

# Chapter 3 Creating a Disaster-Safe City

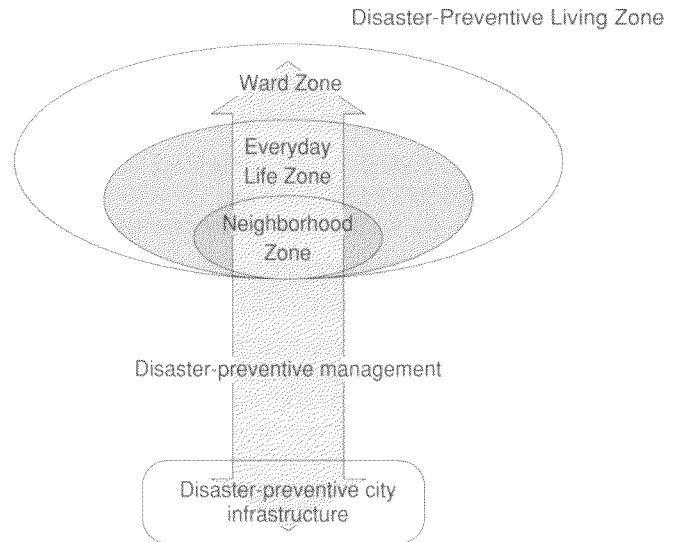
## Section 1 Basic Idea

### 1. Important Aspects in Creating a Safe City

- ① Create an independent living zone.
- ② Secure safety in case of disaster while providing for normal daily life
- ③ Divide up work tasks and foster close cooperation among citizens, businesses, and city government.

### 2. Systems for Providing a Safe City

- ① Disaster-preventive living zone  
We will promote the building of a safe city of three living zones, according to the spheres of life.
- ② Disaster-preventive city infrastructure  
We will construct a disaster-resistant infrastructure and build a city that can exercise disaster-preventive operations over extensive areas.
- ③ Disaster-preventive management  
We will be well prepared for disasters, and provide adequate systems that function appropriately in case of emergency



## Section 2 Disaster-Preventive Living Zone

### 1. Neighborhood Zone ("A zone where citizens take the initiative in securing an independent life")

#### Outline of the Plan

- (1) We will support an independent local lifestyle in which citizens take the initiative.
- (2) We will prepare local disaster prevention bases in cooperation with elementary schools, junior high schools, parks and other institutions
- (3) We will create communities according to regional characteristics, and create a safe and comfortable environment to live in.

#### Principal Measures

- Improve the ability to prevent disasters at the home, the office and in the region (Increase the awareness of citizens through disaster prevention manuals, rebuild the organization to exercise disaster-preventive operations voluntarily, create disaster prevention charts)
- Strengthen disaster-preventive functions of facilities that will serve as bases in the event of a disaster (Have better disaster-resistant municipal radios, install private electrical generators, strengthen the functions of welfare facilities to assist those in need of help)
- Make the best use of water in creating communities. (Utilize various water resources such as rain, wells, rivers.)
- Develop a safe and comfortable environment in which to live. (Develop community roads, systematically rearrange parks)
- Support activities to create disaster-resistant communities. (Prepare databases on information related to community creation, send specialists.)

### 2. Everyday Life Zone ("A zone that supports voluntary disaster prevention activities in neighborhood zones")

#### Outline of the Plan

- (1) We will carry out various aid activities by dividing the roles between the leaders of the regional activity groups and the municipality
- (2) We will prepare several disaster prevention supporting bases in each ward. They will serve as the bases for supporting disaster-preventive operations.

## Principal Measures

- Establish a system to enhance cooperation between citizens and the municipality. (Create a regional activity manual, hold events related to the creation of communities.)
- Train volunteer leaders and coordinate regional activities. (Provide training programs for leaders, train sports leaders, a civil rescue team.)
- Secure space to accommodate support such as personnel, supplies from outside. (Secure rooms for volunteers, rearrange parks.)
- Secure water, electricity and heat resources without depending on others. (Prepare private electrical generators, circulation-type earthquake-resistant water tanks.)
- Prepare systems for sharing information among city wards. (Create databases, prepare disaster-resistant municipal radios.)

