

Disaster Preventive Urban Development

UR's Support for Restoration in Recovery
after the Great East Japan Earthquake

10 October 2016

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Urban Renaissance Agency

——— 街に、ルネッサンス ———



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1. UR's profile(outline of our business)
2. Damage by tsunami caused by the Great East Japan Earthquake
3. Outline of UR Disaster Recovery Support Activities (including case examples)
4. Preparation for the future
 - ① against urban disaster in Tokyo
 - ② against the Nankai Trough Earthquake

1. UR's profile

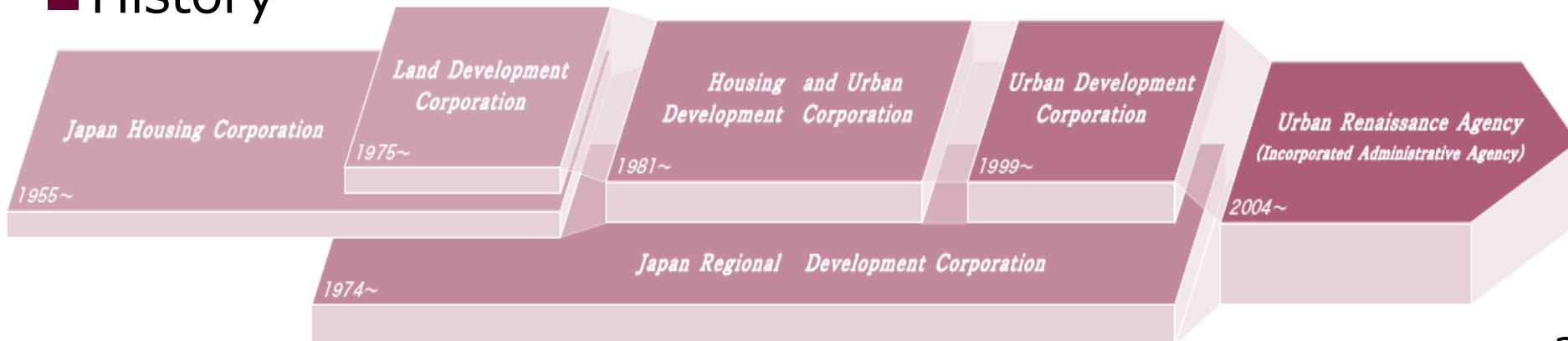
■ Overview of organization

English Name	Urban Renaissance Agency (Independent Administrative Agency)
Date of Establishment	July 1, 2004
Head office	Yokohama
Capital	1.0611 trillion yen (as of March 31, 2015)
Basis laws	Act on the Urban Renaissance Agency, Independent Administrative Agency (Act No.100 of 2003) Act on General Rules for Independent Administrative Agency (Act No. 103 of 1999)
Competent Minister	Minister of Land, Infrastructure, Transport and Tourism
Full-time personnel	3,196 (as of April 1, 2016)



Head office
(Yokohama i-land tower)

■ History



1. Outline of UR Business

- To promote Urban Renewal Project with high political significance such as projects accompanied by a large scale infrastructure development or improvement of densely populated area, etc. while maintaining division of roles with private sector and municipalities.
- To support for the reconstruction of disaster-stricken area of Great East Japan Earthquake and the strengthening the urban disaster prevention function.
- To supply rental housing necessary for the society including providing safety network function to those vulnerable to housing for the elderly or household with small children, which are short in supply.

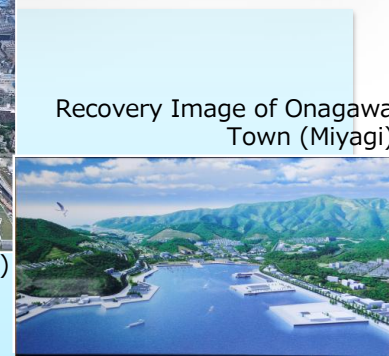
Urban Rejuvenation

UR promotes Urban Renewal in collaboration with Private Business and local authority.

- To promote Urban Renewal
- To coordinate Vision, Planning, Conditions
- To join the project as a partner



Toyosu 2-Chome (Tokyo)



Recovery Image of Onagawa Town (Miyagi)

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Disaster Restoration

UR supports the reconstruction of disaster-stricken area and the strengthening of urban disaster prevention function.

- To promote building disaster resilient urban area

Rental Housing

UR properly manages rental housing and provides rich living space.

- To manage rental housing through cherishing trust relationship with around 748,000 residents (as of the end of March 2014)
- To promote to live in the urban center, to secure stable rental housing for elderly, to improve child care environment.



Oshima 6-Chome Danchi (Tokyo)

New Town Development

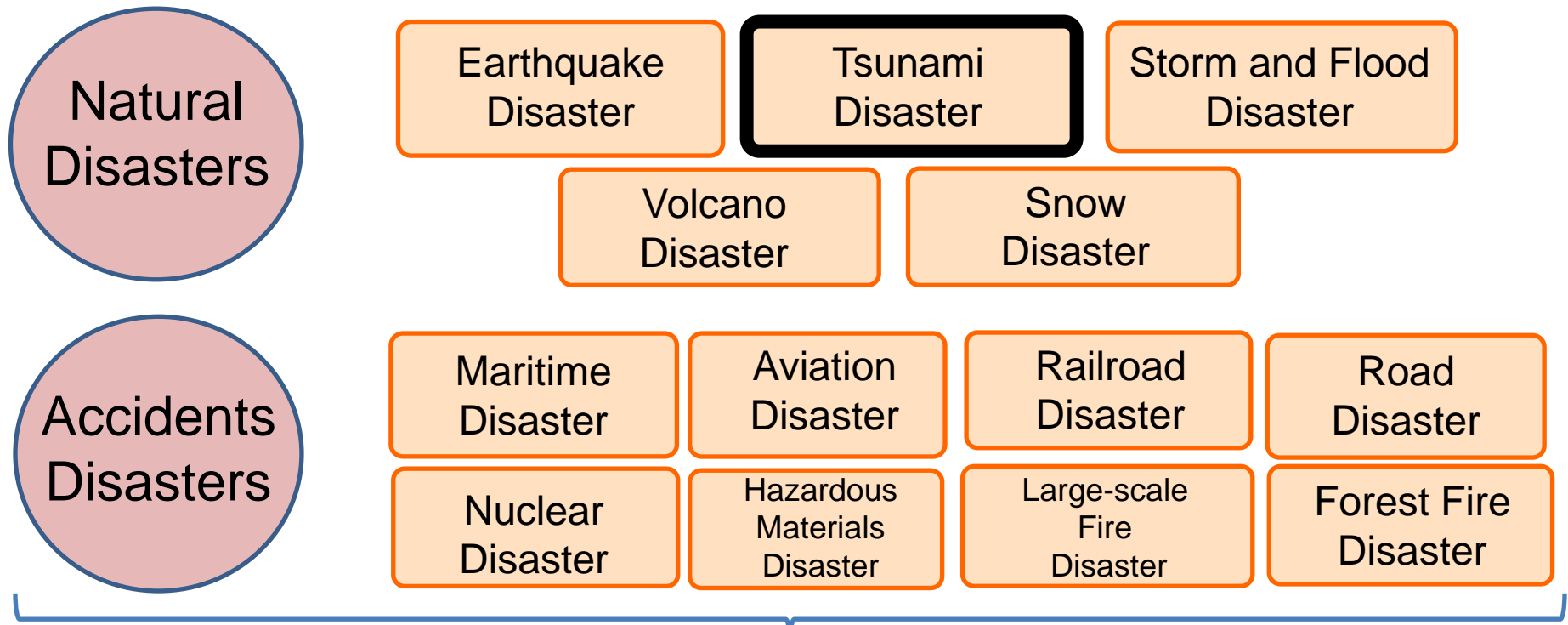
UR aims at building urban area that provides safe and comfortable life in the suburbs

- To advance safe, secure, and eco-friendly city building coping with aging population and lower birthrate
- To realize attractive suburban life or local living
- To complete promptly new town business



Kohoku New Town (Kanagawa)

