

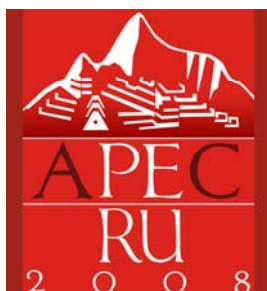


**Asia-Pacific
Economic Cooperation**

2008/SOM3/TFEP/SEM/014

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

Submitted by: Japan



**Emergency Management CEOs' Forum
Lima, Peru
12–14 August 2008**



12-14 Aug. 2008
Lima, PERU

Response Experiences in 1995 Kobe Earthquake

- and recovery experiences of Kobe city -

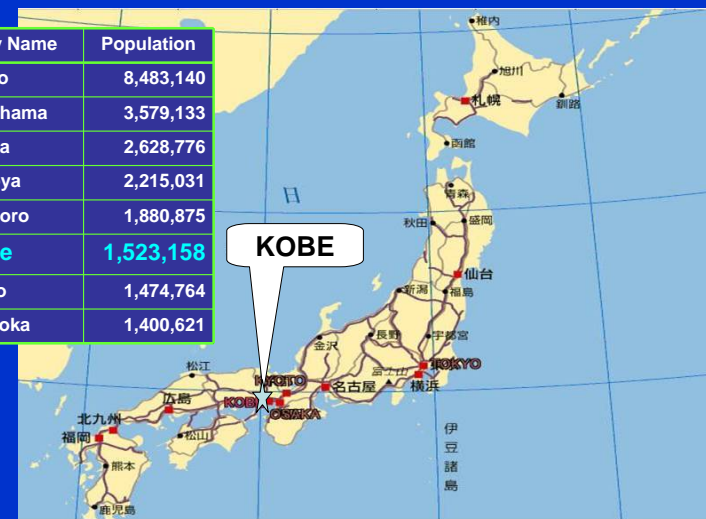
Shoichi Ando Dr.

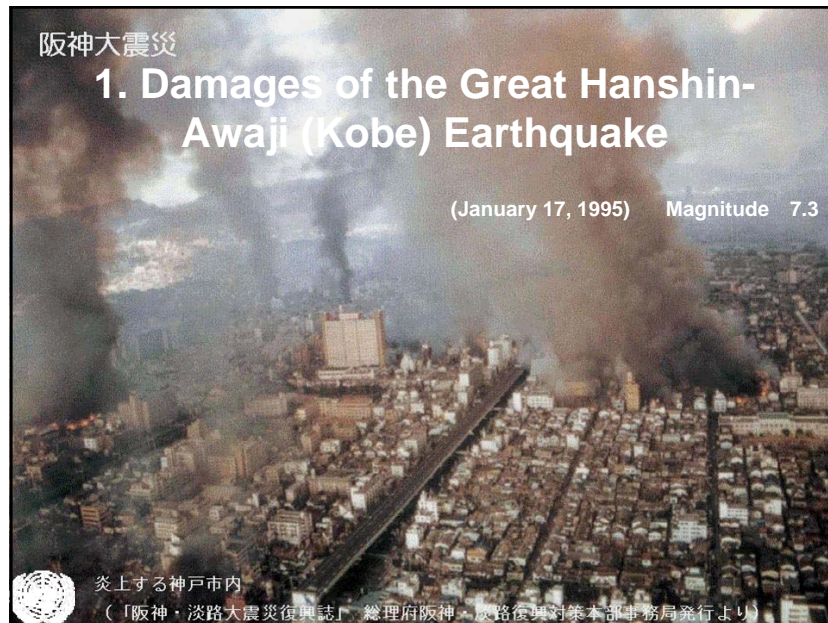
Coordinator

Disaster Management Planning Hyogo Office
UNCRD (United Nations Centre for Regional Development)
UN / DESA (UN Department of Economic and Social Affairs)

