Response Experiences in 1995 Kobe Earthquake and Recovery Experiences of Kobe City

Submitted by: Japan
Response Experiences in 1995 Kobe Earthquake
- and recovery experiences of Kobe city -

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UNCRD (United Nations Centre for Regional Development)
UN / DESA (UN Department of Economic and Social Affairs)
1. Damages of the Great Hanshin-Awaji (Kobe) Earthquake

(January 17, 1995) Magnitude 7.3

- Date: 5:46 a.m. January 17, 1995
- Depth: 16 kilometers below the earth’s surface
- Force: 7.3 on the Richter scale
- Ground motion: Vertical and horizontal shaking occurred simultaneously
Kobe, damaged by the Great Hanshin-Awaji Earthquake (1995)

**Damages of Kobe Earthquake (Total, Hyogo and Kobe)**

<table>
<thead>
<tr>
<th>Human (person)</th>
<th>Total (incl. Osaka)</th>
<th>Hyogo pref.</th>
<th>Kobe city</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dead</td>
<td>6,434</td>
<td>6,401</td>
<td>4,571</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>
<tr>
<td>Evacuees (peak)</td>
<td>320,000</td>
<td>316,678</td>
<td>236,899</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Houses (building)</th>
<th>Total collapsed</th>
<th>Partially collapsed</th>
<th>Totally collapsed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(families)</td>
<td></td>
<td>(families)</td>
</tr>
<tr>
<td></td>
<td>(191,617)</td>
<td></td>
<td>(186,175)</td>
</tr>
<tr>
<td></td>
<td>111,123</td>
<td></td>
<td>104,906</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>67,421</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>( ~ )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emergency Response (building)</th>
<th>Publicly Dismantled Houses</th>
<th>Total (136,730)</th>
<th>Temporarily Dismantled Houses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>108,672</td>
<td>87,289</td>
<td>61,392</td>
</tr>
</tbody>
</table>

Destroyed or burned buildings

Road closed by a collapsed building
Building 2 of City Hall, showing the crushed 6th floor

Traffic Congestion, just after the quake
Too many cars...
Port Facility

Damage to infrastructure (Roads, Express way)
2. Emergency Responses

- Rescue activity
- Medical Services
- Evacuation Center (Temporary Shelter)
- Water and Food Delivery
- Temporary housing
  and any other supports are required…
**Evacuees**

599 shelters were operating as of Jan. 26, ’95 (peak)
236,899 persons used shelter services on Jan. 24, ‘95 (peak)
222,127 evacuees were living in shelters as of Jan. 18, ’95

**Rescue operations**

were performed by neighboring people
Emergency Water Supply

Tank Delivery ⇒ Pipe supply

Volunteers more than 1.20 million (person-day)
Various activities in Evacuation Shelters
**Temporary Housing**
32,346 units constructed
March, 1995 → December, 1999 (Closed)

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**Kobe City Restoration Plan Formulation Process**

- **Jan. 17, 1995**: Great Hanshin-Awaji Earthquake
- **Jan. 26**: Earthquake Restoration Head Office established
- **Feb. 7**: First meeting of the Committee for Restoration Planning (Subcommittees: Urban Infrastructure Subcommittee, Citizens’ Affairs Subcommittee, Safe City Standards Subcommittee)
- **Mar. 27**: Kobe City Restoration Plan Guidelines published
- **April 22**: First meeting of the Kobe Council for Restoration Planning (100 members) (Subcommittees: Citizens’ Affairs Subcommittee, Urban Revitalization Subcommittee, Safe City Subcommittee)
- **June 30**: Restoration Plan formulated
Necessity to Formulate Restoration Plan as Soon as Possible

→ Important to present citizens with a vision for the restoration process ASAP

→ Need to meet the national budget appropriations deadline (Essential to obtain financial support from the government because the damage was too extensive for the city to handle on its own)

⇒ Deadline: End of June 1995

Comprehensive Restoration Plan Consisting of Various Aspects

• Reconstruction of urban foundation (roads, lifeline, railway),
• Reconstruction of residential buildings,
• Land reallocation programs,
• Urban area redevelopment programs,
• Industrial restoration,
• Civic life restoration,
• Port restoration, and others
2-Stage Plan Formulation

1st stage
- Indicate a direction of restoration in a form of guidelines
- Discussion was held with a limited number of experts.
- A high-level proposal was issued as quickly as possible.

