

## Chapter 5 Reconstruction of Homes and Cities

### Section 1 Urban Development

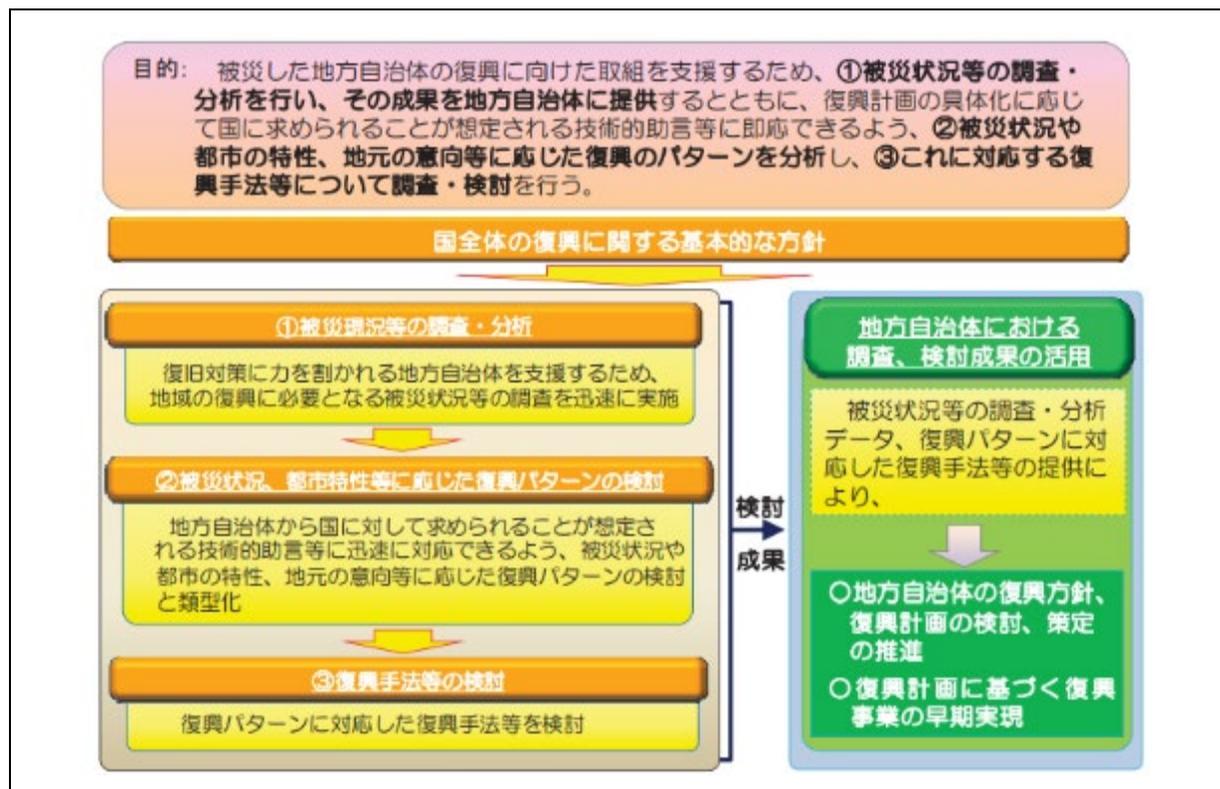
#### 1. Evaluating Reconstruction Urban Development Plans

##### (1) Survey on Reconstruction Methods for Tsunami-Stricken Urban Areas by the Ministry of Land, Infrastructure, Transport and Tourism

The Great East Japan Earthquake caused enormous damage to urban areas, and efforts toward urban reconstruction were urgently needed. Approximately one month after the earthquake, many municipalities began formulating and publicizing their visions and plans for reconstruction, as well as working on concrete reconstruction plans.

Meanwhile, in order to support the efforts of local governments toward the reconstruction of tsunami-stricken urban areas, the Ministry of Land, Infrastructure, Transport and Tourism conducted the Survey on Reconstruction Methods for Tsunami-Stricken Urban Areas, which aimed to provide data for the formulation of reconstruction plans for disaster-stricken municipalities. In addition, they archived the results of surveys on the current state of the damage obtained in this survey, and prepared and published the Guidance for Urban Reconstruction Following Tsunami Damage, which contains the data items necessary for future reconstruction following the earthquake.

Figure 5-1-1 Purpose and Overview of the Survey on Reconstruction Methods for Tsunami-Stricken Urban Areas



Source: City Bureau, Ministry of Land, Infrastructure, Transport and Tourism, "Survey on Reconstruction Methods for Tsunami-Stricken Urban Areas (Summary)" (April 2012)  
<https://www.mlit.go.jp/common/000209868.pdf> (browsed July 31, 2023)

Under normal circumstances, urban reconstruction would be carried out primarily by cities, towns, and villages, which are basic municipalities. These surveys, however, were conducted by the national government for the reasons described below. (Source: “Conducting and Archiving Surveys on Urban Reconstruction Assistance Following the Great East Japan Earthquake” (“Research Lectures on the History of Civil Engineering Vol. 32” by the Committee on the History of Civil Engineering, Japan Society of Civil Engineers, 2012))

① To provide support for disaster-stricken municipalities

There were many smaller local governments whose organizational structures were not quite adequate, and the local government employees themselves were affected by the disaster, making it difficult for them to evaluate reconstruction plans. Therefore, the national government determined that it would be appropriate to conduct its own surveys and provide them to local governments.

② Efficiency in dealing with issues common to disaster-affected areas

As the disaster affected a wide area, it was determined that the national government would be more efficient than local governments alone in conducting surveys on the current state of the damage, which would serve as the basis for reconstruction, as well as in dealing with problems that are common to urban areas affected by tsunamis.

③ In order for the national government to form its own policies

Given the magnitude of the disaster and the distinct nature of the urban reconstruction process compared to recent cases such as the Great Hanshin-Awaji Earthquake, it was deemed necessary for the national government to conduct its own investigations to identify issues for evaluating legal and budgetary frameworks, rather than relying solely on requests from local governments.

The surveys can be classified into the following key categories.

① Surveys on the current state of the damage

The surveys and analyses of the current state of the damage covered 62 municipalities on the Pacific coast in six prefectures: Aomori, Iwate, Miyagi, Fukushima, Ibaraki, and Chiba. The purpose of the surveys was to prepare essential materials to be used for evaluating reconstruction plans in disaster-stricken municipalities by establishing survey criteria common to the disaster-affected areas, combining survey criteria according to the needs of local governments when appropriate, and conducting thorough surveys.

② Studies on urban reconstruction models

1. Preliminary studies

In line with requests from local governments and the results of surveys on the current state of the damage, the opinions of residents were gathered in order to evaluate the development and implementation of reconstruction plans for affected areas in 43 municipalities in six prefectures, excluding those in no-entry zones around the site of the Fukushima Daiichi Nuclear Power Plant accident.

2. Detailed studies

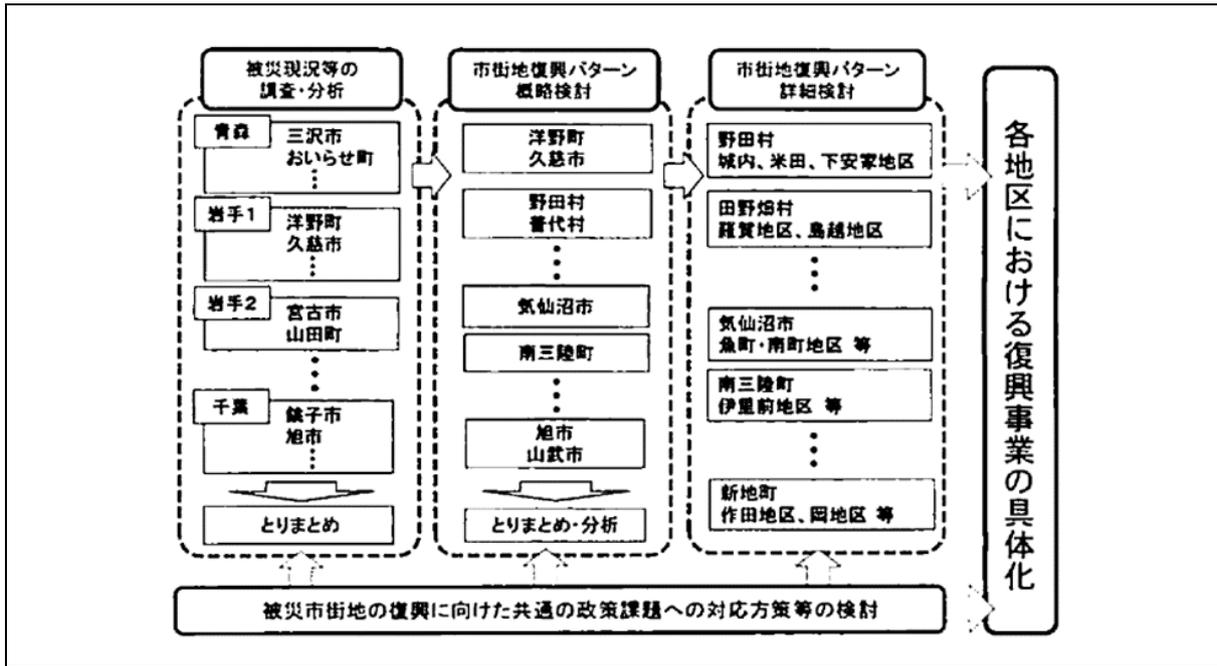
By conducting rights assessments, surveys, and planning, support was provided for the implementation of reconstruction plans in 180 districts in 26 municipalities of three of the prefectures for which the preliminary surveys were carried out.

③ Studies on measures to address common policy issues

Support was provided for the formulation of reconstruction plans and the implementation of reconstruction projects by conducting surveys and studies on policy issues common to disaster-affected areas to formulate technical guidelines, rather than examining individual areas.

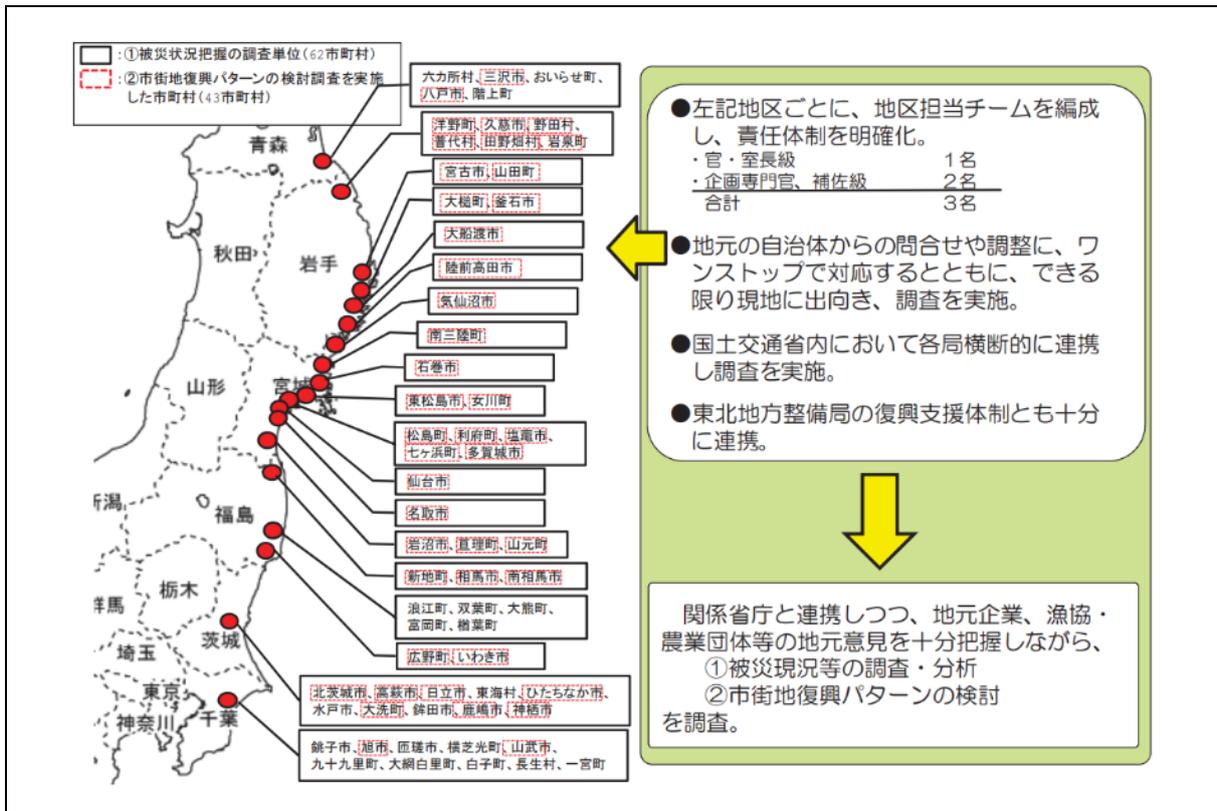
Across 43 coastal municipalities affected by the tsunami, the results of these surveys administered directly by the government were utilized to move forward with the formulation of reconstruction and community development plans and the eventual release of these reconstruction plans.

Figure 5-1-2 Overview of Surveys on the Reconstruction of Urban Areas Affected by the Tsunami



Source: “Conducting and Archiving Surveys on Urban Reconstruction Assistance Following the Great East Japan Earthquake” (“Research Lectures on the History of Civil Engineering Vol. 32” by the Committee on the History of Civil Engineering, Japan Society of Civil Engineers, 2012)

Figure 5-1-3 Target Areas of the Survey on Reconstruction Methods for Tsunami-Stricken Urban Areas



Source: City Bureau, Ministry of Land, Infrastructure, Transport and Tourism, “Survey on Reconstruction Methods for Tsunami-Stricken Urban Areas (Summary)” (April 2012)  
<https://www.mlit.go.jp/common/000209868.pdf> (browsed July 31, 2023)

Figure 5-1-4 Overview of Surveys on the Current State of the Damage and Studies on Urban Reconstruction Models

<p>【被災現況調査】</p> <p>工期：平成 23 年 5 月～平成 24 年 3 月</p> <p>調査対象：6 県 62 市町村</p> <p>調査内容：</p> <ol style="list-style-type: none"> <li>(1) 現地踏査による津波浸水状況、建築物被害状況の把握</li> <li>(2) アンケート調査による住民避難状況、産業被害状況の把握</li> </ol> <p>【市街地復興パターン概略検討調査】</p> <p>工期：平成 23 年 6 月～平成 24 年 3 月</p> <p>調査対象：6 県 43 市町村（福島第一原子力発電所の事故に伴う警戒区域の市町村を除く）</p> <p>調査内容：</p> <ol style="list-style-type: none"> <li>(1) 住民意向把握等</li> <li>(2) 市街地復興構想素案の検討</li> <li>(3) 市街地復興構想素案に係る住民意向の把握</li> <li>(4) 有識者へのヒアリング等</li> <li>(5) 調査作業監理会議の設置、開催</li> </ol> <p>【市街地復興パターン詳細検討調査】</p> <p>工期：平成 23 年半ば頃（地区により異なる）～平成 24 年 3 月</p> <p>調査対象：3 県 26 市町村 180 地区（福島第一原子力発電所の事故に伴う警戒区域の市町村を除く）</p> <p>調査内容：</p> <ol style="list-style-type: none"> <li>(1) 事業化基本調査の実施</li> <li>(2) 事業化詳細調査の実施</li> <li>(3) 事業化に係る必要経費の算出</li> </ol>
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Source: City Bureau, Ministry of Land, Infrastructure, Transport and Tourism, “Survey on Reconstruction Methods for Tsunami-Stricken Urban Areas (Summary)” (April 2012)  
<https://www.mlit.go.jp/common/000209868.pdf> (browsed July 31, 2023)

Figure 5-1-5 Areas Covered in Surveys on the Current State of the Damage and Studies on Urban Reconstruction Models

