Postdisaster Urban Recovery: 20 Years of Recovery of Kobe

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15.1 Introduction

It has been 20 years since the Hanshin-Awaji Earthquake, which struck Hyogo prefecture, occurred at 5:46 a.m. on January 17 in 1995. Except for damage that occurred on Awaji Island, most of the destruction occurred in urban areas, including the cities of Kobe, Ashiya, Nishinomiya, and Takarazuka. For that reason, the Hanshin Awaji earthquake has been characterized as an urban disaster. Since this disaster, the heavily damaged infrastructure, commercial buildings, and residential houses have been rebuilt, and the city of Kobe has recovered. The slogan of the recovery from the earthquake was “Fukko (Reconstruction),” which meant to restore the damaged cities of Hyogo prefecture (including Kobe) so that they are not just the way they were, but even better, to be leading cities in the 21st century. The recovery of Kobe is the focus of this chapter. The recovery of Kobe can be classified roughly into four categories: infrastructure recovery, housing recovery, industrial recovery, and recovery of livelihood. The features of this recovery includes a number of key factors, such as public consensus, planning, and community development. Large-scale construction projects were implemented to achieve this recovery. At the same time, the victims’ livelihoods and mental states were negatively affected by the disaster, and local governments took measures to solve those problems.

15.2 Damages

15.2.1 Physical Damage

Hanshin-Awaji Earthquake was the first major earthquake to occur in close proximity to a large Japanese city since the end of World War II, and severe seismic activity was recorded in the densely populated Hyogo prefecture. The epicenter was in the Awaji Strait between Awaji Island and Kobe, and the hypocenter was an active fault located 16 km below the Earth’s crust. The magnitude of the earthquake, which describes the extent of destruction at the focal point, was 7.3. On the Japan Meteorological Agency (JMA) scale of seismic intensity, which quantifies the severity of the tremors felt on the Earth’s surface, the maximum intensity level was 7, which is the largest. The distribution of area with a seismic intensity level of 7 spread from Awaji Island, where the epicenter was located, Takarazuka City to the east (as shown in Figure 15.1).
The damages caused by the earthquake were tremendous (Table 15.1 and Table 15.2) and economic loss was approximately 10 trillion yen. In total, 6437 persons were killed or missing, and 4573 of them were caused in Kobe, respectively. More than 40,000 people were injured in Hyogo prefecture, approximately 35% of which lived in Kobe. Many houses were destroyed in Kobe, and Nagata and Higashinada ward in particular suffered serious damage. Many of destructed houses were wooden structure and built under the building standard before 1981 revision (Murosaki, 1998).

Lifelines and urban infrastructure, such as expressways, railways, subways, waterworks/sewage works, gas/power supplies, and communications were also seriously damaged. This damage severely disrupted escape and rescue activities and increased human suffering. It also affected people’s lives during the recovery phase for almost a year after the event. Damage to critical facilities, such as hospitals, schools, or government offices, also affected rescue, relief, and response services after the disaster.

Table 15.1 Damage to Persons from the Hanshin-Awaji Earthquake

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Hyogo Prefecture</th>
<th>Kobe City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dead</td>
<td>6434</td>
<td>6402</td>
<td>4571</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Injured</td>
<td>43,792</td>
<td>40,092</td>
<td>14,678</td>
</tr>
</tbody>
</table>

Note: The number of dead includes seven suicides.

Source: Figures come from the Hyogo Prefectural Government as of December 27, 2006. Figures of total and Kobe are from the city of Kobe as of January 1, 2007, and the Fire and Disaster Management Agency as of May 19, 2006, respectively.
Population Changes After the Earthquake

Influences of the Hanshin-Awaji earthquake disaster can be seen in the migration of people from each ward (Figure 15.2). After the earthquake, the population of the most heavily affected areas decreased significantly as victims who lost their houses left those areas to move into temporary housing, relatives’ houses, or private rentals. The populations of Higashinada, Nada, and Chuo wards have returned to, or even exceeded, the level before the earthquake, while those of the Nagata, Hyogo, and Suma wards have not. Now, the center of gravity of Kobe is shifting toward the east side, closer to Osaka. Although those changes were not just due to the earthquake, the earthquake accelerated the population decline in these areas. The decrease of population in the western part of Kobe also affected the local commercial sector, with the shopping streets in Nagata ward experiencing a decrease in sales.

