Ishinomaki metropolitan region as the disaster base hospital. Approximately 120 doctors from all across Japan hurried to the Japanese Red Cross Ishinomaki Hospital to provide their support alongside the staff of the hospital. [A]</p> <p>Problems in securing and maintaining the quality of blood to be used in transfusions</p> <ul style="list-style-type: none"> • Even though the Hyogo Prefectural Blood Center had blood in inventory on the day after the disaster, problems arose in maintaining the quality of the blood due to damage done to lifelines. Also, it was difficult to understand the demands for blood by medical institutions with the paralysis striking the lines of communication and transportation. Even more, from the day after the disaster, there was no hope for drawing or formulation of blood, and the center had to secure blood from other centers. [D]
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> • Forming Disaster Medical Assistance Teams (DMAT) (Disaster relief medical care dispatch teams that consist of personnel such as doctors and nurses who possess specialized knowledge for use in performing life support and similar operations at the site of disasters such as major earthquakes and other natural disasters as well as traffic accidents) • Making emergency stores of medicine and tools and equipment for medical treatment • Forming agreements regarding disasters with medical personnel organizations • Performing training in medical and relief work with relevant officials

Policy	6) Disposing of garbage and human waste		
Details	<ul style="list-style-type: none"> To quickly implement the individual reconstruction of life for each disaster victim after the disaster, it is important to reconstruct the living environments of disaster victims in the early stages of reconstruction. In detail, to secure the sanitary conditions of disaster afflicted areas and to maintain the health of disaster victims, it is necessary to quickly dispose of garbage from daily life and human waste. Disaster afflicted local governments will understand the state of damages, calculate the estimated amount of garbage that will be produced, quickly decide on temporary garbage accumulation locations and on garbage disposal plans, and then promptly proceed with the disposing of garbage. After details such as the number of evacuees in temporary shelters and similar locations, the number of disaster toilets, and the number of human waste collection vehicles are understood, a human waste collection plan will be decided on and disposal by way of sanitary drainage will be implemented. 		
Base laws and systems	The Disaster Relief Act, the Basic Act on Disaster Control Measures, and regional emergency plans		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Securing toilets and disposing of human waste	From the time of the disaster to approximately 1 month later	(1) On the basis of information such as the state of the damage and the location in which waste is collected, use a human waste collection vehicle (vacuum car) to collect human waste that needs to be scooped out. Then, deposit the waste in water reclamation centers and the manholes of main sewer pipes. (2) When installing portable toilets and other similar facilities, secure multi-purpose toilets and select locations in which to install these toilets while considering the safety of people such as elderly people, disabled people, women, and children.
Major roles categorized by bearers of responsibility	(2) Disposing of garbage	From the occurrence of the disaster	(1) The disaster afflicted local government will proactively dispose of garbage. (2) If disposal over a wide area is necessary due to the state of damages, the local governments over the wide area will plan to secure and coordinate machinery for collecting and transporting the garbage and personnel to perform the disposal.
		From the time of the disaster to 72 hours later	Approximately 1 month after the disaster
	Sufferer	—	—
	NPO, etc.	—	—
	Business, etc.	—	—
	Neighborhood council, etc.	—	—
	Local government	<ul style="list-style-type: none"> Deciding on a human waste collection plan and implementing disposal Deciding on a garbage disposal plan and implementing disposal 	<ul style="list-style-type: none"> Implementing disposing of human waste Implementing disposing of garbage
Local governments over a wide area and the national government	<ul style="list-style-type: none"> Coordinating disposal over a wide area 	<ul style="list-style-type: none"> Coordinating disposal over a wide area 	
Notes	<ul style="list-style-type: none"> It is necessary to secure temporary garbage accumulation locations and final disposal locations for the disposal of garbage and to construct a system for disposing of garbage over a wide area. Regarding the disposal of human waste, it is necessary to secure disaster toilets for temporary shelters and to perform coordination of disposal over a wide area. 		

<p>Actual examples</p>	<p>Mountains of feces in temporary shelters</p> <ul style="list-style-type: none"> • Due to water outages, evacuees could not use flush toilets, which led to mountains of feces in temporary shelters and similar locations. There were also locations in which people used water from swimming pools to secure toilets. [D] <p>Using the Self Defense Force to deal with enormous amounts of garbage generated</p> <ul style="list-style-type: none"> • Garbage collection returned to normal at the end of January, but the amount of garbage that was generated during the disaster was so large that Kobe city requested the aid of the Self Defense Force and some other cities requested support from other local governments to deal with the emergency situation of the garbage left behind by the garbage collection. [D] <p>Problems in securing temporary storehouses for disaster garbage</p> <ul style="list-style-type: none"> •Securing temporary storehouses for the disaster garbage became an urgent matter. People searching for locations to store garbage competed with those searching for a variety of locations such as those for rescue operations such as bases for materials, those for storehouses for debris, and those for temporary housing. The situation was extremely difficult, but a location near the sea was obtained for use as a storehouse for the disposing of primarily leftover garbage.[D]
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> • Constructing systems for the disposing of garbage over wide areas • Making emergency stores of disaster toilets <p>(Reference: Plan being implemented [or that has already been implemented] by JICA)</p> <ul style="list-style-type: none"> • Reconstruction of Human Waste Disposal Facilities in Banda Aceh City in Indonesia

Chapter 2 Constructing Systems for Recovery and Reconstruction

• Framework for implementing policies



Policy	1) Constructing a reconstruction control center (establishing and operating reconstruction headquarters)		
Details	<ul style="list-style-type: none"> • To systematically promote the individual reconstruction of life for each disaster victim, the reconstruction of town areas, and industry promotion, establish—as a temporary organization—disaster reconstruction headquarters (hereinafter referred to as the reconstruction headquarters) separate from the normal organization of the administrative body. • Establish the reconstruction headquarters quickly, that is, within approximately one week after the disaster. By quickly deciding on a basic disaster recovery plan and a disaster recovery plan, it becomes possible to: (1) clearly indicate details such as the visions for civic life, for the city, and for industries after disaster recovery; objectives in the disaster recovery plan; and work guidelines and (2) define the roles of the control center that will bear responsibility for implementing the concrete disaster recovery work. • Establish within the reconstruction headquarters a council as a mechanism for the creation of policies related to the reconstruction. The main items to be determined by this council are the basic recovery plan and the local government rehabilitation plan. Also, the results of items related to recovery work such as progress management and coordination must be reported to and acknowledged by this council. 		
Base laws and systems	The Basic Act on Disaster Control Measures		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Establishing reconstruction headquarters	Approximately 1 week after the disaster	(1) When the damage from the disaster is great and it is determined that there is a need to execute disaster reconstruction policies in a quick and systematic manner, establish disaster reconstruction headquarters.
	(2) Operating reconstruction headquarters	Approximately 1 week after the disaster	(1) The head of the reconstruction headquarters will convene and supervise the reconstruction headquarters council.
		At any time	(1) The council at headquarters will deliberate on important matters related to reconstruction such as the basic plan, the work plan, the financial plan, and the personnel affairs plan.
At any time	(1) The head of the reconstruction headquarters will manage the progress of disaster reconstruction policies.		
Major roles categorized by bearers of responsibility		From the time of the disaster to approximately 1 week later	From 1 week after the disaster
	Sufferer	—	• Providing opinions for the local government rehabilitation plan
	NPO, etc.	—	• The same as above
	Business, etc.	—	• The same as above
	Neighborhood council, etc.	—	• The same as above
	Local government	• Establishing reconstruction headquarters	• Operating reconstruction headquarters
	Local governments over a wide area and the national government	—	• Coordinating the local government rehabilitation plan over a wide area • Providing support for recovery work
Notes	<ul style="list-style-type: none"> • It is also necessary for the reconstruction headquarters council to obtain the participation and cooperation of appropriate external experts. • Regarding the drafting of the local government rehabilitation plan, it is necessary to sufficiently reflect the opinions of citizens and business persons. In addition, it is indispensable to provide to citizens and business persons appropriate information regarding the progress of recovery work. 		

Actual examples	<p>Disaster management headquarters on the day of the disaster, disaster reconstruction headquarters on the 10th day</p> <ul style="list-style-type: none"> • Disaster management headquarters were established in Kobe city on the day of the disaster, and disaster reconstruction headquarters headed by the mayor were established on the 10th day after the disaster. [D] <p>Establishment of the Reconstruction Agency</p> <ul style="list-style-type: none"> • In February 2012, 11 months after the disaster, the Reconstruction Agency as well as the following branch offices were established: the Regional Bureau of Reconstruction in Iwate prefecture, the Regional Bureau of Reconstruction in Miyagi prefecture, and the Regional Bureau of Reconstruction in Fukushima prefecture. This agency has been placed under the supervision of the Cabinet and carries the responsibility for (1) the planning, coordination, and implementation of Japan's policies regarding reconstruction and (2) interacting with local public bodies as a one-stop service body, through the providing of support, and in other ways.[A] <p>Temporary organization for reconstruction: Agency for the Rehabilitation and Reconstruction of Aceh and Nias (BRR) in Indonesia</p> <ul style="list-style-type: none"> • This agency was established for a limited period of 4 years according to presidential order in April 2005. The staff members (approximately 450 people at the agency's largest size) were mostly people transferred from various other government offices and agencies, and residences were established in Aceh. Because the plans were established by BRR itself and BRR was the organization that could use the budget, it was possible to perform rehabilitation and reconstruction work by involving very few other government bodies. By principle, all support organizations and associations were obligated to register with BRR. BRR used this fact to coordinate support. Reasons for BRR's success include the leadership of Mr. Kuntoro Mangkusubroto, the head of the agency, and the establishment of on-site bases (there was a need to change things on an ongoing basis such as correcting mistakes when they arose). [G] <p>An organization that carried the responsibility for a series of recovery and reconstruction processes, Disaster and Emergency Management Presidency (AFAD) in Turkey</p> <ul style="list-style-type: none"> • As a lesson from the Marmara earthquake, the Turkish government planned to make clear the structures for managing danger immediately after a disaster. In detail, they constructed a system for a single point of control over prevention, first-aid, and recovery processes, in other words, AFAD. AFAD has been effective in managing danger immediately after a disaster in the same way as the Federal Emergency Management Agency (FEMA) of America. For example, AFAD was evaluated as being effective during the Van earthquake of 2011. [H]
What can be done outside of Japan	<ul style="list-style-type: none"> • Establishing reconstruction headquarters as a control center for the reconstruction • Drafting and making official announcements of local government rehabilitation plans on the basis of a consensus between citizens and business persons • Drafting and making official announcements of local government rehabilitation plans that combine the viewpoints of lifestyles, the city and town areas, housing, and industries

Policy	2) Understanding the state of damages in terms of human life and property		
Details	<ul style="list-style-type: none"> To understand the state of damages suffered by citizens, it is not sufficient to just note the damage to homes and other types of housing. It is also necessary to understand information such as the state of the lifestyles of citizens prior to and after the disaster and the intentions of citizens for the future. It is required then to use this information to provide citizens with housing, social welfare, and similar items. Understanding the state of damages to houses and other residences is necessary in drafting plans for the disposal of debris, the provision of emergency housing and permanent housing, the support of the individual reconstruction of life of each citizen, and the recovery of the town area. Understanding the state of damages to public facilities is important in securing the provision of public services to citizens after the disaster. 		
Base laws and systems	The Basic Act on Disaster Control Measures and the Act on Support for Livelihood Recovery of Disaster Victims		
Detailed actions, procedures, and methods	Detailed action (human life)	Implementation period	Procedures and methods
	(1) Implementing factual surveys of the livelihoods of disaster victims	From 1 week to approximately 1 month after the disaster	(1) Construct systems for the implementation of surveys, and then implement the factual surveys of the livelihoods of disaster victims. (2) Enter the results of surveys into a database.
	(2) Implementing surveys of the state of damages to houses	From immediately after the disaster to 1 week later	(1) Survey the general situation of damages to houses.
		From approximately 1 week after the disaster	(2) Implement detailed surveys of damages to houses. (3) Enter the results of surveys into a database.
(3) Implementing surveys of the state of damages to public facilities and other similar structures	From immediately after the disaster to 2 months later	(1) Survey the state of damages to public facilities. (2) Obtain the cooperation of the people who established privately-owned public facilities in order to understand the state of damages.	
Major roles categorized by bearers of responsibility		From the time of the disaster to 1 week later	From 1 week after the disaster to 1 or 2 months later
	Sufferer	—	• Cooperating with factual surveys of the livelihoods of disaster victims
	NPO, etc.	—	—
	Business, etc.	—	—
	Neighborhood council, etc.	—	—
	Local government	<ul style="list-style-type: none"> Implementing surveys of the general situation of damages to houses Surveying the state of damages to public facilities 	<ul style="list-style-type: none"> Implementing factual surveys of the livelihoods of disaster victims Implementing detailed surveys of damages to houses Implementing surveys of the state of damages to privately-owned public facilities
	Local governments over a wide area and the national government	• Supporting and collecting information from the various surveys	• Supporting and collecting information from the various surveys

<p>Notes</p>	<ul style="list-style-type: none"> • It is necessary to perform factual surveys of the livelihoods of disaster victims for all disaster victims (households) such as evacuees staying at temporary shelters, individuals who have remained at their own homes, and people who have evacuated or moved to places outside of disaster afflicted areas. • For housing damage surveys and surveys of the damages to public facilities and other similar structures, it is required to implement appropriate surveys from the viewpoint of prevention of secondary disasters. • Enter the results of these various surveys into a database for use in drafting the local government rehabilitation plan.
<p>Actual examples</p>	<p>Attempts to understand the needs of disaster victims</p> <ul style="list-style-type: none"> • In order to understand problems such as the actual conditions of, trends among, and how to provide relief to sufferers, Hyogo prefecture made use of emergency patrols of temporary shelters to implement various surveys during the month after the occurrence of the disaster. They implemented a survey to learn how many people had an urgent need to temporarily enter social welfare facilities, a survey to understand the needs of volunteers, a survey related to health and medical requirements within temporary shelters, and a survey into the actual living conditions in temporary shelters. [D] <p>Implementation of an emergency survey of damages to houses and similar buildings in the first 1 to 3 days after the disaster</p> <ul style="list-style-type: none"> • An emergency survey of damages to houses and similar buildings was implemented in each disaster afflicted area in the first 1 to 3 days after the disaster. The results of this survey were extremely effective as materials for understanding at an early stage an overall picture of the damages caused by the earthquake. However, due to variations in the individual survey systems and in the classifications of degrees to which people suffered damages from the disaster, these results could not be used as source materials for plans such as the post-disaster urban recovery plan. [D] <p>Implementation of the survey on examining reconstruction measures of urban areas affected by tsunami, etc.</p> <ul style="list-style-type: none"> • In order to support the work of local public bodies designed for the reconstruction of urban areas affected by tsunami, etc., the Ministry of Land, Infrastructure, Transport and Tourism secured 7.1 billion yen in the first revised budget of the 2011 fiscal year, and then implemented this survey. In detail, this survey targeted the 6 prefectures and 62 municipalities that suffered damages from the tsunami and was implemented to survey aspects in the areas that were flooded by the tsunami such as the state of damages to buildings, infrastructure, and other structures and the evacuation situations of citizens. The results of the survey were provided to local public bodies and were also made public. Also, in response to requests from 6 prefectures and 43 municipalities, investigations were made into the state of damages and the special characteristics of cities, the recovery patterns of affected areas according to factors such as local ideas, and the detailed reconstruction measures of urban areas. These investigations were performed to support municipalities in their creation of local government rehabilitation plans and work plans. [A]
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> • Understanding the state of damages in terms of human life by way of work done by the police, fire departments, and other institutions • Implementing housing damage surveys that make use of aerial photographs • Understanding the state of damages to houses and other residences through field surveys performed by the urban and construction departments • Understanding the state of damages to various public facilities through the work of the jurisdiction department • Entering various information about the state of damages into a database <p>(Reference: Plan being implemented [or that has already been implemented] by JICA)</p> <ul style="list-style-type: none"> • Dispatching Japanese Consultants for the Implementation of Post Disaster Needs Assessment after the Haiti Earthquake