	Surveys and analyses of the state of damage (conducted in 62 municipalities in six prefectures)	Preliminary studies on urban reconstruction models (conducted in 43 municipalities in six prefectures)	Detailed studies on urban reconstruction models (conducted in 180 districts in 26 municipalities of three prefectures)
Overview	In order to support the local governments of disaster-stricken areas as they focus their efforts on recovery measures, <u>surveys and analyses on the state of damage, which were necessary for community reconstruction, were conducted according to the needs of the local governments, to which the survey results were then submitted.</u>	In light of the results of the surveys on the state of damage, <u>urban reconstruction models were evaluated according to the state of damage, characteristics of the urban area, and opinions of local residents.</u> Essential materials were prepared for the evaluation of reconstruction methods and other aspects, and the <u>disaster-stricken municipalities were provided support in the preparation of reconstruction plans.</u>	Based on the results of the surveys on the state of damage and the preliminary studies of urban reconstruction models, <u>detailed studies of urban reconstruction models were conducted according to the state of damage, urban characteristics, and opinions of locals.</u> By preparing essential materials for formalizing projects in disaster-affected municipalities and <u>providing them to the municipalities,</u> support was provided to help realize their reconstruction plans.
Aomori Prefecture	Misawa City, Hachinohe City, Rokkasho Village, Oirase Town, Hashikami Town	Misawa City, Hachinohe City	*1

	Surveys and analyses of the state of damage (conducted in 62 municipalities in six prefectures)	Preliminary studies on urban reconstruction models (conducted in 43 municipalities in six prefectures)	Detailed studies on urban reconstruction models (conducted in 180 districts in 26 municipalities of three prefectures)
Iwate Prefecture	Hirono Town	Hirono Town	*1
	Kuji City	Kuji City	
	Noda Village	Noda Village	Jonai District, etc.
	Fudai Town	Fudai Town	*1
	Tanohata Village	Tanohata Village	Raga District, Shimanokoshi District
	Iwaizumi Town	Iwaizumi Town	Omoto District
	Miyako City	Miyako City	Kuwagasaki District
			Taro District
	Yamada Town	Yamada Town	Atago District, Fujiwara District, Central Urban District, Sokei District, Takahama District, Kanehama District, Tsugaruishi District
			Akamae District, Omoe District
			Osawa District, Funakoshi District
Kamaishi City	Kamaishi City	Yanagisawa-Kitahama District, Yamada District, Orikasa District	
		Honcho District	
Ofunato City	Ofunato City	Unosumai District, Nebama District, Hakozaiki District, Heita District	
		Eastern District, Ureishi-Matsubara District	
Rikuzentakata City	Rikuzentakata City	Ofunato District, Sakari District, Shimo-Funato District, Massaki District, Akasaki District	
		Okirai District, Ryori District	
		Imaizumi District	
		Takata District	
Miyagi Prefecture	Kesenuma City	Kesenuma City	Sakanamachi-Minamimachi District, Minami-Kesenuma District, Shishiorikarakuwa District
			Karakuwa District, Motoyoshi District
	Minamisanriku Town	Minamisanriku Town	Isatomae District, Yoriki-Nirano-hama District, Nakayama-Baba District, Saido-Oritate-Mitobe-Zaigo District
			Shizugawa District
	Higashimatsushima City	Higashimatsushima City	Nobiru District
			Omagari District
			Ushiami District, Hamaichi District
	Onagawa Town	Onagawa Town	Tatenuma District, Hamasuka District, Miyato District
			Urban District
	Ishinomaki City	Ishinomaki City	Outlying Peninsula District
			Ogatsu District, Oshika District
			Minamihama District, Chuo District, Minato District
			Kama District, Okaido District
	Matsushima Town	Matsushima Town	Sumiyoshi District, Fudo District, Watanoha District, Kitakami District, New Urban (Hebita-Watanoha) District
*1			
Rifu Town	Rifu Town		
Shiogama City	Shiogama City	Urato District	
		Kitahama District, Minatomachi District	
Shichigahama Town	Shichigahama Town	Shobutahama District	
		Shobudahama District, Matsugahama District, Hanabuchi-hama-Yoshidahama District	
Tagajo City	Tagajo City	*1	
Sendai City	Sendai City	Kamiokada District, Ageba District, Koyahigashi District, Northern Gamou District	
Natori City	Natori City	Yuriage District	
Iwanuma City	Iwanuma City	Tamaura District	
Watari Town	Watari Town	Arahama District, Eastern Yoshida District, Western Yoshida District	

	Surveys and analyses of the state of damage (conducted in 62 municipalities in six prefectures)	Preliminary studies on urban reconstruction models (conducted in 43 municipalities in six prefectures)	Detailed studies on urban reconstruction models (conducted in 180 districts in 26 municipalities of three prefectures)
	Yamamoto Town	Yamamoto Town	Yamashita District, Kassenhara District, Asouhara District, Sakamoto District
Fukushima Prefecture	Shinchi Town	Shinchi Town	Sakuda District, Oka District, Suzumezuka District, Odohama District, Nakashima District
	Soma City	Soma City	Haragama District, Obama District, Isobe District
	Minamisoma City	Minamisoma City	Haramachi District, Kashima District
	Namie Town	*2	*2
	Futaba Town		
	Okuma Town		
	Tomioka Town		
	Naraha Town		
Hirono Town	Hirono Town	Hirono-Odaka Railway Line District	
Iwaki City	Iwaki City	Onahama Port Hinterland District	
		Hisanohama District	
		Yotsukura District	
		Usuiso-Toyoma District	
		Nagasaki District	
		Iwama District	
Obama District, Nishikisuka District			
Ibaraki Prefecture	Kitaibaraki City, Takahagi City, Hitachi City, Hitachinaka City, Oarai Town, Kashima City, Kamisu City, Tokai Village, Mito City, Hokota City	Kitaibaraki City, Takahagi City, Hitachi City, Hitachinaka City, Oarai Town, Kashima City, Kamisu City	*1
Chiba Prefecture	Asahi City, Sammu City, Choshi City, Sosa City, Yokoshibahikari Town, Kujukuri Town, Oamishirasato City, Shirako Town, Chosei Village, Ichinomiya Town	Asahi City, Sammu City	*1
*1 Project plans will not be prepared because the urban development project for urban reconstruction is not included in the reconstruction plan.			
*2 These areas are part of the no-entry zone of the nuclear power station accident.			

Source: City Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Supplemented in “Survey on Reconstruction Methods for Tsunami-Stricken Urban Areas (Summary)” (April 2012)  
<https://www.mlit.go.jp/common/000209868.pdf> (browsed July 31, 2023)

Figure 5-1-6 Technical Guidelines on Measures to Address Common Policy Issues

名称
東日本大震災からの復興に係る公園緑地整備に関する技術的指針
迅速な復旧・復興に資する再生資材の宅地造成盛土への活用に向けた基本的考え方
復興まちづくりにおける景観・都市空間形成の基本的な考え方
歴史・文化資産を活かした復興まちづくりに関する基本的考え方
東日本大震災の復興における都市政策と健康・医療・福祉政策の連携及びコミュニティ形成に関するガイドライン
対話型復興まちづくりに向けた合意形成支援ツール
津波避難を想定した避難路、避難施設の配置及び避難誘導について

Source: City Bureau, Ministry of Land, Infrastructure, Transport and Tourism, “Survey on Reconstruction Methods for Tsunami-Stricken Urban Areas (Summary)” (April 2012)  
<https://www.mlit.go.jp/common/000209868.pdf> (browsed July 31, 2023)

## (2) Building Restrictions in Accordance with the Building Standards Act

### 1) Building Restrictions Under the Building Standards Act and Special Provisions Act

In order to prevent construction that may hinder the planned development of urban sections of disaster-affected areas, Article 84 of the Building Standards Act (Act No. 201 of 1950) allows the designated administrative agency to restrict or prohibit construction within specified areas limited to a period of up to one month from the day the disaster occurs (with the possibility of an extension of up to two months).

Furthermore, due to the extremely widespread and severe damage caused by the Great East Japan Earthquake, which has made it difficult to make urban planning decisions for reconstruction in short periods of time, special provisions were established under the Act on Special Provisions Concerning Building Restrictions in Urban Areas Severely Damaged by the Great East Japan Earthquake (Act No. 34 of 2011, enacted and enforced on April 29, 2011, hereinafter referred to as the “Special Provisions Act”). These provisions allow the designated administrative agency overseeing urban areas severely affected by the Great East Japan Earthquake to impose building restrictions or bans in designated areas for a period of up to six months from the day the disaster occurred (with the possibility of extension for up to eight months).

The Special Provisions Act stipulates the following area designation criteria and clarifies their relevance to project implementation: ① a considerable number of buildings have been destroyed by the earthquake, ② there is a risk that substandard urban blocks will be formed, and ③ it is necessary to implement land readjustment projects and other projects related to the development of building sites<sup>1</sup>.

On April 8, Miyagi Prefecture (a designated administrative agency) designated areas and began implementing restrictions on construction in Kesennuma City, Minamisanriku Town, Onagawa Town, Higashimatsushima City, and Natori City, which suffered particularly severe damage. On July 1, Miyagi Prefecture also designated areas and began implementing restrictions on construction in Yamamoto Town. Starting on April 8, Ishinomaki City, another designated administrative agency, also designated areas and implemented building restrictions under the authority of the mayor.

All of these municipalities extended the restriction periods until November 10 in accordance with the Special Provisions Act<sup>2</sup>.

### 2) Building Restrictions Under the Act on Special Measures Concerning Reconstruction of Urban Districts Damaged by Disaster

During the period of building restrictions stipulated by the Building Standards Act, the disaster-affected municipalities implemented urban planning decisions for urban disaster recovery promotion areas in accordance with the Act on Special Measures Concerning Reconstruction of Urban Districts Damaged by Disaster (Act No. 14 of 1995, hereinafter referred to as the “Special Measures Act”). To avoid hindering urban development projects for reconstruction, development and building restrictions were enforced until March 10, 2013, two years after the disaster.

Urban disaster recovery promotion areas were designated in 11 districts in six cities and towns, encompassing a total area of about 1,380 ha.

### 3) Building Restrictions Resulting from the Designation of Disaster Risk Areas in Accordance with the Building Standards Act

Subsequently, each city and town proceeded with the formulation of project plans in accordance with the reconstruction plan. In particular, in areas where there is a high risk of damage even with tsunami protection measures such as seawalls, river embankments, and high-embankment roads, if tsunamis similar to that of the Great East Japan Earthquake occur, restrictions on the construction of buildings were enforced in conjunction with the formulation of plans for collective relocation promotion projects for disaster prevention. These restrictions, which include the prohibition of the construction of buildings for residential purposes, were implemented by designating disaster risk areas through city or town ordinances in accordance with the provisions of Article 39 of the Building Standards Act.

The designation status of disaster risk areas in each prefecture affected by the Great East Japan Earthquake is as follows.

<sup>1</sup> Source: Ministry of Land, Infrastructure, Transport and Tourism, “Act on Special Provisions Concerning Building Restrictions in Urban Areas Severely Damaged by the Great East Japan Earthquake” <https://www.mlit.go.jp/common/000144476.pdf> (browsed July 31, 2023)

<sup>2</sup> Source: Miyagi Prefecture, “Progress in Miyagi Prefecture’s Urban Development Projects for Reconstruction” <https://www.pref.miyagi.jp/soshiki/tosikei/ayumi.html> (browsed July 31, 2023)

Figure 5-1-7 Designation status of disaster risk areas

Prefecture	Designated Area	Municipalities (Date of Enforcement)
Iwate Prefecture	Approx. 2,129.4 ha	Noda Village (September 21, 2012), Miyako City (October 24, 2012), Yamada Town (October 5, 2012), Otsuchi Town (December 17, 2012), Kamaishi City (December 2012), Ofunato City (April 1, 2013), Rikuzentakata City (March 26, 2012)
Miyagi Prefecture	Approx. 10,965.238 ha	Yamamoto Town (November 11, 2011), Sendai City (amended December 16, 2011), Higashimatsushima City (June 1, 2012), Watari Town (June 1, 2012), Kesennuma City (June 29, 2012), Minamisanriku Town (amended April 1, 2012), Shichigahama Town (September 20, 2012), Natori City (September 25, 2012), Ishinomaki City (December 26, 2011), Onagawa Town (September 18, 2012), Iwanuma City (December 17, 2012), Shiogama City (December 19, 2012)
Fukushima Prefecture	Approx. 2,926.4 ha	Soma City (area designated October 31, 2011), Shinchi Town (area designated December 27, 2011), Iwaki City (January 15, 2013), Namie Town (area designated April 30, 2014), Tomioka Town (area designated July 17, 2015), Minamisoma City (partially changed March 19, 2013), Naraha Town (area designated February 14, 2013)
Ibaraki Prefecture	Approx. 6.9 ha	

Source: Iwate Prefecture, Supplemented in “Status of Reconstruction Urban Development: Progress of the Three Reconstruction (Area Development) Projects”

[https://www.pref.iwate.jp/area/dbps\\_data/material/files/000/000/006/571/shiryu2.pdf](https://www.pref.iwate.jp/area/dbps_data/material/files/000/000/006/571/shiryu2.pdf) (browsed July 31, 2023)

Otsuchi Town, “Ordinance on Otsuchi Town Disaster Risk Areas”

[https://www.town.otsuchi.iwate.jp/gyosei/mobile/reiki/reiki\\_honbun/b800RG00000703.html](https://www.town.otsuchi.iwate.jp/gyosei/mobile/reiki/reiki_honbun/b800RG00000703.html) (browsed July 31, 2023)

Miyagi Prefecture, “Disaster Risk Areas”

<https://www.pref.miyagi.jp/soshiki/kentaku/saigaikikenkuiki.html> (browsed July 31, 2023)

“Progress in Miyagi Prefecture’s Urban Development Projects for Reconstruction, Chapter 2: Support from the Prefecture for Municipalities and Disaster Victims (Part 1)”

[https://www.pref.miyagi.jp/documents/35873/04\\_2syu-1.pdf](https://www.pref.miyagi.jp/documents/35873/04_2syu-1.pdf) (browsed July 31, 2023)

Soma City, “Areas that suffered severe damage from the tsunami have been designated disaster risk areas.”

[https://www.city.soma.fukushima.jp/shinososhiki/toshiseibika/shinnsaikannren\\_info/903.html](https://www.city.soma.fukushima.jp/shinososhiki/toshiseibika/shinnsaikannren_info/903.html) (browsed July 31, 2023)

Shinchi Town, “Disaster Risk Areas”

<https://www.shinchi-town.jp/site/fukkou/bousaimap.html> (browsed July 31, 2023)

Iwaki City, “Designation of Disaster Risk Areas”

<http://www.city.iwaki.lg.jp/www/contents/1001000001190/index.html> (browsed July 31, 2023)

Namie Town, “Designation of Disaster Risk Areas”

<https://www.town.namie.fukushima.jp/soshiki/26/20140430-0.html> (browsed July 31, 2023)

Tomioka Town, “Disaster Risk Areas Designated”

[https://www.tomioka-town.jp/mobile/saigai\\_fukko/saigaifukkokeikaku/saigaifukkokeikaku/1727.html](https://www.tomioka-town.jp/mobile/saigai_fukko/saigaifukkokeikaku/saigaifukkokeikaku/1727.html) (browsed July 31, 2023)

Naraha Town, “Meeting on Restoration and Reconstruction Projects in Tsunami Disaster-Affected Areas”

<https://www.town.naraha.lg.jp/kurashi/files/%ef%bc%88%e8%b3%87%e6%96%99%ef%bc%8d%ef%bc%91%ef%bc%89.pdf> (browsed July 31, 2023)

Minamisoma City, “Areas that suffered severe damage from the tsunami have been designated disaster risk areas.”