Recovery Planning

15.3.1 Comprehensive Recovery Plan

The city of Kobe established the Headquarters for Reconstruction and organized the Committee for Recovery Planning in three weeks. By the end of March the Committee issued the “Kobe Recovery Guidelines”, which was followed by the “Kobe Recovery Plan”. About three months after the earthquake, Kobe City Recovery Planning Council was organized with three subcommittees (Citizens’ Life, City Vibrancy, and Safe City) to discuss about the recovery plan, and “Kobe Recovery Plan” was issued in the end of June (Kobe City, 2011). This plan does not include physical or spatial aspects, but rather visions, concepts or policies.

The plan consisted of basic concept for recovery, recovery plans classified by goal, resilient city development plans, urban area recovery plans, symbolic projects, and

Table 15.2 Housing Damages from the Hanshin-Awaji Earthquake

<table>
<thead>
<tr>
<th>Ward</th>
<th>Destroyed</th>
<th>Habitable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higashinada</td>
<td>16,174</td>
<td>48,845</td>
<td>65,019</td>
</tr>
<tr>
<td>Nada</td>
<td>10,050</td>
<td>33,280</td>
<td>43,330</td>
</tr>
<tr>
<td>Chuo</td>
<td>5964</td>
<td>38,271</td>
<td>44,235</td>
</tr>
<tr>
<td>Hyogo</td>
<td>7984</td>
<td>30,237</td>
<td>38,221</td>
</tr>
<tr>
<td>Nagata</td>
<td>23,301</td>
<td>36,186</td>
<td>59,487</td>
</tr>
<tr>
<td>Suma</td>
<td>10,761</td>
<td>52,032</td>
<td>62,793</td>
</tr>
<tr>
<td>Subtotal</td>
<td>74,234</td>
<td>238,851</td>
<td>313,085</td>
</tr>
<tr>
<td>Tarumi</td>
<td>3094</td>
<td>81,847</td>
<td>84,941</td>
</tr>
<tr>
<td>Kita</td>
<td>922</td>
<td>61,002</td>
<td>61,924</td>
</tr>
<tr>
<td>Nishi</td>
<td>1033</td>
<td>63,750</td>
<td>64,783</td>
</tr>
<tr>
<td>Citywide Total</td>
<td>79,283</td>
<td>445,450</td>
<td>524,733</td>
</tr>
</tbody>
</table>

Source: Kobe City (2011)
implementation programs. Kobe Recovery Plan was developed in consideration of relationship with existing spatial plans or construction plans for the city and wards (Kobe City, 2011).

However, Kobe Recovery Plan was not developed as upper-level plan of city master plans, district plans or construction project plans, but as the regional plan from the long-term perspective (Kobe City, 2011).

The relationship among plans related to the recovery of Kobe is shown in Figure 15.3.

### 15.3.2 Recovery Plan Factors

In promoting the recovery of Kobe after the earthquake, six factors were involved: reconstruction of infrastructure, revitalization of economy, support for small business, housing recovery urban planning and recovery of livelihoods (Figure 15.4).
Figure 15.3 Relationship of related plans. 
Source: Kobe City (2011).

Figure 15.4 Factors related to the recovery of a resilient city.
Those factors work together to achieve a disaster-safe city. Restoration of infrastructure is essential for the restoration and recovery of other factors. Urban planning and housing reconstruction following infrastructure restoration provide victims with space to live in. Revitalization of Kobe’s economy, as well as of small and medium-sized companies, are important for the livelihood of disaster victims, which in turn affect the recovery of the city’s overall livelihood.

15.4 Two-Stage Planning Process for Reconstruction of the City

Apart from “Kobe Recovery Plan”, plans to reconstruct the city physically were needed to be developed. Developments in the disaster-stricken area were restricted by law for two months after the earthquake. It was required to develop a reconstruction plan to be approved during two months, which became constraint to complete the procedure if the city tried to obtain the consensus of residents. In order to proceed the planning process in the limited time, a two-stage city planning process was adopted to implement the reconstruction projects. In the first stage, Kobe City designated a 5-ha area to be reconstructed and determined the method of implementing projects and important urban facilities to make vulnerable areas earthquake resistant. The plan was passed on March 16. It is a framework for the detailed plan developed in the second stage. Table 15.3 shows the details of those projects, which involve land readjustment and redevelopment. Figure 15.5 shows the locations of those project areas.

