

**The Second United Nations Conference on Human Settlements  
(HABITAT II)  
National Report**

**March 1996**

**Japan's National Committee**

## Table of Contents

### PART I. INTRODUCTION

1. Compilation Procedures of the National Report
2. Members of Japan's National Committee

### PART II. PAST INITIATIVES REGARDING HUMAN SETTLEMENT PROBLEMS

1. Japan's National Land & Socioeconomic Trends
  - 1.1 Natural Features of the National Land
  - 1.2 Demographic Trends
  - 1.3 Socioeconomic Trends and Economic Planning
2. Background of Human Settlement Policies and National Land Policies
  - 2.1 Comprehensive National Development Plan
  - 2.2 Policies for Metropolitan Areas
  - 2.3 Regional Promotion Policies
  - 2.4 Land Policies
3. Initiatives on Human Settlement Problems since the First United Nations Conference on Human Settlements
  - 3.1 Support for the United Nations Center for Human Settlements
  - 3.2 Promotion of "International Year of Shelter for the Homeless (IYSH)" Projects
  - 3.3 Activities of NGOs, Academic Community, and Other Groups
4. Agenda 21 & Initiatives on the Global Strategy for Shelter to the Year 2000
  - 4.1 Agenda 21
  - 4.2 Global Strategy for Shelter to the Year 2000
5. Summary of Successful Cases
  - 5.1 Chiba City's Urban Development Using a Monorail (Structural Formation & Vitalization of Chiba City's Inner-City District)
  - 5.2 Large City Development of a Small Town (Type 1 City- District Redevelopment Project at Ushiku Station's West Exit Area)
  - 5.3 Rainwater Use at Sumida Ward, Tokyo
  - 5.4 Redevelopment of Hiroshima City's Dambara District
  - 5.5 Chiyo District as One Example of Fukuoka City's Residential Area Improvement Projects
  - 5.6 Residential Area Improvement Project in the Kitagata District: Disaster-Resistant Urban Development by Kitakyushu City
6. Initiatives in Priority Fields of Human Settlement Policies
  - 6.1 Improvement of Urban Areas
  - 6.2 Improvement of Rural Areas

### 6.3 Environmental Conservation

## PART III. NATIONAL ACTION PLANS

1. Basic Concepts of Forthcoming Human Settlement Policies
  - 1.1 New Comprehensive National Development Plan
  - 1.2 Policies for Metropolitan Areas
  - 1.3 Regional Promotion Policies
2. Disaster Prevention Initiatives Based on Experience Gained from the Great Hanshin-Awaji Earthquake
3. Field-Specific Goals and Action Plans for the Year 2000
  - 3.1 Housing
  - 3.2 Improvement of Urban Areas
  - 3.3 Urban Transportation
  - 3.4 Social Security (including Housing for the Elderly)
  - 3.5 Waste Disposal
  - 3.6 Waterworks Improvement
  - 3.7 Improvement of Rural Areas
  - 3.8 Environment
  - 3.9 Land
  - 3.10 Water Resources
  - 3.11 Disaster Prevention
4. Action Plan of Local Governments
5. Action Plan of NGOs and the Academic Community
6. Future Advancement of Human Settlement Policies

## PART IV. ACTION PLAN RELATED TO INTERNATIONAL COOPERATION

1. Support for the United Nations Center for Human Settlements
2. Financial Cooperation, Technical Cooperation, and Human Resources Development
  - 2.1 Basic Policies
  - 2.2 Priority Fields
  - 2.3 Human Resources Development

## **PART I. INTRODUCTION**

### **1. Compilation Procedures of the National Report**

This National Report has been compiled by Japan's National Committee consisting of ministries, national agencies, local governments, and NGOs concerned with human settlement problems (see Section 2 below). The National Committee members prepare drafts for this National Report in their respective fields of speciality, and exchange views among them for elaborating the integral National Report.

### **2. Members of Japan's National Committee**

Japan's National Committee was established in June 1995. It consists of 24 members : the Vice-Minister for Foreign Affairs as chairperson, 13 members of Director-General level representing ministries or national agencies, three heads of local governments, and seven members representing NGOs and the academics. The members are listed as follows.

#### **[Committee chairperson]**

Sadayuki Hayashi                      Vice-Minister for Foreign Affairs

#### **[Committee members]**

Toshinori Kanemoto	Director General of International Affairs Department, National Police Agency
Michisato Sakamoto	Director-General, Social Policy Bureau, Economic Planning Agency
Hironori Hamanaka	Director-General, Global Environment Department, Planning and Coordination Bureau, Environment Agency
Shiro Mizutani	Councillor to the Minister's Secretariat, National Land Agency
Kazuo Asakai	Director-General, Multilateral Cooperation Department, Foreign Policy Bureau, Ministry of Foreign Affairs
Yutaka Okamura	Director-General, Science and International Affairs Bureau, Ministry of Education, Science and Culture
Katsuhiko Kameda	Senior Councillor, Minister's Secretariat, Ministry of Health and Welfare
Hisao Azuma	Director-General, Economic Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
Hisashi Hosokawa	Director-General, International Trade Policy Bureau, Ministry of International Trade and Industry
Tsutomu Aihara	Director-General for Policy Coordination, Ministry of Transport
Kazuo Hiromi	Assistant Minister of Labour, Ministry of Labour
Kunihisa Ono	Deputy Vice-Minister for Policy Coordination,