[https://www.city.soma.fukushima.jp/shinososhiki/toshiseibika/shinnsaikannren\\_info/903.html](https://www.city.soma.fukushima.jp/shinososhiki/toshiseibika/shinnsaikannren_info/903.html) (browsed July 31, 2023)

### (3) Formulating Reconstruction and Community Development Plans

In the reconstruction following the Great East Japan Earthquake, the scale of urban area reconstruction plans was generally determined based on the intentions of the disaster victims and the visions for the future of the affected municipalities. However, the intentions of the disaster victims changed, and their plans to relocate, which had been uncertain during the early stages of planning, became clearer. As such, many districts revised their plans, and in some cases, the scale of the plans was determined based on estimated population figures. In addition to urban reconstruction projects, various infrastructure development projects, including the construction of seawalls, were carried out in parallel under the respective plans of each region. For example, the prefectural government would plan the seawall, and at the same time, the municipalities would plan the ground elevation for the urban areas for reconstruction. With early recovery being a priority, planning was carried out within a limited timeframe. As these plans were being deliberated, it took time to build a consensus in the process of formulating the plans, given the differing views among residents and disaster-affected municipalities on how much damage to accept or consider as a premise in response to the assumed disaster risks of both the largest-class tsunamis (L2 tsunamis) and the most frequent tsunamis (L1 tsunamis). Meanwhile, in order to conduct comprehensive studies of such infrastructural and urban development, the national government has presented basic concepts for landscape and urban space formation in urban reconstruction planning, and in each region, efforts have been made to advance urban development through collaborative organizations that involve both the public and private sectors, such as urban development councils.

In addition, in post-earthquake reconstruction efforts, projects have been carried out with the aim of quickly reconstructing housing. However, in some municipalities, the main approach has been to, for example, relocate entire communities to higher ground, which is expected to bring challenges in terms of future sustainability, particularly if these individual communities are small. In addition, in anticipation of population decline, there were cases in which the consolidation of communities was considered but could not be implemented because it was difficult to reconcile with the livelihoods of residents and other factors. On the other hand, there were also initiatives that could be made more sustainable by ensuring a certain population size, such as by establishing relocation sites within existing communities. In addition, based on the concept of a compact city, some communities have been consolidated and equipped with public, commercial, and welfare facilities to create thriving towns, and some prefectures have proposed the integration of communities. Furthermore, the relocated communities are not complete in their current form, and continued efforts to maintain and revitalize them are required.

The challenges that need to be addressed in reconstruction urban development following the Great East Japan Earthquake are by no means unique to post-disaster reconstruction—most of these issues are also present in urban development efforts during times of non-emergency. In other words, societal issues such as population decline, depopulation, and aging occur over certain periods of time, even when disasters have not occurred. However, due to the Great East Japan Earthquake, these issues became apparent immediately, reflecting the tendency for major disasters to accelerate societal trends, and it became necessary to formulate reconstruction plans that take into account the declining population and other such factors. Under these circumstances, urban development for reconstruction was carried out based on the intentions of the disaster victims, as mentioned above. However, it has been pointed out<sup>3</sup> that projects planned after the disaster have become excessive in scale, and that there are concerns that factors such as costs, including those for maintaining and managing facilities that have been built as a result of excessively large-scale projects, will strain the finances of local governments in the coming years. On this point, there have been comments from some disaster-stricken municipalities that in order to solve the problems caused by the earthquake, each facility was developed with a special purpose, such as the reconstruction of local communities in areas formerly under evacuation orders, but as a result, the municipalities were burdened with facilities that were in some ways excessive for the scale of the municipality, creating a significant financial strain for maintenance and management. Others have commented that in rural areas, the number of vacant houses and plots has been increasing, and even in the disaster-affected areas, there were already many vacant houses and plots. Some disaster victims expressed a desire to keep their ancestral land in hopes that future generations might use it, despite

<sup>3</sup> Remarks by Deputy Chair Masuda and Committee Member Onishi, Expert Meeting on Reflection on the Past Decade of Reconstruction Policy for the Great East Japan Earthquake (1st meeting) (October 24, 2022)

not having immediate or guaranteed plans to do so, leaving a certain amount of land vacant<sup>4</sup>.

In the formulation of reconstruction and community development plans, it was necessary to bear in mind various points while advancing the process. The following are key examples.

① The necessity to plan in light of population decline and aging

As mentioned above, in the reconstruction following the Great East Japan Earthquake, the scale of urban reconstruction areas was primarily planned according to projected population estimates, which were based on surveys on the intentions of disaster victims with regard to housing reconstruction. However, in the early stages of the formulation of reconstruction plans, the disaster victims were not final in their intentions, which later changed. Therefore, in many districts, it was necessary to review the scale of the project plans. As widespread population movement occurred, with housing reconstruction sites being chosen beyond district or municipal boundaries, and with the need to accelerate reconstruction projects, municipalities worked on revising the scale of their plans and coordinating the reorganization of projects. In particular, when reconstruction plans were first being formulated, there were cases where the scale of the plan was determined based on projected population estimates, taking into account the intentions of residents and businesses who wished to quickly rebuild, while also assuming that some people had not yet made decisions. On the other hand, some municipalities worked to carefully understand each household's intentions, including aligning opinions within families, and conducted personal interviews with each individual. They also engaged in continuous efforts to reassess plans, anticipating future changes in project scale, which led to revisions in project plans, such as the joint construction of community centers and libraries, or shifting from public sewers to combined septic tanks, and pursued phased developments accordingly<sup>5</sup>.

The projected population, which serves as the foundation for the scale of urban reconstruction efforts and is incorporated into reconstruction urban development plans and specific project plans, was studied and determined by each disaster-affected municipality based on an understanding of the intentions of affected residents. In the course of elaborating the plans, adjustments were made as needed by tracking the intentions of affected residents, which continued to change both in terms of timing and content, in a phased and continuous manner. As a result, in land readjustment projects, the projected populations fell by a total of about 15% between the finalization of urban planning and the final revision of project plans. In addition, in the collective relocation promotion projects for disaster prevention, final confirmations of the intentions of disaster victims prior to starting full-scale land development led to a reduction in the number of plots as a result of plan revisions based on changes in reconstruction preferences. For example, in cases where UR was contracted by local authorities, reductions were generally in the range of 20 to 30%.

In light of further population decline, the aging of the population, and the increase in the maintenance, management, and renewal costs of public facilities, it is necessary for future reconstruction plans to fully reflect the medium- to long-term changes in the social structure according to, for example, future population estimates by the National Institute of Population and Social Security Research<sup>6</sup>. It is also important to define the “exchange population” and “related population” and reflect them in reconstruction plans and monitor them during reconstruction<sup>7</sup>.

② Understanding and providing information from the community and household level to the individual level

To determine the scale of reconstruction urban development plans that are based on reconstruction plans, as well as the project plans that put these into action, and to formulate land use plans, it is important to understand the intentions of residents carefully and accurately before the drafting process. As such, various efforts were

<sup>4</sup> Source: Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake, “Summary from the Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake” (March 31, 2021) <https://www.mlit.go.jp/toshi/content/001397377.pdf> (browsed July 31, 2023)

<sup>5</sup> Remarks by the Mayor of Minamisanriku Town, Miyagi Prefecture, Expert Meeting on Reflection on the Past Decade of Reconstruction Policy for the Great East Japan Earthquake (3rd meeting) (February 27, 2023)

<sup>6</sup> Remarks by Deputy Chair Masuda, Expert Meeting on Reflection on the Past Decade of Reconstruction Policy for the Great East Japan Earthquake (1st meeting) (October 24, 2022)

<sup>7</sup> Remarks by Committee Member Imamura, Expert Meeting on Reflection on the Past Decade of Reconstruction Policy for the Great East Japan Earthquake (2nd meeting) (December 5, 2022)

made to understand the intentions of residents in the areas affected by the Great East Japan Earthquake. Public meetings and other forums where residents can share their views are generally used to learn about the opinions and intentions of residents. However, it is important to take into account the fact that individual circumstances may vary, the fact that expressing opinions in public may be difficult for some, and the fact that differing opinions often exist even within the same household. It is crucial to learn about the intentions of residents individually through personal interviews, learn about the intentions of residents at the family level through questionnaires, implement efforts to promote discussions among family members, and further promote an understanding of intentions through various approaches, such as establishing consultation desks for follow-ups. In learning about the intentions of residents, it is necessary to create a process that allows individuals to plan for their future more easily, while conducting surveys in a phased and ongoing manner to better understand the intentions of the disaster victims. On the other hand, from the perspective of how the local community as a whole thinks about its own future, it is also important to understand the intentions of the entire community so that everyone can think together about the future of the community and coordinate the path forward.

### ③ Approaches to the timeframe for learning about resident intentions

Following the Great East Japan Earthquake, it took about two years for each municipality to put urban reconstruction projects into practice. While there is a need for swift reconstruction, for many residents, one year after the disaster is still too soon to regain stability in their lives, and it often takes about two years after the disaster for these individuals to think calmly about their future and rebuilding their homes. Meanwhile, there is always a trade-off between a sense of speed and the thoroughness of a plan. While it is desirable to start reconstruction projects as soon as possible, learning about the intentions of the disaster victims while taking into account the time they need to think about their lives and rebuilding their homes is thought to lead to more suitable plans. As such, in order to expedite the formulation of reconstruction and community development plans while taking into account the importance of taking time to understand the intentions of disaster victims in detail and repeatedly conducting surveys, care must be taken to align the planning schedules with both the cycle in which disaster victims think about their lives and housing reconstruction, and the government's cycle of translating reconstruction plans into reconstruction urban development plans and project plans.

In addition, it has been pointed out<sup>8</sup> that the initial 10-year limit on financial frameworks for the recovery period created a time constraint when discussing urban recovery planning in the region, making it difficult to build a thorough consensus with the residents. On the other hand, it has also been pointed out<sup>9</sup> that having a deadline has helped facilitate consensus-building, indicating that having a defined timeframe is necessary. Furthermore, stakeholders in some disaster-stricken municipalities have suggested that demonstrating progress in reconstruction will increase the willingness of evacuees to return<sup>10</sup>.

### ④ Approaches to data-based planning

In formulating reconstruction and community development plans, it became necessary to obtain multifaceted data, such as the current state of land use, the current state of buildings, and the state of infrastructure development, as well as the history of the town, the conditions of past disasters, and the estimated damage of various hazards obtained through numerical simulations. Moreover, in the process of implementing reconstruction projects based on these plans, it became necessary to revise the project plans according to changes in the intentions of people. Going forward, it is crucial that data on land use conditions and the current state of buildings are collected, archived, and used to estimate the damage before disasters occur.

### ⑤ Relationship with temporary community development

The emergency temporary housing described in Section 2 is intended to quickly provide accommodation for disaster victims from evacuation shelters and expedite their move to permanent housing, after which its role is considered complete. The time disaster victims spend living in emergency temporary housing is also a period for thinking about the reconstruction of their homes, and when recovery is prolonged, evacuees tend to abandon their

<sup>8</sup> Remarks by Committee Member Imamura, Expert Meeting on Reflection on the Past Decade of Reconstruction Policy for the Great East Japan Earthquake (1st meeting) (October 24, 2022)

<sup>9</sup> Remarks by Chairperson Akiike, Expert Meeting on Reflection on the Past Decade of Reconstruction Policy for the Great East Japan Earthquake (2nd meeting) (December 5, 2022)

<sup>10</sup> Remarks by the Mayor of Kawauchi Village, Fukushima Prefecture, Expert Meeting on Reflection on the Past Decade of Reconstruction Policy for the Great East Japan Earthquake (3rd meeting) (February 27, 2023)

intentions to return. In addition, the location and community have a significant impact on the formulation of reconstruction and community development plans. Regarding emergency temporary housing, for example, there were cases where the housing was later renovated so that it could be used permanently or moved to a new location and used for other purposes after it had been used at the original location. Furthermore, following the Great East Japan Earthquake, there was widespread utilization of rental-type emergency housing (also known as post-disaster public-funded rental accommodation), in which private rental housing was leased and provided to disaster victims.

Notably, in addition to the conventional government-provided housing, a system was established in which disaster victims could rent properties that they found themselves, resulting in a rise in temporary housing outside the districts. Preparing these rental-type emergency housing units outside the district leads to the following challenges. ① It becomes difficult to gather opinions when preparing reconstruction plans because residents live far away from the district, and ② permanent housing units also end up being established outside the district. When formulating reconstruction and community development plans, it is necessary to consider the various effects of these challenges<sup>11</sup>.

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<sup>11</sup> Source: Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake, “Summary from the Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake” (March 31, 2021)  
<https://www.mlit.go.jp/toshi/content/001397377.pdf> (browsed July 31, 2023)

### (4) Implementing Reconstruction Projects

Reconstruction projects based on reconstruction urban development plans are implemented under policies on land use by district (reconstruction approaches) to determine what kind of urban areas should be formed, and infrastructure development policies (policies on utilizing project methods) to determine what specific project methods should be adopted. After project completion, the utilization and maintenance of urban areas must also be considered.

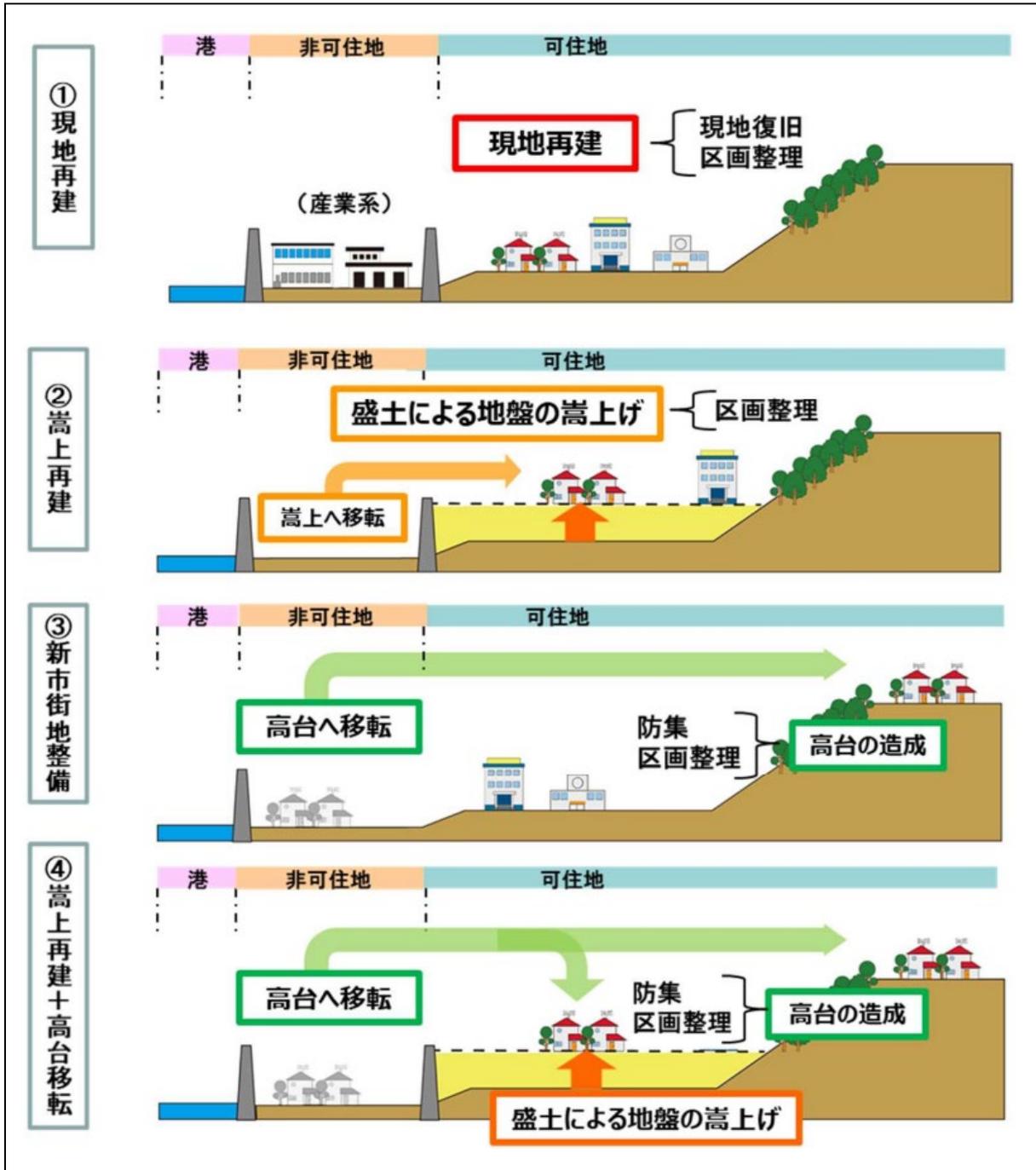
Figure 5-1-8 Overall Flow of Reconstruction Projects