Afterward, the Community Development Council was established with the participation of residents in the heavily disaster-stricken area with the assistance of consultants. The Council developed the vision for recovery of the city and proposed to the city of Kobe. Then, Kobe city developed a detailed plan based on the vision, with the locations of roads, parks, and urban facilities based on the proposal (the vision) prepared by the Council. It was the second stage of the planning process. Detail of each stage is explained in the following sections.

15.5 City Restoration by Urban Planning Measures

15.5.1 Regional Framework for City Restoration

Urban planning projects were implemented by the city of Kobe for restoration purposes. The Emergency Earthquake Reconstruction Ordinance was passed just a month after the earthquake. This law designated Disaster Restoration Promotion Districts and Priority Restoration Districts to promote supply of housing and improvement of urban areas (Figure 15.5). The area of those districts (between Suma and Higashinada wards) was approximately 5887 ha. Then, Priority Restoration Districts within the Disaster Restoration Promotion Districts (24 locations occupying a total area of 1225 ha) were created to promote projects to restore infrastructure, regenerate urban areas,
<table>
<thead>
<tr>
<th>Names</th>
<th>Moriminami</th>
<th>Rokkomichi Station West</th>
<th>Matsumoto</th>
<th>Misuga</th>
<th>Shin-Nagata, Takatori</th>
<th>Rokkomichi South</th>
<th>Shin-Nagata Station South</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area (ha)</td>
<td>16.7</td>
<td>19.7</td>
<td>8.9</td>
<td>10.1</td>
<td>69.2</td>
<td>5.9</td>
<td>20</td>
</tr>
<tr>
<td>Damage ratio</td>
<td>66</td>
<td>68</td>
<td>81</td>
<td>88</td>
<td>86</td>
<td>65</td>
<td>83</td>
</tr>
</tbody>
</table>

Source: Kobe City (2011).
and supply housing on March 17. It was said that political discretion influenced how the districts were drawn, as some areas had urban problems, such as inner-city problems (Inner city problem is caused by the degradation of the urban environment which results in the decrease of population worsens the city management) and lower quality of infrastructure.

### 15.5.2 Projects for City Restoration

#### 15.5.2.1 City Planning Projects for Recovery

Regarding city planning projects related to disaster restoration in Kobe, seven districts (five for land readjustment projects and two for urban redevelopment) were designated for advance implementation in the context of a major project for public-led urban restoration. In the process of making the city planning decisions, Kobe adopted a two-stage planning process for land readjustment projects; the first stage concerned zoning (areas where projects were to be implemented and areas to be designated as disaster-hit urban renewal promotion districts), and the second stage concerned planning decision making for core city facilities (city streets and neighboring parks). Regarding urban redevelopment projects, some of the plans were revised in the process of implementation based on suggestions and proposals by Community Development Councils.

Other disaster restoration–related city planning projects were also implemented in Sannomiya District (5 sites, occupying 70.6 ha), and improvement projects for city roads (10 routes in 13 districts, including the Yamate Kansen Morikita District).

*Figure 15.5* Designation of disaster restoration promotion districts and priority restoration districts.

*Source: Kobe City (2011).*
15.5.2.2 Housing Projects

Schemes for urban renewal included projects for residential area development based on the Residential Areas Improvement Act in four districts (5.48 ha in total): Toga (0.82 ha), Bancho-4 (1.27 ha), Bancho-5 (3.14 ha), and Higashikawasaki 7-chome (0.25 ha). Also, optional projects not covered by legal systems, which are Urban Residential Area Comprehensive Improvement Projects and Densely Built-up Residential Area Improvement Promotion Projects were implemented with housing programs, lot procurement, construction, and rent subsidies for public and semipublic housing, and improvement of related public facilities. Eight districts were designated for Urban Residential Area Comprehensive Improvement Projects as follows: Rokko (296.7 ha), areas around the New Eastern City Center (168.1 ha), areas around Kobe Station (58.0 ha), areas around Matsumoto (22.4 ha), the area south of Hyogo Station (35.6 ha), Misuga (29.1 ha), Shinyo (8.2 ha), and Shin-Nagata (224.0 ha). Nine districts (508.9 ha in total) were designated as Densely Built-Up Residential Area Improvement Promotion Project Districts: Fukae (49.1 ha), Harada-Iwaya (86.9 ha), Miyamoto-Azuma (98.9 ha), Nishide-Higashide- Higashikawasaki (22.6 ha), Hamayama (25.0 ha), Northern Shiriike (25.0 ha), Mano (39.0 ha), Southern Nagata (63.2 ha), and Eastern Tarumi (99.2 ha).