2. All Disaster Types / Disaster Management Plan



Disaster management phases



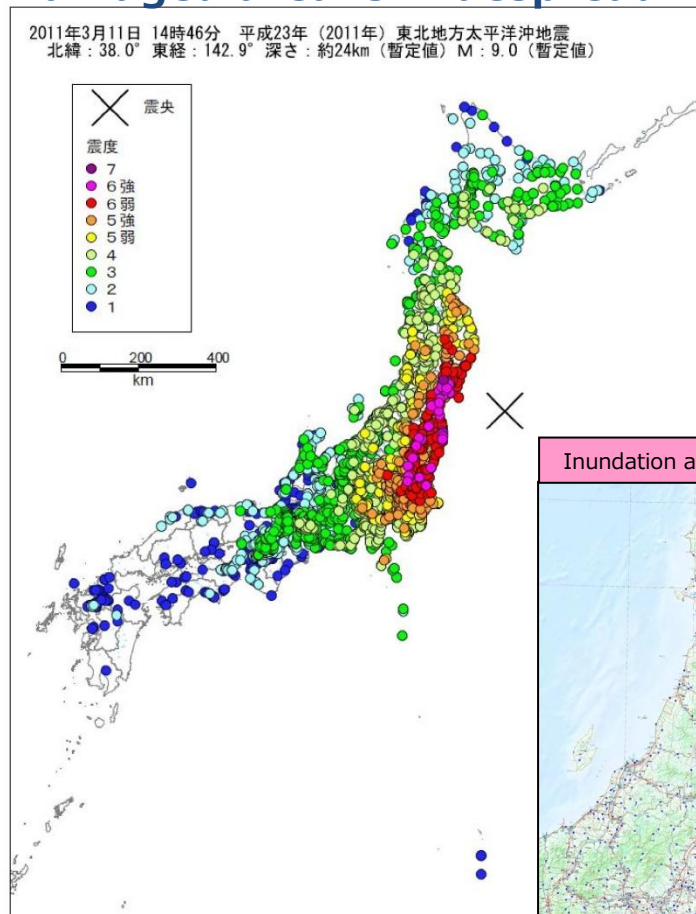
Concrete countermeasures to be taken by each stakeholder



2. Damage by the Great East Japan Earthquake (1)

Seismic intensity map in the Great East Japan Earthquake

Damaged area is widespread



Data Source: Japan Meteorological Agency



Data source: Geospatial Information Authority of Japan

Comparison with the Sumatra-Andaman Earthquake(2004, resulting in the Indian Ocean tsunami)

	the Great East Japan Earthquake	the Sumatra-Andaman Earthquake
Date	Mar 11, 2011	Dec 26, 2004
Magnitude	9.0	9.1
Dead	15,892 ※3	35,322※1 in Sri Lanka (126,732※2 in total)
Missing	2,573 ※3	5,637※1 in Sri Lanka (93,662※2 in total)

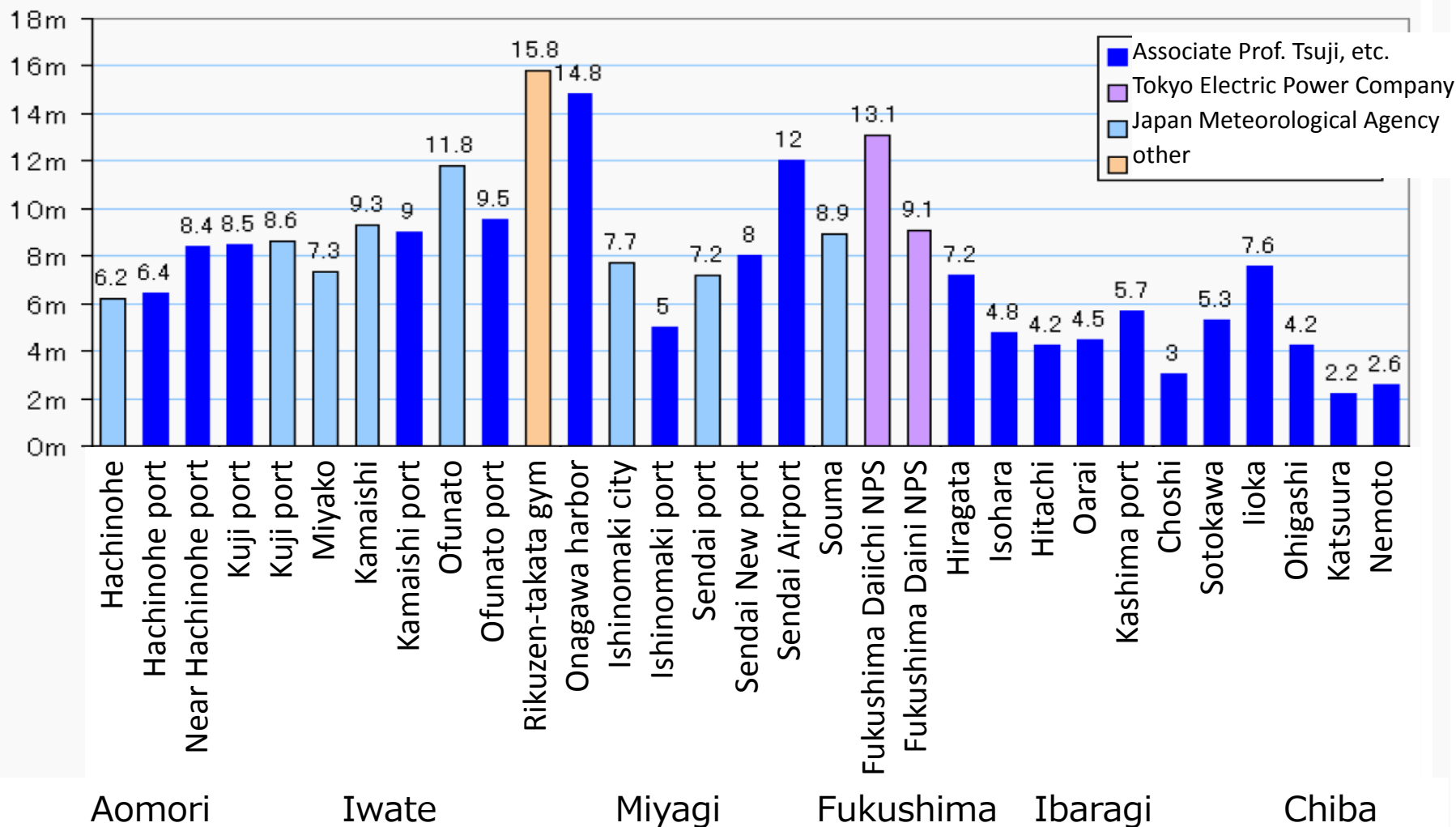
※1: cited from the Wikipedia

※2: as of Mar 30, 2005, Cabinet Office

※3: as of Aug 10, 2015, National Police Agency

2. Damage by the Great East Japan Earthquake (2)

A range of the damage by Tsunami is widespread from Tohoku to Kanto



Further information of Tsunami height is shown as following HP:
<http://www.coastal.jp/tsunami2011/index.php?Field%20survey%20results>

2. Coastal areas attacked by tsunami



3. Outline of UR Disaster Recovery Support Activities

UR has supported town development consisting of restoration, formulation of a reconstruction plan, and urban restoration including urban reconstruction projects and emergency public housing project upon request of the national or local government.

(as of August 1, 2016)

1	Restoration support (from March 2011)	<ul style="list-style-type: none"> (1) A total of 970 UR rental housing provided (2) Around 8 hectares of UR land provided for the construction of emergency temporary housing (3) A total of 181 technical personnel dispatched to construct emergency temporary housing (4) A total of 3 technical personnel to check safety of the building land
2	Support to laying down restoration plans (from April 2011)	A total of 62 personnel dispatched to 1 prefecture and 18 villages, towns and cities in Iwate, Miyagi and Fukushima prefectures.
3	Support in restoration work (from Jan. 2012)	<ul style="list-style-type: none"> • Conclusion of memorandums and agreements with 22 municipalities in disaster-stricken areas to promote restoration through urban development • UR supports ①22 urban reconstruction projects and ②85 public housing projects, according to the request from municipalities in disaster-stricken areas.

