Great East Japan Earthquake: Kamaishi City, Iwate Prefecture

Development of Disaster Management Bases Integrated in Town Development by Cooperation of Residents

### Region

| Kamaishi City, Iwate Prefecture |

### Overview of Efforts

- Kamaishi City of Iwate Prefecture, with a population of about 40,000 (before the earthquake), is one of regions seriously damaged when the Great East Japan Earthquake occurred. About 30% of the total households was damaged mainly due to the tsunami, and a large number of casualties was suffered.
- Reconstruction and town development of the city is promoted in two different ways, “Urban style” and “Fishery village style”. The former mainly promotes development by readjusting land parcels, and the latter mainly promotes population resettlement.
- As for the promotion system for reconstruction, Council of Reconstruction & Town Development and Liaison Council of Landowners have been established. They are promoting the reconstruction by determining projects suited to the actual situations of disaster affected 21 districts.

### Points of Efforts

1. **Promotion of Town Reconstruction in Accordance with Regional Characteristics**
   - In Kamaishi the land use policy by district has been developed to create two type of districts, “District developing a new town as non-flooding area by relocating to upland and installing multiple defenses” and “District adopting building regulations for land use”, based on the regional characteristics.

2. **Establishment of Council of Reconstruction & Town Development by Respecting Residents Playing the Key Role**
   - Immediately after the earthquake, opportunities to hold dialogue between the city administration and relevant parties such as residents, business operators and landowners have been established in a style of social gathering organized by the city administration, in disaster-affected districts within the city.
   - District reconstruction revolves around the exchange of opinions among Council of Reconstruction & Town Development of each district, Liaison Council of Landowners, and the city administration. While incorporating inputs from the residents as much as possible, a comprehensive town development policy has been determined and developed, including plans for not only housing but also elementary and junior high schools, as well as attracting the 2019 Rugby World Cup, a sports complex, etc.

3. **Promotion of Town Development in Cooperation with Local Businesses**
   - In September 2012 a memorandum of understanding on development of disaster public housing with Kamaishi Plant of Nippon Steel Corporation was signed. The housing was developed through a public-private partnership, and the construction was completed in February 2015.
   - The Nippon Steel plant located close to the former shopping district of the city was partially rented to attract AEON Town in March 2014. Requests by Kamaishi Chamber of Commerce and Industry and businesses in the shopping district were reflected in the determination to attract AEON Town.

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**Development of Disaster Management Bases Integrated in Town Development; and Process of Consensus Building among Residents**

**Land Use Policy: 3 Key Points**

- **Securing Safety**
  - Ensure the overall safety by focusing on the maximization of the residents and buildings management of all necessary evacuation and shelter facilities.

- **Reconstruction of Dwelling**
  - Develop public housing for those who lost their properties and who have difficulty in securing housing by themselves.

- **Creation of Evacuation Mechanism**
  - Create safe evacuation routes by considering the characteristics of the districts and district of evacuation, so that each individual can protect themselves. In the process, education will be effective.

**Seawall Development Concept**

- **Security Level (Level 1)**
  - In the case of high frequency tsunami (more than 50 years), several seawalls and breakwaters will be constructed. The height of seawalls will be determined based on simulation results of water intrusion by the biggest tsunami, so that tsunami will not enter the area.

- **Security Level (Level 2)**
  - In the case of high frequency tsunami (more than 50 years), several seawalls and breakwaters will be constructed. The height of seawalls will be determined based on simulation results of water intrusion by the biggest tsunami, so that tsunami will not enter the area.

**Land Use Concept**

- Develop a district-specific land use policy with emphasis on the local conditions and characteristics, so that the development target height for the high frequency tsunami (more than 50 years) will be determined.

- In the case of a 100-year tsunami, seawalls will be constructed to prevent water intrusion into inland areas.

- In the case of a 50-year tsunami, seawalls will be constructed to prevent water intrusion into inland areas.

- In the case of a 10-year tsunami, seawalls will be constructed to prevent water intrusion into inland areas.

**Image of Development**

- **Information Exchange Center**
  - Developed to provide information on evacuation to residents and to enable residents to protect themselves in case of future disasters.

- **Joint Store Facility**
  - Developed to accommodate the needs of residents and to provide necessary goods and services.

- **Council of Reconstruction & Town Development, Liaison Council of Landowners**
  - Developed to promote consensus building among residents and to provide necessary goods and services.

- **Regional Conference**
  - Developed to provide necessary goods and services.

- **Experts Organization**
  - Developed to promote consensus building among residents and to provide necessary goods and services.

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**Source:** Kamaishi City, Basic Plan of Front Project 1, Development Project of Post-Tsunami Reconstruction Base for Eastern District of Kamaishi
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Status of Reconstruction and Land Use in Unosumai and Kerobe Districts

<table>
<thead>
<tr>
<th>Land Use Policy of Unosumai District and Current Status</th>
<th>Land Use Policy of Kerobe District and Current Status</th>
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<tbody>
<tr>
<td><img src="image1.png" alt="View over Unosumai District" /></td>
<td><img src="image2.png" alt="Development status of residence at relocation destination" /></td>
</tr>
<tr>
<td><img src="image3.png" alt="Planned construction site of elementary &amp; junior high schools" /></td>
<td><img src="image4.png" alt="Site after relocation" /></td>
</tr>
</tbody>
</table>

← Instead of relocating to upland, incorporate building regulations to town areas existed before and prepare for disasters such as tsunami.

← Relocate the residential area to upland and develop new fishery-related facilities in the coastal area.

Source: Kamaishi City, Basic Plan for Reconstruction & Town Development of Kamaishi City