15.5.2.3 Other Projects

Focused on supporting private housing reconstruction, the urban renewal projects for nonpriority areas were implemented. Along with the promotion of joint housing projects using voluntary projects, such as the Improvement Projects to Provide Better Buildings, various subsidy and support systems were established. For example, the Road Improvement Type Group Reconstruction System was established to facilitate renewal plan preparation and subsidizing interest for housing fund loans and construction of private roads.

15.5.2.4 Example of a City Recovery Project

The Rokkomichi North district (16.1 ha) is located in the eastern part of Kobe. Before the earthquake, the district included both residential and neighborhood commercial establishments. After the earthquake damaged two-thirds of the district, it was reconstructed by utilizing a land readjustment project (Figure 15.6).

The land readjustment project was designed to improve the living environment and effective use of the land in urban areas by constructing necessary infrastructure and public facilities such as roads and parks. It required individual landowners to provide some portion of their lands for constructing roads and parks as the value of the land will be increased by the land readjustment project (Figure 15.7).

15.6 Community Development in Machidukuri

Under the Kobe Community Development Ordinance (enacted in December 1981), if any Community Development Council is certified as a civic organization by the
Figure 15.6  (a) Rokkomichi North project plan; (b) the undamaged area near Rokkomichi North district before the earthquake; (c) the reconstructed area in Rokkomichi North district after the earthquake.


Figure 15.7  Land readjustment process.
municipality, it will be entitled to make a proposal for community development to the mayor. If they reach an agreement, they will enter into a community development agreement. The ordinance has supported partnerships between residents and administration for the community development.

On that basis, including Councils established before the earthquake there were more than one hundred Councils in Kobe after the earthquake. In districts where community development activities were in place even before the earthquake, civic recovery activities immediately started after the earthquake in the hope of creating a stable future for these areas. In case of emergency, their daily activities (not just knowledge, but culture) play a major role.

The process is as follows: First, residents who intend to solve problems related to living environment and improve them establish a Community Development Council. A draft plan developed through the discussion at the Council is made public to the community to ask for opinions of residents. Then, the draft plan is revised and asked for opinions, which is repeated until the proposal is finalized. The proposal is submitted to the mayor. Once the city of Kobe accepts the proposal, the residents work on community development through mutual understanding of their roles and partnerships.

15.6.1 Participation of Residents in the Recovery Process

The second stage is the image, vision and detail planning following the approved plan developed in the first stage by the city. This process is proceeded with the participation of residents centering Community Development Council. To support the participation of residents in the planning process, an on-site consultation office was set up near the project site so that citizens could have discussed with city officials. Then, if the Council asked, consultants and experts were dispatched to the Council to work with (Figure 15.8).

In the beginning of the second stage of two-stage planning process, Kobe City faced protests of residents against the plan developed by the city in the first stage, and could not obtain their cooperation (Nakayama, 2011). It was not easy to convince residents of disaster affected areas to establish the Community Development Council, but as the time passed and debris had demolished, the attitude of residents had became changed to be positive to participate in planning (Nakayama, 2011).

Residents of the planned project site participated in the Council voluntarily to discuss about the image and detail of the reconstruction plans. Experts supported their discussion providing professional knowledge about laws and regulations related to land, planning and developments. The proposal was developed through the discussions in the Council to be submitted as explained earlier.

Community Development Council was a vehicle for residents to negotiate about the future of the community. It provides residents to give their opinions in formulating the development images of the community and detail designs in the proposal.

15.7 Housing Recovery

Approximately 82,000 housing units were damaged in the Hanshin Awaji earthquake. Many of those damaged houses were wooden older houses built under the old building
code and relatively low earthquake resistant. Moreover, in the densely built-up areas with old small wooden houses, the fire after the earthquake spread to burn down many houses. After victims lost their houses (completely damaged or half collapsed), they restart living from shelters. Then, temporary housing are prepared for victims a few months after the earthquake at the earliest. It took a few years or more until victims are settled in permanent housing finally. There are three alternatives for permanent housing: rebuilding individual housing, entering public housing, or renting private housing units. The housing recovery process is illustrated in Figure 15.9.