Kobe City

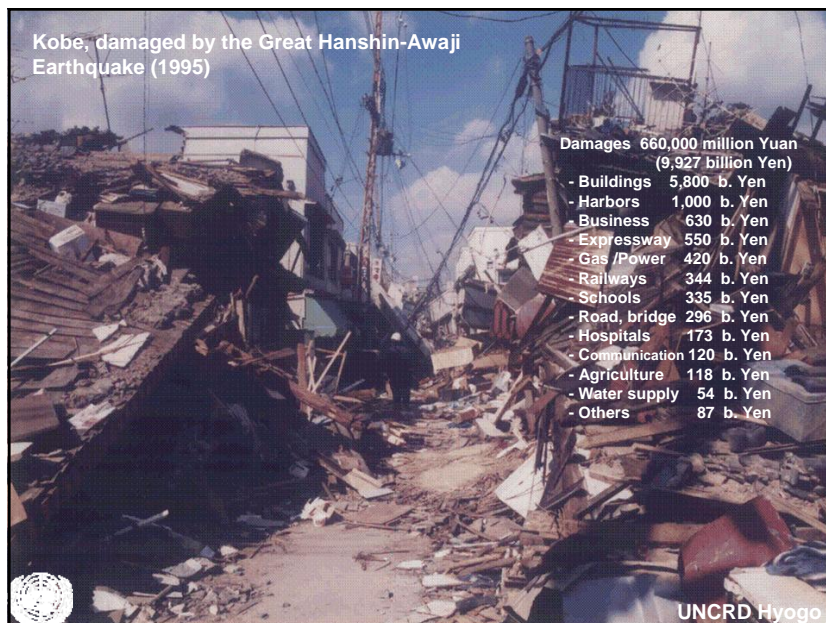
	City Name	Population
1	Tokyo	8,483,140
2	Yokohama	3,579,133
3	Osaka	2,628,776
4	Nagoya	2,215,031
5	Sapporo	1,880,875
6	Kobe	1,523,158
7	Kyoto	1,474,764
8	Fukuoka	1,400,621





Details of the Earthquake

- **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



Damages of Kobe Earthquake (Total, Hyogo and Kobe)				
Damages		Total (incl. Osaka)	Hyogo pref.	Kobe city
Human (person)	Dead	6,434	6,401	4,571
	Missing	3	3	2
	Injured	43,792	40,092	14,678
	Evacuees (peak)	320,000	316,678	236,899
Houses (building)	Totally collapsed (families)	111,123 (191,617)	104,906 (186,175)	67,421 (-)
	Partially collapsed	144,274	137,289	55,145
Emergency Response (building)	Publicly Dismantled Houses	108,672 (Total 136,730)	87,289	61,392
	Temporary Houses	49,800	48,300	32,346

Source : 2008.1.1 (Kobe city) <http://www.city.kobe.jp/cityoffice/06/013/report/index-e.html>
2006.5.19 (Total) http://www.bousai.go.jp/1info/kyoukun/hanshin_awaji/earthquake/index.html



Road closed by a collapsed building



Building 2 of City Hall, showing
the crushed 6th floor



Traffic Congestion, just after the quake



Port Facility



**Damage to
infrastructure
(Roads, Express way)**



Damage to infrastructure (Railways)



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**



Limit to time and volume



No limit to time and volume

Volunteers more than 1.20million (person-day)

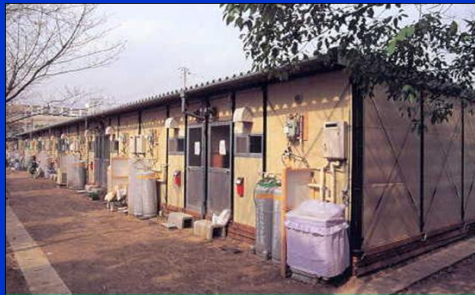
Various activities in Evacuation Shelters



Temporary Housing

32,346 units constructed

March, 1995 → December, 1999 (Closed)



3. Kobe City Restoration Plan

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

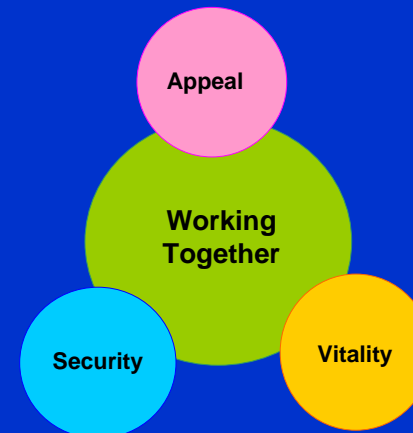
Apr. 22: 1st council →each subcommittee →May 26: 2nd council