各段階	初期対応段階	調査計画段階		事業計画段階
	発災後	震災後 1 年目前半	震災後 1 年目後半	震災後 2 年目～
計画の流れ	復興方針 ビジョン 構想等	復興計画 (自治体全域)	復興まちづくり計画 (地区)	事業計画 (事業地区)
内容	<ul style="list-style-type: none"> <li>復興理念、復興方針</li> <li>将来に向けたメッセージ</li> <li>復興計画の策定スケジュール等</li> </ul>	<ul style="list-style-type: none"> <li>復興の基本理念・将来像</li> <li>自治体全域の視点からみた分野別方針、施策（土地利用、防災・減災、産業振興、医療福祉等）</li> <li>津波シミュレーションによる土地利用、防災減災方針の評価</li> </ul>	<ul style="list-style-type: none"> <li>地区の復興まちづくり計画の検討</li> <li>地区別の土地利用方針（復興パターン）</li> <li>✓ 現地再建、内陸部・高台移転、現地再建・高台移転併用等</li> <li>基盤整備方針（事業手法の活用方針）</li> <li>住まい・事業活動の再建方針等の検討</li> <li>住民・事業者の意向把握・合意形成</li> </ul>	<ul style="list-style-type: none"> <li>①事業計画方針</li> <li>地区復興まちづくり計画の整理</li> <li>住民意向の把握、確認等</li> <li>②適地選定・評価</li> <li>地形、土地所有、支障物件の調査</li> <li>移転候補地検討、方針設定</li> <li>③土地利用計画検討</li> <li>地区施設の検討</li> <li>ソーニング・アクセス動線</li> <li>事業区分/事業適用性の検討</li> <li>概算費用の算定・評価</li> <li>④事業計画</li> <li>事業手法、組み合わせ</li> <li>事業区域、施行計画等</li> </ul>

Source: Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake, "Summary from the Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake" (March 31, 2021)  
<https://www.mlit.go.jp/toshi/content/001397377.pdf> (browsed July 31, 2023)

When evaluating land use plans for reconstructing urban areas following the Great East Japan Earthquake, plans were formulated based on such factors as habitable areas determined by tsunami simulations, geographic conditions, regional characteristics, and existing master plans. In reconstruction projects following the Great East Japan Earthquake, policies on land use by district (reconstruction approaches) can be broadly classified into four approaches: ① site reconstruction, ② rebuilding at elevated heights, ③ development of new urban areas, and ④ rebuilding at elevated heights plus relocation to higher ground. These policies were formulated by comparing and weighing multiple approaches in each district and presenting various approaches to the regions.

Figure 5-1-9 Four Policies for Reconstruction Projects



Source: Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake, "Summary from the Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake" (March 31, 2021)  
<https://www.mlit.go.jp/toshi/content/001397377.pdf> (browsed July 31, 2023)

The types of projects implemented for the reconstruction of urban areas include a variety of approaches, such as land readjustment projects, collective relocation promotion projects for disaster prevention, and tsunami reconstruction base development projects. Following the Great East Japan Earthquake, each of these methods was used for different purposes and in diverse ways.

Figure 5-1-10 Basic Approaches to the Application of Urban Reconstruction Projects and the Features of Each Project



Source: Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake, "Summary from the Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake" (March 31, 2021)  
<https://www.mlit.go.jp/toshi/content/001397377.pdf> (browsed July 31, 2023)

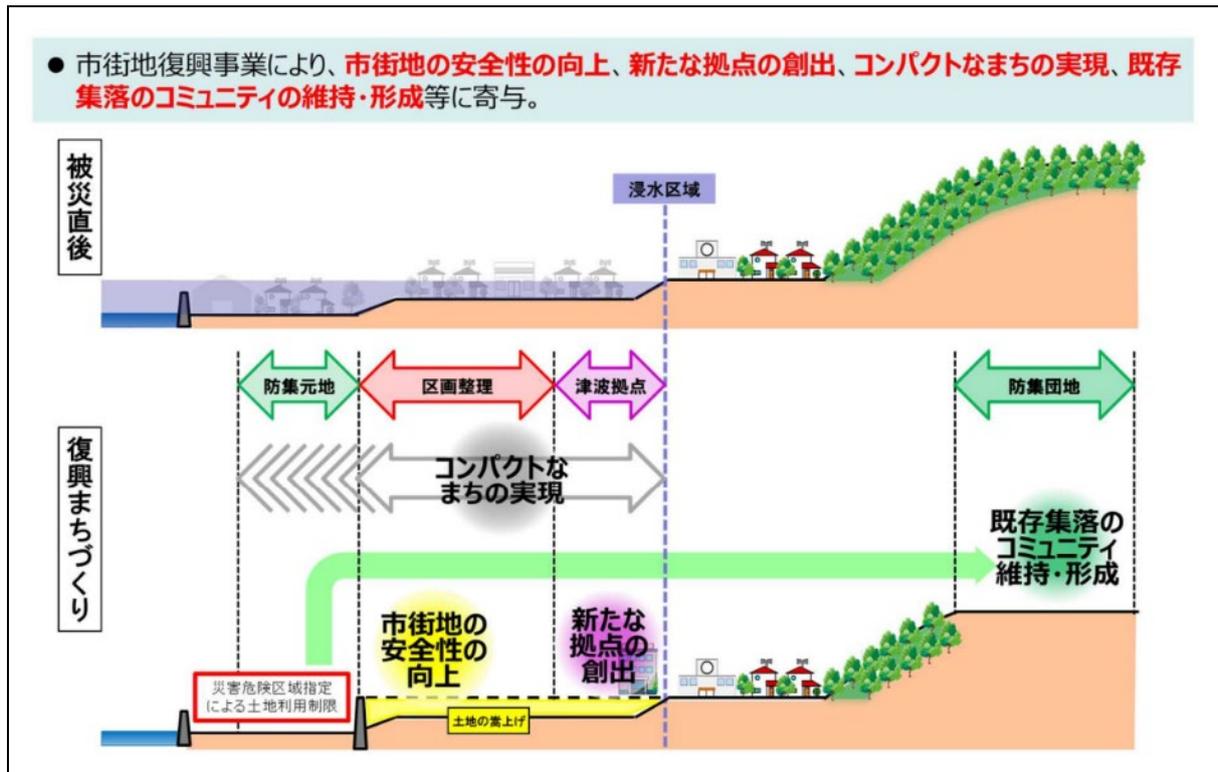
## 2. Urban Reconstruction Projects (Collective Relocation Promotion Projects for Disaster Prevention, Land Readjustment Projects, and Tsunami Reconstruction Base Development Projects)

### (1) Overview of Urban Reconstruction Projects

While municipal governments were formulating reconstruction and community development plans, the Ministry of Land, Infrastructure, Transport and Tourism made the necessary system revisions to the collective relocation promotion projects for disaster prevention and the land readjustment projects. In addition, the Ministry established the new tsunami reconstruction base development project system in order to promote smooth and swift reconstruction.

As a result, the following types of projects were organized. ① In terms of relocation from disaster-affected areas, urban communities and residential lots in rural communities were relocated to higher ground under collective relocation promotion projects for disaster prevention. ② In terms of area-wide reconstruction in disaster-affected areas, land readjustment projects preserved pre-disaster property rights while also including elevation measures to redevelop areas into safer urban environments. ③ In terms of the prompt development of core facilities, swift land acquisition and development at central bases were carried out through tsunami reconstruction base development projects. Municipalities utilized these projects according to the type of urban reconstruction that each region aimed to achieve. In promoting the implementation of these projects, the City Bureau of the Ministry of Land, Infrastructure, Transport and Tourism formulated the Guidelines on the Management of Urban Development Projects in the Areas Affected by the Great East Japan Earthquake in September 2013. The aim was to utilize these projects in the reconstruction of areas affected by tsunamis and other disasters by ensuring widespread awareness of system revisions for each project, presenting the national government's stance on management, and facilitating smooth and swift project implementation to support the fastest possible reconstruction of disaster-affected areas.

Figure 5-1-11 Roles of Urban Reconstruction Projects in the Revitalization of Towns



Source: Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake, "Summary from the Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake" (March 31, 2021)  
<https://www.mlit.go.jp/toshi/content/001397377.pdf> (browsed July 31, 2023)

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Figure 5-1-12 Progress of Urban Reconstruction Projects

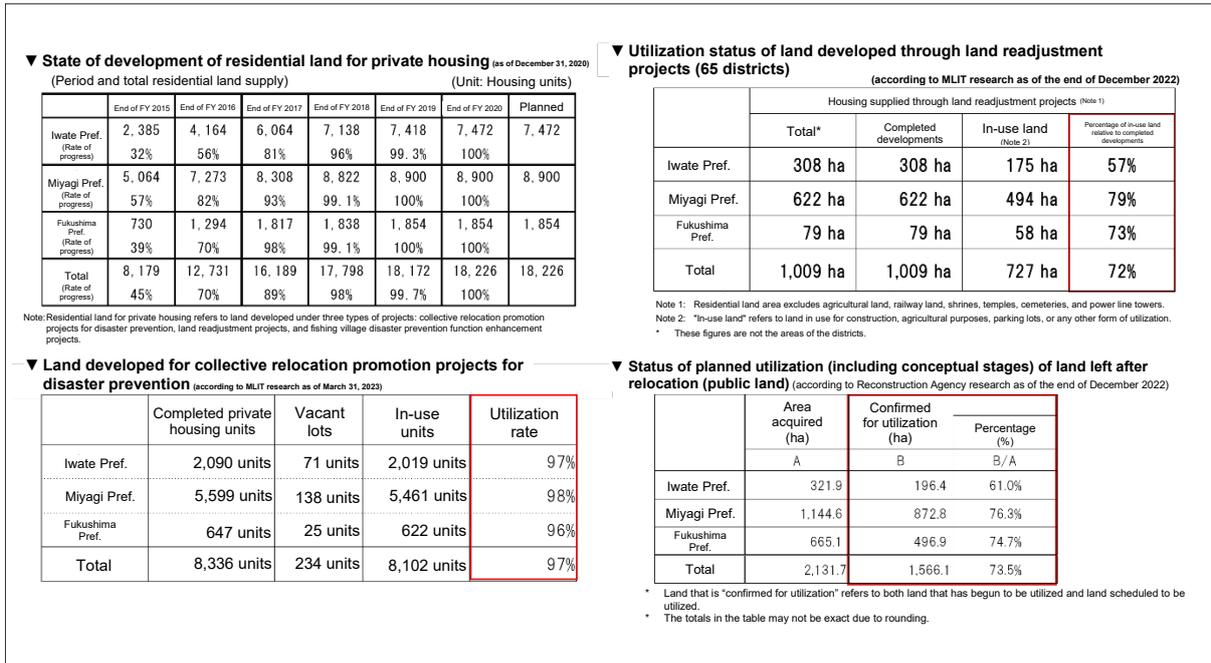
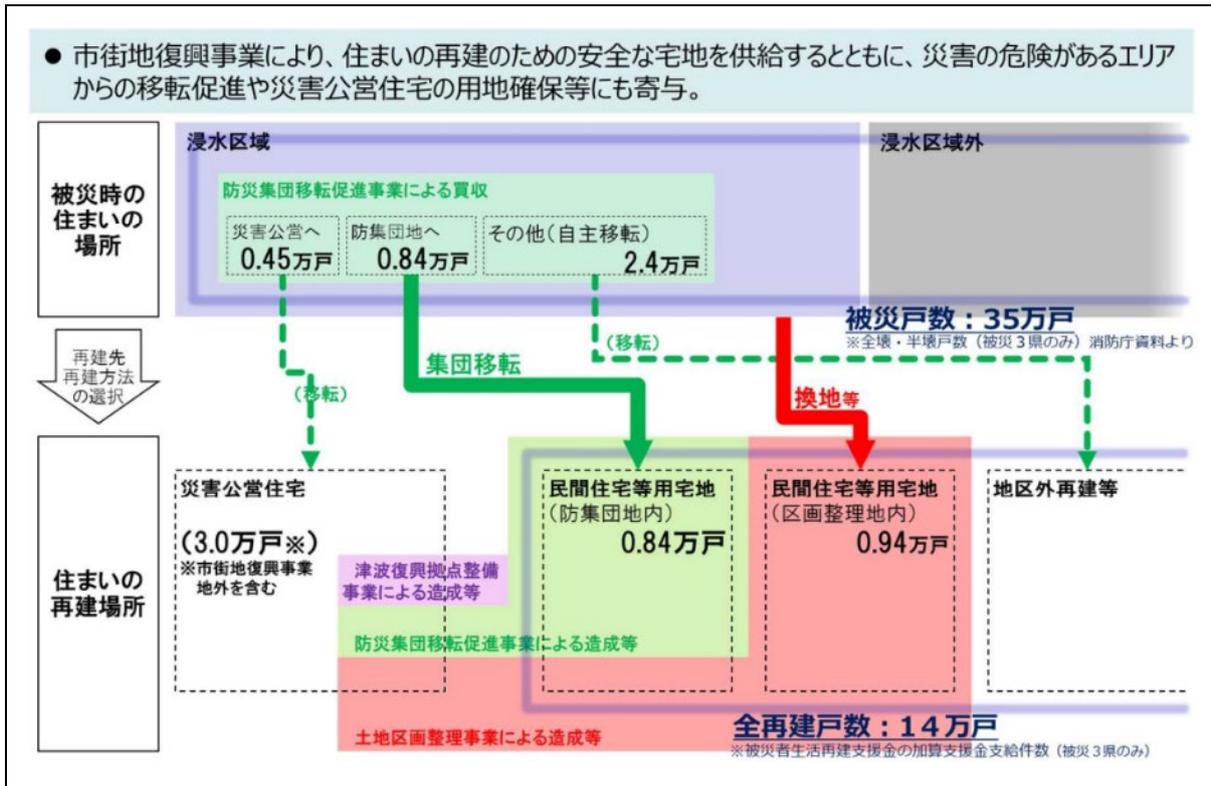


Figure 5-1-13 Roles of Urban Reconstruction Projects in Rebuilding Housing



Source: Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake, "Summary from the Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake" (March 31, 2021) <https://www.mlit.go.jp/toshi/content/001397377.pdf> (browsed July 31, 2023)

## (2) Collective Relocation Promotion Projects for Disaster Prevention

In line with the Act on Special Financial Support for Promoting Group Relocation for Disaster Mitigation (Act No. 132 of 1972), the collective relocation promotion projects for disaster prevention aim to provide partial financial assistance for project costs to the relevant local authorities to facilitate the collective relocation of residences in areas affected by disasters or disaster risk areas deemed unsuitable for residential living, thereby promoting the smooth implementation of collective relocation efforts for the purposes of disaster prevention. The purpose of these projects is to acquire the land owned by the residents and move the residents to housing complexes. These land acquisition-based, voluntary projects do not require urban planning decisions, allowing for swift project initiation and providing flexibility to modify plans.

In the reconstruction policies of the municipalities, the use of collective relocation promotion projects for disaster prevention was considered in cases where homes within a designated area of the disaster-affected region were to be collectively relocated, and those areas were to be used for non-residential purposes, or in cases where building restrictions were to be imposed, such as requiring living spaces in homes to be built above a certain safe height based on the anticipated flood depth.

In order to promote the collective relocation of residences located in zones deemed unsuitable for living in the areas affected by the Great East Japan Earthquake (the area covered by Land Restructuring Plans or Reconstruction Grant Funded Project Plans as stipulated in the Act on Special Zones for Reconstruction in Response to the Great East Japan Earthquake (Act No. 122 of 2011, hereinafter referred to as the “Act on Special Zones for Reconstruction”)), the national government provided reconstruction grants to local authorities that were implementing projects and expanding provisions as described below in the third supplementary budget for the 2011 fiscal year to reduce the burden on the regions. In addition, although the project required a scale of at least 10 units for housing complexes at the time, measures were taken for areas damaged by the Great East Japan Earthquake, such as relaxing the minimum size of housing complexes to five units or more, including the cost of land acquisition and development for public facilities related to housing complexes in subsidies, and raising the basic subsidy rate compared to non-disaster areas\*.