2nd stage
- Based on the guidelines, details of the plan were discussed.
- Discussion members were selected from a wider range of fields (100-member committee)
- Select a symbol project which provided a framework of restoration

Subcommittees (each member other than Chairperson and Deputy Chairperson belongs to one of 3 subcommittees)

★Citizens' Affairs Subcommittee
  - Civic life, community planning through cooperation, disaster-proof living zone

★Urban Revitalization Subcommittee
  - Urban industry, attractiveness of Kobe, improvement of port and harbor, transportation network

★Safe City Standards Subcommittee
  - Ability to respond to disaster, lifelines, disaster-proof urban foundation, disaster-proof living zone

Meeting schedule
- Apr. 22: 1st council → each subcommittee → May 26: 2nd council
- → two sessions of each subcommittee → Jun. 26: 3rd council (discussion to develop a first draft of report)
Basic Themes of Restoration
1. Return the local people’s daily lives and the city’s infrastructure back to normal ASAP to facilitate fuller-scale restoration work.
2. Make the best of the lessons learned from the recent earthquake in order to build a disaster-proof city.
3. Build a welfare society that ensures secure and comfortable lives for all who live in it.
4. Revitalize the Kobe culture characterized by diversity and open-mindedness.
5. Create a city that ensures environmentally-friendly, sustainable development.
6. Revive and rebuild a cosmopolitan city that leads the world in the 21st century.
7. Rebuild the Port of Kobe quickly so that it can function as a “Mother Port” in Asia.
8. Build a society where information networks play an important role.
9. Work together to create our communities.
10. Support volunteer activities and facilitate the network of cooperation among volunteer groups scattered over broad area.
11. Hand down for posterity the lessons learned from the natural disasters that hit Kobe and contribute our know-how to global disaster prevention efforts.

Goals of the Community Restoration Plan
The damage wrought by the earthquake touched almost every aspect of daily life. For this reason, in the process of restoration, we must strive to build a city where people can live, work, and study in safety, a city that is bursting with creative energy, and a city that is individualistic and attractive. Therefore, we set as our target the pursuit of these three themes while promoting close coordination among the city's residents, businesses, and government.
Kobe City Recovery Projects

Recovery of the city

Restoration of daily lives of the communities

Housing Recovery Projects

Urban Recovery Projects

Economic Revitalization Projects

Infrastructure Reconstruction Projects

Damages of the Great Hanshin-Awaji Earthquake

Municipal Recovery Houses (Public Housing)

Various methods for the rapid provision of public housing
- Constructed by Kobe City itself
- Purchased by Kobe City from UR Agency (UR: Urban Renaissance, former Housing Corporation) 7,000 units
- Leased by Kobe City from UR Agency /private sector 3,000 units

Recovery houses suitable for the disaster victims
- Small households for the elderly or singles who made up most of the disaster victims

<table>
<thead>
<tr>
<th>Type</th>
<th>Floor area</th>
<th>Ratio</th>
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<tbody>
<tr>
<td>1 DK</td>
<td>40 m²</td>
<td>20 %</td>
</tr>
<tr>
<td>2 DK</td>
<td>50 m²</td>
<td>40 %</td>
</tr>
<tr>
<td>3 DK</td>
<td>60 m²</td>
<td>30 %</td>
</tr>
<tr>
<td>4 DK</td>
<td>70 m²</td>
<td>10 %</td>
</tr>
</tbody>
</table>

HAT Kobe
Overview of Shin-Nagata area immediately after the earthquake (January 1995)

Overview of Shin-Nagata area after the implementation of the urban recovery projects (2005)
Lessons from the Earthquake (Kobe City)

1. The earthquake disaster reminded the citizens of the severity of nature;
2. Communities protect the lives of their own community members in case of emergency;
3. It is impossible to do something new in a devastated situation what the citizens do not carry out on a daily basis.

Lessons from the Recovery (Kobe City)

1. The meaning of recovery has been changing as the time passes;
2. Cross-sectional and flexible recovery is required;
3. Communities are crated by the autonomous efforts of individuals through daily partnerships and participation.

Gracias!
ありがとう
Thank you!