3. UR Disaster Reconstruction Support

Based on relevant laws, UR carries out the following projects by consignment and request by disaster-stricken municipalities.

1) Land Readjustment Project

Land development on higher ground for relocation, land elevation of disaster-stricken areas, development of roads, residential land development

2) Collective Relocation Promotion Project for Disaster Prevention

Purchase of affected residential land, and group relocation to higher ground

3) Development of Business Revitalization Bases

4) Disaster Resilience Enhancement Project of Fishing Communities

Land elevation in fishing communities and improvement of roads, drainage, etc.

5) Building / Transfer of Public Housing for Displaced People

Rental housing for people who lost their houses in the disaster

< Project costs > (1) – (4) are fully borne by the central government.
(5) is covered by the central government (7/8) and by the local authorities (1/8).

3. UR's main support menu for urban restoration

1. Urban reconstruction projects (a total of 22 districts, 1,300 hectares in 12 municipalities)

- UR implements land readjustment projects and collective relocation promoting projects committed by the disaster-stricken municipalities



2. Public housing projects (a total of 5,880 housing units in 51 districts in 16 municipalities)

- UR constructs public housing and transfers to the municipalities according to their requests



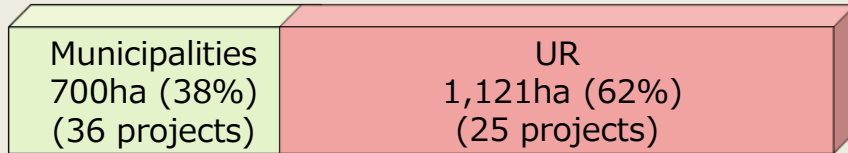
3. Proportion of UR supporting projects in the whole

■ Urban reconstruction project

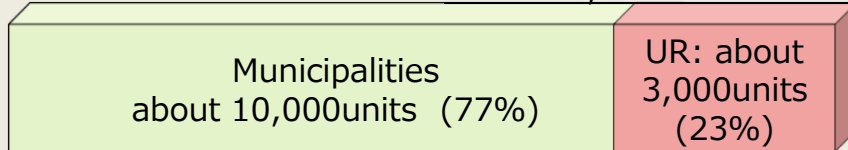
22 districts are implemented by UR
Over 60% of land readjustment projects are supported by UR

I Urban reconstruction project

- ① Land readjustment projects
1,821ha (61 projects) in total

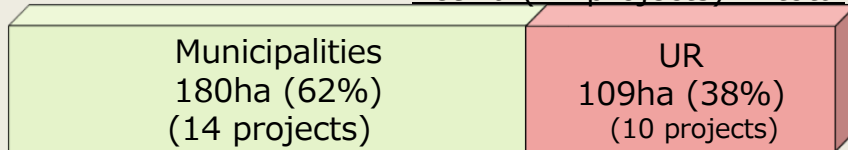


- ② Collective Relocation Promoting Projects
About 13,000 units in total

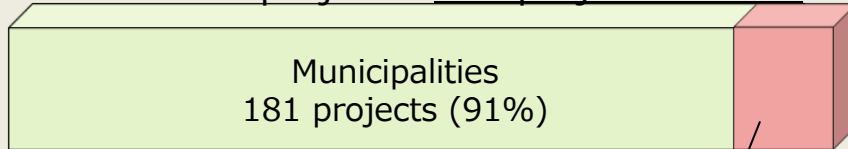


※included number of emergency public housing constructed in collective relocation promoting projects

- ③ Business Revitalization Bases Development
289ha (24 projects) in total



- ④ Fishery village disaster prevention functional enhancement projects: 198 projects in total



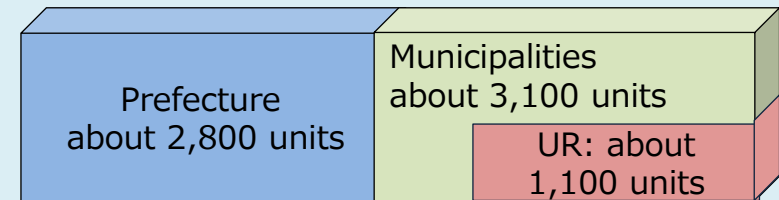
UR 17 projects (9%)

■ Public housing project

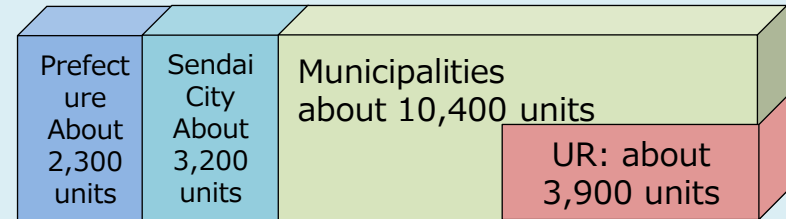
About 5,900 units are constructed by UR
(20 % of about 29,500 units in total)

II Public housing project

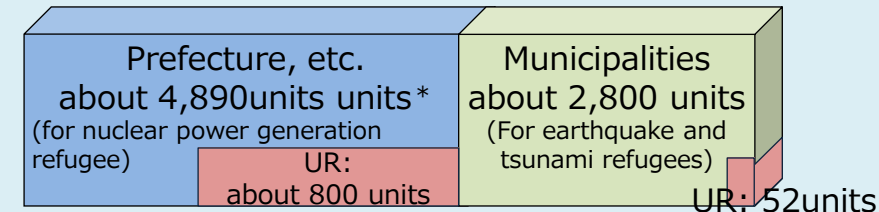
- ① Iwate prefecture: about 5,900 units in total



- ② Miyagi prefecture: about 15,900 units in total





- ③ Fukushima prefecture: about 7,700 units in total



* Data source: 2nd emergency public housing construction plan

※Prospect by publicly disclosed information as of April 1, 2016
※Number of projects and units by UR are accumulated ones under construction or under discussion to construct.

3. UR's Reconstruction Projects

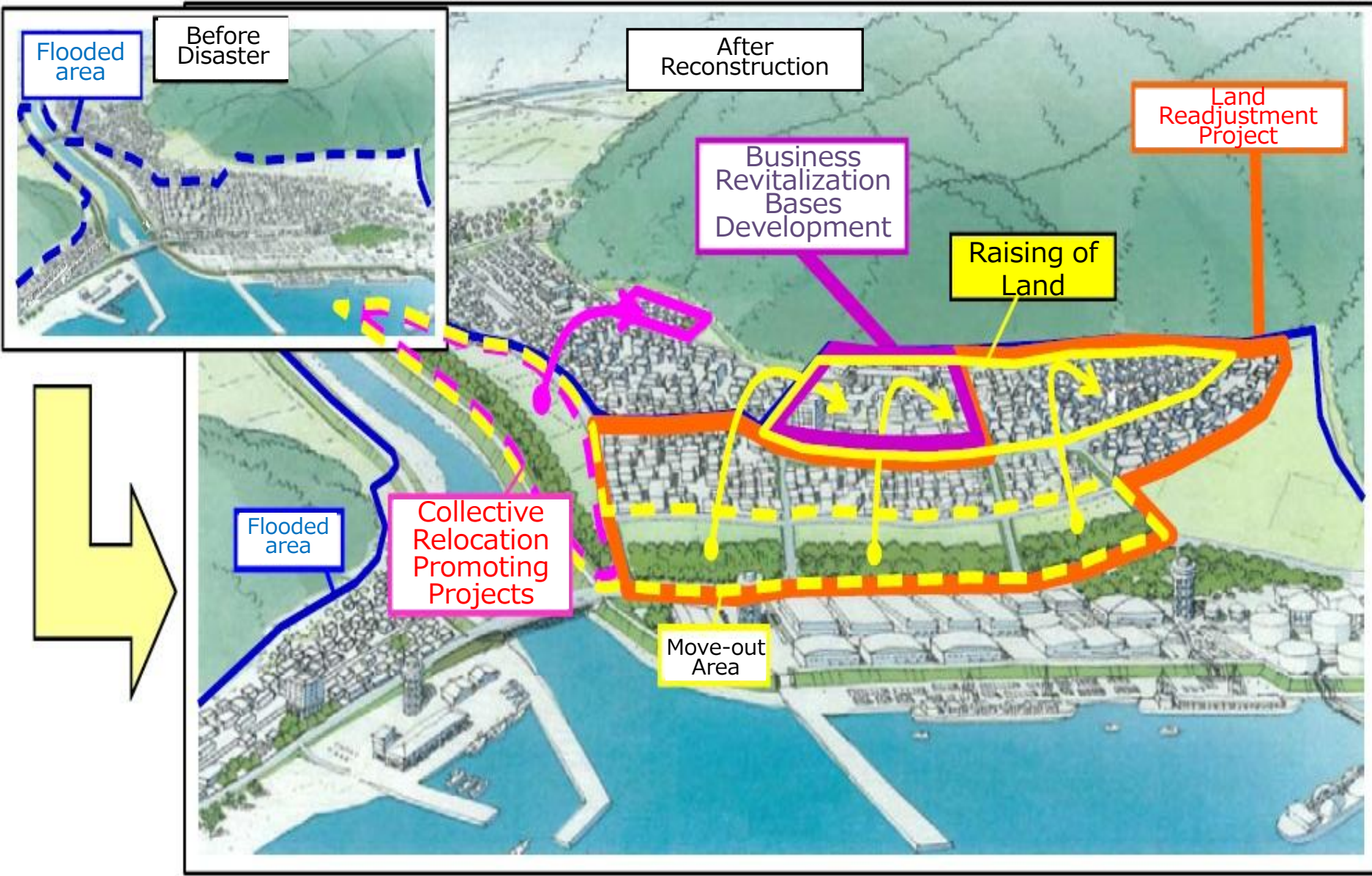
Planning  Project  Ground-breaking  Partially completion 