Policy	3) Disposing of debris		
Details	<ul style="list-style-type: none"> • Perform appropriate disposing of materials formed by the disaster such as debris arising from the destruction, burning, and deconstruction of buildings as well as garbage such as furniture and appliances. In order to smoothly proceed with emergency countermeasures as well as recovery and reconstruction in disaster afflicted areas, decide on a basic plan for disposal of debris that is based on the understanding of accurate information. • Proceed quickly with the appropriate disposal of debris under collaboration over a wide area. When disposing of debris, inform all relevant parties, including people who have evacuated or moved to places outside of disaster afflicted areas, of details such as plans and procedures related to debris disposal and to the deconstruction, demolition, processing, and disposal of houses and similar buildings. 		
Base laws and systems	<p>The Waste Management and Public Cleansing Act and the Act on Support for Livelihood Recovery of Disaster Victims The outline of the implementation of disaster waste disposal work related to the Great Hanshin-Awaji Earthquake (Ministry of the Environment)</p>		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Estimating the amount of debris and other refuse that will be generated	Immediately after the disaster	(1) Check the state of damages within the local government, estimate the amount of debris that will be generated, and then determine and officially announce the range of the amount of debris that will be disposed of according to the responsibility of public expenditure.
	(2) Creating systems for the promotion of debris disposal	From immediately after the disaster to approximately 2 weeks later	(1) Within the local government, create a system for the promotion of debris disposal.
	(3) Deciding on and making public knowledge a debris disposal plan	Approximately 2 week after the disaster	(1) Collect and organize a variety of information immediately after the disaster, decide on a debris disposal plan that makes clear the basic plan for the disposal of debris to be performed within the local government, and then inform all relevant parties of this information, including people who have evacuated or moved to places outside of the area of the local government.
	(4) Implementing and coordinating debris disposal	From approximately 1 month after the disaster	(1) Perform debris disposal within the local government according to the debris disposal plan.
	(5) Collaborating between private housing deconstruction and demolition consultations and housing and town development consultations	From approximately 1 month after the disaster	(1) Alongside the implementation of the debris disposal plan, establish request and consultation centers for topics such as what the responsibility of public expenditure will be applied to and the procedure for requesting public expenditure. (2) Establish consultation centers for the coordination between housing consultations and the town development of the neighborhood. (3) If necessary, make requests to local governments over a wide area for the dispatch of experts for consultation such as architects and licensed tax accountants.
Major roles categorized by bearers of responsibility		From the time of the disaster to approximately 2 week later	From approximately 1 month after the disaster
	Sufferer	—	• Engaging in debris disposal work (employment)
	NPO, etc.	—	—

	Business, etc.	—	<ul style="list-style-type: none"> • Cooperation of private transport companies • Cooperating with the sorting and disposal of debris
	Neighborhood council, etc.	<ul style="list-style-type: none"> • Transmitting to disaster victims information related to debris disposal 	
	Local government	<ul style="list-style-type: none"> • Estimating the amount of debris and other refuse that will be generated • Creating systems for the promotion of debris disposal • Deciding on and making public knowledge a debris disposal plan 	<ul style="list-style-type: none"> • Implementing and coordinating debris disposal • Providing various kinds of consultations related to debris disposal
	Local governments over a wide area and the national government	<ul style="list-style-type: none"> • Planning for the application of the Waste Management and Public Cleansing Act • Coordinating debris disposal over a wide area 	<ul style="list-style-type: none"> • Enforcing the budget • Coordinating debris disposal over a wide area
Notes	<ul style="list-style-type: none"> • If necessary, establish temporary storehouses for debris disposal. At these storehouses, it is important to perform suitable disposal of debris by classifying debris into that which can be reused and that which will be disposed of at the final disposal site. • It is necessary to proceed with the reuse of debris by sorting it properly. Sort concrete debris into materials such as subbase course material, backfilling material, and refilling material, sort lumber into chips and other similar materials, and sort scrap metal into different types for reuse. 		
Actual examples	<p>Delayed debris disposal</p> <ul style="list-style-type: none"> • The disaster waste of Kobe city took up approximately half of each disaster afflicted area, so it took a long time to begin deconstruction work. The deconstruction work finally got underway in roughly the second month after the disaster, but because some waste needed to be recycled and some waste took a great deal of work to sort, the temporary storehouses were full to bursting. As an emergency measure, waste was burned in fields within Kobe city and between Osaka and Kobe. [D] <p>Performing efficient debris disposal by way of waste separation</p> <ul style="list-style-type: none"> • In Higashimatsushima city in Miyagi prefecture, a city which is said to have generated disaster waste equivalent to 100 years' worth of normal waste, the people plunged into the work to sort and collect debris as soon as possible. By sorting and recycling debris into 19 classifications, the people were able to reduce the amount of debris that was incinerated to 3% of the total amount. Also, disaster victims were employed to perform the sorting work in an effort to avoid capital expenditures as much as possible. As a result, the final cost was 35% lower than the initial estimate. [A] <p>Implementing debris disposal as an emergency job-creation measure</p> <ul style="list-style-type: none"> • In the recovery and reconstruction plan and survey for Muzaffarabad in Pakistan (2006 to 2007), community empowerment was implemented through debris demolition as emergency rehabilitation work. Community-Based-Organizations (CBOs) planned, implemented, and administered debris demolition. This work provided people with opportunities for employment and to make some money, which has led to this work being evaluated as making the citizens feel that they could take part in the recovery under their own power. [F] 		
What can be done outside of Japan	<ul style="list-style-type: none"> • Estimating the amount of debris that will be generated • Deciding on a debris disposal plan • Implementing the sorting and disposal of debris • Implementing debris disposal by way of employment for disaster victims 		

Policy	4) Creating a disaster recovery plan			
Details	<ul style="list-style-type: none"> • Decide on and make public knowledge the basic disaster recovery plan that makes clear the lifestyles of citizens and the desired shape of the town area after recovery as well as the methods to use in restoring jobs and the basic strategies to be used in realizing these methods. • Decide on a disaster recovery plan as well as local government rehabilitation plans for each specific field that are all based on the basic plan. • It is necessary to listen to and reflect in the final document the opinions of a great number of citizens while creating the disaster recovery plan. • The multiple plans covering specific fields, such as urban renaissance and industry promotion, must be consistent with the disaster recovery plan. 			
Base laws and systems	<p>The Act on Special Measures for Reconstruction of Disaster-stricken Urban Areas and the Act on Support for Livelihood Recovery of Disaster Victims The Act on Reconstruction from Large-scale Disasters</p>			
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods	
	(1) Constructing systems for use in deciding on plans	Approximately 1 week after the disaster	(1) Under the supervision of disaster headquarters, establish systems for use in deciding on the disaster recovery plan, and then carry out this work smoothly. (2) The reconstruction headquarters act as the focal point for general coordination and similar tasks related to the decision on the disaster recovery plan	
	(2) Deciding on a basic disaster recovery plan	Approximately 3 week after the disaster	(1) Create a draft of the basic plan related to recovery, and then have bodies such as the reconstruction headquarters council deliberate over this draft. (2) Decide on and make public knowledge the basic plan.	
	(3) Deciding on a disaster recovery plan	6 months after the disaster	(1) Create drafts in each department on the basis of the basic plan with coordination provided by the reconstruction headquarters. (2) The reconstruction headquarters will collect and arrange the drafts of the plans, present them to citizens, and then hear the opinions of the citizens. (3) Decide on and make public knowledge the disaster recovery plan.	
Major roles categorized by bearers of responsibility			From the time of the disaster to approximately 2 week later	From approximately 1 month after the disaster
	Sufferer	—		• Providing opinions for the disaster recovery plan
	NPO, etc.	—		• Providing opinions for the disaster recovery plan
	Business, etc.	—		• Providing opinions for the disaster recovery plan
	Neighborhood council, etc.	—		• Providing opinions for the disaster recovery plan
	Local government	• Constructing systems for use in deciding on plans	• Deciding on a disaster recovery plan	
	Local governments over a wide area and the national government	• Deciding on a basic disaster recovery plan	• Providing coordination for the disaster recovery plan over a wide area	
Notes	<ul style="list-style-type: none"> • It is necessary to build a vision for the recovery that can be shared by citizens, business people, and the administrative body. The disaster recovery plan must make clear what reconstruction policies to proceed with in order to realize this vision. 			

Actual examples	<p>Implementing work for the local government rehabilitation plan in accordance with the degree of damage</p> <ul style="list-style-type: none"> • The damaged area was extremely large. In addition, there were areas that suffered excessive damage to the entire area and other areas that suffered damage in scattered locations. As such, it was necessary to assign priorities to the application of reconstruction work. Therefore, urban recovery plan work over the entire area was implemented for the areas that suffered excessive damage to the entire area and spot improvement work was implemented for the areas that suffered damage in scattered locations. [D] <p>Creating a local government rehabilitation plan with the community development council method</p> <ul style="list-style-type: none"> • Prior to the disaster and based on the Kobe urban development ordinance, community development councils were recognized in approximately 10 locations. To plan for the promotion of and building of consensus for town development after the disaster, primarily due to the encouragement of the administrative body, community development councils were organized in as many as 100 locations. From repeated discussions, these councils came to a detailed decision on town development. [D] <p>Working to decide on a plan for town development during recovery that reflects the wishes of the citizens</p> <ul style="list-style-type: none"> • In Higashimatsushima city in Miyagi prefecture, the officials urged local citizens and local communities to participate in the decision of the plan for town development during recovery. In this way, the officials kept in mind the desires of the citizens in regard to recovery and reconstruction. In detail, community discussion sessions were held 11 times in the format of workshops with conferences conducted by the council of citizens and the local government. A system for reflecting the wishes of the citizens in the plan was created, the document “Information from the Area Community Discussion Session” was created with the details of the discussion and this document was distributed, and other information was provided. Also, regarding the future ideas for town development, a meeting for community development—which was made up of members such as the council of citizens and the local government, members of the committee for deciding on the comprehensive plan, NPOs, the council for social welfare, and economic bodies—was held, and the results of this meeting were reflected in the “Isshin Project.” Furthermore, a workshop for junior high school students was held to provide young people with an opportunity to discuss the future of the city. [A]
What can be done outside of Japan	<ul style="list-style-type: none"> • Drafting comprehensive disaster recovery plans and local government rehabilitation plans for separate departments (the city, housing, industry, and lifestyles) • Creating local government rehabilitation plans that maintain the history and characteristics of the area • Creating local government rehabilitation plans in which methods for participation in the creation of have been introduced <p>(Reference: Plan being implemented [or that has already been implemented] by JICA)</p> <ul style="list-style-type: none"> • The Urgent Development Study on Rehabilitation and Reconstruction in Muzaffarabad City in the Islamic Republic of Pakistan (2006 to 2007)

Policy	5) Securing resources		
Details	<ul style="list-style-type: none"> • An enormous demand on public finances and a great decrease in tax revenue are expected in response to reconstruction, so it is of utmost importance to secure resources. Take whatever actions possible to secure resources for the carrying out of first-aid, recovery, and reconstruction measures in order to plan for the reconstruction of the lives of citizens as soon as possible, even by just a single day. • To deal with demands on public finances, make requests as soon as possible to local governments over a wide area and to the national government for things for which measures are possible within the limits of existing systems and for things that require exceptional measures that exceed the limits of existing systems. • Supplement the reconstruction measures being performed by the administrative body. To reconstruct as attractive areas those areas ruined by the disaster, establish recovery funds, which make possible more flexible management of funds for use in reconstruction. 		
Base laws and systems	The Basic Act on Disaster Control Measures and the Act on Special Financial Support to deal with the Designated Disaster of Extreme Severity (Special Financial Aid for Heavy Disasters)		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Calculating the public finance amount to demand	Within 1 week after the disaster	(1) Calculate the public finance amount to demand in relation to emergency first-aid and recovery work and plans for living expenses immediately after the disaster.
		Within 1 month after the disaster	(2) Calculate the public finance amount to demand for reconstruction work.
	(2) Deciding on and carrying out a plan for the enforcement of the budget	Within 2 weeks after the disaster	(1) Define the amount required for countermeasures with high urgency, and then decide on a plan for the enforcement of the budget. (2) Quickly carry out the budget according to this plan.
	(3) Following the procedure for the issuance of bonds	1 month after the disaster	(1) Calculate the required amount of bonds to issue for debts such as those attributable to disaster recovery and rehabilitation, and then carry out the procedure to request the issuance of bonds.
	(4) Requesting exceptional measures such as state aid	1 month after the disaster	(1) Request local governments over a wide area and the national government for exceptional measures such as the issuance of bonds, tax allocations, and state aid.
	(5) Founding recovery funds	Approximately 2 weeks after the disaster	(1) Decide to establish recovery funds only after consulting with local governments over a wide area and the national government.
	1 month after the disaster	(2) Perform budgetary measures related to recovery funds. (3) Establish incorporated foundations for the operation of recovery funds.	
Major roles categorized by bearers of responsibility		From the time of the disaster to 1 week later	From 1 week after the disaster to 1 month later
	Sufferer	—	—
	NPO, etc.	—	—
	Business, etc.	—	—
	Neighborhood council, etc.	—	—
	Local government	• Deciding on a plan for resources	• Following the procedure for the issuance of bonds

		<ul style="list-style-type: none"> Deciding on a plan for the enforcement of the budget 	<ul style="list-style-type: none"> Requesting exceptional measures such as state aid Establishing recovery funds
	Local governments over a wide area and the national government	<ul style="list-style-type: none"> Coordinating the amounts of recovery budgets 	<ul style="list-style-type: none"> Coordinating the amounts of recovery budgets
Notes	<ul style="list-style-type: none"> To effectively and efficiently proceed with reconstruction work, it is necessary to consider the priority of work and policies and steadily plan for the creation of budgets starting with the work and policies that are most urgent and that have the largest ripple effect. When operating recovery funds, it is required to do so in a way that is useful for the implementation of policies that are based on the characteristics of the area. 		
Actual examples	<p>Establishing recovery funds</p> <ul style="list-style-type: none"> In order to supplement the policies of the administrative body and to implement the following work, Kobe city in Hyogo prefecture established the Hanshin-Awaji Earthquake Recovery Fund (a public utility foundation corporation) by using as a reference the disaster management fund created for the Mount Unzen, Fugen-dake eruption. <ol style="list-style-type: none"> Work to support the stability of and self-reliance in the lifestyles of disaster victims and to support the advancement of the health and social welfare of disaster victims Work to support the reconstruction of housing such as the rebuilding of the homes of disaster victims Work to support industry promotion such as the restarting of work for employees at small- to medium-sized businesses that have been damaged Work contributing to the recovery of education and culture such as the rebuilding of private schools that have been damaged Other work contributing to the quick and comprehensive recovery of disaster afflicted areas [D] <p>Recovery funds that use donations as their capital</p> <ul style="list-style-type: none"> The damage to Okushiri island brought about concerns in a great many people, which led to donations of 19 billion yen. Using 70% of these donations as capital, a recovery fund was established with 13.2 billion yen as an ordinance of Okushiri-cho. This fund was planned to be used in the relief of disaster victims. It was used in a wide range of reconstruction work such as making citizens independent and reconstructing local farming, forestry, fishing, commerce, and tourism. The goals of this fund were supporting the independence of citizens in the area as well as contributing to the comprehensive reconstruction of the area. [E] <p>A menu of various types of support made possible by recovery funds</p> <ul style="list-style-type: none"> The Mid. Niigata Prefecture Earthquake recovery fund is a system for the funding of support projects. Each year, 2% of the total 300 billion yen is used, which has provided a total amount of 60 billion yen over 10 years. The funds are used by Niigata prefecture. The representative department within the prefectural government considers proposals for work from municipalities, and has done things such as arranging these proposals into menus. For example, a menu for the independence of semi mountainous areas was prepared that contained such items as a program for the support of homemade rice field repairs (which was designed to give support to the creation of small-scale agricultural zones that could not receive assistance from the national government); financing of the costs of the rebuilding of housing of elderly disaster victims; “reverse mortgages,” in which the principal would be paid back through the selling of land and property owned by individuals after their deaths; and support for rebuilding costs associated with items such as meeting halls owned by villages and emotional pillars of communities such as Shinto shrines and other objects associated with local Shinto deities. [B] 		
What can be done outside of Japan	<ul style="list-style-type: none"> Raising recovery resources through the issuance of bonds including foreign bonds Securing recovery support payments from various foreign countries Establishing and operating recovery funds (flexible operation that is based on the characteristics of the area) 		

Policy	6) Constructing systems for giving reports and providing consultations		
Details	<ul style="list-style-type: none"> To organize and provide to citizens in a quick and accurate manner a variety of converging information—such as information related to the administrative body’s plans and concrete policies dealing with reconstruction and information related to the lifestyles of those living in disaster afflicted areas—, develop a variety of public relations activities while collaborating closely with local governments over a wide area. To deal with the various concerns and problems that disaster victims are dealing with in their daily lives, it is important to establish consultation centers for disaster victims to support each disaster victim’s individual reconstruction of life and stability of lifestyle. To this end, establish comprehensive consultation centers for disaster victims. Establish these centers in all necessary areas and ensure that each center offers all the required functionality in a single location. Then, provide disaster victims with consultation services through these centers. 		
Base laws and systems	The Act on Support for Livelihood Recovery of Disaster Victims		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Implementing reports related to reconstruction	From 1 week after the disaster	(1) Publish temporary public relations documents on the reconstruction as appropriate. Use these documents to transmit the details and status of implementation of reconstruction policies and information related to the lifestyles of citizens. (2) Make use of the press, the Internet, and other means to transmit information related to reconstruction as appropriate.
	(2) Establishing temporary consultation centers	Within 1 week after the disaster	(1) Establish a temporary consultation center in each department and provide consultations over the phone.
	(3) Establishing a Consultation Support Center for Foreign Residents	Approximately 1 month after the disaster	(1) To provide a variety of support for disaster victims, establish a Consultation Support Center for Foreign Residents and provide necessary information in a comprehensive and centralized manner.
Major roles categorized by bearers of responsibility		From the time of the disaster to 1 week later	From 1 week after the disaster
	Sufferer	—	—
	NPO, etc.	—	—
	Business, etc.	—	—
	Neighborhood council, etc.	—	—
	Local government	<ul style="list-style-type: none"> Implementing reports related to reconstruction Establishing temporary consultation centers 	<ul style="list-style-type: none"> Implementing reports related to reconstruction Establishing a Consultation Support Center for Foreign Residents
	Local governments over a wide area and the national government	<ul style="list-style-type: none"> Providing information related to reconstruction 	<ul style="list-style-type: none"> Providing information related to reconstruction
Notes	<ul style="list-style-type: none"> It is necessary to figure out a way to transmit in a clear and easy-to-understand manner information, such as that pertaining to individual reconstruction of life, industry, and town development, to disaster victims and business people. During various types of consultations, it is important to understand and manage in a centralized manner the information that arises from consultations with and various requests from disaster victims. At the same time, it is required to consider the privacy of disaster victims. 		
Actual examples	Examples of free legal consultations provided in the aftermath of the 3.11 Earthquake <ul style="list-style-type: none"> As the second anniversary of the disaster approached, the Japan Federation of Bar Associations collected examples of free legal consultations provided in the aftermath of the 3.11 Earthquake. Starting with the period immediately after the disaster, interviews 		

