

# Chapter 22

## Urban Planning and Community Development for Disaster Recovery

Field of expertise: Urban Planning

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### Summary

Urban planning and community development to recover from the Great East Japan Earthquake has been different from that of previous large-scale disasters in that it is based on the premise of a declining population and an aging society. In addition to building a city that is resistant to the dangers of tsunamis, it was also necessary to build a compact city both in terms of quantity and quality. In that sense, it was important to think about community development from the perspective of how the space would be used by residents.

**Keywords:** community development for disaster recovery, urban planning, population decline, ownership and use, compact community development

### Introduction

Urban planning and community development for recovery from the Great East Japan Earthquake has been different from previous large-scale disasters in that it is based on the premise of a declining population and an aging society.

### 1: Issues Raised by the Great East Japan Earthquake

#### What happened

Japan is a disaster-prone country, and many cities have been repeatedly hit by man-made disasters as well as natural disasters such as earthquakes, floods, tsunamis, and fires. Those who came before us rebuilt the affected areas each time. One example of this is the recovery from the Great Hanshin-Awaji Earthquake of 1995, which caused extensive damage mainly in Kobe City, Hyogo Prefecture.

#### The reality of the damage

In the Great East Japan Earthquake, more than 120,000 houses were completely destroyed, and more than 20,000 people were killed or went missing (Iwabuchi & Ubaura, 2019). Most of the damage was caused not by the earthquake itself, but by the tsunamis that followed so the reconstruction efforts have been focused on the coastal areas that were devastated by the tsunami.

## **2: Paradigms Destroyed by the Earthquake**

### **Common knowledge of the past**

Community development for disaster recovery requires two major things. One is, of course, to ensure that the city has the spaces to respond to hazards caused by the disaster. Along with this, the other important thing is to solve the urban planning and community development problems that the city had before the disaster. In a society with a growing population, this means increasing urban activity and the spatial capacity needed for it. For example, in the aforementioned city of Kobe, a dense area of low-rise wooden houses was converted and redeveloped into high-rise noncombustible buildings (houses) to make it safer against the hazard of earthquakes and increase the floor space of the buildings to hold more residents. In fact, as more and more people moved to the city, a variety of urban activities began to take place. In a society with a growing population, if a city is built, people come, new activities take place, and the city becomes more lively. This establishes a cycle.

## **3: A New Approach**

### **A new method of disaster science**

In the reconstruction of cities and towns after the Great East Japan Earthquake, the plans were to recreate spaces that can cope with the hazards from future tsunamis by constructing seawalls, moving the city to a safer elevation, and raising the land. At the time, it was important to consider that in many affected areas, the population had already been declining since before the disaster and the occurrence of vacant lots and houses had become an issue for community development, a trend that was expected to continue even after the disaster. The question was how to rebuild the city while responding to the challenges of a declining population.

This is where compact community development in both the quantitative and qualitative sense comes into play, where new towns are created, based on the intentions of the people who use the space, or in other words, the new city is filled with the charm of that city's character through making use of local resources.

For example, in terms of housing reconstruction, there are many ways for disaster victims to rebuild their homes. These include building their own homes in housing complexes built for victims relocating as a group, finding land and building their own houses, or moving into public disaster housing built by the local government. Victims' methods and intentions on how and where to rebuild their houses have changed over time since the disaster (Figure 22-1).

This led to each municipality conducting interviews with the affected households and following up with them to understand their intentions on housing reconstruction. Through understanding the intentions of how residential land would be used, there was flexibility and change in the plans regarding the number of plots and buildings to build on hills and in inland

areas. In order to ensure no vacant lots would exist from the time reconstruction was completed, care was given to keep lots compact (Photo 22-1).