	Municipality	Project name	Project procedure	Planned Area	Period (FY)	Progress					
						FY2012	FY2013	FY2014	FY2015	FY2016	FY2017-
Iwate	Miyako	Taroo	LR, CR	45ha	2012-2016						
		Kuwagasaki/Koanaii	LR	24ha	2013-2017						
	Yamada	Osawa	LR, FS	19ha	2012-2016						
		Orikasa	LR, CR	13ha	2012-2016						
	Yamada	Yamada	LR, BR, CR	56ha	2012-2018						
		Otsuchi	Machikata	LR, BR, CR	40ha	2012-2017					
	Kamaishi	Kaase	LR	23ha	2012-2018						
		Unosumai	LR, BR	60ha	2012-2018						
		Kerobe	CR, FS	2ha	2012-2019						
	Ofunato	Ofunatoeki	LR, BR	36ha	2013-2019						
Rikuzen-takata	Imaizumi	LR	112ha	2012-2018							
	Takata	LR, BR	186ha	2012-2018							
Miyagi	Kesennnma	shishiori	LR	42ha	2012-2017						
		Minami Kesennuma	LR	33ha	2012-2017						
	Minami-Sannriku	Shizugawa	LR, BR	111ha	2012-2018						
	Onagawa	Town center	LR, BR, FS	218ha	2012-2018						
		Remote area	LR, FS	54ha	2012-2017						
	Ishinomaki	Shinkadowaki	LR	24ha	2013-2017						
	Higashi-Matsushima	Nobiruohkubu hill	LR, BR	92ha	2012-2016						
Higashiyamotoeki Kita		LR, BR	28ha	2012-2016							
Fukushir	Iwaki	Usuiso	LR	37ha	2012-2017						
		Toyoma	LR	56ha	2012-2018						

Total	22 projects	約1,300ha	Start constructing 6		Start constructing: 16					
			Transfer building lots: 1		Transfer building lots: 6		Transfer building lots: 11		Transfer building lots: 4	
							Complete: 1		Complete: 5	

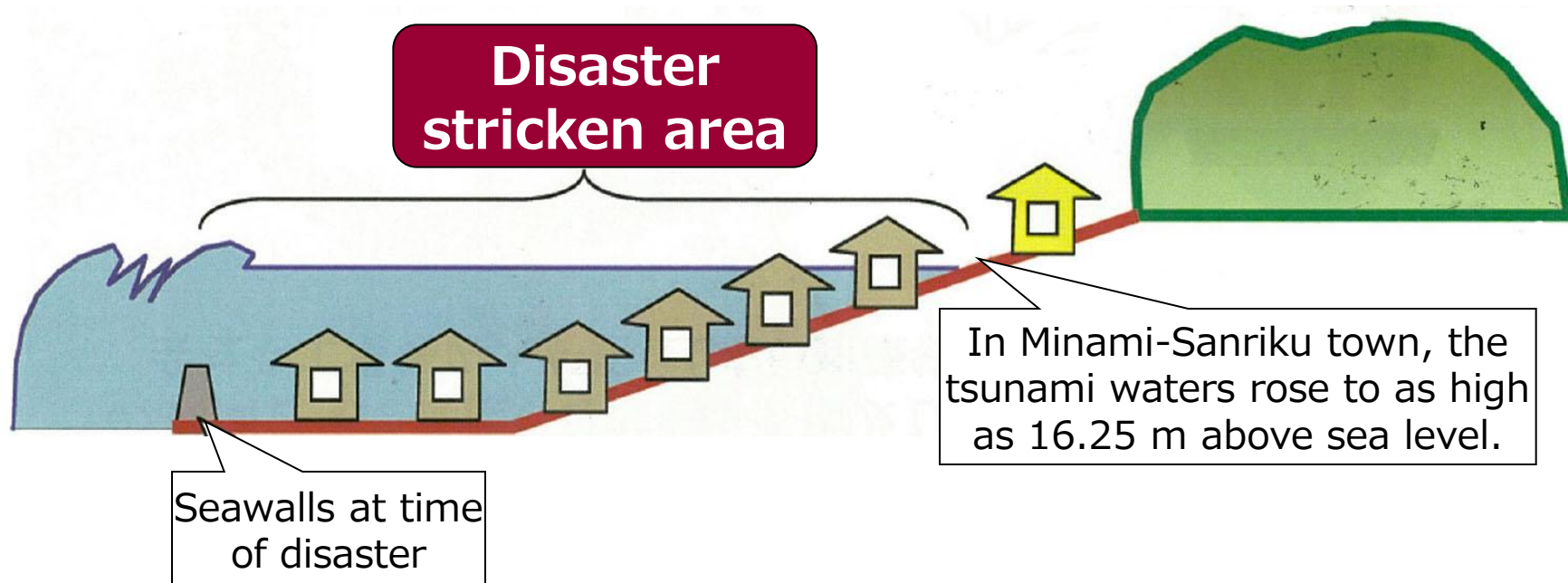
LR: Land Readjustment Project, CR: Collective Relocation Promoting Projects, BR: Business Revitalization Bases Development, FS: Fishery village disaster prevention functional enhancement projects, FY: Fiscal Year
 ※Related project may be implemented after the major project completed.