- \* The subsidy limit was raised.
- For land acquisition and development costs for housing complexes, additional costs were provided to cover development expenses based on regional conditions. Furthermore, subsidies were made obtainable through individual approval even when the costs exceeded the limit.
- Loan interest subsidies were increased from 4.06 million yen to 7.227 million yen.
- \* The previous per-household limit of 16.55 million yen, which applied to ordinary municipalities, was lifted.
- \* Grant Rate: 3/4 (An additional national subsidy covered 50% of the remaining costs, and the other 50% was supplemented through local allocation tax increases or similar local measures.)  
The national government covered 100% of reconstruction grants and local fiscal measures.

Support for relocation costs for those moving out of housing complexes was enabled by purchasing land and buildings through collective relocation promotion projects for disaster prevention, as well as by using projects for relocating housing in hazardous areas such as those near cliffs. As a result, relocation options became more flexible, allowing the system to better accommodate the diverse housing reconstruction preferences of disaster victims. Furthermore, land for residential use was leased at low prices to encourage people to move to housing complexes built with public funds. In addition to the development of new housing complexes as relocation destinations, unused land scattered throughout existing communities was used at the request of the municipalities in an approach known as “infill” into existing so-called “sponge” communities. This resulted in the use of existing stock to secure relocation sites, allowing for flexibility in relocation, as well as adjustments according to the local circumstances, such as the consolidation of several small communities into compact relocation sites.

Following the Great East Japan Earthquake, the treatment of land left after relocation (referring to land purchased by municipalities for the purpose of collective relocation of residences; the same definition applies hereinafter) created by these projects also attracted attention. In these projects, land purchases were primarily restricted to land designated for residential use in line with the legal goal of promoting collective relocation. As a result, in low-lying coastal areas, a complex web of property rights was left behind, with public land left after relocation (former residential lots) overlapping with surrounding privately owned land (such as farmland that was not purchased). This issue has become one of the challenges in using these lands in the future<sup>12</sup>. (The land left after relocation and the surrounding private land are hereinafter collectively referred to as “land left after relocation, etc.” The use of land, including land left after relocation, etc., will be discussed in Section 3.)

However, plots of land left after relocation are by definition designated as disaster risk areas, which imposes

<sup>12</sup> Remarks by Deputy Chair Masuda, Expert Meeting on Reflection on the Past Decade of Reconstruction Policy for the Great East Japan Earthquake (2nd meeting) (December 5, 2022); remarks by the mayor of Miyako City, Iwate Prefecture (3rd meeting) (February 27, 2023)

restrictions on use. The priority level of these areas in terms of land use is generally not high, and it should be noted that if these projects were used to purchase non-residential lots (farmland, etc.) with a view to utilizing the land left after relocation, challenges may arise, such as longer project durations and determining how to evaluate the appropriateness of increased project costs associated with the expansion of the land acquisition area. In some cases<sup>13</sup>, some of the land left after relocation was reorganized through other reconstruction projects, such as by converting them into industrial land through land readjustment projects, or by incorporating them into areas covered by agricultural land development projects, and it was crucial that these projects were carried out in a planned manner with a view to the future.

Collective relocation promotion projects for disaster prevention are quick and flexible and can accommodate the diverse needs of disaster victims. As such, it is desirable to take advantage of these benefits and use the projects in accordance with the intentions of disaster victims to rebuild their houses. For example, there were some successful cases in which the benefits of scale were considered, where integration resulted in the development of public facilities and daily amenities. When utilizing collective relocation promotion projects for disaster prevention, the scale should be determined appropriately from the standpoint of sustainability, such as by ensuring a certain population density and level of accessibility that will enable stable and continued use in the future, and in the case of small-scale communities, by integrating the projects with measures to foster livelihoods. For example, there were some cases in which the development of condensed relocation sites that integrated several small-scale communities was considered. However, in some cases, small-scale communities remained intact due to issues such as fishing rights and the balance with livelihoods, as well as the strong connections within individual communities.

In addition, it is important that land use plans, from the area level down to individual plots, fulfill actual needs regarding use, as well as the demand to create attractive regions. As such, when developing housing complexes, it is necessary to focus on use as the central concept, such as by ensuring that the size of the plots meets these needs, as well as by providing appealing designs that fit the character of the region for everything from public facilities to private buildings.

Regarding the collective relocation promotion projects for disaster prevention, approximately 37,000 homes have been relocated, and by the end of 2020, development work had been completed in all of the planned 324 districts, primarily in elevated areas (88 districts in Iwate Prefecture, 186 districts in Miyagi Prefecture, 47 districts in Fukushima Prefecture, and 3 districts in Ibaraki Prefecture).

As of March 2022, approximately 97% of the developed housing complexes were being utilized for collective relocation promotion projects for disaster prevention.

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<sup>13</sup> Iwanuma City and Watari Town in Miyagi Prefecture and other municipalities

Figure 5-1-14 Overview of Collective Relocation Promotion Projects for Disaster Prevention

制度概要

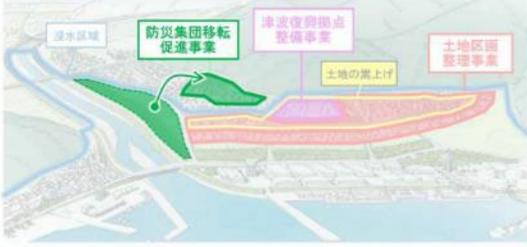
防災集団移転促進事業

● **住民の居住に適当でないと認められる区域内の住居の集団移転**を支援する事業を促進するため、市町村が行う高台等における住宅団地の整備、移転元地の買取り、引越費用の助成等を支援。

事業要件

※赤字部は東日本大震災の復興に係る制度拡充

- ・**移転促進区域の設定**  
住居の集団的移転を促進することが適当であると認められる区域  
※事業区域を建築基準法第39条の災害危険区域として建築禁止である旨を条例で定める。
- ・**住宅団地の規模**  
5戸以上（国土交通大臣が特別な事情があると認める場合を除き、移転しようとする住居の数が10戸を超える場合には、その半数以上）



支援対象

- ① 住宅団地（住宅団地に関連する公益的施設を含む）の用地取得及び造成に要する費用
- ② 移転者の住宅建設・土地購入に対する補助に要する経費（借入金の利子相当額）
- ③ 住宅団地に係る道路、飲用水供給施設、集会所等の公共施設の整備に要する費用
- ④ 移転促進区域内の農地及び宅地の買取に要する費用
- ⑤ 移転者の住居の移転に関連して必要と認められる作業所等の整備に要する費用
- ⑥ 移転者の住居の移転に対する補助に要する経費
- ⑦ **事業計画等の策定費**



Source: City Bureau, Ministry of Land, Infrastructure, Transport and Tourism, “Guidelines on the Management of Urban Development Projects in the Areas Affected by the Great East Japan Earthquake” (September 2013) <https://www.mlit.go.jp/common/001014480.pdf> (browsed July 31, 2023)

Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake, “Summary from the Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake” (March 31, 2021) <https://www.mlit.go.jp/toshi/content/001397377.pdf> (browsed July 31, 2023)

Ministry of Land, Infrastructure, Transport and Tourism Website, “Collective Relocation Promotion Projects for Disaster Prevention (Limited to Those in Areas Affected by the Great East Japan Earthquake)” <https://www.mlit.go.jp/common/001200016.pdf> (browsed July 31, 2023)

### (3) Land Readjustment Projects

Land readjustment projects enable the systematic and integrated development of public facilities and residential lots in order to reconstruct damaged urban areas. As such, these projects can be applied in districts where the municipal reconstruction policy is based on rebuilding on the original land, as well as in the development of urban areas designed to accommodate relocated residents. In order to secure residential lots that are safe from disaster when applying these projects, possible approaches include developing these districts in an integrated manner with the adjacent hilly areas, and if needed, raising the elevation of urban areas (building embankments) to improve disaster prevention against tsunamis.

These projects are a method to allow land to be returned to the rights holders after improving infrastructure and reorganizing residential lots while preserving existing property rights. They were also used as a key tool to reconstruct urban areas in their original locations in disaster-affected areas, with support provided through reconstruction grants.

In addition, these projects were used as a tool for various types of land exchange, such as simplifying mixed land uses in the original urban area, consolidating and reorganizing land for projects such as collective relocation promotion projects for disaster and tsunami reconstruction base development projects, and exchanging land between newly developed elevated areas and the original urban area (in a process also known as “twin district reorganization”).

Furthermore, when the necessary requirements were met in areas affected by the catastrophic tsunami, support was granted for raising the elevation of residential areas that were not covered by standard land readjustment projects. In this way, these projects were also used as a tool for creating safer urban areas. Land readjustment projects in the disaster-affected areas have contributed to the fulfillment of various needs in these areas, such as the development of residential lots to accommodate residents relocating to higher ground, the integration of towns turning into so-called “sponge” communities, the preservation of the character of the original urban areas, the creation of prosperity and industrial bases, and increasing the elevation of existing urban areas for improved safety.

In addition to land exchanges for those who wished to rebuild in the original location, the projects addressed the diverse intentions of residents regarding reconstruction by combining land acquisition projects and purchasing land for public facilities, thereby accommodating to some extent the intentions of disaster victims within the district who wished to sell their land<sup>14</sup>.

One of the characteristics of the Great East Japan Earthquake was the enormous damage caused by the tsunami and liquefaction. The third supplementary budget for the 2011 fiscal year addressed this damage by expanding not only the construction zone requirements, but also land readjustment projects for urban disaster recovery, as described below.

- ㄱ) In areas severely damaged by the tsunami, the cost of raising the elevation of urban areas to the level necessary for disaster prevention against the largest anticipated tsunami on record (hereinafter referred to as “land preparation expenses for protection against tsunami disasters”) was included in the expenses (maximum amount) covered by national funds.
- ㄴ) Expenses for the development of disaster prevention facilities and flood control facilities, which had already been included in the expenses covered by national funds (maximum amount) for urban revitalization land readjustment projects, were added to both the expenses covered by national funds (maximum amount) and expenses covered by grants<sup>15</sup>.

As a basic principle of land readjustment, land readjustment projects are fundamentally based on ownership and aim to coordinate the development of space. However, in land readjustment projects for urban disaster recovery, which aim to reconstruct urban areas into sustainable communities, it is even more important to focus on coordinating the use of space in planning and implementation. In addition to optimizing the scale of the projects, land should be consolidated and exchanged based on the intention to sell or lease after the project, with land designated for sale being grouped into larger plots. For leased areas, an area management organization should be established to create a system for shared land use, making full use of the project’s features of land exchange, consolidation, and integration. To ensure that residential land development meets new societal needs, it is desirable

<sup>14</sup> Source: Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake, “Summary from the Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake” (March 31, 2021) <https://www.mlit.go.jp/toshi/content/001397377.pdf> (browsed July 31, 2023)

<sup>15</sup> Source: City Bureau, Ministry of Land, Infrastructure, Transport and Tourism, “Guidelines on the Management of Urban Development Projects in the Areas Affected by the Great East Japan Earthquake” (September 2013) <https://www.mlit.go.jp/common/001014480.pdf> (browsed July 31, 2023)

to begin these efforts in the initial stages.

Although the average project duration was longer than that of acquisition-based projects due to land conversion procedures, these durations were reduced to about a quarter of the time required for standard land readjustment projects. This is the result of taking steps to accelerate the process, introducing special construction methods, and taking other measures. Considering the scale and difficulty of the projects, the implementation was relatively fast. In order to shorten the project duration, it is desirable to limit the land readjustment zones to the minimum necessary area during the planning phase by combining it with land acquisition projects and promoting independent reconstruction, while also minimizing the elevation area, which takes time to develop. Additionally, during the project implementation stage, it is important to make effective use of early construction initiatives conducted in disaster-affected areas (commencement approval, two-stage provisional land designation, etc.), as well as measures for handling land with unknown owners (issuing public notifications, etc.). On the other hand, it is also necessary to give due consideration to the time required for disaster victims to think about housing reconstruction, and to take the necessary time to consider how to integrate and reorganize the land with a view to future land use. In doing so, it becomes even more important to create an environment where people can be hopeful about reconstruction, as well as disseminate information, such as by establishing an advisory council and presenting a timetable.

Land readjustment projects were carried out in 65 districts (in Iwate, Miyagi, and Fukushima Prefectures). Among these districts, residential land was provided in accordance with the Residential Reconstruction Roadmap for 9,358 housing units across 50 districts (as of the end of December 2020). Support was also provided for the development of integrated workplace-residential communities and the development of industrial sites. In particular, in regions where central urban areas were affected by the disaster, new urban areas were developed while preserving the character of the towns as they were prior to the disaster. This was achieved by consolidating the towns into dense, built-up urban areas centered on stations, as well as by leveraging the benefits of preserving pre-disaster property rights.

As of December 2022, 72% of residential land and 73% of non-residential land had been utilized in land readjustment projects.

Figure 5-1-15 Overview of the Land Readjustment Project System



Source: Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake, "Summary from the Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake" (March 31, 2021) <https://www.mlit.go.jp/toshi/content/001397377.pdf> (browsed July 31, 2023)

#### (4) Tsunami Recovery Base Development Projects

In many of the areas affected by the Great East Japan Earthquake, not only houses and business facilities but also public facilities such as schools, medical facilities, and government facilities were severely damaged. Consequently, urban areas integrated with the functions of these facilities urgently needed to be provided and their functions maintained so that the areas could serve as bases for reconstruction in the entire region.

To this end, by leveraging the framework for collective urban development facilities that serve as tsunami disaster prevention bases, as defined in Article 17 of the Act on Regional Development for Tsunami Disaster Prevention, tsunami reconstruction base development projects were newly created as land acquisition-based initiatives to enhance the resilience of urban areas to tsunami damage and support the formation of urban areas that will lead reconstruction efforts in disaster-affected areas.

As prescribed in Article 2, Paragraph 15 of the Act on Regional Development for Tsunami Disaster Prevention, collective urban development facilities that serve as tsunami disaster prevention bases are collective housing facilities, designated business facilities<sup>\*1</sup> or public interest facilities<sup>\*2</sup>, and public infrastructure<sup>\*3</sup> that form urban areas to serve as bases for maintaining urban functions in zones where there is a significant risk of tsunami disaster and where it is deemed highly necessary to prevent or mitigate such disasters in the event of a tsunami. Under urban planning, these bases can be designated as urban facilities as stipulated in Article 11 of the City Planning Act (Act No. 100 of 1968).

Though both are land-acquisition based initiatives, collective relocation promotion projects for disaster prevention were focused on the relocation and development of housing. By contrast, these tsunami reconstruction base development projects aimed to develop not only housing lots but also public interest facilities, business facilities, and other lots, and furthermore, they provided support for land raising efforts. As such, the project was utilized as a tool for the speedy development of urban areas, which make up to core of reconstruction efforts.

Through reconstruction grants, tsunami reconstruction base development projects provided support for urgent efforts to develop urban areas (limited to areas that have been designated in city planning as “collective urban development facilities that serve as tsunami disaster prevention bases” under the Act on Regional Development for Tsunami Disaster Prevention; hereinafter referred to as “tsunami reconstruction bases”) that would serve as bases for reconstruction in areas damaged by the tsunami caused by the Great East Japan Earthquake.

- \*1: The term “designated business facilities” refers to offices, places of business, and other business facilities that contribute to the promotion of core industries in tsunami-affected areas, the creation of employment opportunities in regions within the affected zones, and the formation of well-developed urban areas, but do not fall under the category of public interest facilities.
- \*2: The term “public interest facilities” refers to educational facilities, medical facilities, government facilities, retail facilities, or any other facilities that are necessary for the common welfare or convenience of residents.
- \*3: “Public infrastructure” refers to facilities and infrastructure used for public purposes, such as roads and parks.

In districts expected to take a leading role in reconstruction plans, where the location, scale, and other aspects of facilities have been decided, these areas can be designated under urban planning, making them eligible for tsunami reconstruction base development projects. In addition, when implemented as urban planning projects, the initiatives were granted the right of expropriation, enabling the acquisition of land with special tax exemptions on capital gains (such as a special income tax deduction of 50 million yen). Based on these features, various approaches were adopted according to the circumstances of each disaster-affected municipality, including localized base development through independent projects, integrated urban development through the consolidation and exchange of project land under land readjustment projects, and integrated development with housing complexes developed under collective relocation promotion projects for disaster prevention<sup>16</sup>.