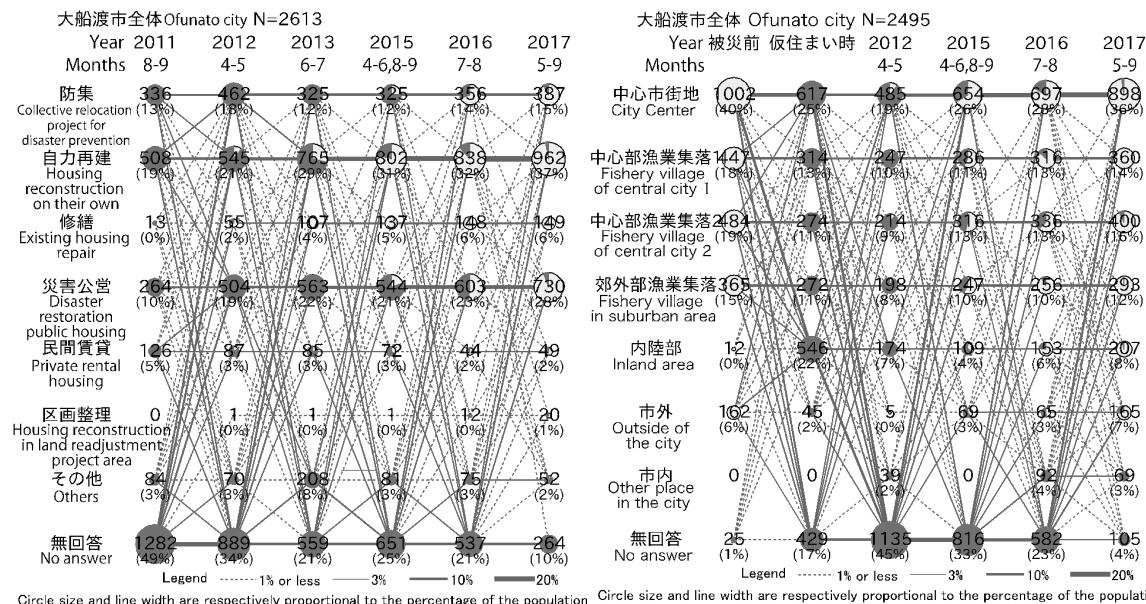


Figure 22-1. Changes in intentions regarding the method (left) and location (right) of housing reconstruction in Ofunato City, Iwate Prefecture (Iwabuchi & Ubaura, 2019)

There are many diagonal lines that show the change in intentions



Photo 22-1. Group relocation housing complex in Taro District, Miyako City, Iwate Prefecture (Almost no vacant land can be seen.)

In addition, many municipalities established community development companies to build and operate facilities to rent to businesses (Photo 22-2). If individual shop owners own their stores, there is a high possibility that they will be shuttered or become vacant when the business stops operating in the future. If the shopkeepers use the rental stores instead, when they close their stores, the next tenants can move in, and the shopping areas are less likely to become vacant. This forms a compact, attractive commercial area that can be maintained.



Photo 22-2. Ofunato Station area, Ofunato City, Iwate Prefecture  
(Commercial facilities are operated by a community development company)

Furthermore, the community development company plays a role in creating, improving, and disseminating local attractions, mainly by holding events in the city center and disseminating local information. These local attractions are one-of-a-kind attractions, not found anywhere else in Japan. Activities like these are known as area management, and are attracting attention as efforts to maintain and improve local environment, value, and attractiveness, as well as to revitalize regions.

#### **4: Achievements and the Future**

The reconstruction of a city, as we have seen so far, is not simply a matter of returning the city to its pre-disaster state. Based on the Build Back Better concept, it is about restoring the city to a form that is more resilient to disasters and resolves various issues that the city had before the disaster.

However, not all of the urban planning and community development issues have been resolved through the reconstruction.

For example, many of the group relocations are expected to continue to decline in population. As a result, the urban areas that are compact and well-used now may become marginal villages in which vacant lots and houses will increase in the future. This is not limited to the disaster-stricken areas, but we will be required to deal with such issues in the future.

There are also cases, especially in areas where the damaged land has been raised and rebuilt, where the land is not being used because owners rebuilt elsewhere, even though land in which people can live safely has been reclaimed. Furthermore, there are cases where low-lying areas that were inhabited before the disaster, mainly in small villages, have been left unused after relocation. How to make effective use of such vacant land, or how to minimize the cost of maintenance and management by actively choosing not to use it, remains an issue for the future.

#### **Conclusion - From the Author**

Urban planning and community development for recovery is in fact inextricably linked to urban planning and community development during times of peace. Many of the challenges for reconstruction, such as urban planning in an era of depopulation, are extensions of the challenges

faced in urban planning during normal times. Therefore, in order to proceed smoothly, it is extremely important to accumulate preparations and experiences during normal times (sometimes called "pre-recovery"). I hope that people will become interested in the field of urban planning and community development from the perspective of seamlessly connecting urban planning during normal times with disaster prevention and recovery.

## References

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