### 3. Ward Zone (“A zone where the municipality takes the initiative to develop activities to prevent disasters”)

#### Outline of the Plan

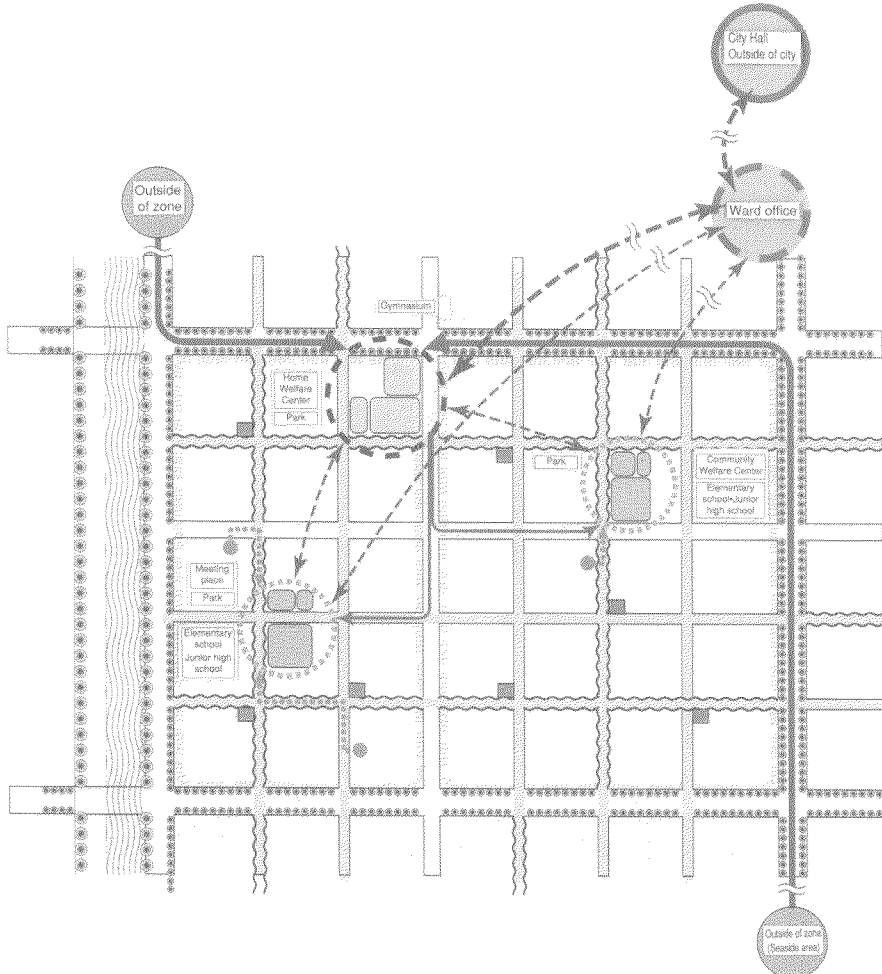
- (1) We will improve the ability of the ward zone to respond to disasters and to carry out disaster-preventive operations smoothly.
- (2) We will improve ward offices to serve as independent general disaster prevention bases.

#### Principal Measures

- Come up with disaster prevention plan for city wards. (Be aware of possible risks in an emergency by creating databases.)
- Improve the relay of information among disaster prevention bases. (Prepare databases, cooperate with radio stations, TV stations.)
- Secure facilities to function independently. (Prepare and utilize solar power generators, introduce cogeneration systems.)

#### Image of a Disaster-Preventive Living Zone

(See Multi-Colored Appendix)



Legend	
	Disaster prevention supporting base (Bases at the level of Everyday Life Zone)
	Local disaster prevention base (Bases at Neighborhood Zone)
	Evacuation, reception of supplies, collection of information
	Reception of supplies and volunteers
	Delivery of supplies
	Information-Communication
	Riverside green belt
	Roadside green belt
	Disaster-preventive green road (Mall)
	Park in the city zone
	Neighborhood Zone

## Section 3 Disaster-Preventive City Infrastructure

### 1. Preparation of Green Belts

#### Outline of the Plan

- (1) We will develop "Network of Water and Greenery," a comfortable space rich in nature that will serve as an evacuation route in case of disaster.

#### Principal Measures

- Develop a riverside green belt, roadside green belt, green belt at the foot of the mountain, and seaside green belt  
(Assign disaster-preventive rivers where citizens can gather in case of disaster, increase greenery on roadsides, utilize civil greening and other systems, promote harbor environment improvement projects )

### 2. Preparation of Disaster Prevention Bases

#### Outline of the Plan

- (1) We will systematically prepare disaster prevention bases such as the city hall, ward offices and other places
- (2) We will prepare bases to receive supplies and for evacuation over an extensive area.
- (3) We will strengthen the ability of the city to prevent disasters, including the adoption of safety measures for underground space and high-rise buildings











#### Principal Measures

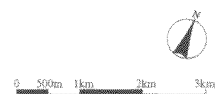
- Prepare central disaster prevention bases (city hall), general disaster prevention bases (ward offices), and disaster prevention supporting bases (several in a ward).
- Prepare parks and green areas, prepare access points to the sea (emergency mooring facility)
- Improve the wide-ranging evacuation plans, create disaster prevention manuals