	<p>and telephone legal consultations were implemented free of charge in each area. The information from these consultations was collected and analyzed into the results of the free legal consultations provided in the aftermath of the 3.11 Earthquake. In the version that was made public knowledge in October 2012, there were approximately 40,000 sets of consultation information that were the targets of the analysis. The collected examples are a selection of 1,000 of the aforementioned analysis results that indicate the concrete details of the consultations. The collected examples record the real opinions of disaster victims, convey the tragedy of the 3.11 Earthquake, and contain a variety of information such as examples of consultations that led to the realization of new legislation and systems in the wake of the disaster and examples of consultations that show the future problems. [A]</p> <p>Work related to centralized support for disaster victims performed by people such as consultation staff</p> <p>- Disaster Victim Counseling and Support Centers in the Kamaishi area</p> <ul style="list-style-type: none"> • In order to deal with consultations with and questions from disaster victims in a centralized and flexible manner, Disaster Victim Counseling and Support Centers were established in the fourth month after the disaster in each area under the jurisdiction of the wide-area promotion departments in the northern and coastal parts of Iwate prefecture. To facilitate the individual reconstruction of life of each disaster victim, experts (such as financial planners, lawyers, judicial scriveners, architects, land and house investigators, and licensed tax accountants) and consultation staff provided a variety of consultations and fielded a variety of questions. As of the 2012 fiscal year, there are plans for the implementation of a toll-free phone number dedicated for consultations, the holding of a conference of Kamaishi area disaster victim liaisons, and the sharing of information pertaining to the state of activities and support needs. [A] <p>The establishment of temporary FM radio stations for the conveying of information and the bonding together of townspeople</p> <ul style="list-style-type: none"> • Yamamoto-cho in Miyagi prefecture was left with no means to convey information to local townspeople after their loudspeaker vehicles were washed away by the tsunami and the disaster prevention wireless system became inoperable. In this situation, the temporary FM radio station “Apple Radio,” which was formed based around a former radio announcer who had retired to Yamamoto-cho, started broadcasting 10 days after the disaster on March 21. Apple Radio made live broadcasts every day from 7:00 in the morning until 7:30 at night to provide timely information—such as the state of damages within the town, information about the well-being of residents, and medical information—to disaster victims, evacuees, and people outside of the town. Currently, the radio station has made changes to its broadcast format such as the broadcast times, but it still continues to convey information about the town. [A] <p>Otsuchi Newspaper: Local woman conveys information on disaster afflicted areas all by herself</p> <ul style="list-style-type: none"> • From June 2012 in Otsuchi-cho in Iwate prefecture, the “Otsuchi Newspaper” was distributed free of charge every week to every household in the town (approximately 5,400 households). Every part of the production of the newspaper, from performing interviews and writing stories to printing and delivery, was accomplished by a lone woman living in the town. Half a year after the disaster, she participated in the “Oraga-OtsuchiYumehiroba” corporation, which promoted town development work. Although she had no experience in performing interviews and editing, she volunteered to start making the newspaper. When she first launched the newspaper, its contents took up only an A3-size page, but the newspaper grew to 4 tabloid-size pages. The newspaper introduced information such as plans for the construction of public housing for disaster victims and guidance for the recruitment of people to move into the said housing in a manner that the readers found polite and easy to understand. It is said that these days, the staff at the town hall keep the newspaper close to hand, showing how the newspaper has become an existence to them on par with answering the questions of the townspeople. [A]
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> • Publishing reconstruction news • Establishing Consultation Support Centers for Foreign Residents with the goal of providing consultations to disaster victims (mobilizing experts)

Policy	7) Planning how to collaborate with volunteers		
Details	<ul style="list-style-type: none"> • So that volunteers, NPOs, and other similar organizations can be deployed effectively in the event of a disaster, the administrative body has to plan for the creation of an environment in which people can smoothly participate in reconstruction activities while respecting the independence and self-reliance of the above organizations and carrying out mutual communications to prevent the duplication of civic activities and activities being done by the administrative body. • Establish a location within the local government disaster management headquarters from which to interact with volunteers, establish activity bases, and create a system for collaboration in order to deal with emergencies. • Provide support for volunteers, NPOs, and other organizations that in turn provide support for the independence of disaster victims during the period of livelihood reconstruction that spans multiple years. 		
Base laws and systems	Various subsidy systems for volunteer activities		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Creating systems	From immediately after the disaster	(1) Establish activity bases for volunteers and other workers. (2) Collect and transmit information about civic activities done in disaster afflicted areas and other similar activities. (3) Collaborate with local volunteer centers and similar locations to form a network consisting of organizations performing activities such as volunteer organizations.
	(2) Collaborating with civic activities	A few months after the disaster	(1) Volunteers begin to leave disaster afflicted areas during the period of reconstruction, so it is necessary to train new local volunteers. Spread this idea among the citizens.
Major activities performed by other bearers of responsibility		From immediately after the disaster	A few months after the disaster
	Sufferer	—	—
	NPO, etc.	• Disaster volunteer activities	• Disaster volunteer activities
	Business, etc.	• Participating in volunteer activities	• Participating in volunteer activities
	Neighborhood council, etc.	—	—
	Local government	• Creating systems	• Collaborating with civic activities
Notes	<ul style="list-style-type: none"> • In general, the Council for Social Welfare receives volunteers locally, however, it may be the case that the local Council for Social Welfare cannot respond appropriately due to reasons such as insufficient experience. As such, it will be required to provide operational support. 		
Actual examples	Volunteer networks in collaboration with the administrative body <ul style="list-style-type: none"> • At the time in question, volunteers were received by the personnel affairs section of the city hall. However, appropriate instructions could not be given to volunteers because all functions of the city hall were in chaos. Amidst this situation, the Nishinomiya Volunteer Network (NVN; current name: Nippon Volunteer Network Active in Disaster [NVNAD]) was created as a new format for collaboration with the administrative body in which the work to receive volunteers was itself performed by volunteers. [D] 		

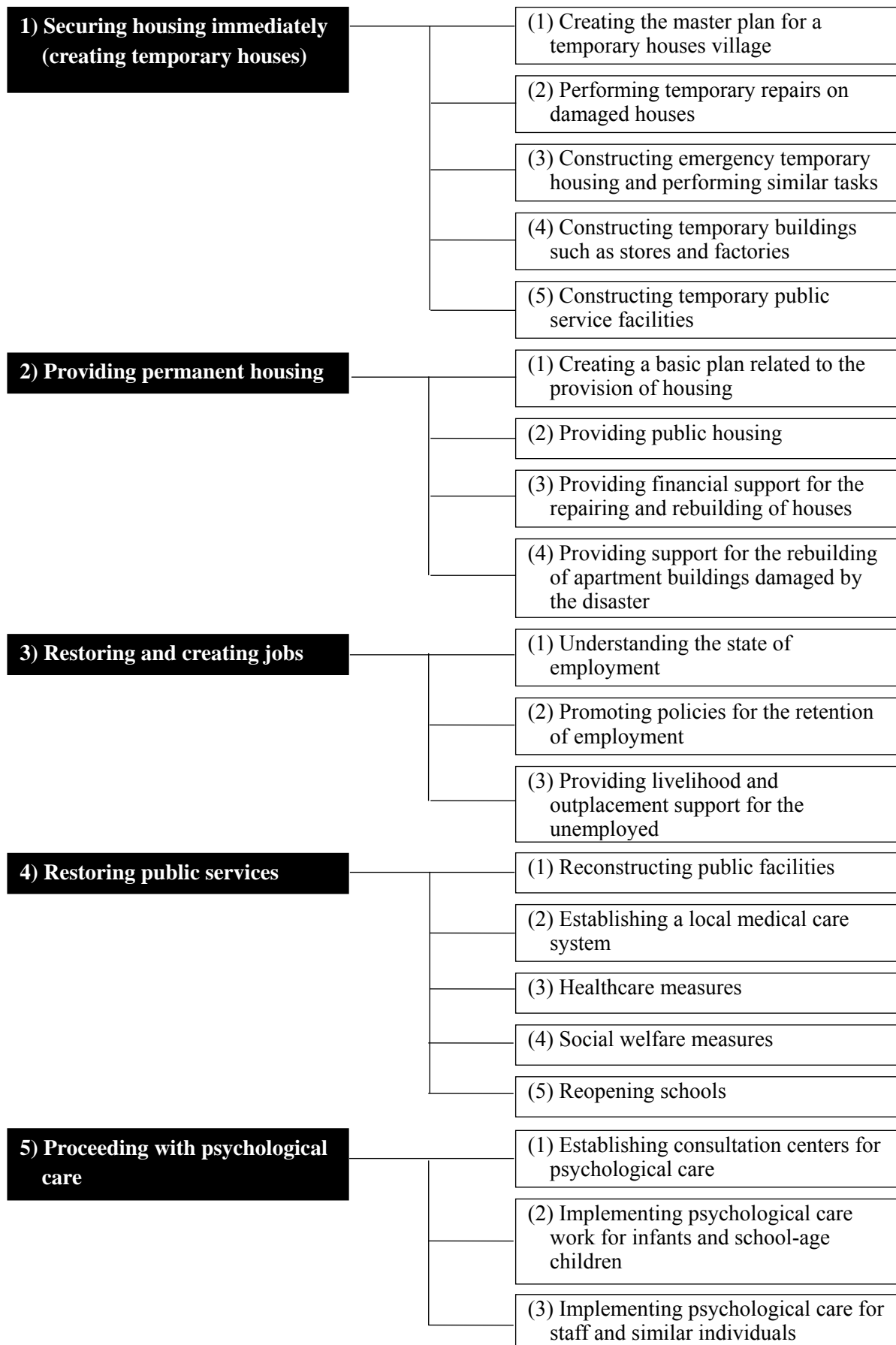
	<p>Coordination between volunteers performed through the Cooperative Reconstruction Center</p> <ul style="list-style-type: none"> • Because there were a great number of disaster afflicted areas from the 3.11 Earthquake, the aspects of suffering from the disaster also varied depending on the prefecture. Therefore, a great number of local volunteer organizations that were based on the characteristics of the area were created in the disaster afflicted areas. The volunteers from outside of the affected prefectures have also continued their activities ever since the period immediately after the disaster. To coordinate communications between these organizations, Cooperative Reconstruction Centers were established in three prefectures. A Cooperative Reconstruction Center is an umbrella group for connecting different organizations to each other and is an area base for national networks such as the Japan Civil Network for Disaster Relief in the East Japan (JCN). [A] <p>Using Ashiyu (footbath) to get closer to disaster victims</p> <ul style="list-style-type: none"> • A group networking the NGOs for the disaster sufferers and the Nippon Foundation collaborated to start the “Shin-tsunami& ROAD Project” in which Ashiyu (footbath) volunteers are dispatched to provide disaster victims with a soothing environment. Ashiyu (footbath) is one type of Oriental medicine. A washtub or similar container is filled with hot water, which warms the participant’s feet and thereby improves the flow of blood in the participant’s entire body. This technique prevents colds. This is normally something that people perform by themselves, but the project was implemented to provide communities in disaster afflicted areas a chance to gather. The volunteers faced and gave a hand massage to each person who came to receive the Ashiyu (footbath). The volunteers endeavored to record on cards everything that the people receiving the Ashiyu (footbath) said. Included among these notes were the true feelings of the participants, which could not be asked by way of surveys and similar mechanisms, and information relating to the state of disaster victims within the community. By analyzing this information and picking out the needs contained therein, those working on the reconstruction were able to start initiatives leading to effective reconstruction support. [A] <p>Providing support through local NGOs</p> <ul style="list-style-type: none"> • In the “Turkey-Japan Temporary Housing Support Project” (2000 to 2002), Japanese NGO members were dispatched as experts. These NGO members obtained the cooperation of local NGOs to support women and children by way of temporary housing. [H]
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> • Creating systems for receiving volunteers • Creating volunteer gathering bases and activity bases • Establishing and operating umbrella groups



People trying footbaths in the meeting hall next to temporary houses in Kamaishi City.

Chapter 3 Rebuilding Housing and Lifestyles

- Framework for implementing policies



Policy	1) Securing housing immediately (creating temporary houses)		
Details	<ul style="list-style-type: none"> • In a major disaster, it is likely that a great number of buildings such as houses, stores, and workplaces will be destroyed. In this case, temporary homes, places where people can purchase goods and work, and places for public services are required in a transitional manner. Such temporary environments are all referred to as “temporary houses.” • Based on the local government rehabilitation plan, there is a need to transition temporary houses to the main houses as soon as possible in the early period after the disaster. 		
Base laws and systems	The Disaster Relief Act		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Creating the master plan for a temporary houses village	Within 2 months after the disaster	(1) Consider the number of temporary houses that are required and the number that can be constructed, and then create the master plan that indicates the deployment and composition of the temporary houses.
	(2) Performing temporary repairs on damaged houses	Within 1 month after the disaster	(1) Perform temporary repairs on the usable private homes among those that have been partly destroyed or partly burned by the disaster.
	(3) Constructing emergency temporary housing and performing similar tasks	From 2 months after the disaster	(1) Construct emergency temporary housing on usable public and private lots. (2) Secure vacant spaces in public and private housing as designated temporary housing.
	(4) Constructing temporary buildings such as stores and factories	From 2 months after the disaster	(1) Construct temporary buildings such as stores and factories on usable public and private lots.
	(5) Constructing temporary public service facilities	Within 1 month after the disaster	(1) Construct temporary public service facilities for those facilities that have been destroyed and that are urgently needed.
Major activities performed by other bearers of responsibility		Within 1 month after the disaster	From 1 month after the disaster
	Sufferer	—	• Move into emergency temporary housing or similar facilities
	NPO, etc.	—	—
	Business, etc.	• Providing sites for temporary houses	• Moving into temporary buildings such as stores and factories
	Neighborhood council, etc.	• Selecting sites for temporary houses	• Managing temporary houses
	Local government	• Creating the master plan for a temporary houses village	• Performing temporary repairs on damaged houses • Constructing emergency temporary housing • Constructing temporary buildings such as stores and factories
	Local governments over a wide area and the national government	• Providing support for the construction of temporary houses	• Providing support for the construction of temporary houses

Notes	<ul style="list-style-type: none"> • The largest problem in constructing temporary houses is the securing of sites. Public lots will be considered with the highest priority, but if these lots are insufficient, private lots will also have to be used. In this situation, the first locations that will be used are vacant lots for places such as business locations and locations that are planned for development as well as agricultural zones. Thereafter, it will be necessary to consider subleasing areas such as continuous ones that have been lost to fire. • In the master plan for a temporary houses village, it is necessary to pay attention to four principles of temporary houses: the unity of areas, the neighboring of disaster afflicted areas, the focus on disaster victims, and overall livelihood.
Actual examples	<p>Moving into temporary housing that shows respect to the community</p> <ul style="list-style-type: none"> • From the start, Nagaoka city considered moving its citizens into temporary housing that showed respect for the local community. In the selection of construction sites, thought was given to factors such as sites being as close as possible to the disaster afflicted areas, the commutes of students to elementary and junior high schools, shopping at familiar stores, and participation in neighborhood association activities. [B] <p>Difficulty in using urban areas for construction sites of emergency temporary housing led to the use of suburban areas</p> <ul style="list-style-type: none"> • In the Great Hanshin-Awaji Earthquake, emergency temporary housing for 48,300 households in Hyogo prefecture and 1,381 households in Osaka was constructed. However, it was difficult at first to obtain materials and other items required for the construction of such a large amount of temporary housing. Also, especially in major urban centers such as Kobe city, it was difficult to secure sites for the construction of emergency temporary housing. As a result, large-scale temporary housing facilities were created in suburban areas. [D] <p>Creating temporary houses villages that have stores and social welfare facilities</p> <ul style="list-style-type: none"> • Generally, temporary housing and temporary stores are constructed separately, but on the basis of a proposal from the University of Tokyo and Iwate Prefectural University, temporary houses villages that contained both housing and stores were realized. In Kamaishi city in Iwate prefecture, such a temporary houses village was constructed in Heita Athletic Park. This village contained temporary housing for 240 households, a temporary medical care support center equipped with medical examination and treatment facilities, and a temporary shopping mall called “Heita Park Shopping Street” where citizens could purchase daily necessities. In the temporary shopping mall, 22 stores that had suffered damages from the tsunami—such as a cafe, a beauty parlor, and a supermarket—were opened for business. The operation of this temporary space provided residents with living and lifestyle services as well as a place to work all in one location. This environment, which has supported the process from recovery to reconstruction, has provided both physical and emotional support to disaster victims. [A]
What can be done outside of Japan	<ul style="list-style-type: none"> • Constructing temporary houses • Constructing various temporary buildings through the use of local materials and local construction methods