3. Illustration of Reconstruction (1)



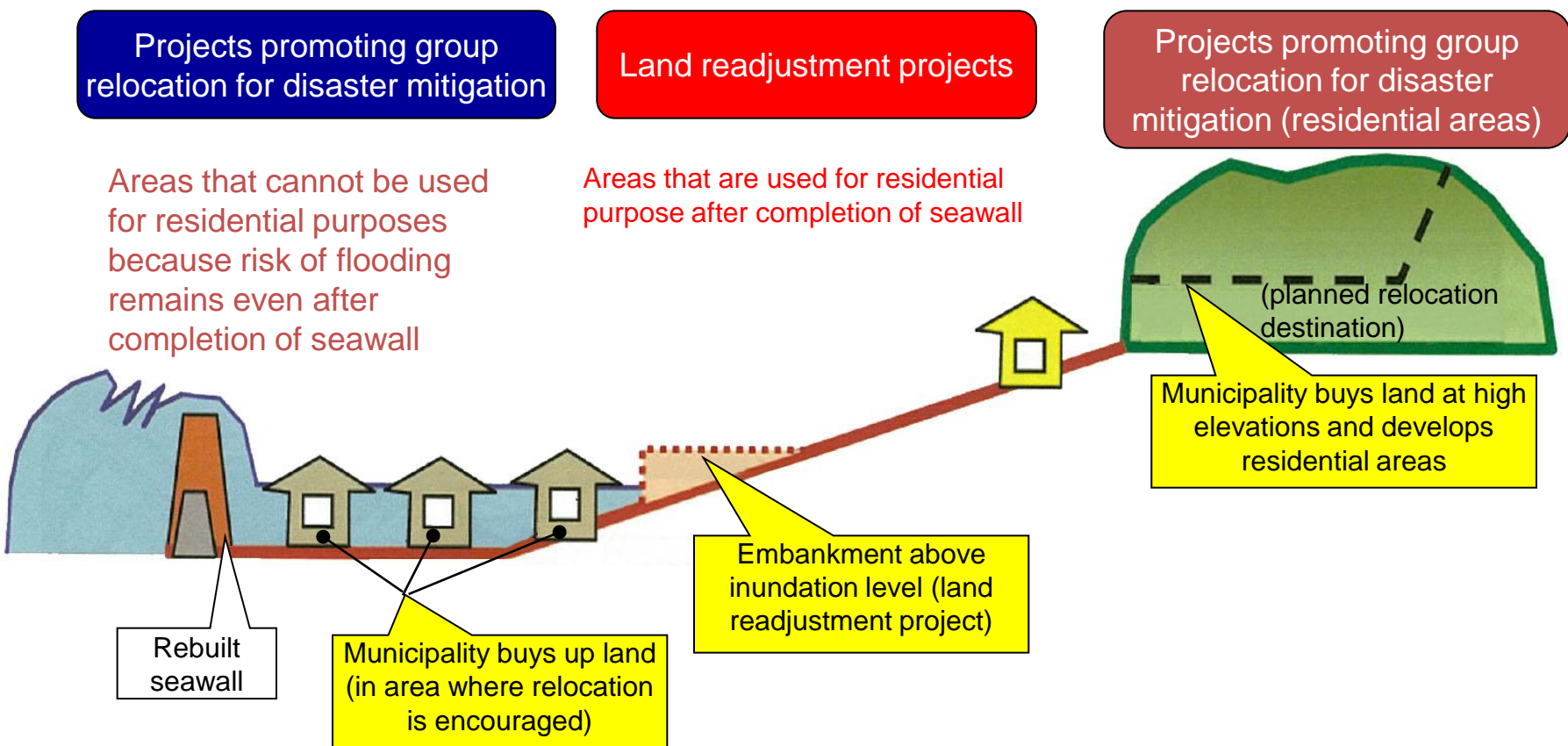
3. Illustration of Reconstruction (2)

1. Status at time of disaster



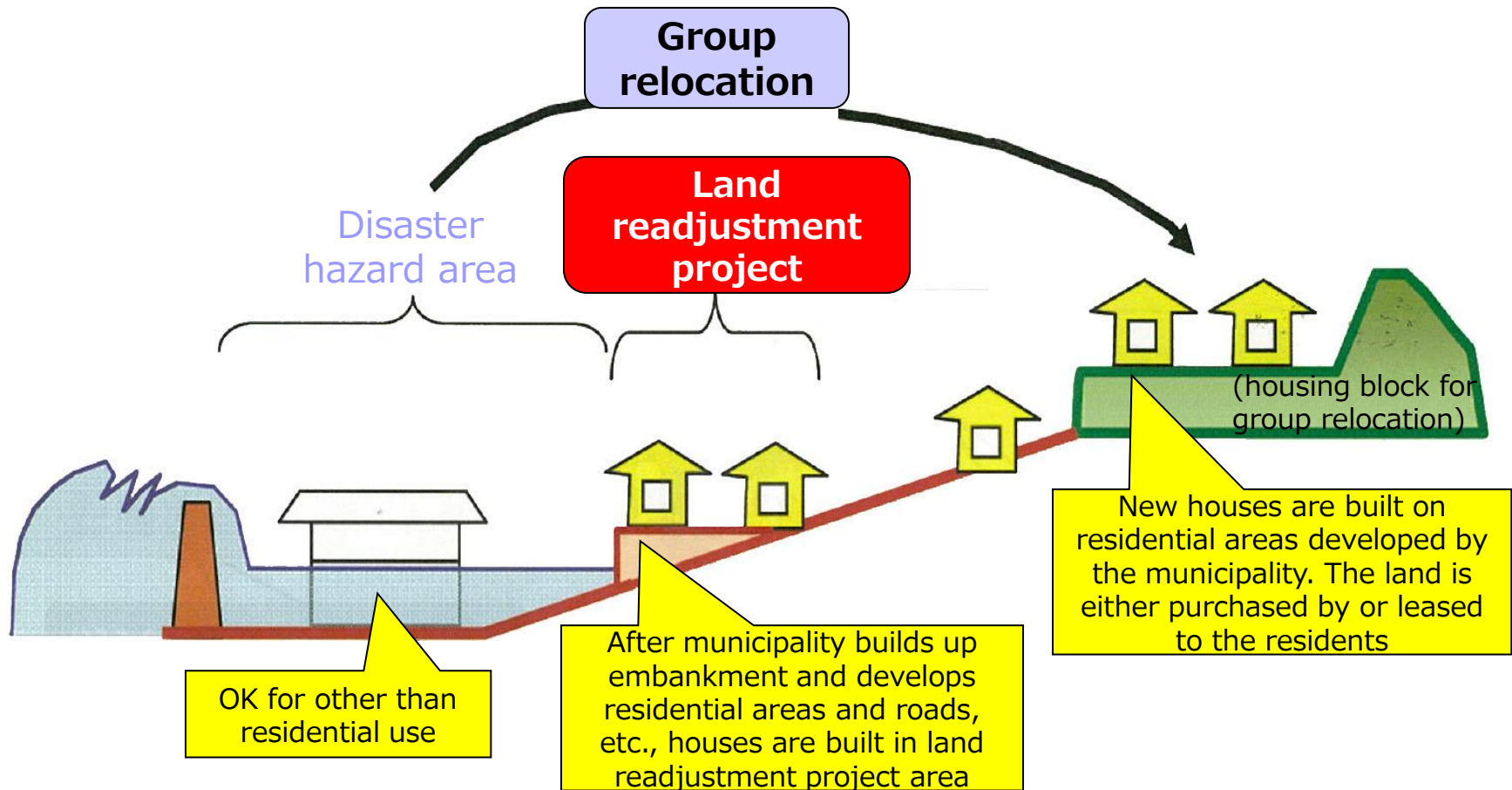
3. Illustration of Reconstruction (3)