#### Formation of green belts and disaster prevention bases

(See Multi-Colored Appendix)



Legend			
Disaster prevention supporting base (Everyday Life Zone level)		Riverside green belt	
		Roadside green belt	
General disaster prevention base (Ward level)		Green belt at the foot of the mountain	
Central disaster prevention base (City level)		Seaside green belt	
		Access from outside the zone	
By land		Green area, park, etc.	
		By sea	
		Access point to the sea	



### 3. Construction of an Urban Space with Extensive-Area Disaster Prevention Ability

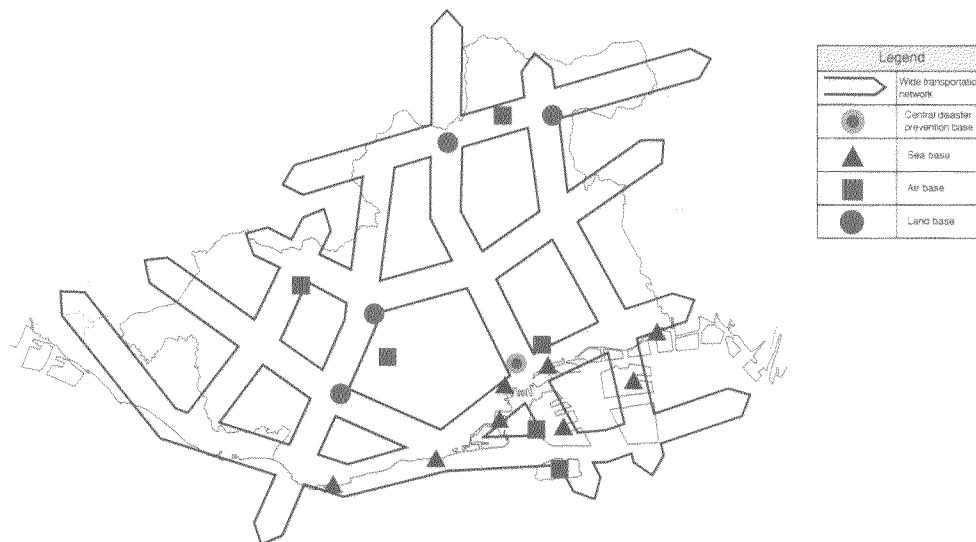
#### Outline of the Plan

- (1) We will prepare a wide transportation network, and pave the way for smooth disaster prevention operations
- (2) We will set up land, sea and air bases to prevent disasters, and exercise a variety of disaster prevention operations through cooperation

#### Principal Measures

- Build a checkerboard-patterned transportation network
- Set up sea bases to prevent disasters. (Prepare Port Island (second stage area), Kyobashi district, Hyogo Piers.)
- Set up air bases to prevent disasters. (Prepare Kobe Airport and designate an emergency heliport)
- Set up land bases to prevent disasters. (Prepare Kobe Comprehensive Sports Park, Akashi-Kaikyo National Park, and new Ohgo distribution base)

(See Multi-Colored Appendix)



### 4. Preparation of a Disaster-Resistant Network of Gas, Water, and Electricity Systems

#### Outline of the Plan

- (1) We will make disaster-resistant gas, water, and electricity systems, including such preparations as utility tunnels.
- (2) We will improve water services and the function of drainage ditches to prepare for disasters by making the pipelines earthquake-proof and securing alternatives.
- (3) We will promote the appropriate disposal of waste by preparing facilities with machines to crush waste into small pieces so that it will prolong the usage of disposal grounds for final treatment.
- (4) We will promote the utilization of solar energy and exhaust heat to lessen the burden on the environment and secure various new energy means.

#### Principal Measures

- Prepare utility tunnels (Kobe Yamate utility tunnel), and promote underground wiring (prepare electric utility tunnels)
- Ensure supply of drinking water in case of disaster (make pipelines earthquake-proof, secure a base to supply and distribute water, install large water pipes)
- Improve the drainage, garbage disposal facilities and make them earthquake-proof. Ensure alternatives (increase the number of independent main lines), use sea water, highly purified water
- Secure disposal grounds for final treatment, lessen the amount of waste, promote recycling (improve facilities with machines to crush waste into small pieces)
- Utilize the heat exhausted from the Clean Center (Garbage Burning Plant), natural energy (introduce solar power generators) and advance the plan of main line systems for heat supply