Policy	2) Providing permanent housing		
Details	<ul style="list-style-type: none"> • Create and promote programs for encouraging the rebuilding of housing and for moving citizens from emergency housing to permanent housing. • Plan to provide public housing for those individuals who have difficulty rebuilding or otherwise obtaining housing under their own power and provide support for the repairing and rebuilding of private housing and for the providing of good-quality private housing. • Provide financial support for the securing of permanent housing, provide support for housing and town development activities, and provide a variety of information and consultations. 		
Base laws and systems	The Act on Public Housing, the outline of the program system for maintenance of excellent buildings, the outline of the subsidy program for the promotion of the provision of special rental housing, and the Act on Support for Livelihood Recovery of Disaster Victims		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Creating a basic plan related to the provision of housing	Within 3 months after the disaster	(1) Understand the number of permanent houses that are required and the number of houses that can be provided, and then decide on a basic plan for the provision of permanent housing as a basic framework for housing reconstruction.
	(2) Providing public housing	From 1 month after the disaster	(1) Provide public housing to those households that are not capable of securing housing under their own power. In this situation, perform actions such as reconstructing and repairing existing public housing; creating new public housing; relaxing the requirements on tenants; and providing rent reductions, exemptions, and assistance.
	(3) Providing financial support for the repairing and rebuilding of houses	From 3 months after the disaster	(1) In accordance with the residence stability support system of the Act on Support for Livelihood Recovery of Disaster Victims, provide the necessary financial support for the smooth rebuilding and repairing of housing such as by providing funds on loan and other housing loans.
	(4) Providing support for the rebuilding of apartment buildings damaged by the disaster	From 3 months after the disaster	(1) To proceed with the rebuilding of apartment buildings damaged by the disaster, perform acts such as providing support for building consensus with right holders, implementing measures for the relaxation of noncompliance in relation to existing buildings, and founding systems to support the reconstruction of buildings.
Major activities performed by other bearers of responsibility		From 1 month after the disaster	From 3 months after the disaster
	Sufferer	—	<ul style="list-style-type: none"> • Repairing and rebuilding housing • Reconstructing apartment buildings
	NPO, etc.	—	—
	Business, etc.	—	<ul style="list-style-type: none"> • Supporting the repairing and rebuilding of housing and the reconstructing of apartment buildings
	Neighborhood council, etc.	—	—
	Local government	<ul style="list-style-type: none"> • Creating a basic plan related to the provision of housing • Providing public housing 	<ul style="list-style-type: none"> • Providing financial support for the repairing and rebuilding of houses • Providing support for the rebuilding of apartment buildings damaged by the disaster

	Local governments over a wide area and the national government	• Supporting the provision of permanent housing	• Supporting the provision of permanent housing
Notes	<ul style="list-style-type: none"> • After a mega-disaster, the need for public housing increases. However, the provision of a large amount of public housing leads to a long-term burden for the disaster afflicted local government in terms of maintaining and managing the housing thereafter. By creating emergency plans for the construction of public housing that, as much as possible, make use of and introduce to citizens the provision of private housing, it enables to reduce the burden of constructing public housing. On the other hand, it is desirable to provide incentives for the construction of private housing. 		
Actual examples	<p>Rebuilding of housing in line with the ideas of disaster victims</p> <ul style="list-style-type: none"> • Regarding the ideas of disaster victims for the rebuilding of the Aonae area of Okushiri-cho, in which the tsunami damage was significant, those working in the fishing industry requested reconstruction in the original location and other citizens requested the relocation of houses to upland areas. In response to these requests, the reconstruction of the disaster afflicted area was carried out by way of raising land (projects focused on creating environments for fishing villages) and the relocation of houses to upland areas (projects focused on promoting group relocation for disaster mitigation). [E] <p>Work related to the construction of public housing for disaster victims that considers local communities; Idobata tenement houses</p> <ul style="list-style-type: none"> • In Soma city of Fukushima prefecture, public housing for disaster victims that has a cafeteria and a cooperative space in which citizens can sit together in a circle has been created with the goals of preventing the isolation of elderly disaster victims and reconstructing the local community. Although this is public housing for disaster victims, one of its characteristics is that it contributes to the maintenance of the local community in the disaster afflicted area through methods such as preventing the isolation of elderly disaster victims and providing citizens with countless mechanisms for interacting with each other during daily life. [A] <p>Privately constructed, publically operated reconstruction housing</p> <ul style="list-style-type: none"> • Sendai city of Miyagi prefecture hammered out a plan for publically operated reconstruction housing with the goal of providing housing for 3,000 households. Among these 3,000 households, Sendai city will directly construct publically operated reconstruction housing for 1,620 households. The remainder of the housing will be provided through a “privately constructed, publically operated” system in which the city purchases multiple dwelling houses that are constructed by private businesses. Regarding the “privately constructed, publically operated” system, candidates for the project have been decided as of March 2013 on the basis of a numerical evaluation of items such as certainty of securing plots of land, site conditions, consideration of the forming of communities, and the cost of land and building. The construction will be carried out with targeted completion by March 2015. [A] 		
What can be done outside of Japan	<ul style="list-style-type: none"> • Creating a basic plan related to the provision of housing • Providing permanent public housing • Providing support for the repairing and rebuilding of houses • Providing support for the rebuilding of apartment buildings damaged by the disaster 		

Policy	3) Restoring and creating jobs		
Details	<ul style="list-style-type: none"> Stable employment is an irreplaceable factor for enabling disaster victims to plan for the reconstruction of their lifestyles. Therefore, make business people aware of systems for the retention of various types of employment, implement consultations for the retention of employment, and plan for the promotion of the reemployment of the unemployed affected by the disaster in the affected areas through methods such as introductions of employment to job applicants and the expansion of job offers. 		
Base laws and systems	The Employment Insurance Act, the special subsidy for job creation in disaster-affected regions (Employment Countermeasures Act), and the Employment Security Act		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Understanding the state of employment	From immediately after the disaster	(1) Immediately after the disaster, quickly perform a survey of the state of employment. Also understand the state of employment thereafter at periodic intervals.
	(2) Promoting policies for the retention of employment	From 1 month after the disaster	(1) To avoid the dismissal of workers, plan the retention of employment at locations such as workplaces affected by the disaster through the use of the Employment Adjustment Subsidies. <ul style="list-style-type: none"> Request that business people retain the employment of their workers. Request that public institutions retain the employment of their workers. Make people aware of and encourage the use of various program systems.
(3) Providing livelihood and outplacement support for the unemployed	From 1 month after the disaster	(1) Provide support, such as reemployment mediation, for those individuals who have lost their place of work due to the disaster. <ul style="list-style-type: none"> Make people aware of and encourage the use of the employment insurance system. Understand the trends in job offers and in job hunting. Expand job offers. Provide business mediation. 	
Major activities performed by other bearers of responsibility		From immediately after the disaster	From 1 month after the disaster
	Sufferer	—	—
	NPO, etc.	—	<ul style="list-style-type: none"> Creating new employment opportunities
	Business, etc.	<ul style="list-style-type: none"> Retaining employment 	<ul style="list-style-type: none"> Retaining employment
	Neighborhood council, etc.	—	—
	Local government	<ul style="list-style-type: none"> Implementing surveys of the state of employment 	<ul style="list-style-type: none"> Employment retention measures Providing livelihood and outplacement support for the unemployed
Local governments over a wide area and the national government	<ul style="list-style-type: none"> Supporting surveys of the state of employment 	<ul style="list-style-type: none"> Exceptional measures for the retention of employment 	
Notes	<ul style="list-style-type: none"> It is necessary to effectively perform surveys of the state of employment by collaborating with various bodies such as the local government, other local governments over a wide area, various industry groups, and associations. To encourage the retention of employment, it is required to decide on support measures for employment retention during the early period after the disaster and then thoroughly make business people aware of these measures. If the major industry of the disaster afflicted area is farming, forestry, or fishing, there are limits on the demands for job offers. In such areas, there are prospects for temporary employment arising from demands for construction during disaster recovery and rehabilitation, but continued employment support will be required. 		

<p>Actual examples</p>	<p>Employing in public work individuals made unemployed by the disaster</p> <ul style="list-style-type: none"> As much as possible, individuals made unemployed by the disaster were employed in the public work whose plans were implemented in disaster afflicted areas. The “Act on Special Measures for the Promotion of the Employment of Individuals Made Unemployed by the Great Hanshin-Awaji Earthquake in Public Work Performed in Areas Afflicted by the Great Hanshin-Awaji Earthquake” was enacted on March 1, 1995, with the goal being the planning of stable lifestyles for disaster victims. [D] <p>Establishing “lively farms” and “dream plantations”</p> <ul style="list-style-type: none"> For citizens whose means of acquiring income were lost because they evacuated off the island, the special employment subsidy program for disaster-affected regions, which used the special program for job creation in disaster-affected regions provided by the Japanese government, was implemented immediately after the evacuation. Through the use of this program, a “lively farm” approximately 1.3 hectares in size was established in Hachioji city in 2001 and a “dream plantation” approximately 2.6 hectares in size was established on Yumenoshima in Koto ward in 2002. This program was designed to plan for the retention of the desire to perform farming among and the securing of employment opportunities for citizens and also to provide assistance in quickly restarting farming once citizens returned to the island. [C] <p>Creating workplaces through the use of cash-for-work</p> <ul style="list-style-type: none"> In the coastal parts of Iwate and Miyagi prefectures, such as Okirai in Sanriku-cho, elderly women who lost their opportunities to fish due to the tsunami were able to obtain cash income by making string bracelets (a type of handicraft) out of the remaining fishing nets in order to assist a project of external supporters (the string bracelets sold at a price of 1,100 yen each of which 576 yen was paid to the maker of the bracelet). As a result of aspects of the project such as the ability to publicize and the quality control for this project that were provided by the external supporters, the project became so popular that supply of the bracelets could not keep up with their demand. In the approximately 1 year since the start of the project, approximately 140 million yen of income has been brought into the disaster afflicted areas. [A]
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> Implementing surveys of the state of employment Employing the unemployed affected by the disaster in the affected areas in debris disposal and construction work for disaster recovery and rehabilitation Implementing work training for the unemployed affected by the disaster in the affected areas Developing employment by creating new employment opportunities <p>(Reference: Plan being implemented [or that has already been implemented] by JICA)</p> <ul style="list-style-type: none"> Employment Support for Women in the Turkey-Japan Temporary Housing Support Project



Bracelet “Tamaki” made in SanrikuArea
(Source: Committee of the Project)

Policy	4) Restoring public services		
Details	<ul style="list-style-type: none"> • At the stage when recovery and reconstruction policies are being implemented, disaster victims are recovering from the shock of the disaster. In this stage, it is important to restore in disaster victims the consciousness of rebuilding their own lifestyles and their own areas. To this end, it is essential to restore the roles and functionality of services such as those of the administrative body including medical care, healthcare, social welfare, and education. • In order to provide support to disaster victims, aim to reconstruct facilities related to a variety of fields in the early period after the disaster and proceed with the construction of flexible systems that should be usable in responding to the varied needs of disaster victims. 		
Base laws and systems	Special Financial Aid for Heavy Disasters, the Child Welfare Act, the Act on Social Welfare for the Elderly, the Act on the Welfare of Persons with Physical Disabilities, etc.		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Reconstructing public facilities	From immediately after the disaster	(1) Endeavor to reconstruct related public facilities in the early period after the disaster and to develop a plan for the preservation of functions so that various public services are not delayed for a long period of time due to the disaster. <ul style="list-style-type: none"> • Understand the state of damages to facilities and other structures. • Maintain functions by performing reconstruction in the early period after the disaster. • Maintain functions through methods such as the use of temporary or substitute facilities.
	(2) Establishing a local medical care system	From immediately after the disaster	(1) To make it possible to respond to new medical care needs attributable to the disaster, consider the implementation of temporary clinics and patrolling clinics. (2) Reconstruct public medical clinics in the early period after the disaster and provide support for the rebuilding of private medical clinics.
	(3) Healthcare measures	From immediately after the disaster	(1) Implement health examinations and mental healthcare work to support the maintenance of the health of disaster victims.
	(4) Social welfare measures	From immediately after the disaster	(1) Accurately understand the trends in demands made by disaster victims on social welfare, reconstruct social welfare facilities in the early period after the disaster, secure social welfare personnel, and provide information to those disaster victims who require social welfare services. <ul style="list-style-type: none"> • Rebuild social welfare facilities. • Improve at-home social welfare services. • Operate livelihood protection systems.
	(5) Reopening schools	From 1 week to within 3 months after the disaster	(1) In the event that elementary and junior high schools cannot be used for their normal purpose because they are being used as temporary shelters, quickly secure substitute locations for providing education. <ul style="list-style-type: none"> • Recover educational facilities. • Secure classrooms. • Support disaster-afflicted infants and school-age children. • Handle school entrance examinations.

		Immediately after the disaster	From 1 week after the disaster
Major roles categorized by bearers of responsibility	Sufferer	—	—
	NPO, etc.	—	• Providing support as dedicated volunteers
	Business, etc.	—	—
	Neighborhood council, etc.	—	—
	Local government	<ul style="list-style-type: none"> • Reconstructing public facilities • Establishing a local medical care system • Healthcare measures • Social security measures 	• Reopening schools
	Local governments over a wide area and the national government	• Supporting the reopening of public services	• Supporting the reopening of public services
Notes	<ul style="list-style-type: none"> • It is needed to quickly provide the institutions that provide public services and disaster victims with information such as that regarding the state of the recovery of facilities and institutions. • It is expected that the demands for medical and social welfare services will increase, so if it is not possible to meet such demands within the area after a disaster, it is important to proceed with the reception of the said services from the surrounding areas. 		
Actual examples	<p>Connecting long-term evacuees by way of a citizens' telephone directory</p> <ul style="list-style-type: none"> • In Tomioka-cho in Fukushima prefecture, in which all the townspeople evacuated due to the nuclear accident, a citizens' telephone directory was created with only the information of the townspeople and only when permission was given to include the said information, and this directory was then distributed to each household. The goal of this telephone directory was to make it easy for the citizens, who had moved all over Japan, to contact and encourage each other. The reference for this project was the creation of a telephone directory during the complete evacuation of the citizens from Miyakemura island of Tokyo.[A] <p>Establishing a Comprehensive Care Center</p> <ul style="list-style-type: none"> • In May 2013, Ishinomaki city in Miyagi prefecture decided to establish a “Comprehensive Care Center” to bring together in one location the work for healthcare, social welfare, medical care, and nursing. The center will be established in the area in the city in which the largest temporary housing facilities are arranged in order to support the healthcare of the elderly people who have suffered due to the 3.11 Earthquake. The center will collaborate with temporary medical clinics, with the visiting assistance personnel of the municipal social welfare council, and with the care managers of regional comprehensive support centers, which will make it possible to share information such as that pertaining to the health of each and every disaster victim. In turn, this will make it possible to smoothly provide a variety of separately sought-after services such as social welfare and medical care. [A] <p>Loss of nursing staff due to evacuation from the nuclear accident</p> <ul style="list-style-type: none"> • In May 2013, it became clear that among all the staff members of long-term care health facilities in Fukushima prefecture, 121 people left their jobs due to evacuation from the nuclear accident. More than three quarters of the departed staff are members of families with small children and are in their twenties or thirties, which is the group that is said to be the most concerned about radioactivity. Replacements for the lost staff have not arrived, which has led to an increasingly dangerous situation. According to the Fukushima Association of Geriatric Health Service Facilities, an investigative organization, “the exhaustion of the staff members and the deterioration in the quality of nursing services are becoming even more serious.” [A] 		