<sup>16</sup> Source: Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake, “Summary from the Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake” (March 31, 2021) <https://www.mlit.go.jp/toshi/content/001397377.pdf> (browsed July 31, 2023)  
City Bureau, Ministry of Land, Infrastructure, Transport and Tourism, “Guidelines on the Management of Urban Development Projects in the Areas Affected by the Great East Japan Earthquake” (September 2013) <https://www.mlit.go.jp/common/001014480.pdf> (browsed July 31, 2023)  
The Reconstruction Agency, “Progress in Full Recovery and Reconstruction of Public Infrastructure (as of March 31, 2021)” [https://www.reconstruction.go.jp/topics/main-cat1/sub-cat1-2/210622\\_FukkoShihyo.pdf](https://www.reconstruction.go.jp/topics/main-cat1/sub-cat1-2/210622_FukkoShihyo.pdf) (browsed July 31, 2023)

Figure 5-1-16 Collective Urban Development Facilities that Serve as Tsunami Disaster Prevention Bases

津波が発生した場合においても都市機能を維持するための拠点となる市街地を整備するため、住宅・業務・公益等の各種施設を一体的に整備するための都市計画を決定できることとする(全面買収方式で整備することを可能とする)

**業務系**



**住宅・公益系**



**【整備手法の例】**

- 公共団体等は全体の用地の取得・造成、道路及び防災センター等の公共施設や産業団地を整備し、民間が賃借する
- 公共団体等は全体の用地の取得・造成、道路及び行政施設等の公共施設を整備し、民間が借地又は譲渡を受ける

**予算概要**

- 内容：安全な拠点市街地を整備するために必要な費用(拠点市街地を整備するにあたり必要となる計画作成費等の支援、公共施設等整備費、用地取得造成費) ※上物の整備については、既存制度がある場合は当該制度で対応
- 対象：被災地限定

**税制概要**

- 内容：新たな都市施設に関する収用代替資産の取得に係る5,000万円控除等(所得税・法人税)

Source: Ministry of Land, Infrastructure, Transport and Tourism, “Act on Regional Development for Tsunami Disaster Prevention” (March 2014)  
<https://www.mlit.go.jp/common/001040613.pdf> (browsed July 31, 2023)

Of the tsunami reconstruction bases, the only eligible municipalities are ones that meet one of the following criteria established within the zones covered by the Reconstruction Grant Funded Project Plans prescribed in Article 77 of the Act on Special Zones for Reconstruction.

- イ) The area damaged by inundation is approximately 20 ha or more, and the number of buildings damaged by inundation is approximately 1,000 or more.
- ロ) The Minister of Land, Infrastructure, Transport and Tourism deems that the scale of the disaster is equivalent to the criteria described in イ).

In addition, the number of tsunami reconstruction bases eligible for support under the tsunami reconstruction base development project was generally limited to two districts per municipality, and the maximum area of government-funded support was limited to 20 ha per district. It has been pointed out that such restrictions have prevented some municipalities from implementing the development enabled by these projects. However, there are no restrictions on the area or the number of districts in urban planning decisions regarding tsunami reconstruction bases.

Tsunami reconstruction base development projects were implemented in 24 project districts (10 districts in Iwate Prefecture, 12 districts in Miyagi Prefecture, and 2 districts in Fukushima Prefecture), and as of the end of March 2021, development had been completed in all districts.

Figure 5-1-17 Overview of the Tsunami Recovery Base Development Project System



Source: Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake, “Summary from the Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake” (March 31, 2021)  
<https://www.mlit.go.jp/toshi/content/001397377.pdf> (browsed July 31, 2023)

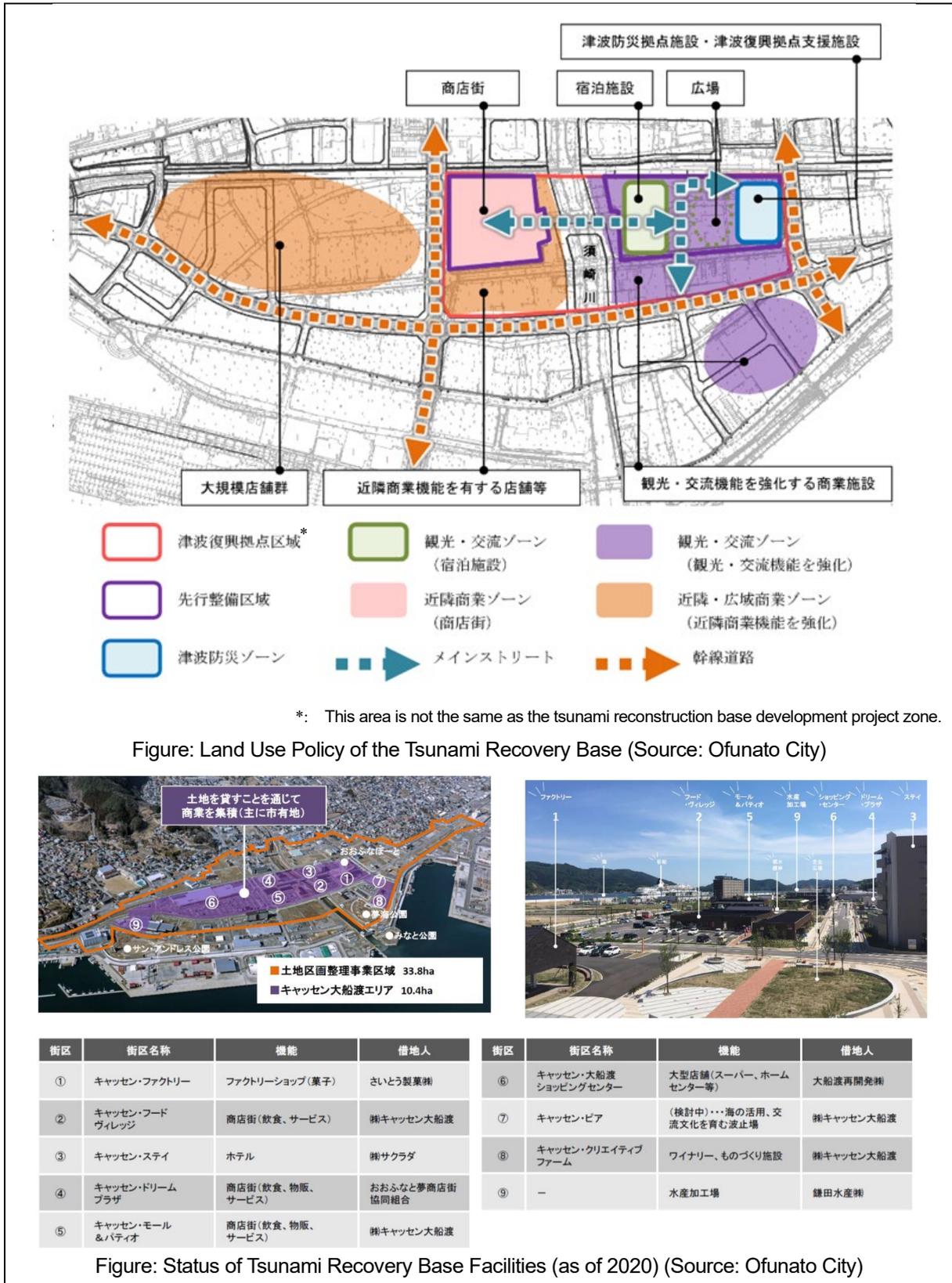
## ○ Case Study of a Collective Relocation Promotion Project for Disaster Prevention

Case Study	Building a consensus on consolidated relocation and reflecting the opinions of residents in development plans by holding a workshop
Location	Tamauranishi District, Iwanuma City, Miyagi Prefecture
Member Organizations	Iwanuma City, Tamauranishi District Urban Development Planning Committee, the University of Tokyo
<p>Activity Overview:</p> <p>In Iwanuma City's Basic Guidelines for Reconstruction following the earthquake, which were published on April 25, 2011, the municipality declared its goal of creating a compact city while prioritizing the revitalization of the local community. On November 2 of the same year, Tamauranishi District was selected as a destination for collective relocation by the Committee of Representatives from Six Districts, which was formed by representatives from coastal districts that were severely damaged by the earthquake. On June 11, 2012, the Tamauranishi District Urban Development Planning Committee was established to plan the urban development of the collective relocation district, and in August of the same year, construction of the collective relocation site began.</p> <p>After the collective relocation destination was selected, the Tamaura District Reconstruction Urban Development Workshop was held from November 2011 to January 2012 as a collaborative effort between the city and the University of Tokyo. In the interests of ensuring a safe and secure local environment, the reconstruction of living places, and the preservation of the history and culture nurtured in the region, thoughts on regional issues were exchanged, and concepts and future visions of urban reconstruction for the entire district were discussed. Workshop participants were primarily disaster victims from inside and outside the city, who exchanged opinions and compiled a plan for the reconstruction of the city, which included the creation of a model built to a 1:200 scale.</p> <p>Then, prior to the commencement of development work, the aforementioned Urban Development Planning Committee was established, and from June 2012 to November 2013, a total of 28 comprehensive studies were conducted on the urban development of the relocation site, including the urban development policy and land use plan. This was a joint effort by academic experts, representatives of the six disaster-affected districts, and representatives of residents of surrounding districts which were the relocation sites.</p>	
<p>Utilized Programs:</p> <ul style="list-style-type: none"> <li>• Collective relocation promotion project for disaster prevention</li> <li>• Special reconstruction zone system stipulated in the Act on Special Zones for Reconstruction in Response to the Great East Japan Earthquake</li> </ul>	
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>整備された緑道</p> </div> <div style="text-align: center;">  <p>商業拠点の様子</p> </div> <div style="text-align: center;">  <p>公園に隣接する集会所での団欒の様子</p> </div> </div> <div style="text-align: right; margin-top: 20px;"> <p>玉浦西地区 ランドスケープ基本計画図 (出典：宮城県岩沼市)</p> </div>	

Source: Reconstruction Agency, "Great East Japan Earthquake: Lessons Learned & Know-How Gained" (March 2021)  
<https://www.reconstruction.go.jp/311kyoukun/index.html#gsc.tab=0> (browsed July 31, 2023)

○ Case Study of a Land Readjustment Project and Tsunami Recovery Base Development Project

Case Study	Creating sustainable town appeal through area management and implementing phased development for early reopening of business
Location	Ofunato Station Area District, Ofunato City, Iwate Prefecture
Member Organizations	Ofunato City, Kyassen Co., Ltd., Ofunato Chamber of Commerce and Industry, Urban Renaissance Agency, Daiwa Lease Co., Ltd. (Area Management Partner)
<p>Activity Overview:</p> <p>In Ofunato City, with the aim of revitalizing the area around Ofunato Station, the central commercial and business base of the Kesen region, land consolidation and infrastructure development were carried out under a land readjustment project, which was implemented alongside a tsunami reconstruction base development project, through which key urban areas were urgently developed for reconstruction through land acquisition.</p> <p>Area management methods were used to create a system in which the private sector took the lead in value creation and the maintenance of the city, with a focus on transforming integrated commercial-residential shopping areas into safer, separated residential-commercial urban developments, and forming bases that bring together various sustainable and appealing functions, such as commerce, business, tourism, exchange, and disaster prevention activities. The framework was established with the cooperation of private companies and the recruitment of private sector talent.</p> <p>In addition, to allow businesses to reopen as soon as possible, a preliminary development area was established, and facilities in the central area were gradually developed while coordinating with housing development through land readjustment.</p>	
<p>Utilized Programs:</p> <ul style="list-style-type: none"> <li>• Tsunami reconstruction base development project</li> <li>• Land Readjustment Projects</li> </ul>	
<p>Figure: Overview Map of the Ofunato Station Area District (Area managed by Kyassen Co., Ltd., an urban renewal promotion corporation)</p> <p>(Source: Ofunato City)</p>	



Source: Reconstruction Agency, "Great East Japan Earthquake: Lessons Learned & Know-How Gained" (March 2021)  
<https://www.reconstruction.go.jp/31/1kyoukun/index.html#gsc.tab=0> (browsed July 31, 2023)

### 3. Issues in Project Implementation and Measures to Address Them

#### (1) Issues and Measures

In implementing urban area reconstruction projects, a wide range of accelerated measures were taken to help disaster victims rebuild their livelihoods as soon as possible. These measures, which covered the entire construction process, ranged from land acquisition, such as shortening the duration of land acquisition procedures, to streamlining design and construction contracts. Compared to other land readjustment projects carried out nationwide during the same period, the implementation period for these projects was shortened to about a quarter of the usual time. While the completion of the project within the reconstruction and revitalization period contributed to the swift rebuilding of homes, several challenges and learning experiences emerged during the process.

##### 1) Importance of Preparedness for Promoting Swift Reconstruction

The Great East Japan Earthquake accelerated societal trends, bringing about immediate long-term changes such as population decline and depopulation. In the event of an actual disaster, there was an urgent need for the swift reconstruction of urban areas.

It is difficult to implement measures in times of disaster unless they have been prepared in advance. Thus, in anticipation of future urban reconstruction efforts, it is crucial to earnestly consider the future vision for the town during times of non-emergency by engaging in preemptive preparation efforts for prompt reconstruction, as well as to collect and analyze basic information in order to, for example, understand the data necessary for reconstruction before a major disaster occurs<sup>17</sup>. In addition, it is important to think about post-disaster urban reconstruction during times of non-emergency and make use of location optimization plans and other tools to properly plan for future urban development that is sustainable. Preemptive reconstruction preparations are covered in detail in (2).

##### 2) The trade-off between swift project implementation and learning about and reflecting the intentions of residents

The intentions of the disaster victims of the Great East Japan Earthquake evolved over time both in terms of timing and content. In the immediate aftermath, this was due to uncertainties about the future and the volatility of systems that would form the conditions for reconstruction urban development plans. Later, their intentions were influenced by individual circumstances and environments, as well as by visible progress in reconstruction efforts after project implementation began. As a result, although the scale of projects was considered based on the intentions of the disaster victims, problems such as vacant plots and unused land became apparent in some districts.

Although there is a trade-off between swift project implementation and spending time to learn about and reflect the intentions of residents, it is important to provide sufficient information to residents, and in doing so, establish an appropriate project scale based on land use needs and promote sustainable urban development, all while carefully learning about the intentions of each resident in a phased and continuous manner. (On the topic of vacant lots, which will be discussed later, some say that the project durations were too long, causing disaster victims to rethink their intentions, while others believe that progress in land use was possible because time was spent exchanging opinions. In reality, some say that there is no clear correlation between the project duration and the land utilization rate.)

In the event of future disasters, plans must be formulated under the presumption that residents will rethink their intentions. In addition to considering future urban development through preemptive reconstruction preparations, efforts must be made to allow for adjustments in land use plans and projects in response to changes in the intentions of residents. This includes understanding past earthquake cases, conducting resident intention surveys during times of non-emergency to predict shifts in intentions, and ensuring that urban reconstruction plans and project plans can adapt to those changes.

As the details of the plan become more concrete and the start of construction approaches, it becomes increasingly difficult to ascertain the intentions of residents and change the content of the plan. This calls for a time-sensitive approach in which, for example, the scope of preliminary development is defined in advance with time constraints in mind, enabling early reconstruction for residents who are set in their intention to rebuild, all while staying informed

<sup>17</sup> Remarks by Chairperson Akiike, Committee Member Onishi, and Deputy Chair Masuda, Expert Meeting on Reflection on the Past Decade of Reconstruction Policy for the Great East Japan Earthquake (3rd meeting) (February 27, 2023)

on the intentions of residents who need time to make a decision<sup>18</sup>.

### 3) Promotion of post-project land utilization

As described earlier, although the scale of projects was considered based on the intentions of the disaster victims, some districts were left with vacant plots and unused land as a result.

On the topic of developed land, it is necessary to recognize the issue of vacant plots, in light of the fact that towns cannot be built in a short time, and that vacant lots, particularly those around central urban areas, can be seen as valuable potential sites for future urban development. With this in mind, it is important to support initiatives tailored to individual regions, such as visualizing data on land usage, establishing land banks, and introducing advanced practices like business entry systems.