## Section 4 Disaster-Preventive Management

### 1. Better Preparation Against Disasters

#### Outline of the Plan

- (1) We will make disaster prevention plans for predicting a major disaster, and make them widely known to the public.
- (2) We will strengthen fire extinguishing capabilities to respond to fires breaking out at multiple places simultaneously.
- (3) We will improve the system to convey personnel and supplies in emergencies, cooperate more with medical institutions, and make a better emergency lifesaving system.
- (4) We will improve on the diversified information network in the city to ensure quick response and appropriate communication in case of emergency

#### Principal Measures

- Revise regional disaster prevention plans, collect information on the geological features and other information related to disaster prevention.
- Increase and improve the quality of fire fighters, fire engines, equipment, and secure water for various occasions of fire fighting.
- Strengthen the comprehensive fire-extinguishing assistance system. (Prepare assistance manuals )
- Maintain a perfect fire brigade. (In terms of organization, personnel, facilities, equipment)
- Strengthen the competence to deal with situations, in case of emergency, caused by a major disaster (Strengthen conveyance systems for emergencies, recheck manuals describing what to do in case of disaster )
- Maintain a perfect emergency lifesaving system. (Train paramedics, give lectures to citizens on emergencies (train civil paramedics).)
- Foster closer cooperation with medical institutions and fire departments. (Share information on the number of vacant beds, departments that can provide medical examinations and treatment )
- Introduce multiple communication methods and share information. (Introduce optical fibers, satellite circuits Create various kinds of databases.)

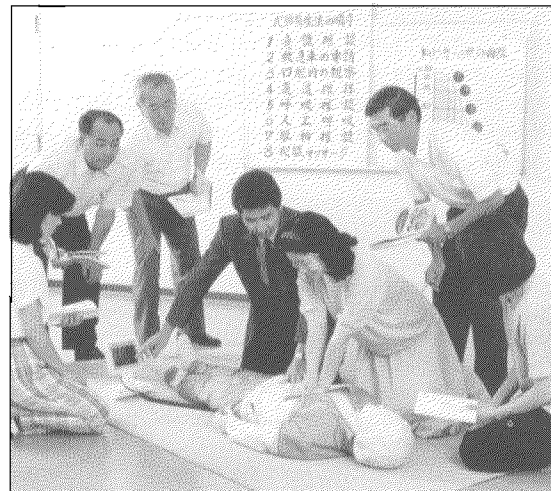
### 2. Strengthening the Ability to Respond to Emergencies Immediately after a Disaster

#### Outline of the Plan

- (1) We will grasp disaster information immediately and will offer emergency information.
- (2) We will promptly coordinate all regional cooperation efforts and a wide range of support to exercise quick disaster-preventive operations through the appropriate direction and supervision.

#### Principal Measures

- Maintain effective information collecting systems in the early stages of an emergency. (Utilize portable telephones, helicopters, and TV monitors.)
- Set up various ways to publicize information to citizens. (Support and promote local small-scale FM stations and small-scale local communication magazines, cooperate with local television stations.)
- Develop the ability to prevent disasters in the region promptly (Maintain a perfect fire brigade, train leaders on preventing disasters, cooperate closer with the Japanese Red Cross volunteer group and others )
- Solidify cooperation with other cities and institutions. (Improve systems to receive support )



### 3. Improvement of Rescue and Restoration Operations

#### Outline of the Plan

- (1) We will improve the restoration of transportation and water, electricity and gas supplies to function smoothly. We will enhance the ability to respond comprehensively to disasters by cooperating with health, medical and welfare organizations.
- (2) We will have comprehensive cooperation with other cities and work in cooperation with volunteers and businesses.
- (3) We will prepare for secondary disasters, be better prepared to cope with situations and reinforce management systems for dangerous areas.

#### Principal Measures

- Establish management systems to temporarily deal with the problems of transportation and restoration. (Establish a system to immediately determine which roads to direct traffic and alternate routes, strongly publicize that people should refrain from driving cars.)
- Establish management systems to temporarily deal with the problems of water, electricity and gas supplies, and restoration (Share geographic information by using road construction arrangement systems.)
- Take good care of those in need of help after disasters (Share information on them while considering their privacy.)

### 4. Inheritance of the Experience of Disaster

#### Outline of the Plan

- (1) Never forgetting the lessons of this disaster, we will inherit this as our culture unique to the region and will set up a base to send the message to the world

#### Principal Measures

- Provide more disaster prevention education. (Promote disaster prevention education through lifetime study programs, and at elementary, junior and senior high schools.)
- Prepare bases for the inheritance of the disaster experience (Promote and construct the Earthquake Restoration Memorial Park and the Museum of Disaster Science.)
- Prepare facilities related to disaster prevention (Research on the construction of an Emergency Academy Center.)
- Hold events to inherit the experience of disaster (Set up Earthquake Day (tentative name) on Jan 17.)