To promote housing recovery and restoration, the Kobe City Emergency Three-Year Plan for Housing Reconstruction was formulated in July 1995. Within a framework for housing supply volume, a three-year target was set at establishing 82,000 housing units, which included at least 10,000 units then under construction, so the actual target number of newly constructed housing units was 72,000 units (Table 15.4). This overall volume of new housing was comparable to the numerical target of 79,000 units for Kobe’s Five-Year Plan for Phase 6 (1991–1995).

15.7.1 Public Housing

Disaster restoration public housing for earthquake disaster victims is a type of housing supplied by local municipalities, with national grants, for renting to low-income residents whose houses were damaged by disasters such as earthquakes. There are three types of public housing; (a) constructed by Kobe City or Hyogo Prefecture,
Figure 15.9 Housing reconstruction process. 
*Source:* Revised figures of Kobe City (2011).

Table 15.4 Number of Housing Units to Be Rebuilt in the Three-Year Plan

<table>
<thead>
<tr>
<th>Housing Type</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public housing</td>
<td></td>
</tr>
<tr>
<td>City of Kobe</td>
<td>10,500</td>
</tr>
<tr>
<td>Hyogo Prefecture</td>
<td>5,500</td>
</tr>
<tr>
<td>Specially designated high-quality rental housing</td>
<td></td>
</tr>
<tr>
<td>City of Kobe</td>
<td>5,700</td>
</tr>
<tr>
<td>Hyogo Prefecture</td>
<td>1,200</td>
</tr>
<tr>
<td>Redevelopment housing</td>
<td>4,000</td>
</tr>
<tr>
<td>Public corporation housing</td>
<td></td>
</tr>
<tr>
<td>Urban Development Corporation</td>
<td>10,500</td>
</tr>
<tr>
<td>Kobe City Housing Supply Corporation</td>
<td>2,000</td>
</tr>
<tr>
<td>Hyogo Prefectual Housing Corporation</td>
<td>1,000</td>
</tr>
<tr>
<td>Private housing units (with public grants)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31,600</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>72,000</strong></td>
</tr>
</tbody>
</table>

*Source:* Kobe City (2011).
(b) subsidized the room-rent of privately rented housing by the government, or (c) constructed for people who sold lands for the projects. Public housing are all apartment houses and not single-family detached house. Public housing specially designed for elderly people were also built. In registration of tenants, elderly and disabled were yielded precedence. Also, if requested, residents (victims) in the same community were able to move in public housing together.

15.7.2 Housing Supply Supported by Government

As a support for middle income victims who cannot afford to reconstruct their own houses, affordable housing were supplied. For example, government supported to construct subsidized rental apartments with high quality. Public corporations also constructed apartments or condominiums to supply housing for middle income households.

15.7.3 Assistance in the Reconstruction of Privately Owned Houses

In constructing their own houses, victims faced various kinds of problems, such as lack of funds, boundaries with next door, lack of knowledge about assistance programs and so on. In particular, lack of funds became serious problem. In addition, quite a few victims had housing loan, thus, if they rent money to reconstruct their houses, they would suffer from double loan. In order to support victims to reconstruct their houses, government provided low interest financing or paying money equivalent to interest of housing loans. To support victims whose lands are too small to reconstruct houses, government recommended to reconstruct a condominium together with other victims and subsidized it. Many of these programs were implemented utilizing recovery funds which were provided by the national government as special grants.

15.7.4 Evaluation of Housing Reconstruction Programs

The most important mission for the city of Kobe and Hyogo prefecture was to supply enough housing as soon as possible to victims who lost their housing to the disaster. There were many advanced policies and programs implemented for housing recovery by Kobe and Hyogo prefecture after the earthquake. Four points are discussed in this section.

First, approximately 40,000 public housing units were supplied eventually, which after 20 years have become a problem for both the city and Hyogo prefecture. The large stock of public housing is a serious issue in terms of management of housing supply, as Murosaki (2013) has pointed out, and Kobe and Hyogo prefecture need to deal with this in the long term.

Second, financial support to supply for housing loan interest was effective for victims who reconstructed their own houses as the interest rate was higher back in twenty years ago than now. This program is applied to victims of Great East Japan Earthquake, however, it is not so effective as the time of Hanshin Awaji Earthquake.

Third, a recovery fund plays a key role in the implementation of various housing recovery programs that were not institutionalized. In the recovery from Niigata Chuetsu earthquake in 2004, the recovery fund was utilized, but it was not with the Great East Japan
earthquake, which occurred off the Pacific coast of Tōhoku in 2011. In order to make the best use of the recovery fund system, institutionalization is considered necessary.