2. Collective relocation promoting project and Land readjustment projects (Under construction)



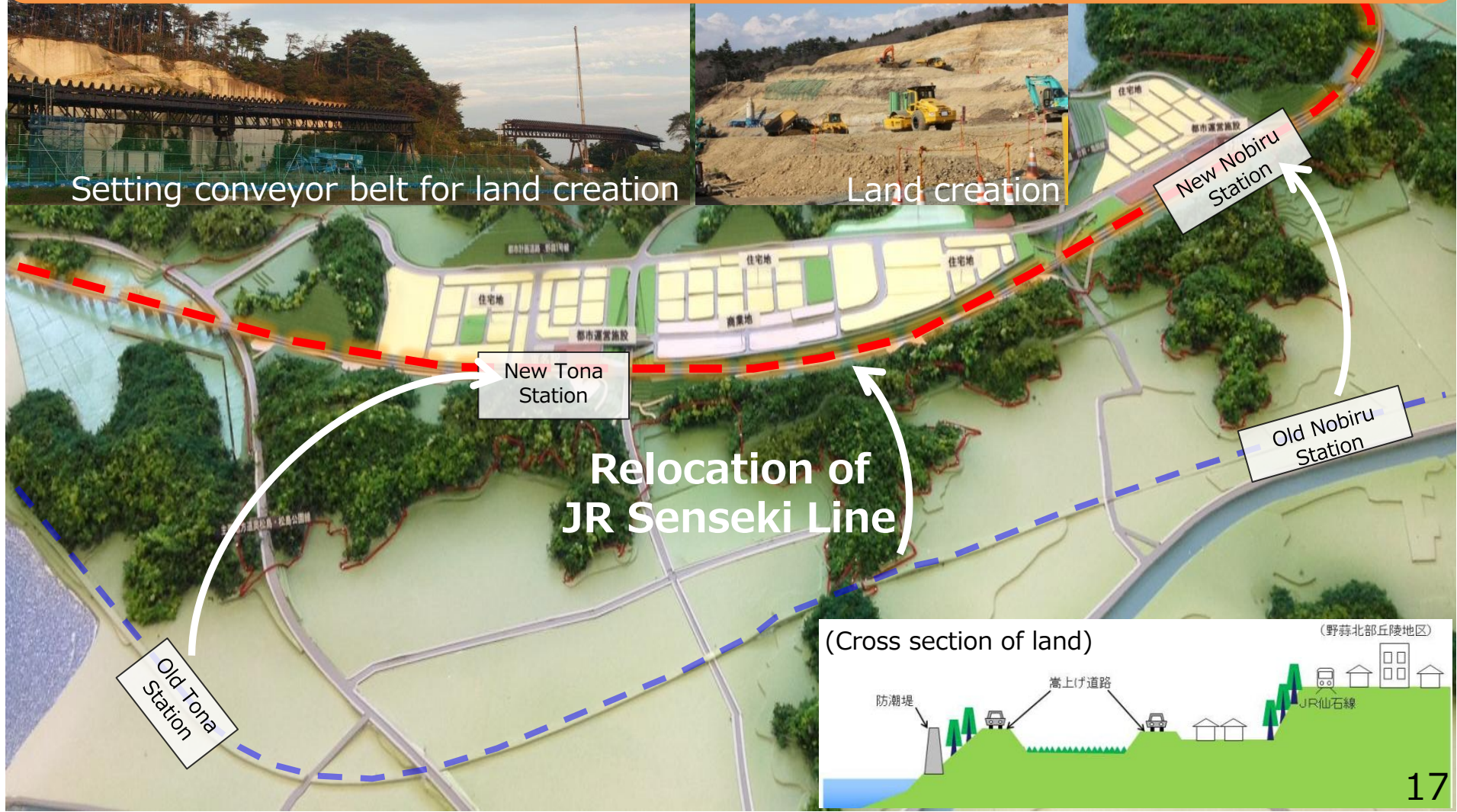
3. Illustration of Reconstruction (4)

3. Collective relocation promoting project, and Land readjustment projects (After the construction)



3. 【Case 1】Nobiru Hokubu Project, Higashimatsushima city

- UR developed a new urban area on the hill and relocated **JR Senseki Line in May 2015** in land readjustment project, at a time. (448 building lots for housing, 1 childcare supporting facility, etc. were completed and transferred in FY 2015)
- UR reduced construction time by carrying 3,000,000 m³ surplus soil by temporary conveyor belt, proposed by private contractor.



3. 【Case 1】Nobiru Hokubu Project, Higashimatsushima city

- UR transferred construction site for JR Senseki Line by July 2014, reducing time by utilizing conveyor belt to carry lots of surplus soil.
- It could make possible that JR Senseki Line, the most important local railway, was opened in May 2015, on schedule.
- UR will transfer all building lots for housing in FY 2016 and emergency public housing in 2017.