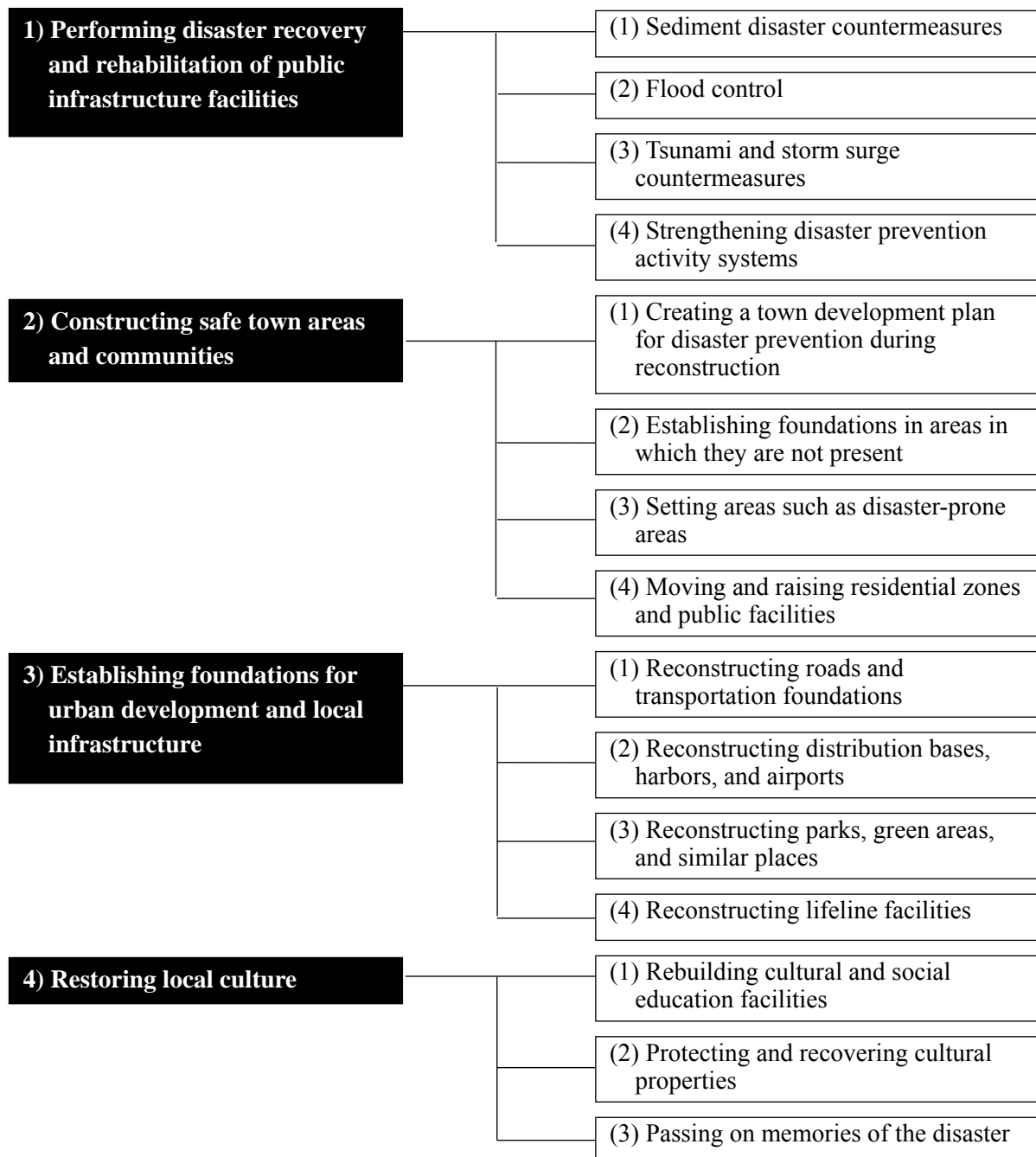
	<p>Reductions of 80% to the populations of elementary and junior high schools in evacuation areas</p> <ul style="list-style-type: none"> • Among all the elementary and junior high schools in the 12 municipalities within Fukushima prefecture specified as evacuation areas due to the Fukushima Daiichi Nuclear Accident, 32 out of the 42 schools have restarted classes, but the number of students has been reduced to 1,592, which is less than a fifth of the 8,388 students prior to the accident. Of the 27 elementary schools, 20 have restarted classes and of the 15 junior high schools, 12 have restarted classes, but small-scale schools and similar schools have been forced to hold combined classes. One of the causes of this situation is said to be that townspeople have evacuated over a wide area and the students have decided not to return now that they have become familiar with the schools that they have transferred to. Local governments for which the evacuation area only makes up a part of their entire area and for which it was sufficient to move schools to different locations within the town have minimized the number of students who have transferred away. Such areas also have low rates of losses of citizens. [A]
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> • Temporary construction of destroyed public service facilities • Restarting public services such as medical care, healthcare, social welfare, and education

Policy	5) Proceeding with psychological care		
Details	<ul style="list-style-type: none"> The disaster may cause health problems and there may be disaster victims who are affected by problems such as by suffering deterioration of bodily functions attributable to psychological damage (posttraumatic stress disorder: PTSD). To plan for the restoration of health and the psychological stability of such disaster victims, perform health management and psychological care. 		
Base laws and systems	Recovery funds		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Establishing consultation centers for psychological care	From 1 week after the disaster	(1) To deal with the psychological damage caused by the shock and stress of experiencing the disaster, establish consultation centers and implement mental healthcare measures for disaster victims. <ul style="list-style-type: none"> Establish psychological consultation centers. Implement patrolling consultations.
	(2) Implementing psychological care work for infants and school-age children	From 1 month after the disaster	(1) Experiencing a disaster during childhood may have a profound effect on one's later personality development, so ensure that sufficient psychological care measures are available for infants and school-age children. <ul style="list-style-type: none"> Implement consultations for infants. Implement patrolling consultations that visit schools.
(3) Implementing psychological care for staff and similar individuals	From 1 month after the disaster	(1) Create systems for proceeding with psychological care measures for individuals in the disaster afflicted areas such as volunteers who are engaged in reconstruction work and the staff of the local government.	
Major roles categorized by bearers of responsibility		From 1 week after the disaster	From 1 month after the disaster
	Sufferer	—	—
	NPO, etc.	—	<ul style="list-style-type: none"> Supporting psychological care measures
	Business, etc.	—	—
	Neighborhood council, etc.	—	—
	Local government	<ul style="list-style-type: none"> Establishing consultation centers for psychological care 	<ul style="list-style-type: none"> Implementing psychological care work for infants and school-age children Implementing psychological care for staff and similar individuals
	Local governments over a wide area and the national government	<ul style="list-style-type: none"> Supporting psychological care measures 	<ul style="list-style-type: none"> Supporting psychological care measures
Notes	<ul style="list-style-type: none"> Generally, it is necessary to perform physical health management with priority given to those who are at risk for the development of problems with their bodies such as elderly people, disabled people, and people with chronic diseases. It takes a long time to cure a person of psychological damage, which means that it is important to secure the appropriate man power and an organization that can provide the required continual care. 		

<p>Actual examples</p>	<p>Psychological care for elderly people by way of centers for emotional connections</p> <ul style="list-style-type: none"> • In the wake of the Great Hanshin-Awaji Earthquake, centers for emotional connections were established to provide psychological care for elderly people and other people living in emergency temporary housing, to form communities, and to provide bases for volunteer activities. These centers for emotional connections were established in temporary housing zones that held 50 households or more. To hold these centers, new buildings were constructed or vacant rooms in existing facilities or in temporary housing in the neighborhood were used. [D] <p>Direct emotional connections between island residents by way of meetings</p> <ul style="list-style-type: none"> • To create opportunities for island residents to make direct emotional connections to each other, 9 meetings were held between 2000 and 2004 by organizations such as the island resident liaison committee. Each meeting was an enjoyable event in which one third of the island residents participated. Other volunteer organizations, such as the Tokyo Volunteer Center for Relief of Miyakejima Disaster, also participated, and each organization had its own stall for serving things such as food and drinks. [C] <p>After school “collaborative lessons”</p> <ul style="list-style-type: none"> • The NPO Katariba started this program in November 2011 with the aim being to provide relaxing places where children who lost their homes or cram schools to the tsunami caused by the disaster can study. Lessons are offered free of charge and are held in 4 time slots between 16:00 and 21:00 on 6 days each week. Lessons are taught by 12 teachers who administered a local cram school prior to the disaster. The characteristic of this project is that it has been created through the collaboration of local people—the teachers at the cram school, the board of education, the association of school principals, schools, parents, and citizens—and people outside the community—such as volunteers, administrative staff, and contributors. [A] <p>PEP Kids Koriyama, an indoor playground for peppy kids in Koriyama city</p> <ul style="list-style-type: none"> • A private business established this indoor facility after receiving an extremely positive response to an event in which they provided an indoor playground due to their worry that people were restricting their children from playing outside because of concerns about radiation. The facility is being rented and administered by Koriyama city, but the playthings have been provided by donations. This facility provides children with a sand pit, a ball pool, running tracks, and other opportunities to play, which provides child-raising assistance to parents and psychological care to both parents and children. [A]
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> • Constructing systems for the implementation of psychological care measures (Targeted at people such as general disaster victims, infants and school-age children, and staff of local governments) <p>(Reference: Plan being implemented [or that has already been implemented] by JICA) Project for Capacity Development on Mental Health Services for Reconstruction Support of Sichuan, China Earthquake (from 2009)</p>

Chapter 4 Creating Safe Areas

- Framework for implementing policies



Policy	1) Performing disaster recovery and rehabilitation of public infrastructure facilities		
Details	<ul style="list-style-type: none"> • If the public facilities and civil engineering facilities administered by the local government have been damaged by the disaster, there is a need to plan for civil government stability by way of quick recovery of these facilities to functional states and to prevent the occurrence of damage. • Disaster afflicted local governments must make use of the related legislative systems and structures to proceed with disaster recovery and rehabilitation work as well as to receive the appropriate local government financial measures. 		
Base laws and systems	The Act on Temporary Measures for Subsidies from National Treasury for Expenses for Project to Recover Facilities for Agriculture, Forestry and Fisheries Damaged by Disaster, the Act on National Treasury's Sharing of Expenses for Project to Recover Public Civil Engineering Works Damaged by Disaster, the Act on Special Financial Support to deal with the Designated Disaster of Extreme Severity, etc.		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Sediment disaster countermeasures	From 1 month after the disaster	(1) Secure the safety of residents in the surrounding area and prevent the breaking up of roads, railroad tracks, and similar facilities. At the same time, endeavor to reduce damages by recovering disaster locations in which landslides have occurred and by planning for—to prevent the reoccurrence of landslides—soil conservation, erosion control, and the establishment of landslide prevention facilities.
	(2) Flood control	From 3 months after the disaster	(1) Because flooding has a high probability of occurring again in a short time period, it is important to perform maintenance on flood control facilities. Plan for the disaster recovery and rehabilitation of river facilities damaged by the disaster. Also, perform appropriate maintenance on floodways including those outside of the disaster locations and on regulating facilities and outlet facilities.
	(3) Tsunami and storm surge countermeasures	From 3 months after the disaster	(1) If a tsunami or storm surge occurs, plan for the recovery of damaged coastal facilities and prevent the influx of water into town areas due to the tsunami or storm surge by constructing facilities such as tidal walls (dikes), river dikes, and floodgates.
	(4) Strengthening disaster prevention activity systems	From 3 months after the disaster	(1) The disaster may cause damages that exceed the scale previously estimated and it is insufficient simply to implement measures for physical objects. As such, proceed with measures related to the human condition such as by constructing observation and information systems and by training and strengthening voluntary residents associations.
Major roles categorized by bearers of responsibility		From 1 month after the disaster	From 3 months after the disaster
	Sufferer	—	• Participating in voluntary residents associations
	NPO, etc.	—	—
	Business, etc.	—	• Forming and making use of disaster prevention organizations within businesses
	Neighborhood council, etc.	—	• Forming and making use of voluntary residents associations

	Local government	<ul style="list-style-type: none"> • Sediment disaster countermeasures 	<ul style="list-style-type: none"> • Flood control • Tsunami and storm surge countermeasures • Strengthening disaster prevention activity systems
	Local governments over a wide area and the national government	<ul style="list-style-type: none"> • Sediment disaster countermeasures 	<ul style="list-style-type: none"> • Flooding, tsunami, and storm surge countermeasures • Providing support for the strengthening of disaster prevention activity systems
Notes	<ul style="list-style-type: none"> • It is required to endeavor to perform disaster recovery and rehabilitation work with the goal of creating a favorable environment that is in harmony with the natural environment. One example of a way to achieve this goal is by creating work guidelines. • Tidal walls (dikes) are structures that separate the coast from the village or town area. These structures have a large impact on the environment, scenery, and daily usage of the area, so appropriate consideration should be given to the characteristics of the area when constructing tidal walls (dikes). 		
Actual examples	<p>The start of recovery work on mouth-of-bay breakwaters that are so large to be recognized by the Guinness Book of World Records</p> <ul style="list-style-type: none"> • Construction on the mouth-of-bay breakwaters of Kamaishi city in Iwate prefecture started in 1978 and was completed in 2009. These breakwaters cost a total of 120 billion yen to construct and had a water depth of 63 m, the largest in the world. However, they were destroyed by the tsunami caused by the earthquake a mere 2 years after their completion. Immediately after the disaster, many people stated that there are limits to what can be done through the reliance on physical objects for disaster prevention, and these breakwaters were criticized as a white elephant by some parts of the media outside of Japan. Nevertheless, the city is spending approximately 49 billion yen to complete the recovery of the breakwaters within 4 years. The mayor is attempting to obtain understanding for the project by stating that the mouth-of-bay breakwaters are the cornerstone of Kamaishi's reconstruction. [A] <p>The planned construction of enormous dikes on the Kesenuma coast; the decision to not construct breakwaters in certain areas</p> <ul style="list-style-type: none"> • In Kesenuma city, which boasts four locations selected in the Best Beach 100 of Japan by the Ministry of the Environment, citizens are raising concerned voices against the coastal dike plan being driven forward by the administrative body as a disaster prevention measure. The citizens are concerned that the enormous dikes will reduce the scenic beauty of the swimming beaches, harm the area's image of having rich natural beauty, and obliterate the sandy beaches, which will have an effect on the number of tourists that come to the area. The swimming beaches are an invaluable part of the town creation of the area, and the citizens want a plan that will preserve the area's nature. The Mone area, in which NPO Mori waumi no koibito is based, had no tidal walls (dikes) from the start, and 44 out of the 52 homes in the area were washed away by the tsunami. Nevertheless, the people among 36 homes who have decided to stay here have decided that they do not require the nearly 10 m tall tidal walls (dikes) and have instead decided to relocate their houses to nearby upland areas. The city has accepted the ideas of the citizens and has withdrawn their plan for the construction of tidal walls (dikes). [A] <p>Delays in the recovery of coastal safety facilities due to difficulties in acquiring land</p> <ul style="list-style-type: none"> • According to the forecast regarding maintenance on major infrastructure damaged by the 3.11 Earthquake organized by Iwate prefecture, as of August 2013, the completion of work is ahead of schedule in 30 out of 674 locations, but there are delays in 111 locations including coastal protection facilities such as tidal walls (dikes) and floodgates. For example, in locations such as the Takahama coast of Miyako city, there are plots of land 		

	<p>that have been inherited by multiple people and there are plots of land that have undecided boundaries. As such, it takes time to perform land acquisition for a given plot, which is the cause of the delay. Members of the disaster afflicted local government have been asking the national government for exceptional measures that will make it possible to speed up the land acquisition process. [A]</p> <p>Activities of voluntary residents associations</p> <ul style="list-style-type: none"> • In Sendai city in Miyagi prefecture, the activities of voluntary residents associations in relation to the 3.11 Earthquake are being surveyed and the results posted on the city's website. For example, the Kagitori New Town Neighborhood Association was able to confirm the safety of approximately 400 people in all 129 households of their community within 35 minutes after the earthquake occurred. After the occurrence of the earthquake at 2:46 P.M. on March 11, 80% of all households hung a yellow handkerchief on the outside of their front door to indicate that all members of their family were safe. Members of the neighborhood association visited the remaining 20% of the households. By approximately 3:20 P.M., they had confirmed that there were no injuries to any of the people in the neighborhood association. From roughly 10 years earlier, the same neighborhood association had been performing town development with the goal of strengthening their community against disasters, on the assumption of earthquake occurrence in Miyagi. According to this town development, the head of the neighborhood association would become the Community Disaster Prevention Leader supported by the various officers of the association. In addition, the community had developed activities to prevent casualties, fires, and collapsed buildings in the event of an earthquake.[A]
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> • Sediment disaster countermeasures (such as soil conservation, erosion control, and the establishment of landslide prevention facilities) • Flood control (such as the maintenance of flood control facilities, floodways, regulating facilities, and outlet facilities) • Tsunami and storm surge countermeasures (such as the maintenance of tidal walls [dikes], river dikes, and floodgates) • Strengthening disaster prevention activity systems (such as by constructing observation and information systems and by training and strengthening voluntary residents associations)