Finally, local governments made efforts to place residents from the same regional community before the earthquake as a group in the same public housing complex, so that the community members could be together. This was a reflection of the dissatisfaction caused by placing victims into temporary housing without consideration of the communities they were part of.

15.8   Recovery of Livelihood of Victims
15.8.1   Policies and Programs
In order to focus more on alleviating the impact of disasters on victims’ lives, the city of Kobe and Hyogo prefecture developed programs to help victims recover their livelihoods two years after the earthquake. In the plan developed by the city of Kobe, health care, jobs, and housing were important elements of the recovery of livelihoods. Meanwhile, Hyogo prefecture emphasized the importance of community development, mental care, and the elderly. A recovery fund was set up by the city and prefecture, with the assistance of the central government, to provide victims with grants to support their lives and financial assistance to rebuild their houses, as well as implement various other assistance programs.

15.8.2   Support for the Elderly and Disabled
As postdisaster public housing were occupied mainly by elderly people, it was significant to promote their health and independence of living. In order to cater to aging residents of public housing, Hyogo prefecture assigned caseworkers to look after the interests of elderly people and set up spaces to support their independence in the community. It also operated programs to support community development.

15.8.3   Support for Community Activities and Community Development
Quite a few victims were settled in public housings which are located in places apart from where they used to live. Through those projects, migration of population took place, and so the members of the communities changed. Therefore, it was necessary to redevelop or establish community ties. For example, the city of Hyogo placed regional welfare coordinators in each district to support community development by working with careworkers and regional organizations.

15.9   Industrial Recovery
The biggest impact on the economy of Kobe was caused by damages to Kobe harbor, which is one of the important harbors in Japan and fifth biggest port in the world
in terms of the amount of freight handling. After the occurrence of earthquake, it decreased dramatically, and has continued to decrease to drop to the 50th in the world. Although the port of Kobe has been recovered physically, it has not recovered economically.

Small scale business in Kobe also suffered. There were many small-scale chemical shoes manufacturing factories in the Nagata ward of Kobe. Due to heavy damage from the earthquake coupled with economic depression, chemical shoes manufacturing industry of Kobe was devastated. The retail sector also suffered because of the decrease of population in the affected area. Shopping streets were damaged physically by the earthquake and lost their customers as well.

In order to assist and revitalize the city’s small businesses and shopping streets, local governments provided financial support and provided spaces where businesses could reopen. Nowadays, local governments provide financial assistance to either restore small businesses or start up new ones. For the revitalization of shopping streets, support for area development or planning events is also provided.

In order to revitalize the city, Kobe City and Hyogo Prefecture proposed the plans to develop enterprise zones or international economic hubs. Special districts are determined to promote specific industries or business by exemption of taxes. Five districts are determined to be enterprise zones and two districts are determined to be international economic zone to promote functions to support life and culture, information technologies, global activities, large-scale retailers, logistics, medical industry, environmental-related industry, innovative technologies and aerial industry.

15.10 Conclusions

Advanced efforts have been made by the city of Kobe and Hyogo Prefecture in the recovery process after the tragic Hanshin Awaji earthquake. Many programs to assist victims to reconstruct their houses and livelihoods and revitalize business sectors and economic activities were created, and recovery was achieved, with the goal of making cities more resilient. The effectiveness of the innovative programs to promote recovery have been reflected in the recovery that took place after the Niigata Chuetsu earthquake and the Great East Japan Earthquake, two disasters that have occurred since.

One of the features of these recovery programs was recovery funds that enabled Kobe City and Hyogo prefecture to help their residents. Although it is a powerful tool but the framework for the operation needs to be considered to institutionalize it. Another feature of the recovery of Kobe is that funds were granted to victims to help them to recover their livelihoods. Hyogo prefecture passed a Natural Disaster Victims Relief Law, which ensured the provision of grants, but note that it was not applied to victims of the Hanshin Awaji earthquake. It was used to help victims of the Niigata Chuetsu earthquake in 2004, however.

The recovery after the Hanshin Awaji earthquake was designed to make the damaged city of Kobe more resilient and sustainable than it was before the earthquake. Although Kobe has achieved this recovery, it is also burdened with social, economic, and financial issues whose resolution also may hold lessons for the future.
References