→two sessions of each subcommittee → Jun. 26: 3rd council (discussion to develop a first draft of report)

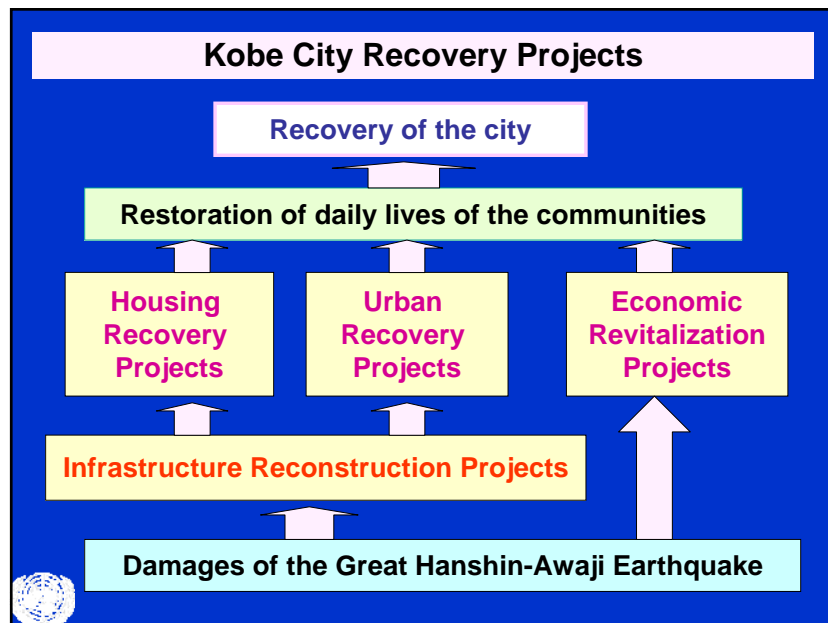
Basic Themes of Restoration

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.



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)
- Leased by Kobe City from UR Agency /private sector

} 7,000 units
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

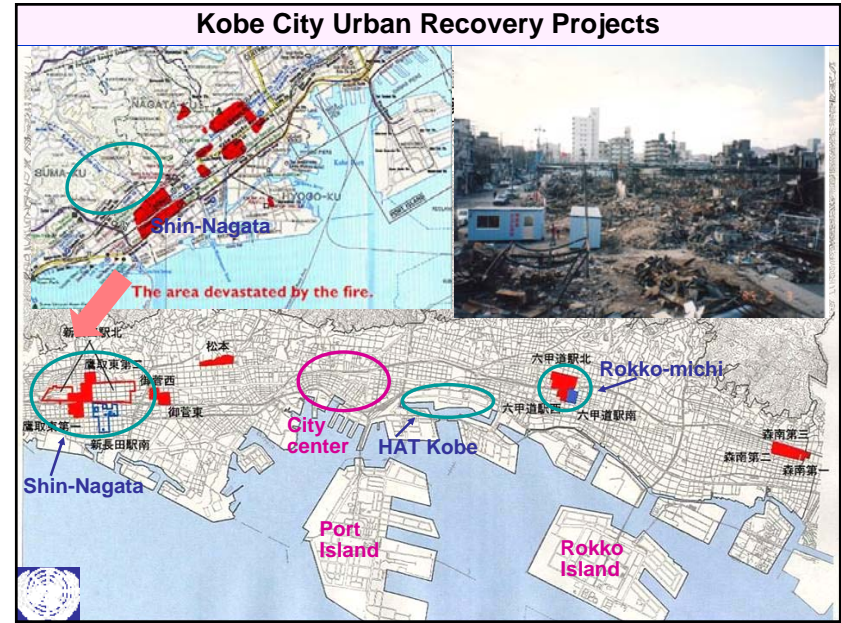
Type	Floor area	Ratio
1 DK	40 m ²	20 %
2 DK	50 m ²	40 %
3 DK	60 m ²	30 %
4 DK	70 m ²	10 %

HAT Kobe

Kobe City Urban Recovery Project (Example)

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 created by the autonomous efforts of individuals through daily partnerships and participation.



Gracias!
ありがとう
Thank you!