Recovery from the Great Hanshin-Awaji Earthquake and the Development of Safe Cities

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Noboru Shimizu
Manager, Planning,
Crisis Management Office,
Kobe City Government
The Great Hanshin-Awaji earthquake occurred on January 17, 1995, 5:46 am. M 7.3 (Seismic Intensity 7)
Damage on Urban Infrastructures (Residences / Buildings)

Fire in residential area (Suma Ward)
Damage on Urban Infrastructures (Railways /Expressway)

Collapse of Railways (Higashinada Ward)

Collapse of Hanshin Expressway (Higashinada Ward)
Collapse of the municipal office’s mid floors (Chuo-Ward)
Kobe City Recovery Plan

Recovery Plan Guidelines

Kobe City Recovery Plan

Sector-specific Plans
Objectives of Reconstruction
Urban Development

- Attraction
- Safety
- Vitality

Creating a “Safe City”
Post-earthquake Restoration Urban Development Project

Urban Planning in Two Stages

First stage:
Areas subject to land readjustment and the basic urban facilities (main roads and neighboring parks)

Second stage:
Neighborhood district roads and local parks
Establish a new water route in addition to waterline in Mt. Rokko.

System to activate an emergency stop valve

- Okuhirano Control Center
- Seismometer
- Telemeter slave station
- Reservoir equipped with emergency stop valve
- Reservoir connected to distribution network
- Connection pipe to distribution line
- Connection pipe to transmission line
- Inflow pipe
- Emergency stop valve
- Distribution pipe
- High-capacity transaction pipe
- Connection pipe to distribution line
- Connection pipe to transmission line
- High-capacity transaction pipe
- In-charge power generation facility
- Pump facility

Emergency water supply using emergency water taps

Filling fire engines and water tank trucks with water

High-capacity waterline
Kobe Biomedical Innovation Cluster

- **Formation of Japan’s first biomedical cluster**
  Establishment of a center of excellence for highly advanced medical technology on Kobe’s Port Island to attract healthcare-related industry

- **Promotion of translational research**
  Establishment of integrated process from basic research to clinical application and industrialization
  - R&D of medical devices
  - Support of clinical trials for pharmaceuticals
  - Clinical application of regenerative medicine

- **Objectives**
  - Creation of employment and revitalization of Kobe’s economy
  - Promotion of public health and welfare by providing advanced medicine
  - Contribution to the improvement of medical standard in Asia
Disaster-Safe Welfare Community - “BOKOMI”
191 BOKOMIs (mostly in elementary school districts)

- Maintenance and Support for DRR Equipments
- Guidance of Disaster Drills & Seminars

Disaster-Safe Welfare Community

DRR Activity
- Drills / Seminars
- Crime Prevention
- Activities
- Community Safety Plan Preparation etc.

Welfare Activity
- Friendship Visit
- Providing Meals to Elderly
- Housework Support etc.

Measure to support people who need assistance (Disabled, Elderly etc.), Combination of community DRR and welfare activities

- Consolidation of Regional Welfare Center
- Support for activities

- Fire Station
  - Volunteer fire Corps
  - Resident's Association
  - Business entities

- Ward Office
  - Women's Association
  - Eldery Association
  - Child Committees Member
  - PTA
  - Youth Association
  - Crime Prevention Association

Cooperation
Changes in the Population of Kobe

(10,000 persons)

92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13

Earthquake

1,424,000
National Census as of October 1, 1995

1,545,000
Estimated population as of November 1, 2011
The way Forward