Policy	2) Constructing safe town areas and communities		
Details	<ul style="list-style-type: none"> If there is a chance of disasters occurring again in a disaster afflicted area that has been restored to its original state, plan for a drastic reconstruction of the disaster afflicted area through redevelopment projects, land readjustment projects, projects for the construction of facilities such as disaster-prevention facilities, and projects for the relocation of houses to upland areas. In this way, construct safe town areas, communities, and public facilities. 		
Base laws and systems	The Urban Renewal Act, the Land Readjustment Act, the Act on Special Measures for Reconstruction of Disaster-stricken Urban Areas, the Concentrated Urban Areas Development Act, the Urban Park Act, and the Act on Special Financial Measures for Group Relocation Promotion Projects for Disaster Mitigation		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Creating a town development plan for disaster prevention during reconstruction	Within 1 month after the disaster	(1) Determine the basic direction to follow in recovery and reconstruction in order to construct town areas and communities that are resistant to the same types of damages that they have suffered. Then, create a town development plan for disaster prevention during reconstruction that makes clear the plan and measures in terms of both the recovery of physical objects and the recovery of the human condition.
	(2) Establishing foundations in areas in which they are not present	From 1 month after the disaster	(1) Implementing building restrictions: When, due to the area suffering excessive damage to the entire area, projects for the restoration of affected urban areas over entire areas (such as land readjustment projects) will be implemented, make use of the Construction and City Planning Act to implement building restrictions. (2) Deciding on a plan of town development during recovery for the town area and community: Take into consideration the characteristics of the area and the characteristics of the damage for each damaged town area and community to decide on a plan of town development during recovery that reflects the ideas of the sufferers. (3) Implementing projects for town development during recovery: Implement projects for town development during recovery on the basis of the plan of town development during recovery. (4) Measures for preventing the spread of fire: To plan for the improvement of disaster prevention capabilities within town areas after a disaster occurs, proceed with the construction of facilities for the containment of the spread of fire, with the securing of water sources for fighting fires, and with similar projects. (5) Constructing structures such as evacuation facilities and disaster-prevention facilities: Construct facilities such as evacuation facilities and disaster-prevention facilities in affected areas and communities to make evacuation processes smoother in the future.
	(3) Setting areas such as disaster-prone areas	From 1 month after the disaster	(1) Plan to set as disaster-prone areas, or a similar designation, for areas such as those that have a high degree of being prone to future disasters. Also implement building restrictions and structural restrictions on the buildings in these areas.
	(4) Moving and raising residential zones and	From 6 months after the disaster	(1) To plan to make affected areas and communities safe, when relocating residents to upland or inland areas, implement projects such as projects focused on promoting group relocation for

	public facilities		disaster mitigation. (2) If there is a chance of disasters occurring again in a disaster afflicted area (afflicted by flooding and tsunami) that has been restored to its original state, create safe town areas and communities by raising the ground.
Major roles categorized by bearers of responsibility		Within 1 month after the disaster	From 1 month after the disaster
	Sufferer	—	• Building a consensus for the plan of town development during recovery
	NPO, etc.	—	• Supporting the plan of town development during recovery
	Business, etc.	—	• Building a consensus for the plan of town development during recovery
	Neighborhood council, etc.	—	• Building a consensus for the plan of town development during recovery
	Local government	• Creating a town development plan for disaster prevention during reconstruction	• Establishing foundations in areas in which they are not present • Setting areas such as disaster-prone areas • Moving and raising residential zones and public facilities
	Local governments over a wide area and the national government	• Coordinating and supporting town development plans for disaster prevention during reconstruction	• Coordinating and supporting town development projects for disaster prevention during reconstruction
Notes	<ul style="list-style-type: none"> • It is necessary to proceed with the creation of safe town areas and communities by collaborating with the individual reconstruction of life of each disaster victim and with the reconstruction of industry. • Amid considerable confusion, it is important to arrange the town development plan for disaster prevention during reconstruction as soon as possible during the early period after the disaster, and then start the next step of reconstruction work. • The setting of areas as disaster-prone areas applies large usage limits on land owners, so it is required to fully understand the ideas of those involved and obtain the understanding of all involved parties. 		
Actual examples	<p>Mass relocation and creation #1, Tamaura-nishi area, Iwanuma city, Miyagi prefecture</p> <ul style="list-style-type: none"> • The people of the Tamaura-nishi area in Iwanuma city in Miyagi prefecture have made use of the projects focused on promoting group relocation for disaster mitigation to perform a mass relocation of the six communities in the coastal area damaged by the disaster to the Tamaura-nishi area, which is close to the center of the old village. The groundbreaking ceremony to start the construction was held in August 2012. The city has constantly cooperated with citizens since immediately after the disaster, and lots were decided on by suggestions from citizens. In the town development consideration council, which included experts, a workshop method was used to discuss the plans for the use of land, the divisions of land, and the construction of public facilities. The process for building consensus proceeded smoothly because it took little time to come to decisions between citizens, of which the majority are farmers, and because the relationship of mutual trust between the citizens and the administrative body has been maintained. [A] 		

	<p>Performing town development during reconstruction with the participation of citizens</p> <ul style="list-style-type: none"> • To realize the reconstruction of Shinchi-cho in Fukushima prefecture as soon as possible, the focus is on the town development performed by the citizens, who are the main bearers of responsibility of the reconstruction. While accepting the support of consultants, the citizens are attempting to build consensus through meetings and surveys. In this town, the mass relocation destinations for areas that have been completely washed away by the tsunami have been coordinated to enable people to make selections regarding their individual reconstruction of life in units of communities. Also, workshops regarding the units for mass relocation destinations have been held multiple times to proceed with discussions regarding the town development. Topics covered by these discussions include the allocation of residential lots within housing structures, details regarding parks and meeting halls, and rules on the construction of houses. The construction of all planned areas on the basis of the plan that reflects the ideas of the citizens has already begun, and citizens are expected to begin moving into the structures from the 2014 fiscal year onward. [A] <p>Unification of scenery by a company founded by a citizens' association</p> <ul style="list-style-type: none"> • A citizens' association in the Koizumi area of Motoyoshi-cho in Kesenuma city in Miyagi prefecture, which had the goal of performing a mass relocation of its citizens, formed a corporation for the operation of agreements related to town development in order to unify the scenery of the townscape in their mass relocation destination. This citizens' association, which had as its goals the creation of beautiful scenery and a charming area through the unification of the townscape in the upland area at the relocation destination, came to agreements on summaries of the unified shapes and colors of houses at the relocation destination and now has a plan for the seeking of agreements in town development with a decided standard for the scenery. This new company bears the burden of making agreements and is being managed to ensure that a sense of unity is maintained in the townscape.[A]
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> • Creating a town development plan for disaster prevention during reconstruction (a basic plan for reconstruction) • Deciding on a town development plan for disaster prevention (creating the plan with the participation of the citizens) • Establishing foundations in areas in which they are not present (establishing facilities such as roads and parks) • Setting areas such as disaster-prone areas (building restrictions and measures for prohibiting building) • Moving and raising residential zones and public facilities (projects for relocating residents to upland or inland areas)



Victims are deeply involved in discussion about themes in living at present and future communities of their own.

Policy	3) Establishing foundations for urban development and local infrastructure		
Details	<ul style="list-style-type: none"> • The facilities that make up the foundations for urban development and local infrastructure are those that support the livelihood of citizens and the industry and economic activities of the urban area. Damage to or stoppages to the functionality of these facilities have various influences on the securing of the livelihood of citizens and on the reconstruction of industry and the economy. As such, it is necessary to: <ul style="list-style-type: none"> i) Recover and reconstruct in the early period after the disaster those functions that are closely related to the livelihood of disaster victims. ii) Plan for the strengthening of various aspects, such as earthquake resistance, of functions and facilities for which vulnerabilities were made clear by the disaster. iii) By way of collaboration between foundation facilities, aim for a systematic reconstruction that considers the reconstruction of the entire area and plan for the strengthening of all the foundations of the urban area. 		
Base laws and systems	The Act on Sharing of Expenses, Special Financial Aid for Heavy Disasters, the Act on Improvement of Railroads and Rail Tracks, the Act on Special Measures for Reconstruction of Disaster-stricken Urban Areas, the Act on Emergency Measures concerning Road Construction and Improvement, the Seashore Act, the Airport Development Law, and the Urban Park Act		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Reconstructing roads and transportation foundations	From immediately after the disaster	(1) Roads and transportation foundations play an important role in the individual reconstruction of life and the reconstruction of work for disaster victims, so plan to quickly recover these facilities. At the same time, if damages from the disaster have made clear problems in these facilities in terms of disaster prevention, do not only restore these facilities to their original states but also perform all necessary reconstruction work such as by strengthening earthquake resistance. <ul style="list-style-type: none"> •Decide on a plan for recovery and reconstruction. •Implement quick and smooth recovery work. •Construct a transportation network that is highly resistant to damage from disasters. •Create more driver-friendly roads.
	(2) Reconstructing distribution bases, harbors, and airports	From immediately after the disaster	(1) Damages to harbors, airports, and other distribution facilities paralyze the distribution function, so quickly understand the state of damages and proceed with the necessary recovery and reconstruction work. <ul style="list-style-type: none"> •Decide on a plan for recovery and reconstruction. •Recover and reconstruct harbors and fishing harbors. •Recover and reconstruct airports. •Recover and reconstruct distribution facilities.
	(3) Reconstructing parks, green areas, and similar places	From 1 month after the disaster	(1) From the point of view of the creation of urban areas that are highly resistant to damage from disasters, encourage the recovery work of parks and green areas. It is possible to plan for the improvement of the urban area's disaster prevention capabilities by forming a network of parks and green areas. <ul style="list-style-type: none"> •Decide on a plan for recovery and reconstruction. •Recover and reconstruct existing parks. •Systematically create parks and green areas. •Expand and maintain park facilities as disaster-prevention facilities.
(4) Reconstructing lifeline facilities	From immediately	(1) Lifeline stoppages have a major effect on the daily lives of citizens and on urban activities, so	

		after the disaster	quickly restore lifeline functions and at the same time plan for the improvement of lifeline disaster prevention capabilities. <ul style="list-style-type: none"> •Decide on a plan for recovery and reconstruction. •Construct lifeline facilities that are highly resistant to damage from disasters.
Major roles categorized by bearers of responsibility		From immediately after the disaster	From 1 month after the disaster
	Sufferer	—	—
	NPO, etc.	—	—
	Business, etc.	—	—
	Neighborhood council, etc.	—	—
	Local government	<ul style="list-style-type: none"> • Reconstructing roads and transportation foundations • Reconstructing distribution bases, harbors, and airports • Reconstructing lifeline facilities 	<ul style="list-style-type: none"> • Reconstructing parks, green areas, and similar places
Local governments over a wide area and the national government	<ul style="list-style-type: none"> • Reconstructing and supporting facilities that make up the foundations for urban development 	<ul style="list-style-type: none"> • Reconstructing and supporting facilities that make up the foundations for urban development 	
Notes	<ul style="list-style-type: none"> • If the facilities that make up the foundations for urban development have been sufficiently maintained prior to the disaster, these facilities can be quickly recovered. However, for those facilities that had problems prior to the disaster, work that considers the improvement of these issues and problems over the mid and long term must be performed. • Regarding roads and similar facilities for which city planning decisions had been made prior to the disaster, it is important to take the opportunity presented by the reconstruction to carry out the plan. 		
Actual examples	<p>Consideration of bringing in the construction management system for the creation of reconstruction roads in order to accelerate work and to make use of private technology and know how</p> <ul style="list-style-type: none"> • Regarding the new construction of six routes of roads (recovery support roads), such as the Sanriku coastal road, primarily on the Pacific Ocean side of the Tohoku region where damage from the 3.11 Earthquake was significant, the Ministry of Land, Infrastructure, Transport and Tourism is considering bringing in the construction management system with the goals being to make work smoother and to secure and improve quality. Because the project area is large, it will be broken up into smaller sections so that the construction can be performed in multiple sections at the same time in a parallel fashion. Construction managers—who provide project support for both the people who place orders and the private businesses that bear responsibility for coordination, design, and the carrying out of work—will be deployed to stimulate the smooth completion of all work. Bringing in construction management will make the construction schedule control more strict. This plan will make it possible to periodically make public knowledge information such as the state of progress and the time when the project will be completed. For road projects under the direct control of this ministry, it takes an average of 10 years from the creation of a project to the start of operations. The ministry is actively bringing in the construction management method as one policy aimed at accelerating this process. The goal for these six routes of roads is to have them all operational within the next 10 years. [A] <p>BRT using the Ofunato Line</p> <ul style="list-style-type: none"> • From March 2013, the East Japan Railway Company operated its Ofunato Line (44 km between Kesennuma and Sakari), which had been damaged in the disaster and was not in use, in a temporarily recovered state as a bus rapid transit (BRT) system. The section of railroad tracks used exclusively for the BRT was initially only 2 km, but there were plans to add an extension of 13 km between Otomo and Sakari in September 2013. [A] 		

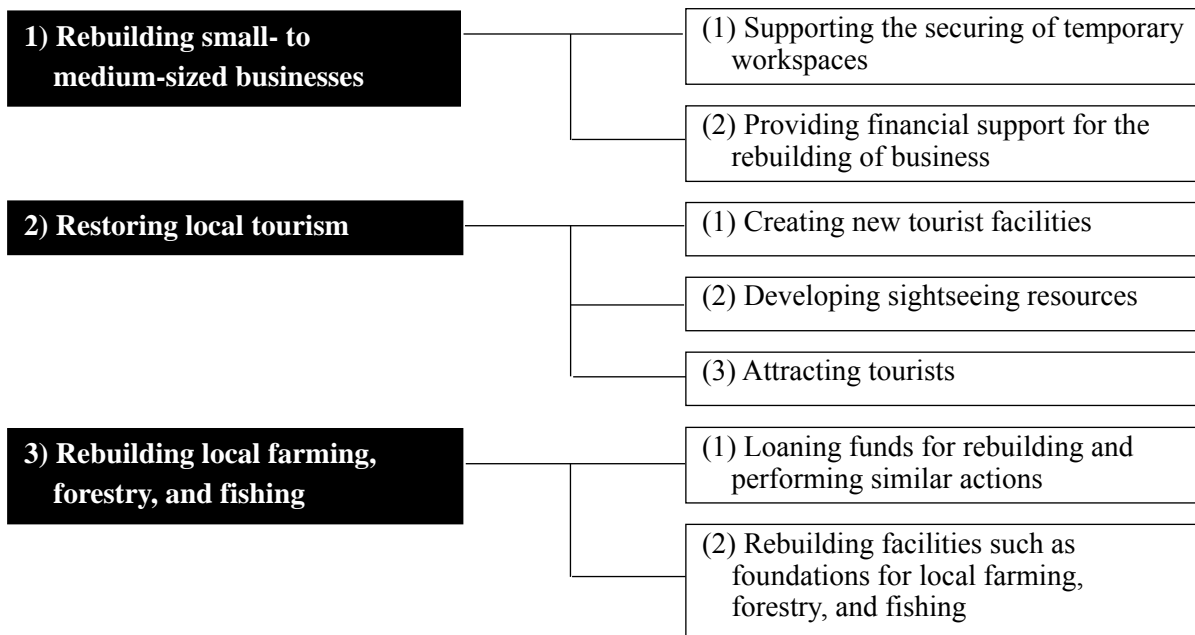
	<p>Sanriku Reconstruction National Park</p> <ul style="list-style-type: none"> To contribute to the reconstruction of the Sanriku area that was damaged in the 3.11 Earthquake, Sanriku Reconstruction National Park was established in May 2013. The length of the park is approximately 220 km to the north and south. To the north can be found magnificent cliffs that are referred to as the Alps of the sea. To the south can be found a ria coast with its elegant and intricate terrain. Along the coast there are breeding grounds for sea birds such as black-tailed gulls and streaked shearwaters, which makes it possible for visitors to observe wildlife from up close. This park contains many of the fishing harbors that boast of fantastic catches amongst all the fishing harbors in Japan, such as Hachinohe, Miyako, Kamaishi, Ofunato, and Kesenuma, which lends the park another of its charming features: the way that it enables visitors to enjoy fresh seafood. A great many people from all over Japan have visited this park with the goal of receiving disaster-prevention education. [A] <p>The construction of artificial hills filled with disaster waste on a coast damaged by the disaster</p> <ul style="list-style-type: none"> In Iwanuma city in Miyagi prefecture, the construction of “SennenKibou no Oka” is ongoing as a history project to pass on the numerous lessons learned from the disaster to the children of the future 1,000 years from now. According to the plan, approximately 15 artificial hills each with a height of approximately 10 m and a diameter between 70 and 100 m will be built on a stretch of coastal land approximately 10 km in length on the remains of a mass relocation site (as of June 2013, the first hill has been completed). Embankments with a height of approximately 3 m will be built to connect the hills to each other and various trees and shrubs will be planted atop the embankments. In theory, even if the area is struck by a tsunami of the same scale as that which was caused by the disaster (7.2 m in height), it is hoped that the hills will reduce the force of the tsunami and thereby grant citizens the time they need to evacuate. Also, from the desire to dispose of disaster waste at the same time, the hills will be made with disaster waste and dirt that was deposited by the tsunami. During ordinary times, the plan is to use the hills in disaster-prevention education as a memorial park connected to the memories of the disaster. [A]
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> Reconstructing roads and transportation foundations (constructing a transportation network that is highly resistant to damage from disasters) Reconstructing distribution bases, harbors, and airports (restoring distribution functions in the early period after a disaster) Reconstructing parks and green areas (forming a network of parks and green areas) Reconstructing lifeline facilities (restoring the daily lives of citizens and urban activities in the early period after a disaster) <p>(Reference: Plan being implemented [or that has already been implemented] by JICA)</p> <ul style="list-style-type: none"> Bangladesh Cyclone Center (normally used as an elementary school)