With regard to land left after relocation, a number of challenges exist. The disaster risk area status imposes limits on use, and in addition, it is difficult to utilize the land as is due to the mixture of purchased public land and non-purchased private land. Moreover, there is no prospect of utilization due to the decrease in land use needs due to the relocation of homes to higher ground and the declining population.

In order to revitalize these towns in the future, land developed for housing reconstruction and land left over following the implementation of collective relocation promotion projects for disaster prevention must be used effectively, and to this end, land utilization initiatives are crucial.

To this end, the Reconstruction Agency compiled the “Collection of Case Studies on the Use of Relocation Areas under Collective Relocation Promotion Projects for Disaster Prevention” in June 2017. This compilation summarizes case studies of urban reconstruction and regional development implemented through the effective use of land left after relocation and surrounding areas, thus serving as a reference for local governments of disaster-affected areas that intend to promote the use of land left after relocation.

In May 2019, the “Guidebooks on the Promotion of Land Utilization in Disaster-Stricken Urban Areas” were prepared as a series of three volumes: “Elevated Land Development,” “Low-Lying Areas,” and “Presumed Users.” Based on the examples of the previous efforts nationwide and in the disaster-affected areas, as well as the results of surveys conducted by the Reconstruction Agency, these guidebooks summarize methods for building systems of land utilization. They explain the procedures by dividing the basic tasks that need to be completed into stages. Revised versions with updated case studies were published in June 2020 and November 2021.

In addition, land utilization model surveys were conducted at a total of 12 locations between the 2018 and 2020 fiscal years. The aim was to study public-private partnership strategies to revitalize developed land, generate land demand, promote lowland utilization, and create simple management approaches, while compiling the results and disseminating the know-how more widely. In addition, in the 2021 fiscal year, a one-stop consultation desk for land utilization was established. In addition, the Hands-on One-Stop Land Utilization Promotion Project has been underway, in which the Reconstruction Agency staff members visit the actual sites and provide detailed dialogue and support. In the 2021 fiscal year, the Reconstruction Agency conducted surveys of three developed sites and six sites of land left after relocation in three disaster-affected prefectures. Through approximately 70 dialogues with disaster-affected municipalities, support for the creation of materials (such as through visualization), the introduction of leading examples, collaboration with organizations engaged in leading initiatives, and support for implementing social experiments, efforts have been made to secure players responsible for urban development, establish public-private collaboration systems, formulate land use policies, and establish sustainable frameworks.

<sup>18</sup> Source: Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake, “Summary from the Committee for the Verification of Urban Area Reconstruction Projects Following the Tsunami Damage of the Great East Japan Earthquake” (March 31, 2021) <https://www.mlit.go.jp/toshi/content/001397377.pdf> (browsed July 31, 2023)

Figure 5-1-18 Supporting Municipalities Through the Hands-On One-Stop Land Utilization Promotion Project

Objectives

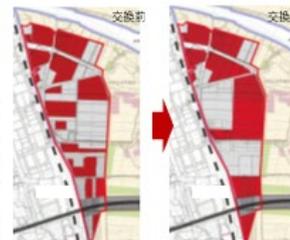
- In revitalizing towns, taking the land developed for housing reconstruction, as well as the land left over following the implementation of collective relocation promotion projects for disaster prevention, and making effective use of it for the purpose of urban reconstruction is a challenge.
- The various bottlenecks encountered in promoting land utilization from the planning stage to the land utilization stage and the individual issues of the region are dealt with thoroughly through hands-on support, and efforts are made to realize independent and sustainable efforts by disaster-stricken municipalities.
- To address specific issues of land utilization, the municipalities and the Reconstruction Agency jointly conduct focused and prompt studies for areas selected through public solicitation for the use of Reconstruction Agency survey funds.
- This enables experts to be dispatched, and practical studies such as social experiments to be conducted.

<Examples of Expected Initiatives>

- Formulation of land use plans, examination of management measures, and implementation of trial measures through public-private partnerships including government, local residents, and urban development organizations (plan formulation)
- Establishing matching support systems such as land banks, etc. (preparation for utilization)
- Promoting efficient land consolidation (preparation for utilization)
- Marketing through social experiments and promoting land demand (matching and attracting)
- Examining methods to attract population and enterprises, such as incentives and information dissemination to relocating residents and enterprises (matching and attracting)
- Examining efficient maintenance and management methods (land maintenance)



Holding discussions on the effective use of land through public-private platforms



Consolidation of land left after relocation



Marketing through social experiments

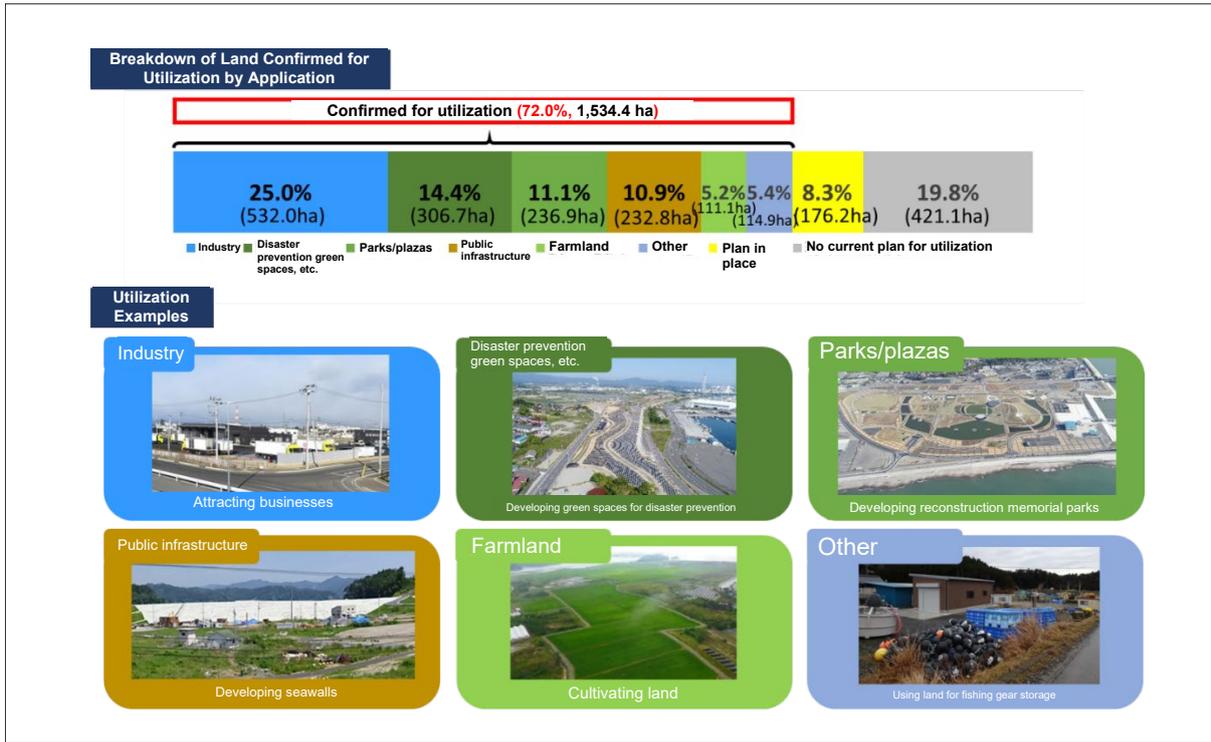


Conducting workshops to promote greening in land left after relocation

Source: Reconstruction Agency, “Supporting Municipalities Through the Hands-On One-Stop Land Utilization Promotion Project”

Land left after relocation was generated as a result of collective relocation projects for disaster prevention. However, considering the purpose of the projects, which was the collective relocation of homes, this land was never expected to be reused within these projects. Although land was also left behind as a result of relocation following disasters that preceded the Great East Japan Earthquake, it was often reused for parks and other facilities, and the problem of utilization generally did not materialize. However, the Great East Japan Earthquake saw widespread devastation caused by tsunamis over a vast region, and large-scale collective relocation promotion projects for disaster prevention resulted in over 2,000 ha of land left after relocation. While this land came to be used for public purposes such as disaster prevention forests and parks in coastal areas, or incorporated into corporate land or large-scale agricultural land, there is still a considerable number of lots that have not been incorporated into these projects due to poor demand. Plots of land left after relocation are by definition a part of disaster risk areas, and generally speaking, their utilization is not necessarily recommended. However, in disaster-affected areas, many municipalities are now exploring the utilization of this land because of the attachment that residents have to the former sites of their communities, and because municipalities are concerned about having to continuously maintain and manage these plots as public land.

Figure 5-1-19 Utilization of Land Left After Relocation

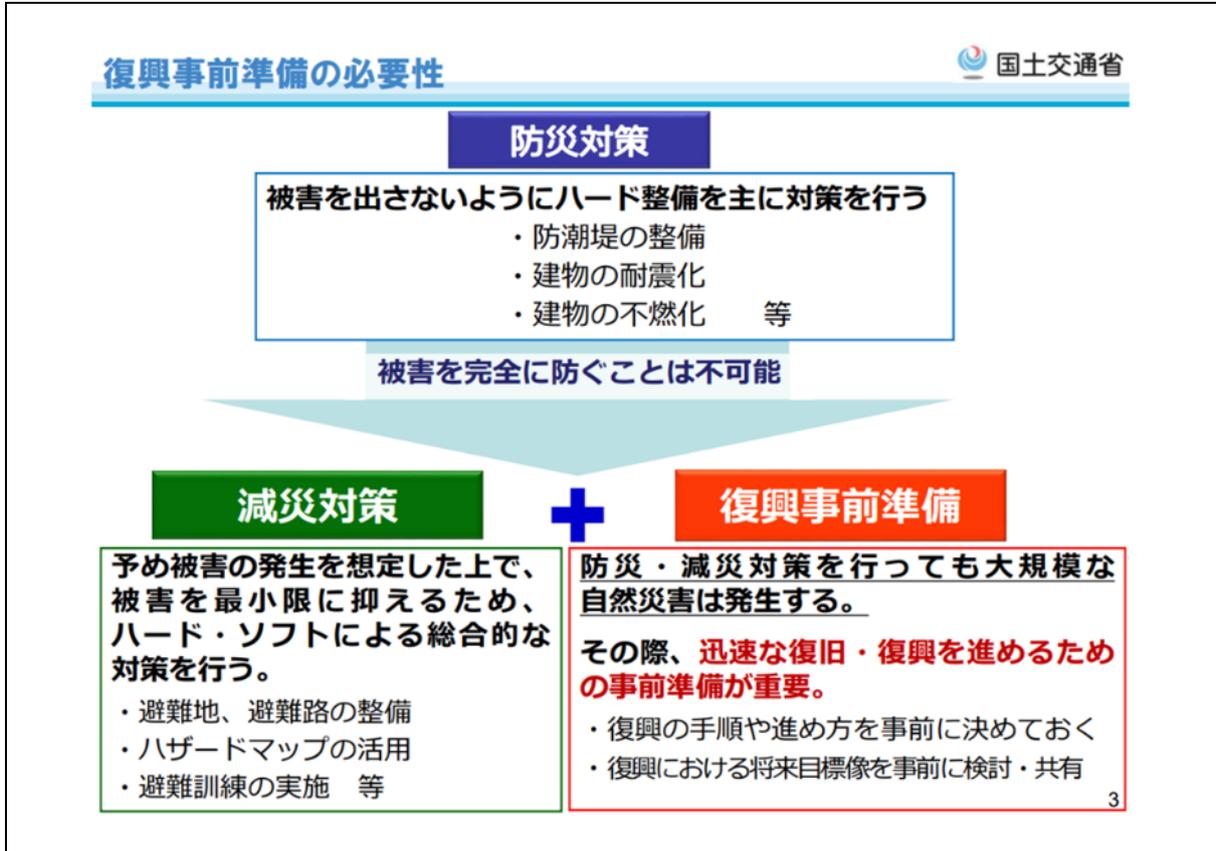


Source: Reconstruction Agency, "Utilization of the Land Left After Relocation (as of December 2021)"

## (2) Preemptive Reconstruction Preparations

Efforts are now underway to make preemptive preparations for reconstruction, which was one of the lessons learned from the urban reconstruction process. Preemptive reconstruction preparations refer to efforts to proactively prepare non-physical measures during times of non-emergency to ensure a swift recovery in the event of a disaster, no matter the extent of the damage.

Figure 5-1-20 The Necessity of Preemptive Reconstruction Preparations



Source: Ministry of Land, Infrastructure, Transport and Tourism, “Preemptive Preparations for Urban Reconstruction” (July 2021) <https://www.mlit.go.jp/toshi/content/001445217.pdf> (browsed July 31, 2023)

Though early urban reconstruction is essential after a disaster, during large-scale events such as the Great East Japan Earthquake, the widespread and severe damage meant that municipalities faced an overwhelming amount of administrative work immediately after the disaster, which far exceeded normal levels and demanded significant time and labor. In addition, some municipalities lacked staff who were familiar with the urban reconstruction project systems, and they were forced to proceed with the formulation of plans for each disaster-affected area without sufficiently organizing the schemes, adoption requirements, and merits and demerits of each project. In some cases, they were unable to give careful explanations, leaving disaster victims feeling anxious. Challenges and learning experiences from urban reconstruction include the lack of basic data for planning, a shortage of personnel skilled in handling urban reconstruction after large-scale disasters, and the need to establish reconstruction systems early on.

Prior to the Great East Japan Earthquake, disaster prevention measures such as building structures to be quake-resistant and improving seawalls were implemented based on the approach of preventing damage in the event of an earthquake or other disaster. Following the Great East Japan Earthquake, these disaster prevention measures required large budgets and significant amounts of time, making it unrealistic to rely solely on this approach. Instead, municipalities have integrated the concept of disaster mitigation, which assumes a certain level of damage while focusing on minimizing it within time and budget constraints, and comprehensive disaster prevention and mitigation measures have been implemented as part of preemptive efforts. Meanwhile, in the event of an actual disaster, there is an urgent need for the swift reconstruction of urban areas. To ensure that urban reconstruction is carried out swiftly and effectively, it is crucial not only to implement disaster prevention and mitigation measures, but also to promote preemptive reconstruction preparations, which involve planning and preparing for post-disaster urban reconstruction ahead of time.

The effects of preemptive reconstruction preparations include the following.

① Reducing the burden on employees following a disaster

After a disaster, the required actions are not limited to emergency recovery measures, relief activities, issuance of disaster certificates, or collection and organization of information on disaster victims. After these actions are taken, there is a continuous workload of clerical work far beyond normal levels until projects are completed, starting with the formulation of reconstruction plans and urban development plans. In the aftermath of the Great East Japan Earthquake, many municipalities were busy with emergency recovery efforts and were unable to devote time to learning about the intentions of residents or examining reconstruction plans. The burden on post-disaster personnel can be reduced by working on preparations that can be made in times of non-emergency, such as organizing and analyzing basic data, and examining reconstruction systems and procedures in advance.

② Human resources development for urban reconstruction

The shortage of human resources has been identified as an issue and a learning experience from past disasters, and the nurturing of personnel who can respond to urban reconstruction from large-scale disasters has been discussed as a solution. In times of non-emergency, providing personnel with image training on urban reconstruction and training to improve the practical skills needed for urban reconstruction enhances their knowledge and abilities related to urban reconstruction and interacting with residents. In addition, the implementation of various urban reconstruction training programs that also involve residents is effective in raising awareness regarding urban reconstruction for not only the personnel but also the residents.

③ Improving reconstruction frameworks to shorten reconstruction periods

The challenges and lessons of past disasters point to the need for establishing a recovery framework for swift urban reconstruction within the Agency, examining the approaches and procedures used in urban reconstruction efforts after disasters in the past, and clearly defining the responsible parties. By developing reconstruction frameworks in times of non-emergency and determining the initiatives, procedures, and processes (timing of implementation) for urban reconstruction, it is possible to start urban reconstruction efforts at the same time as emergency recovery measures after a disaster. Preparing and analyzing basic data ahead of time allows for the immediate advancement of reconstruction plans and urban reconstruction plans following a disaster. As a result, reconstruction can be achieved more quickly following a disaster.