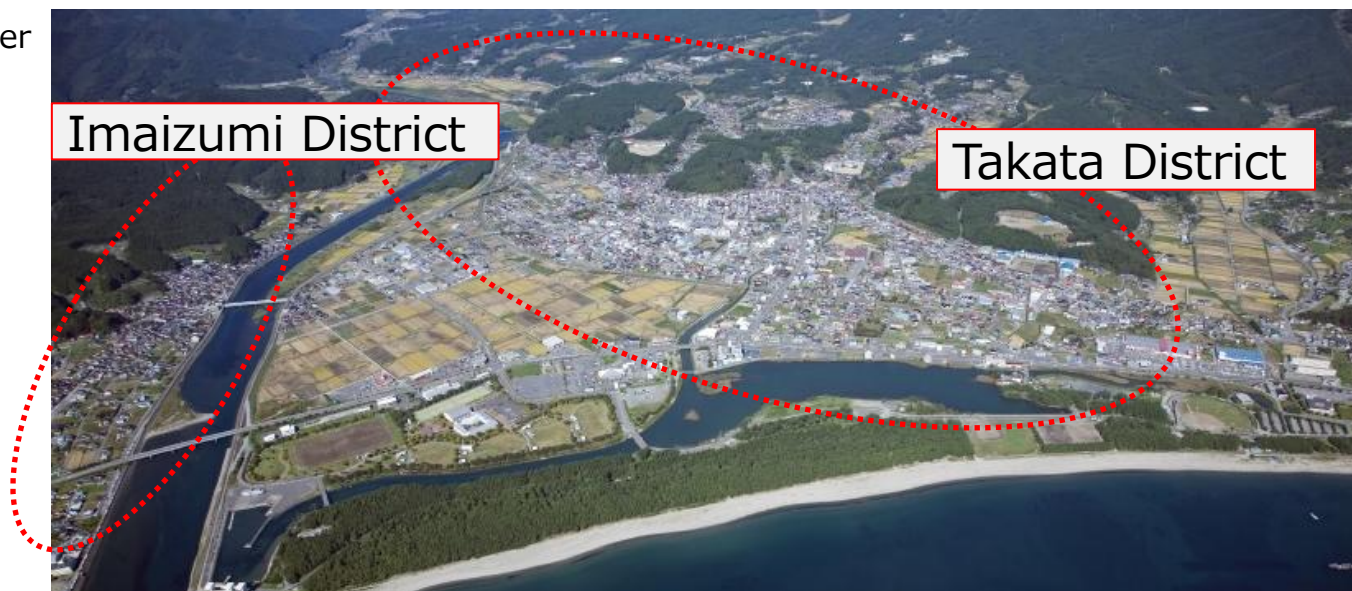


Data Source: Higashimatsushima city HP



3. 【Case 2】Takata & Imaizumi District, Rikuzentakata city

Before the Disaster

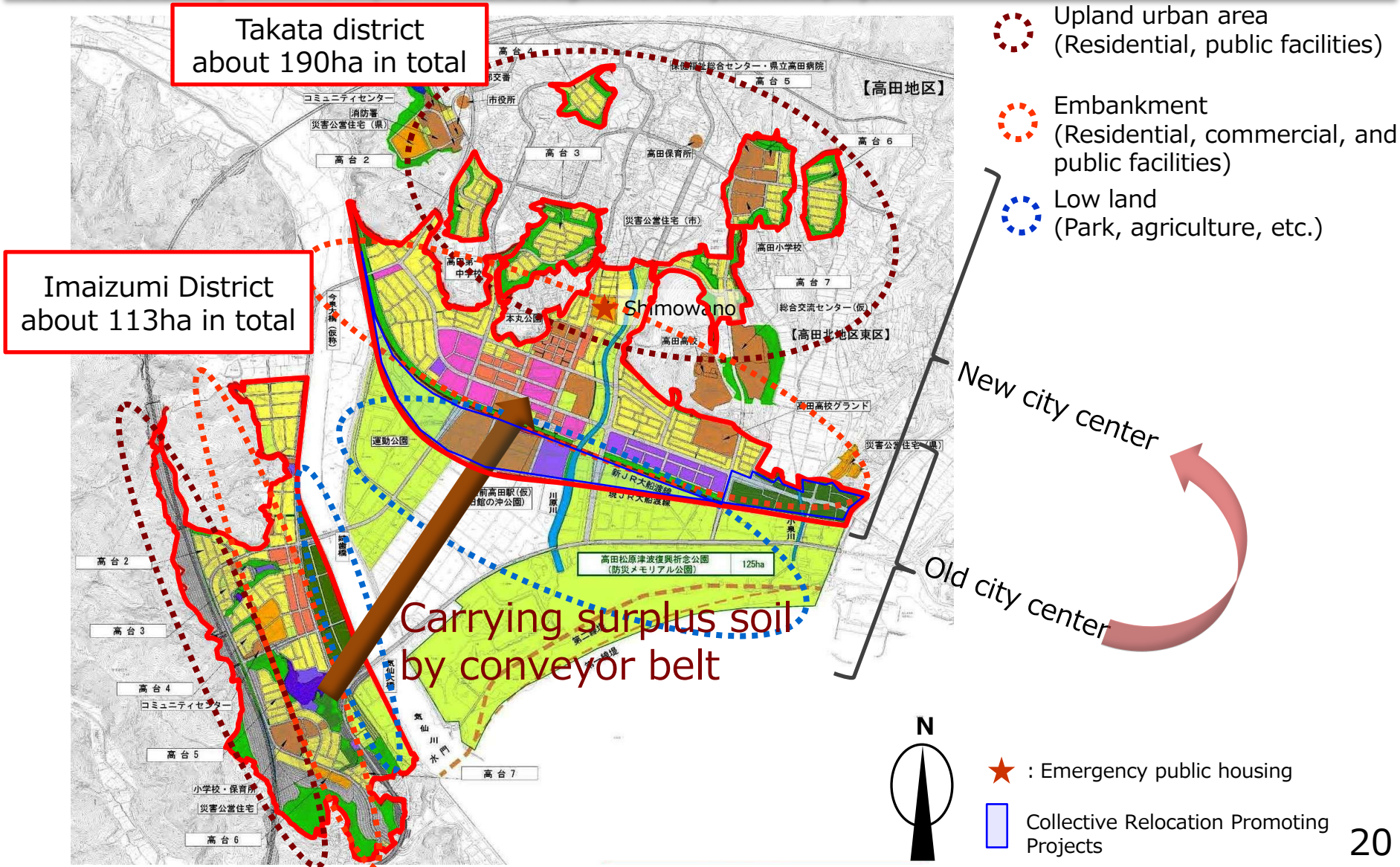


After the Disaster



3. 【Case 2】Takata & Imaizumi District, Rikuzentakata city

- Old city center in Tsunami stricken area is planned to relocate closer to hilly area and constructed on the embankment over Tsunami level.
- New city center is planned to be compact.
- Relocation of city center is implemented through land readjustment project.



3. 【Case 2】Takata & Imaizumi District, Rikuzentakata city



View from the Hill in Imaizumi district (as of July 2014)

- ※The crusher and conveyor belt was removed from Sep. 2015 to Feb. 2016
- ※The suspension bridge to convey sands was removed from April to Sep. 2016

View of Takata district, raising the level of embankments (as of Oct. 2015)



3. Construction schedule of Public housing by UR

•UR has a plan to construct 5,880 units of public housing in 85 project sites. Peak of construction is in FY 2015 and 2016.

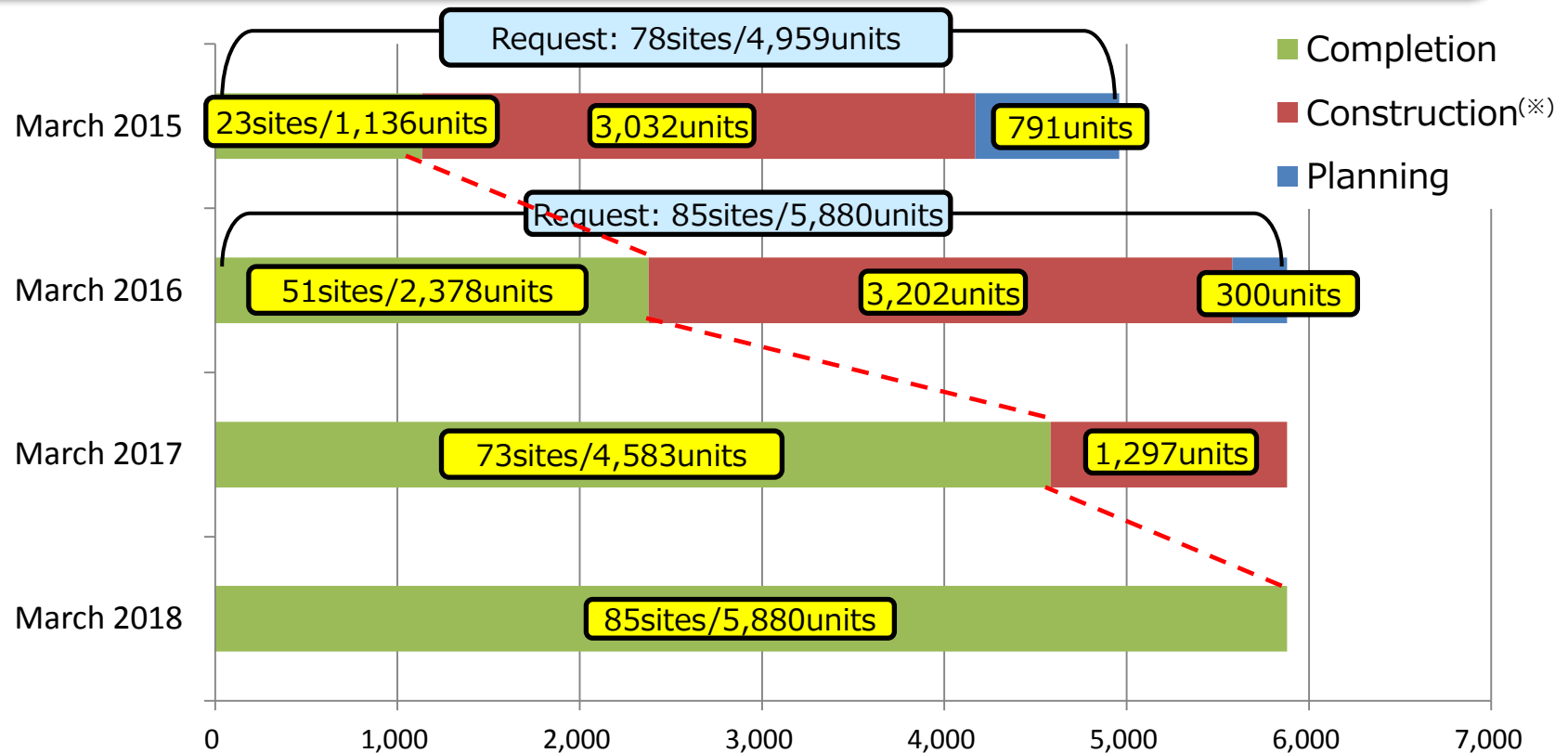
Iwate: 1,124 housing units in 37 project sites

Miyagi and Fukushima: 4,756 housing units in 48 project sites

(4,003 units in 43 project sites outside Iwaki, 753 units and 5 project sites in Iwaki)

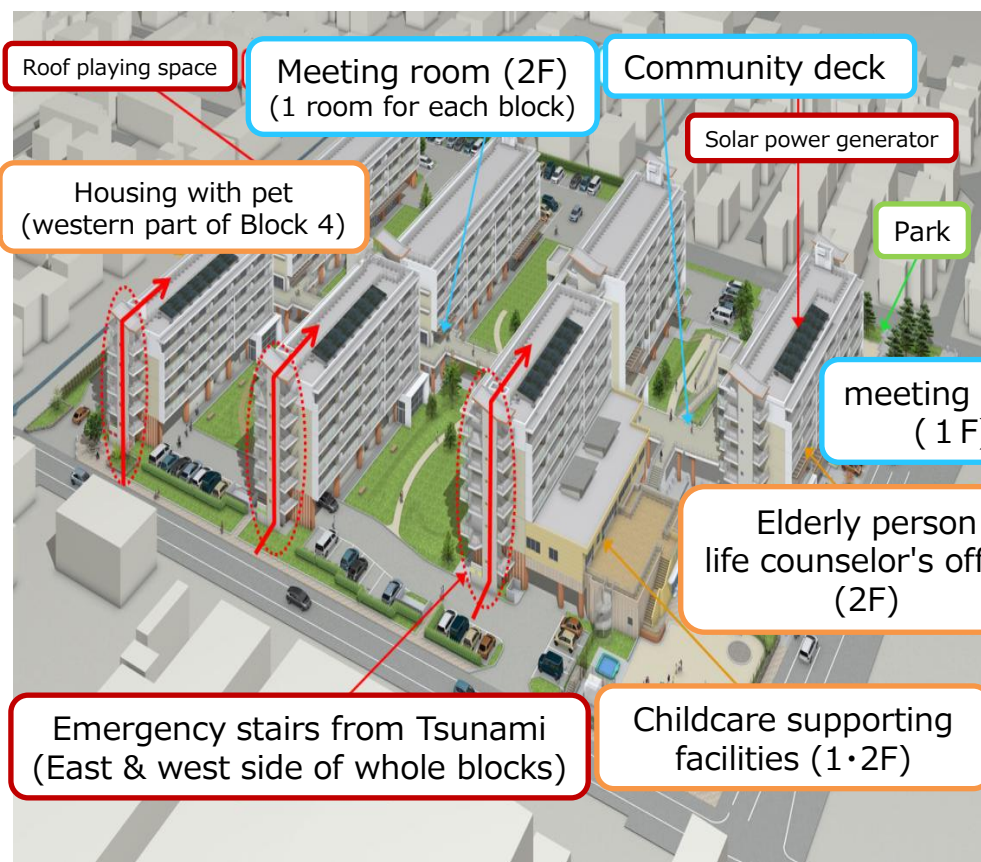
•UR has got all requests of building public housing from municipalities by March 2016 and a plan to complete by March 2018.