Policy	4) Restoring local culture		
Details	<ul style="list-style-type: none"> • In a disaster, there is a chance of cultural properties, foremost among them designated cultural properties, being damaged. If these properties are left as-is after the disaster, there is a concern that the damage or deterioration that the properties have suffered will expand or otherwise progress. Therefore, there is a need to urgently inspect and preserve damaged cultural properties to prevent these important cultural properties from being discarded and lost. Also, these cultural properties are national properties and it is often the case that they are important sightseeing resources, so it is necessary to plan for their quick recovery. • An important part of reconstruction is also the act of preventing memories of and lessons pertaining to the disaster from fading so as to correctly convey this information to future generations, so plan for the creation of records, facilities, and similar items for this purpose. 		
Base laws and systems	The Law for the Protection of Cultural Properties		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Rebuilding cultural and social education facilities	From 1 week to within 3 months after the disaster	(1) Take into consideration the state of damages to facilities and the state of progress of recovery in the areas around facilities, and then rebuild social education facilities. (2) Use the assistance of recovery funds to rebuild private cultural and educational facilities as well.
	(2) Protecting and recovering cultural properties	From 3 months after the disaster	(1) Survey the state of damages of cultural properties, and then use recovery funds to recover damaged cultural properties. (2) For privately-owned cultural properties, enter into negotiations with the owner of the cultural property regarding its repairs.
	(3) Passing on memories of the disaster	From 6 months after the disaster	(1) Convey the importance of being prepared for disasters to future generations. Correctly instill in subsequent generations the fear of and lessons learned from the disaster so as to ensure that none have to suffer from such a disaster ever again. <ul style="list-style-type: none"> • Create disaster records. • Construct memorial buildings and similar structures. • Establish records such as indications of the height that the flood waters reached (due to the tsunami, storm surge, and storm and flood damage).
Major roles categorized by bearers of responsibility		From 1 week to 3 months after the disaster	From 3 months after the disaster
	Sufferer	—	• Activities to pass on to future generations memories of the disaster
	NPO, etc.	—	• Supporting activities to pass on to future generations memories of the disaster
	Business, etc.	—	—
	Neighborhood council, etc.	—	• Activities to pass on to future generations memories of the disaster
	Local government	• Rebuilding cultural and social education facilities	• Protecting and recovering cultural properties • Passing on memories of the disaster
	Local governments over a wide area and the national government	• Providing support for local culture recovery work	• Providing support for local culture recovery work

<p>Notes</p>	<ul style="list-style-type: none"> • The recovery of local culture provides a source of energy for people as they suffer through the dampness and inactivity of the lifestyle of disaster victims during the period of recovery and reconstruction and for people who are doing their best as they participate in the reconstruction. As such, it is necessary to rebuild facilities as soon as possible in the early period after the disaster. • The creation of disaster records makes it possible to pass on the memories of and lessons learned from the disaster. In addition, disaster records are vital documents for the reworking and complete overhaul of emergency plans at a later time.
<p>Actual examples</p>	<p>Working toward the recovery of culture through multifaceted activities</p> <ul style="list-style-type: none"> • After the Great Hanshin-Awaji Earthquake, a large number of non-governmental organizations held activities in the disaster afflicted areas such as Art Aid Kobe, the 10-year committee for the support of reconstruction after the Great Hanshin-Awaji Earthquake, and the Hanshin cultural reconstruction conference. To plan for the expansion of opportunities for art and cultural activities, which had been decreased by the disaster, the prefecture also took part by providing indirect support through the establishment of subsidies for art and cultural activities in disaster afflicted areas. The prefecture also expanded cultural activities such as by holding events and concerts related to culture. [D] <p>Community development council in the Imaizumi area of Rikuzentakata, the revival of a town that maintains its history</p> <ul style="list-style-type: none"> • In November 2012, a community development council was held in the Imaizumi area of Rikuzentakata with the goal of discussing the basic plan for the development of the area’s new town. This council was made up of citizens of the Imaizumi area and a support group and was started from a study session regarding the rehabilitation of the townscape. The discussion covered how to carry forward the history and culture of “ImaizumiYado” and the creation of a new sustainable town. In this area, there are still tangible and intangible cultural properties—such as “KenkaTanabata,” which is said to be a festival with a history of 900 years and the holding of which was considered by the members of the council through discussions of how to set the roads in the town. To create a town that inherits the area’s identity, the council plans to continue holding these general meetings once a month going forward. [A] <p>Carrying on traditional arts</p> <ul style="list-style-type: none"> • The people in the Namiita area of Kesenuma city, in which the majority of households suffered losses from the disaster, are working to hand down to future generations the Namiita tiger dance, which is their traditional art that has a history of 300 years. The officials who had supported the tiger dance from behind the scenes were lost to the disaster, and there are quite a lot of citizens who moved away from the area. In January 2013, the tiger put on a powerful dance accompanied by a Japanese orchestra on the grounds of a Shinto shrine situated in an upland location of the area. The president of the preservation association quietly said “The tiger dance brings together all the people of the area. Even though many people have moved away due to the disaster, I still want to continue the tiger dance. Not only for us, but for the people that we’ve lost as well.” [A] <p>Sakura Line 311, planting sakura (cherry blossom) trees to connect the points reached by the tsunami</p> <ul style="list-style-type: none"> • A project for the planting of sakura trees began in Rikuzentakata city in November 2011. By February 2013, approximately 500 trees have been planted. The name of this project is “Sakura Line 311,” and its purpose is to plant 17,000 sakura saplings spaced at intervals of 10 m over the approximately 170 km that makes up the line in the city to which the tsunami reached. A member of a local youth organization said that “We can use the sakura trees blooming in the spring as a chance to pass on to our children and grandchildren information about the tsunami.” The saplings are being purchased with contributions from individuals who have endorsed the project. The people working on the project are continuing to obtain consent from landowners for the planting of trees along the line. [A]
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> • Rebuilding cultural and social education facilities (creating bases for the recovery of culture) • Protecting and recovering cultural properties (preserving national cultural properties) • Creating disaster records (passing on memories of the disaster) • Constructing memorial buildings and monuments (passing on memories of the disaster)

Chapter 5 Reconstructing Industries and the Economy

- Framework for implementing policies



Policy	1) Rebuilding small- to medium-sized businesses		
Details	<ul style="list-style-type: none"> • There is a need to plan for the rebuilding of shops, factories, and similar facilities as soon as possible in the early period after a disaster in order to restart sales and production activities for small- to medium-sized businesses that have been damaged in the disaster. Therefore, establish temporary stores and factories in the early period after a disaster to secure temporary workspaces. At the same time, make use of various financial support systems to provide the support required for the continuance of business activities. 		
Base laws and systems	The Act on Special Financial Support and Other Assistance to Deal with the 3.11 Earthquake, the Small Business Finance Corporation Act, and recovery funds		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Supporting the securing of temporary workspaces	From 2 weeks after the disaster	(1) Construct temporary stores and factories as temporary workspaces, and loan these buildings to disaster afflicted business people. (2) Collect information on privately loaned stores and factories, and provide this information to disaster afflicted business people.
	(2) Providing financial support for the rebuilding of business	From 1 week after the disaster	(1) Accurately understand the state of damages and request the preparation of funds from related financial institutions. (2) To plan for the quick rebuilding of workplaces, make the details of the system to support past borrowers common knowledge to individuals such as disaster afflicted business people and plan to encourage the use of this system. (3) Do not just rebuild facilities back to their previous level. Provide support for the planning of improvements to equipment and technology.
Major roles categorized by bearers of responsibility		From 1 week after the disaster	From 2 weeks after the disaster
	Sufferer	—	—
	NPO, etc.	—	• Supporting the creation of businesses
	Business, etc.	• Providing financial support for the rebuilding of business	• Rebuilding business (giving support to)
	Neighborhood council, etc.	—	—
	Local government	• Providing financial support for the rebuilding of business	• Supporting the securing of temporary workspaces
	Local governments over a wide area and the national government	• Providing overall support for the rebuilding of small- to medium-sized businesses	• Providing overall support for the rebuilding of small- to medium-sized businesses
Notes	<ul style="list-style-type: none"> • It is necessary to construct temporary stores and factories with thought given to the relationship between these buildings and the position of the temporary housing in which disaster victims are living. • It is important to smoothly restart the economic and production activities of disaster afflicted business people. To this end, it is necessary to quickly hammer out the financial support plans that make use of current systems during the early period after the disaster. 		

Actual examples	<p>Restarting business through multifaceted support for commerce and industry</p> <ul style="list-style-type: none"> • To recover commerce (such as shopping arcades and retail markets) and industry (particularly local businesses that are extremely small, small, and medium in size) in the early period after the disaster, national and local governments provided support for the restarting of the commercial and industrial work of business people by a variety of means such as providing financial support through systems such as essentially interest-free loans, providing a variety of consulting support through the establishment of consultation centers for small- to medium-sized businesses, and founding subsidy systems for the establishment of temporary stores and factories. [D] <p>Recovery of workplaces through the use of subsidiary aid for groups of small- to medium-sized businesses</p> <ul style="list-style-type: none"> • Groups of small- to medium-sized businesses, which form the core of the local economy (which itself can play a leading role in reconstruction), can receive support for the recovery and construction of facilities and equipment if they create and have authorized by the prefecture a reconstruction work plan. A wide variety of fields such as the marine product processing industry, the manufacturing industry, the retail distribution industry, and the tourism industry are covered, but only groups composed of multiple business people from small- to medium-sized businesses can make an application for support. [A] <p>Organization for Supporting the Rehabilitation of Business People After the 3.11 Earthquake, dealing with double loans taken on by small- to medium-sized businesses</p> <ul style="list-style-type: none"> • Based on the Act on Organization for Supporting the Rehabilitation of Business People After the 3.11 Earthquake—officially announced on November 28, 2011—the said organization, which was established in March 2012, purchases credits from the financial institutions that are financing the small- to medium-sized businesses suffering under double loans in order to implement partial reductions and postponements in loan repayments. This organization is also continuing to provide support in a variety of ways such as by dispatching experts to support the management of small- to medium-sized businesses. [A]
What can be done outside of Japan	<ul style="list-style-type: none"> • Supporting the securing of temporary workspaces (supplying temporary facilities such as stores and factories) • Providing financial support for the rebuilding of business <ul style="list-style-type: none"> - Making common knowledge financing systems and promoting financing - Operating microfinancing to support the starting of businesses by women

Policy	2) Restoring local tourism		
Details	<ul style="list-style-type: none"> Rebuild various tourist facilities during the early period after the disaster and at the same time develop new sightseeing resources and attract tourists. In this way, recover the number of tourists that visit and use the disaster as an opportunity to drive the promotion of sightseeing. 		
Base laws and systems	The Museum Act		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Creating new tourist facilities	From 6 months after the disaster	(1) Aligned with the goal of planning for the improvement of consciousness of disaster prevention, establish archives and similar facilities as local sightseeing resources.
	(2) Developing sightseeing resources	From 6 months after the disaster	(1) Reevaluate various resources in the area and use them as sightseeing resources. <ul style="list-style-type: none"> Use disaster relics. Use volcano resources (such as hot springs).
	(3) Attracting tourists	From 6 months after the disaster	(1) Plan to attract tourists through a variety of means such as by using the mass media to advertise, holding exhibitions of the related products, and attracting school excursions.
Major roles categorized by bearers of responsibility		From the time of the disaster	From 6 month after the disaster
	Sufferer	—	—
	NPO, etc.	—	—
	Business, etc.	—	<ul style="list-style-type: none"> Creating new tourist facilities Developing sightseeing resources
	Neighborhood council, etc.	—	—
	Local government	—	<ul style="list-style-type: none"> Creating new tourist facilities Developing sightseeing resources Attracting tourists
	Local governments over a wide area and the national government	—	<ul style="list-style-type: none"> Providing support for the restoring of local tourism
Notes	<ul style="list-style-type: none"> It is considered that tourists recognize a given area as including the disaster afflicted areas, so necessary to consider the development of tourism for excursions over a wide area by building facilities in scattered locations and by making close networks between areas and other close relationships between the sightseeing resources of different areas. 		

Actual examples	<p>14 varied members of the Iwate Recovery Support Group take up their new posts in the northern part of the prefecture</p> <ul style="list-style-type: none"> • Upon receiving their notices of personnel changes, 14 members of the Iwate Recovery Support Group, which supports the reconstruction of the disaster afflicted areas in Iwate prefecture and the regional vitalization of the northern part of the prefecture, took up their new posts. The members come from a wide variety of previous jobs such as foreign-owned companies, post offices, and IT businesses. After receiving their training, the members will work for a maximum period of 5 years as term-based staff at the Iwate Liaison Council for the Promotion of Permanent Residence and Exchange, during which they will be stationed in 8 municipalities focused around the disaster afflicted areas. Their work will include the transmission of sightseeing information and the development of local specialties and they will support the reconstruction with their new points of view and ideas. [A] <p>Provisional opening of the Ofunato Tsunami Museum</p> <ul style="list-style-type: none"> • The Ofunato Tsunami Museum, which teaches about the lessons from the tsunami, was established in a local baked goods factory and opened on a provisional basis in March 2013. During the tour of the museum, visitors can vicariously experience the tsunami through videos taken during the disaster and stories told by local storytellers who lived through the tsunami.[A] <p>Usage of the disaster guide project passes 10,000 people in half a year</p> <ul style="list-style-type: none"> • The disaster guide project—which is run by the Miyako Tourist Information Office, was started to convey the state of areas when they were assaulted by the tsunami and the current state of disaster afflicted areas, and is performed in Taro-cho of Miyako city—has received over 10,000 participants (approximately 50,000 participants including repeat participants) in the half year since it was implemented. During the disaster guide service, a group of 4 guides including disaster victims introduce tidal walls (dikes) and a sightseeing hotel that was submerged up to its 4th floor by the tsunami. At this hotel, a video of the tsunami assaulting the area is shown. Individual participants have come back multiple times with other people that they know. Many citizens of the Kanto region, in which a tsunami from the most powerful earthquake is expected in the future, disaster prevention researchers, and junior high school and high school students on educational trips have also participated. This project has become a way for people to understand the reality of the disaster. [A]
What can be done outside of Japan	<ul style="list-style-type: none"> • Creating new tourist facilities (establishing archives and similar facilities including disaster relics) • Developing sightseeing resources (developing programs for sightseeing excursions over a wide area) • Attracting tourists (developing tour programs for disaster afflicted areas and training storytellers)

Policy	3) Rebuilding local farming, forestry, and fishing			
Details	<ul style="list-style-type: none"> • In rebuilding local farming, forestry, and fishing, it is important to plan for the restoration or reconstruction of damaged agricultural zones and foundations for production such as fishing harbors, marine product processing facilities, and fishing grounds and to make it possible to smoothly supply funds for rebuilding and restarting these industries. • Damages to farming, forestry, and fishing facilities have a large economic effect not only on the workers directly involved in these industries but on the local society as well. The expenses associated with the recovery and reconstruction of these industries is very large, which places an enormous economic burden on the workers in the farming, forestry, and fishing industries. Therefore, endeavor to recover and rebuild the farming, forestry, and fishing industry facilities that have been damaged by the disaster through work such as disaster recovery and rehabilitation work performed primarily by local governments over a wide area. • It is necessary to perform relief measures such as financing the funds required by workers in the farming, forestry, and fishing industries to restart their businesses. 			
Base laws and systems	Special Financial Aid for Heavy Disasters			
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods	
	(1) Loaning funds for rebuilding and performing similar actions	From 1 month after the disaster	(1) Understand the demands for funds due to the state of damages, and then request from related financial institutions the preparation of funds to meet these demands. (2) Make common knowledge to workers in the farming, forestry, and fishing industries information on financing systems provided by organizations such as the national government, the administrative divisions of Japan, and various financial institutions. (3) Establish temporary consultation centers to provide information such as that pertaining to financing systems and appropriate farming guidance.	
	(2) Rebuilding facilities such as foundations for local farming, forestry, and fishing	From 3 months after the disaster	(1) Perform disaster recovery and rehabilitation of items such as agricultural zones, farming facilities, and fishing facilities to proceed with work such as the restoration of these items to their original states. (2) Proceed with the recovery of items such as coasts, landslide prevention facilities, and fishing harbors. (3) Construct and loan to disaster afflicted business people substitute agricultural zones and substitute shared facilities for product manufacturing. (4) Provide a variety of support to workers in the farming, forestry, and fishing industries to improve the will of workers to produce their products and to expand the markets for the products.	
Major roles categorized by bearers of responsibility			From 1 month after the disaster	From 3 months after the disaster
	Sufferer	—		—
	NPO, etc.	—		—
	Business, etc.	• Loaning funds for rebuilding and performing similar actions		—
	Neighborhood council, etc.	—		—
	Local government	• Loaning funds for rebuilding and performing similar actions		• Rebuilding facilities such as foundations for local farming, forestry, and fishing