④ Improving reconstruction efforts

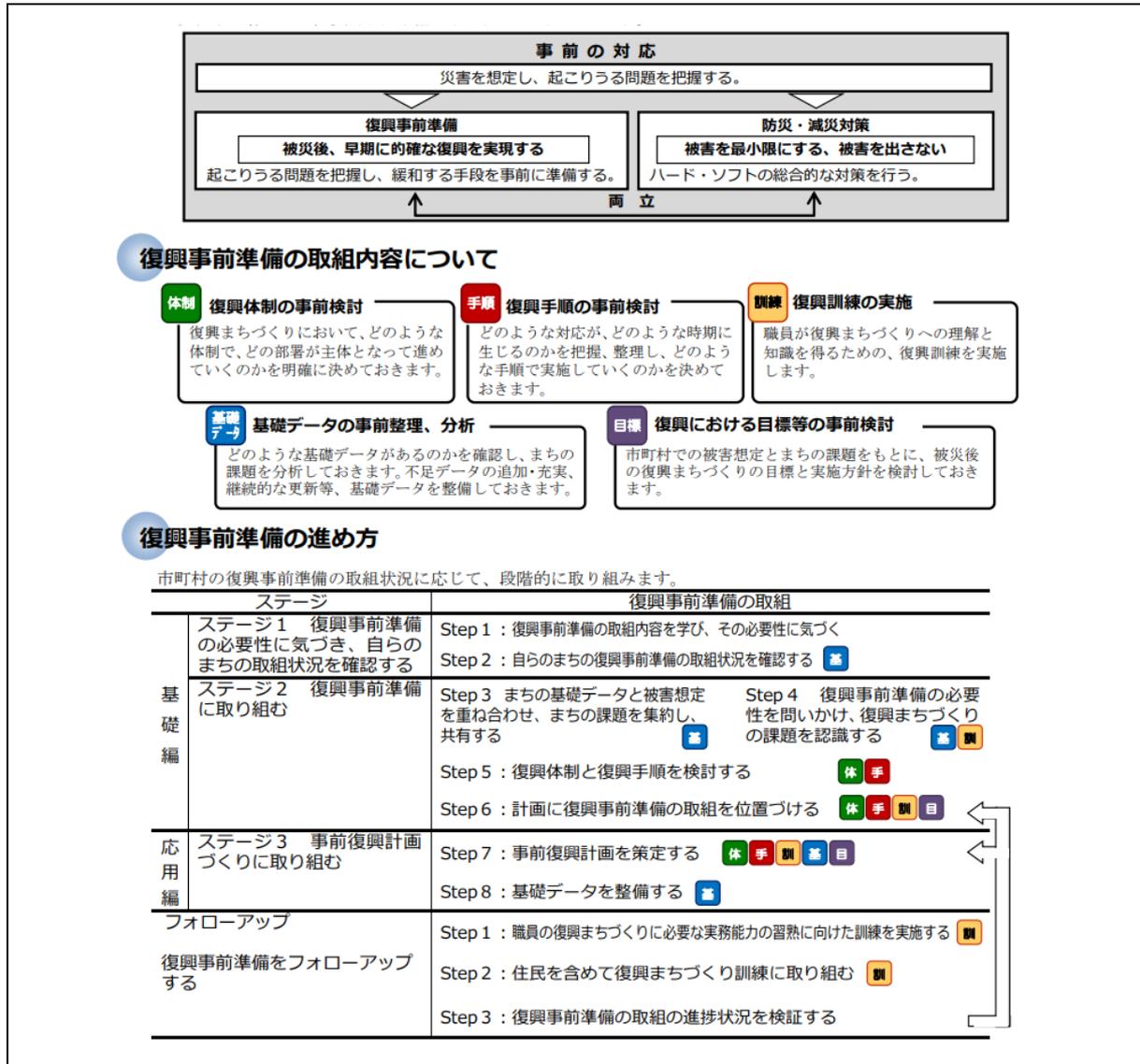
The challenges and lessons of past disasters point to the importance of preemptive studies of urban reconstruction based on the characteristics of the urban area and damage estimates. Large-scale disasters bring to the fore the challenges that the region had before the disaster, such as population decline, the exodus of young people, the aging of the population, and the decline of industry. By analyzing the issues of post-disaster reconstruction based on basic data and damage estimates in times of non-emergency, and by examining implementation policies, such as making the city more resilient to disaster than before the disaster and promoting consolidation, it will be possible to quickly determine objectives and urban reconstruction policies after a disaster occurs. This will enable urban reconstruction to proceed smoothly while taking into account the intentions of residents and the characteristics of the region, thereby realizing improved reconstruction (“build back better”).

Since the Great East Japan Earthquake, the Ministry of Land, Infrastructure, Transport and Tourism has promoted initiatives related to preemptive reconstruction preparations, such as the formulation of guidelines for urban reconstruction in the wake of tsunami damage and the inclusion of preemptive reconstruction preparations in basic disaster prevention plans. However, findings from the 2016 Survey on the Status of Preemptive Reconstruction Preparation Efforts revealed that local authorities have not yet implemented these preparations, despite viewing them as important, with some commenting that the necessary steps are unclear and that smaller municipalities have limited awareness of its importance and have not pursued these efforts. To address these issues, the Preemptive Reconstruction Preparation Guidelines for Urban Reconstruction were established in 2018, outlining the necessary initiatives and points of consideration for municipalities to engage in early and accurate urban recovery preparations. Through efforts like these, the national government must continue to promote the preemptive reconstruction preparation efforts of local authorities nationwide. Prefectures must also support the efforts of municipalities by preparing guidelines according to the characteristics of each region.

Municipalities need to make preliminary reconstruction preparations based on issues and lessons learned from urban reconstruction following past disasters, enabling them to commence appropriate urban reconstruction efforts as soon as possible after a disaster occurs. Efforts to prepare for reconstruction need to take into account damage

estimates, the intentions of residents, regional characteristics, and other factors. It is crucial that the municipalities, as the main entities responsible for formulating recovery plans and having the best understanding of local characteristics, take the lead in these efforts. In the municipalities, preliminary reconstruction preparations need to be made based on issues and lessons learned from urban reconstruction following past disasters, enabling them to commence appropriate urban reconstruction efforts as soon as possible after a disaster occurs. In particular, it is necessary to provide appropriate information to municipalities with small populations that have not taken preemptive reconstruction preparation measures.

Figure 5-1-21 Overview of Preemptive Reconstruction Preparations



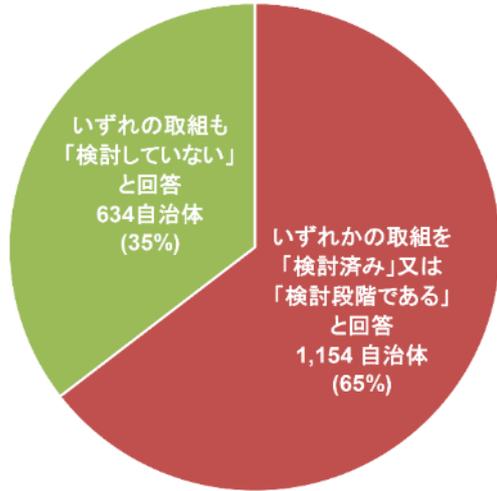
Source: City Bureau, Ministry of Land, Infrastructure, Transport and Tourism Metropolitan, "Preemptive Preparations for Urban Reconstruction by Municipalities: Are You Prepared to Begin Reconstruction Work If Disaster Strikes?" (July 2018) <https://www.mlit.go.jp/common/001246245.pdf> (browsed July 31, 2023)

Figure 5-1-22 Status of Preemptive Preparation Efforts for Urban Reconstruction

■復興事前準備取組全体の検討状況

○「復興まちづくりのための事前準備ガイドライン（平成30年7月公表）」に示す5つの取組のうち、いずれかの取組について、令和4年7月末時点で「検討済み」又は「検討段階である」と回答したのは1,154自治体(約65%)

■取組全体の検討状況



(参考) 復興まちづくりのための事前準備の取組内容

- 体制** **復興体制の事前検討**  
復興まちづくりにおいて、どのような体制で、どの部署が主体となって進めていくかを明確に決めておく。
- 手順** **復興手順の事前検討**  
どのような対応が、どのような時期に生じるかを把握、整理し、どのような手順で実施していくかを決めておく。
- 訓練** **復興訓練の実施**  
職員が復興まちづくりへの理解と知見を得るための、復興訓練を実施する。
- 基礎データ** **基礎データの事前整理、分析**  
どのような基礎データがあるのかを確認し、まちの課題を分析しておく。不足データの追加・充実、継続的な更新等、基礎データを整備しておく。
- 目標** **復興における目標等の事前検討**  
市町村での被害想定とまちの課題をもとに、被災後の復興まちづくりの目標と実施方針を検討しておく。

<調査概要>  
 ・調査時点：令和4年7月末時点  
 ・調査対象：全国の都道府県及び市区町村（1788自治体）を対象に調査し、1788自治体から回答（回答率 100%）

注：数値は、小数点以下を四捨五入

■復興事前準備の取組事例（次ページ）

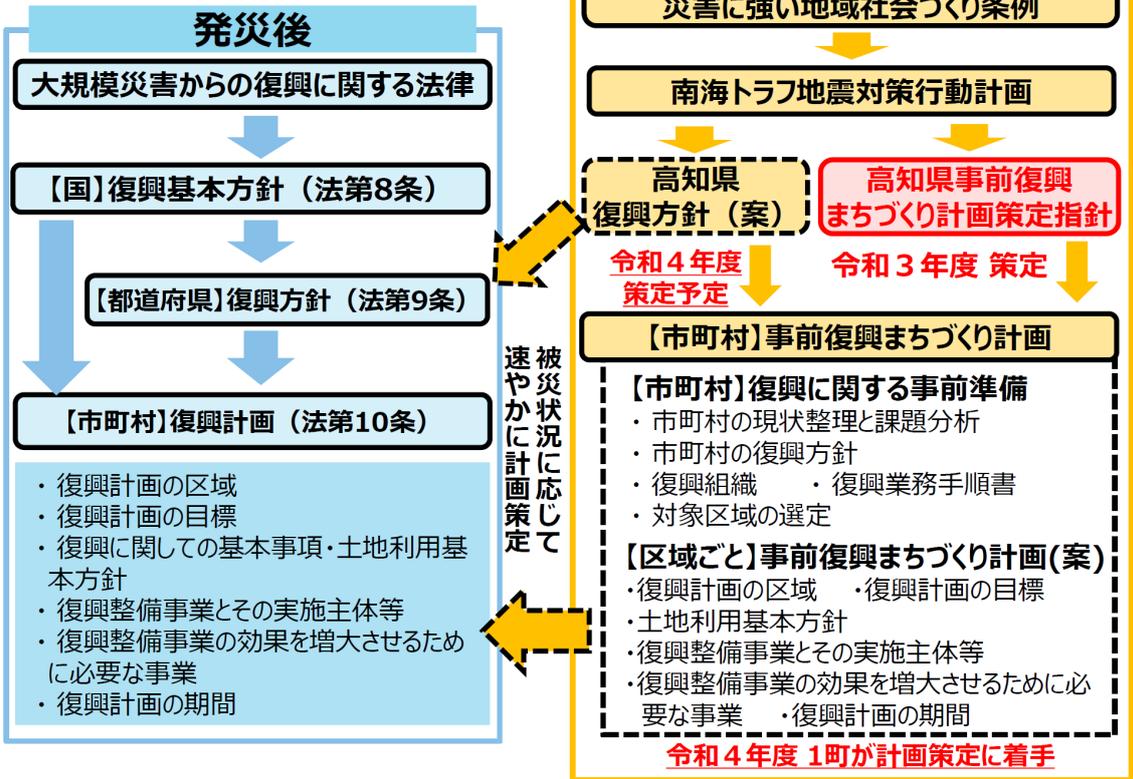
＜県が**事前復興まちづくり計画策定指針**を策定した事例＞

■ **高知県**

体制 手順 訓練 目標

- 高知県では、南海トラフ地震による被災後、住民が早期に生活を再建し、地域に住み続けることができるよう、市町村が事前に復興まちづくり計画を策定するための指針をR4.3に策定。
- 県は、指針策定後、沿岸19市町村と勉強会を開催し、R6年度末までに事前復興まちづくり計画の作成に着手することを目標としている。

■ **高知県事前復興まちづくり計画策定指針の位置づけ**



■ **指針の構成**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. 事前復興まちづくり計画を策定する必要性</li> <li>2. 高知県における事前復興まちづくりの基本理念</li> <li>3. 東日本大震災の復興から学ぶ</li> <li>4. 高知県における事前復興まちづくり計画の考え方</li> <li>5. 市町村における事前復興まちづくり計画策定の進め方</li> </ol> | <ol style="list-style-type: none"> <li>1. 命を守る</li> <li>2. 生活を再建する</li> <li>3. なりわいを再生する</li> <li>4. 歴史・文化を継承する</li> <li>5. 地域の課題等の解決につなげる</li> </ol> |
|--|---|

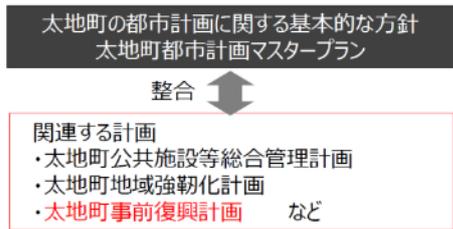
<町が**事前復興計画**を策定した事例>

■ **和歌山県太地町**



- 太地町では、R3.3に「**太地町都市計画マスタープラン**」を策定し、**復興事前準備の取組の推進を位置づける**とともに、大規模災害から早期の復興を実現するために、あらかじめ、復興まちづくりの方針等を記した「**太地町事前復興計画**」を策定。
- 計画策定後、**住民説明会を開催し、計画の概要版のリーフレットを用いて復興事前準備の必要性を周知しながら、意見交換を実施。**

■ 「**太地町都市計画マスタープラン**」と「**太地町事前復興計画**」の位置づけ



■ 「**太地町事前復興計画**」の主な記載事項

- 基本的な方針
  - 復興まちづくりの方針  
(土地利用、土地施設、市街地開発事業、防災施設配置に関する基本方針)
  - 復旧期の実施事項と事前準備事項
  - 復興まちづくりイメージ
  - 被災前に取り組んでおくべき事項
- ※ 「太地町都市計画マスタープラン」より（「太地町事前復興計画」については、概要版のみ公表されており、本体計画については、現時点では非公表

■ **計画の概要版リーフレット**

- 事前復興計画を住民に説明するための資料として概要版リーフレットを作成。
- 概要版は上空から見た手書きのパーズ図で分かりやすく、柔らかな表現ができるよう配慮。

【概要版リーフレットの表紙】



【復興まちづくりのイラスト】



【概要版リーフレットの構成】

- 目的
- 被害想定
- 事前復興の基本的な方針
  - ・ 命を守るまちづくり
  - ・ 暮らしやすさを高めるまちづくり
  - ・ 産業を守るまちづくり
- まちづくりの時間的なとらえ方
- 事前の取組
  - ・ 町役場の移転
  - ・ 高台・アクセス道路の整備
  - ・ 切土・盛土等調査設計の事前検討
  - ・ 上水道における耐津波対策の検討
  - ・ 地籍調査の推進
- 復旧・復興期の主な整備方針(案)
- 復興まちづくりのイラスト

■ **住民説明会を開催し、住民と意見交換**

- 「太地町事前復興計画」を策定後、住民説明会を開催。町内10地区に加え、全地区（2回）の計12回実施。（各1時間程度）
- 説明会においては、事前復興計画は、「たたき台」にすぎず、これから住民自身の手でつくりあげていくため、変化していく計画であることを強調

【説明会の様子】



【説明会の流れ】

- ・ 事前復興計画とは
- ・ 南海トラフで発生する地震
- ・ 過去の地震発生状況
- ・ 南海トラフ地震臨時情報
- ・ 「概要版」の説明
- ・ 地震に対する備え
- ・ 防災対策に係る各種補助
- ・ 意見交換・質問等

Source: Ministry of Land, Infrastructure, Transport and Tourism, “Status of Preemptive Preparation Efforts for Urban Reconstruction” (as of the end of July 2022)  
[https://www.mlit.go.jp/toshi/toshi\\_bosai/content/001582386.pdf](https://www.mlit.go.jp/toshi/toshi_bosai/content/001582386.pdf) (browsed July 31, 2023)