Completion ratio: 40% in March 2016 → 78% in March 2017 → 100% in March 2018



3. 【Case】 Sakuragi district, Tagajo city

- Place residential floor, community traffic line and space over 2nd floor against Tsunami
- Place community deck on the 2nd floor, using emergency traffic line
- Place elderly person life counselor's office and childcare supporting facilities
- Place meeting room for all residents facing to community deck



Community deck

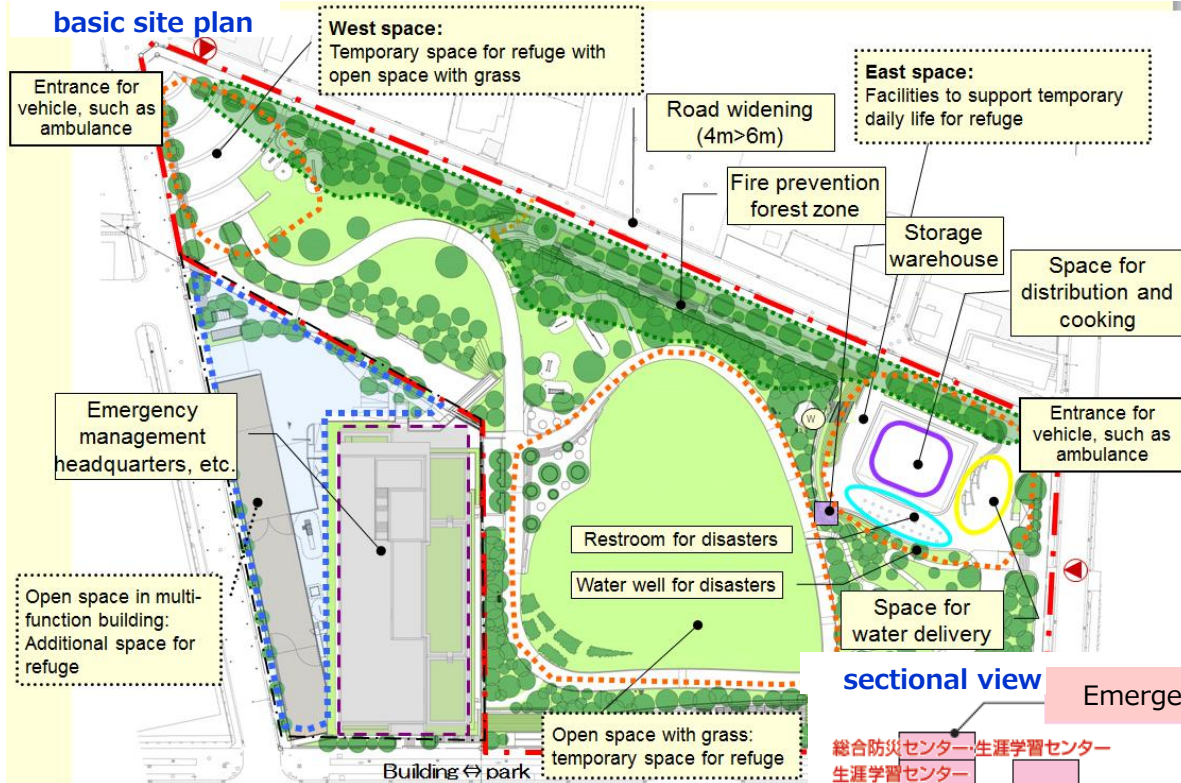
4. Preparation for the future (against urban disaster①)

Urban development with bolstered functions for disaster-resistance

【Mitaka civic center project, Tokyo】

- Civic center and related facilities should be renovated or rebuilt because they became old and not enough earthquake-resistant.
- Construction of integrated disaster-readiness hub with disaster-readiness park, multi-function building and civic center in the project site

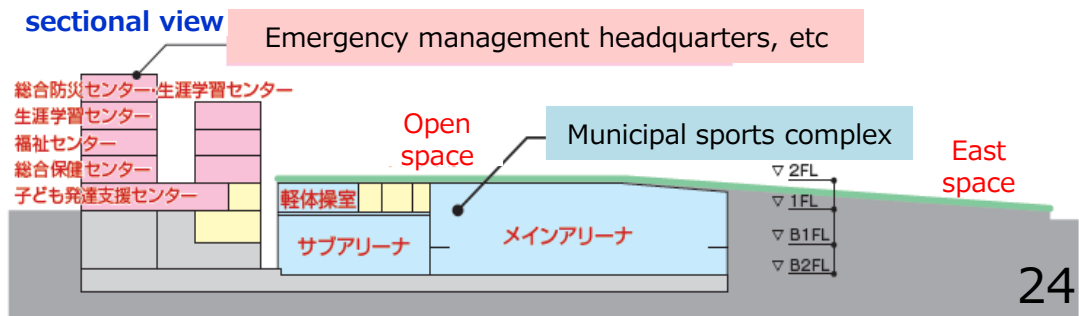
basic site plan



layout image



sectional view



4. Preparation for the future (against urban disaster②)

Building a fire-resistant, safe town

【Kyojima 3-chome District, Tokyo】

- Densely built-up area with many wooden houses and tenement houses
- In terms of improving the disaster-resistance of this area, UR worked in collaboration with municipality to establish a disaster-prevention block.
- Old wooden buildings were rebuilt to be more fire-resistant, and main roads in this community were widened.

before construction



after construction



4. Preparation for the future (against the Nankai Trough Earthquake)

- Formulation of the “Guidelines for Disaster-resistant Town Development”
- Consideration of “a disaster-resistant town development plan” for each regional model
- Developing a tsunami evacuation tower, evacuation routes and other facilities

The central part of Naka-Tosa town, Kochi, and the tsunami evacuation tower (November 2015)



4. Preparation for the future (summary)

○ **Activities for disaster-resistant town development**

Regions where tsunami damage is predicted are proceeding with study on disaster-resistant town development and other projects. UR is providing information on the Preliminary Urban Restoration Plan and other projects based on its experience in the reconstruction from the Great East Japan Earthquake.

For example,

● **Reconstruction direction policy**

A direction policy is important to ensure speedy decisions on reconstruction projects (whether reconstruction at the original place or relocation to upland/inland or other area) that need to combine speed and quality

● **Securing of necessary land**

Preparation (consideration of a disaster prevention park, understanding of the land situation and so on) for accessible flat land in upland or inland areas which will become necessary for emergency disaster countermeasures, emergency temporary housing, emergency public housing and other measures at an early stage

● **Systems to promote reconstruction**

Local interested organizations and municipalities that concluded “mutual aid” or other agreement are expected to deepen understanding among staff members, social welfare councils and others

Thank you for your attention.



——— 街に、ルネッサンス ———



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Full restoration of JR Senseki Line On May 30, 2015
Photo at Nobiru station