	Local governments over a wide area and the national government	• Loaning funds for rebuilding and performing similar actions	• Rebuilding and supporting facilities such as foundations for local farming, forestry, and fishing
Notes	<ul style="list-style-type: none"> • For workers in the farming and forestry industries, the way that damaged agricultural land is recovered and reconstructed has an influence on the future management of the land, so it is important to present to these people in the early period after the disaster the course of action to be followed for recovery and reconstruction in the vicinity of farming and forestry land. • The implementation of recovery work for agricultural zones and similar areas will be entrusted to business people who possess the required heavy equipment, but it is also necessary to hire as the labor for this work agricultural workers afflicted by the disaster. • It is necessary to implement consultations on business and technology in a highly detailed manner so that workers in the farming, forestry, and fishing industries who have restarted production through the borrowing of funds can continue their businesses. 		
Actual examples	<p>Toward practical reconstruction through farming; starting work on the construction of hydroponics facilities</p> <ul style="list-style-type: none"> • “Michisaki,” a corporation established in July 2012 by farming families in the coastal area of Sendai city, constructed a large-scale hydroponics facility in Gamo, Miyagino ward for the harvesting of vegetables all year round. This facility can be used to produce fruits and vegetables such as tomatoes, leaf vegetables, and strawberries. The goal is the reconstruction of local farming through the integration of production, processing, and distribution (agriculture, forestry, and fishery industries for developing new products). Mamoru Kikuchi, the representative director of the company, spoke enthusiastically about the project by saying “it is a practical application of reconstruction town development through farming. I want to guide the way forward for farming 10 or 20 years down the road.” [A] <p>Revitalizing beaches through the cultivation of oysters</p> <ul style="list-style-type: none"> • iLINK Inc. (located in Sendai city), a company that operates a website on the Internet for selling oysters, has implemented an activity in which its users can become oyster shareholders with a minimum investment of 10,000 yen, and a portion of the funds collected in this manner are given to the producers of the oysters. The company realized that failing to cultivate oysters immediately after the disaster would have a negative effect on the harvests in 2 or 3 years. They promptly involved the oyster producers to come to a quick decision on the support details, and then placed orders to material manufacturers. Their goal is not the rehabilitation but the reconstruction of the beaches. The company is thinking of activities that are connected to the profits of the oyster producers such as making visits to sites in France in order to rethink the technology that has been used until now.[A] <p>The holding of the Yuinoba community recovery matching event</p> <ul style="list-style-type: none"> • The Yuinoba community recovery matching event was held in November 2012 at the Ishinomaki Chamber of Commerce and Industry (in Miyagi prefecture). “Yuinoba” was an event for the effective matching of businesses in the disaster afflicted areas that are faced with a number of challenges to companies such as major companies that have a variety of management resources. The theme of this event was the reconstruction of the Ishinomaki marine product processing industry. The event was held through the joint sponsorship of the Chamber of Commerce and Industry and the Regional Bureau of Reconstruction in Miyagi prefecture, which is a branch office of the Reconstruction Agency. The event saw the gathering of 13 businesses from the disaster afflicted areas and 35 companies such as major companies that have a desire to provide support for the businesses in the disaster afflicted areas through the use of their management resources. The parties involved actively exchanged ideas covering a wide variety of fields such as the pioneering of new markets, the development of new products, and the securing of personnel. [A] 		
What can be done outside of Japan	<ul style="list-style-type: none"> • Activities such as the loaning of funds for the restarting of business (making common knowledge financing systems and executing financing) • Constructing foundations for local farming, forestry, and fishing (such as through the recovery of agricultural zones, farming facilities, and fishing facilities) • Promoting agriculture, forestry, and fishery industries for developing new products (integration of production, processing, and distribution) 		



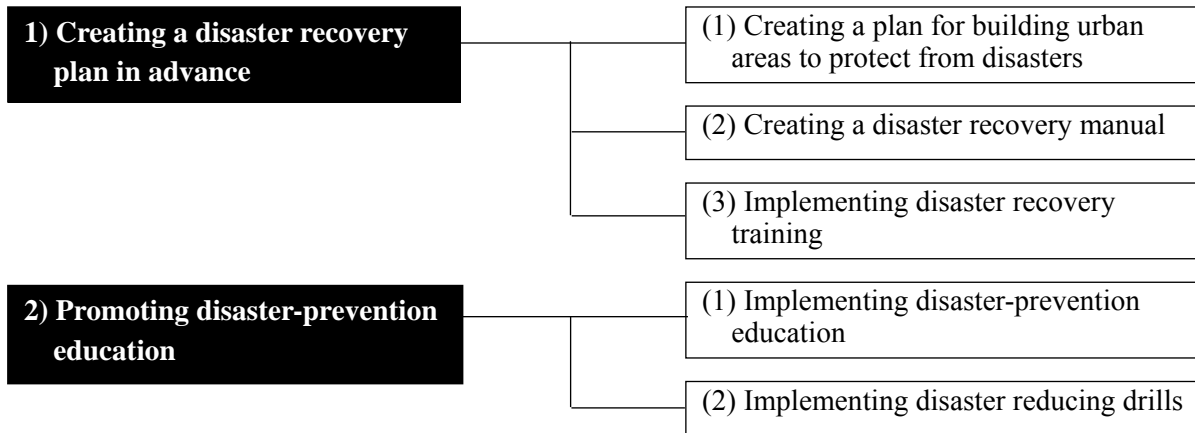
Fixed netting restored by Hirotawan Fisheries Cooperative in Rikuzentakata City, Iwate Prefecture.



Strawberry houses for tourists opened after 2 years of closure along the coast of Fukushima Prefecture.

Chapter 6 Implementing Countermeasures Prior to Disasters

- Framework for implementing policies



Policy	1) Creating a disaster recovery plan in advance		
Details	<ul style="list-style-type: none"> It is impossible to prevent the occurrence of disasters, but in areas where a disaster is predicted to occur in the near future, it is important to (1) make efforts in advance of the disaster to reduce the damages likely to be caused by the disaster and (2) plan in advance for quick and appropriate recovery and reconstruction in the event of a disaster. Regarding (1), based on the fact that the fragile locations of the area are most at risk to damage in the event of a disaster, it is necessary to draft a plan for building urban areas to protect from disasters in order to improve the disaster prevention capabilities in such locations. Regarding (2), it is necessary to create a disaster recovery manual that makes clear the procedure for dealing with disasters and to implement disaster recovery training to cultivate a better understanding in and mastery of this manual by the administrative body and citizens. 		
Base laws and systems	The City Planning Act, the Urban Park Act, the Basic Act on Disaster Control Measures, the Act on Special Measures for Reconstructing Livelihoods of Disaster Victims, and the Act on Special Measures for Reconstruction of Disaster-stricken Urban Areas		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Creating a plan for building urban areas to protect from disasters	Prior to the disaster	(1) Create an overall plan for the improvement of the urban area's disaster prevention capabilities with a focus on fragile locations.
	(2) Creating a disaster recovery manual	Prior to the disaster	(1) Create a disaster recovery manual, which will be the guide for the processes and means to use in proceeding with disaster reconstruction and for the roles to be filled by the administrative body, citizens, and supporters during the reconstruction.
	(3) Implementing disaster recovery training	Prior to the disaster	(1) Training is performed by the administrative body and citizens to simulate how to proceed with town development during reconstruction and how to implement the reconstruction both in accordance with the process indicated in the disaster recovery manual for use in the event of a disaster.
Major roles categorized by bearers of responsibility	Prior to the disaster		
	General citizen	• Participating in disaster recovery training	
	NPO, etc.	—	
	Business, etc.	• Participating in disaster recovery training	
	Neighborhood council, etc.	• Participating in disaster recovery training	
	Local government	<ul style="list-style-type: none"> Creating a plan for building urban areas to protect from disasters Creating a disaster recovery manual Implementing disaster recovery training 	
Local governments over a wide area and the national government	<ul style="list-style-type: none"> Supporting the plan for building urban areas to protect from disasters Creating a disaster recovery manual 		
Notes	<ul style="list-style-type: none"> It is necessary to create a comprehensive plan for building urban areas to protect from disasters that covers not only physical objects such as maintenance on roads and parks and fireproofing of buildings but the human condition as well through the revitalization of resident associations in the area. In the disaster recovery manual, it is especially required to define the importance of Town Reconstruction Committees for the proceeding of reconstruction with the participation of citizens. 		

<p style="text-align: center;">Actual examples</p>	<p>Nerima Ward Disaster Recovery Manual</p> <ul style="list-style-type: none"> On the basis of the results of the post-disaster urban development training programs carried out in the Nukui area in the 2003 fiscal year and in the Sakuradai area in the 2006 fiscal year, Nerima ward decided on the “Nerima Ward Disaster Recovery Manual,” which incorporates a way of thinking about recovery with local cooperation through the working together of citizens, the administrative body, and experts during disaster recovery. This manual corresponds to the disaster recovery plans of the regional emergency plans of Nerima ward and indicates what guidelines for action and procedures will be followed by the ward and its citizens to proceed with the recovery in an efficient and effective manner in the event of a disaster. Examples of reference materials for this manual include the Tokyo “Disaster Recovery Manual, Recovery and Reconstruction Process Edition” (March 2003) and “Cabinet Office Draft Guide to Disaster Recovery and Reconstruction Measures.” <p>Drafting emergency plans through neighborhood associations</p> <ul style="list-style-type: none"> The Ando neighborhood association of the Ando area of Otsuchi-cho, which suffered the loss of 218 of its citizens along with other forms of major damage during the 3.11 Earthquake, created a tsunami emergency plan unique to the area and reported this plan to the town in April 2013. To convey the lessons learned from the tsunami to future generations, the neighborhood association obtained the cooperation of research institutions such as Iwate University to organize the details of the plan on the basis of the disaster experiences of the citizens. The town intends to reflect the plan created by the neighborhood association in the town’s emergency plans as a model for dealing with disasters. The neighborhood association used surveys and other similar methods to investigate the behavior of citizens at the time of the disaster and included in the draft of the plan guidelines for use in the event of a disaster such as evacuation behavior, the operation of temporary shelters, and disaster prevention organizations of the neighborhood association. The draft of the plan contains detailed information on the behavior to follow according to a timeline after the occurrence of a disaster. <p>Implementing urban development training programs</p> <ul style="list-style-type: none"> In the Haramachi area of Megurohon-cho of Meguro ward of Tokyo, training was implemented in the 2006 fiscal year with the goals of making advance preparations for disasters and understanding the importance of the cultivation of the organizations that will bear the responsibility for the reconstruction of the area and, furthermore, with the hopes of spreading the power of the community in preparation for disasters and of developing this training into detailed activities for the reduction of disaster damages. The characteristic of the training was the holding of conferences according to the following timeline: the occurrence of the disaster, time spent in temporary shelters, time spent in temporary houses, and then town development during recovery. Also, the training was constructed of a total of four programs, and during the fourth program, citizens from outside the area also participated and shared the results of their own training.
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> Creating a plan for building urban areas to protect from disasters <ul style="list-style-type: none"> - Improvement focused on the fragile locations of the urban area Creating a disaster recovery manual <ul style="list-style-type: none"> - A guide for disaster recovery to be followed by the administrative body and by citizens - Definition of the importance of Town Reconstruction Committees) Implementing disaster recovery training <ul style="list-style-type: none"> - Disaster recovery simulations for the administrative body and for citizens

Policy	2) Promoting disaster-prevention education		
Details	<ul style="list-style-type: none"> • In past disasters such as the Great Hanshin-Awaji Earthquake and the 3.11 Earthquake, a great number of lives were saved by citizens helping each other during the period immediately after the occurrence of the earthquake, which has made clear the importance of assisting oneself and mutual assistance when a disaster occurs. • In order to go forward with constant preparations for disasters with the protection of one's own life by oneself and the protection of the town that one lives in by the group of people living in the town as the basic principles of disaster prevention, it is necessary to promote comprehensive disaster-prevention education continuously for people from the time that they are infants right through to the time that they are members of society. During disaster preparation, it is necessary to consider differences in viewpoints between the sexes and to proceed with disaster-prevention education to teach Community Disaster Prevention Leaders including women and young people. • Target a wide range of citizens for the training, and proceed with practical and effective disaster reducing drills related to fire fighting, rescue and relief, and first-aid and other aid for the area during the early period after a disaster. 		
Base laws and systems	The Basic Act on Disaster Control Measures and the Disaster Countermeasure Ordinance		
Detailed actions, procedures, and methods	Detailed action	Implementation period	Procedures and methods
	(1) Implementing disaster-prevention education	Prior to the disaster	<ul style="list-style-type: none"> (1) Create a variety of educational materials for use in disaster-prevention education. (2) Implement disaster-prevention education in collaboration with organizations such as educational institutions starting with those attended by infants. (3) Train organizations such as organizations of citizens for disaster prevention, women's fire protection organizations, boys and girls fire clubs (BFC), and kid fire clubs. (4) Implement workshops based on the characteristics of the area for the disaster prevention staff of the administrative body.
	(2) Implementing disaster reducing drills	Prior to the disaster	<ul style="list-style-type: none"> (1) Implement practical training that corresponds to the occurrence of disasters and that corresponds to the characteristics of the area. (2) Implement training that incorporates a variety of factors such as vulnerable people, families, area citizens, and workplaces. (3) Implement training for the operation of and staying at temporary shelters.
Major roles categorized by bearers of responsibility	Prior to the disaster		
	General citizen	<ul style="list-style-type: none"> • Learning through disaster-prevention education • Participating in disaster reducing drills 	
	NPO, etc.	<ul style="list-style-type: none"> • Supporting disaster-prevention education and disaster reducing drills 	
	Business, etc.	<ul style="list-style-type: none"> • Participating in disaster reducing drills 	
	Neighborhood council, etc.	<ul style="list-style-type: none"> • Learning through disaster-prevention education • Participating in disaster reducing drills 	
	Local government	<ul style="list-style-type: none"> • Implementing disaster-prevention education • Implementing disaster reducing drills 	
Local governments over a wide area and the national government	<ul style="list-style-type: none"> • Supporting disaster-prevention education 		

<p>Notes</p>	<ul style="list-style-type: none"> • The working together of neighborhood citizens to help each other immediately after the disaster has a large effect on the saving of lives, even just one more life, when a disaster occurs. Above all, appropriate support for vulnerable people such as elderly people is necessary, which makes the participation of each and every citizen in cooperative work and the activities of organizations of citizens for disaster prevention important. • Workplaces have the role of contributing to the stability of the livelihoods of area citizens such as by supporting the performance of relief work as a member of the area and by supporting the economic activities and employment of the area through business continuity. As such, it is necessary to improve the disaster preparedness of workplaces even more than other locations.
<p>Actual examples</p>	<p>Life-saving disaster-prevention education</p> <ul style="list-style-type: none"> • In Kamaishi city in Iwate prefecture, a great number of people were killed by or have gone missing due to the tsunami. However, the survival rate of 99.8% of elementary school and junior high school students attests to the fact that many of these students were saved. It is said that this is the result of the disaster-prevention education that was performed through the schools. Professor Katada from Gunma University, who is the adviser for Kamaishi city, has taught the children three principles to survive: do not rely on preconceptions too much, do your best, and be the first evacuee. He has also advised the children to have an “attitude” for taking proper actions to save one’s own life in the event of a disaster. On the basis of these principles, not only did the elementary and junior high schools in the city held evacuation drills but also held activities for disaster prevention on a daily basis such as by inserting into the educational materials used in lessons the themes of earthquakes and tsunami. [A] <p>Varied implementations of disaster-prevention education</p> <ul style="list-style-type: none"> • Since the Great Hanshin-Awaji Earthquake, there have been ongoing considerations for disaster-prevention education aimed at people such as the leadership of local public bodies, disaster prevention staff, fire department personnel, the members of fire brigades, the members of voluntary residents associations, and area citizens. A variety of activities are being performed such as training and lectures on the topic of this disaster-prevention education and training programs that make use of the Internet. [D] <p>Ways to support disabled people; evacuation drills performed independently by citizens</p> <ul style="list-style-type: none"> • As a result of surveys and other investigations performed by Iwate prefecture, Miyagi prefecture, and Fukushima prefecture, it is now known that the 3.11 Earthquake took the lives of 1,655 people in possession of identification booklets for disabled people. This made clear the question of how to support disabled people during disasters. Among families that are providing at-home nursing care for disabled people, there are those who are beginning to independently consider disaster prevention measures. For example, at a study session for disaster prevention related to disabled children held in Izumi ward in Sendai city, it was reported that the number of victims among the people who require assistance was low in the Oshika area of Ishinomaki city, in which were held daily evacuation drills involving disabled people and elderly people. [A]
<p>What can be done outside of Japan</p>	<ul style="list-style-type: none"> • Implementing disaster-prevention education (creating educational materials for use in disaster-prevention education and developing and spreading disaster-prevention education programs) • Implementing disaster reducing drills (developing and spreading a variety of disaster reducing drill programs) <p>(Reference: Plan being implemented [or that has already been implemented] by JICA)</p> <ul style="list-style-type: none"> • School-based Disaster Education Project in Turkey (2010 to 2013)