Kazuo Minato	Minister's Secretariat, Ministry of Construction Deputy Vice-Minister for Policy Coordination, Ministry of Home Affairs
Akira Hashimoto	Governor of Ibaraki Prefecture
Wataru Aso	Governor of Fukuoka Prefecture
Asahi Matsui	Mayor of Chiba City
Kokichi Asakura	President, Metropolitan Area Research Development Association
Eiichi Isomura	President, Japan HABITAT Society
Shunsuke Iwasaki	Secretary General, Citizen Forum 2001
Masao Kamei	President, Japan Housing Association
Yasuhiko Kobayashi	Executive Managing Director, Japan Environmental Sanitation Center
Naohisa Nagata	Vice-President, National Institute for Research Advancement
Shigeru Morichi	Professor, Tokyo Institute of Technology

## **PART II. PAST INITIATIVES REGARDING HUMAN SETTLEMENT PROBLEMS**

### **1. Japan's National Land & Socioeconomic Trends**

#### **1.1 Natural Features of the National Land**

Japan's national land covers a total area of 377,812 square kilometers, extending 2,800 kilometers from north to south and 3,200 kilometers from east to west. Belonging to the Pan-Pacific orogenic zone at the eastern edge of the Eurasian continent, it is subject to intense crustal movement and frequent seismic activity, producing about 10% of the world's seismic energy. The climate is generally a temperate monsoon climate, creating four distinct seasons which yield diverse weather conditions, including heavy rain, light rain, high temperatures, and low temperatures. Large volumes of earth and sand flow out from the steep mountainous areas and swift streams to form plains that seem to be clinging to the mountains, but these plains are very limited in area. In particular, the lowlands (alluvial lowlands) were recently formed over several millennia and their foundation is weak and unstable. Based on these geographic features, Japan's national land can be said to possess the following characteristics from the standpoint of housing conditions:

- (1) The difference in weather conditions created on the Pacific Ocean and Sea of Japan sides of Japan due the presence of mountain ridges combined with the different weather conditions northern and southern Japan as well as the seasonal changes form a climate with diverse regional differences.

- (2) The plains most suitable as residential and producing zones are limited in area but most of such plains are lowlands within the flood-prone range of rivers, and thus run a high risk of damage by typhoons, torrential rain, and earthquakes.

- (3) Because, in comparison with continental rivers, steeply sloping rivers show a great variance in the amount of flowing water during a flood and during the dry season, their use and control are difficult, leading easily to flood damage due to torrential rain, drought due to water shortage, and so forth. Moreover, the rainfall produced by the steep landform and humid climate causes landslides and avalanches of earths and rocks, which poses problems for land conservation.

- (4) The diversity of geographical features and climate produce an abundant variety of flora and about 70% of Japan's area is covered with forest, thus forming a lush verdant national land. Opportunities for people to interact with nature are decreasing, however, particularly in the vicinity of large cities.

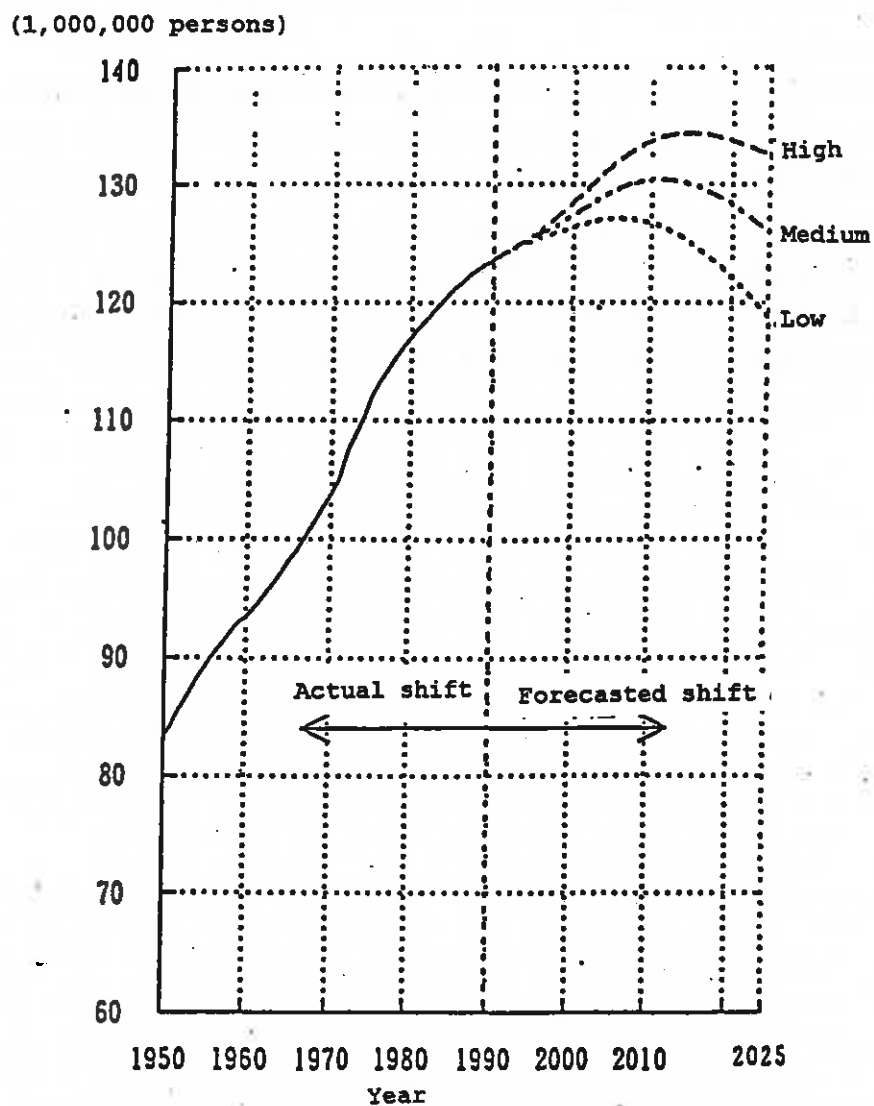
#### **1.2 Demographic Trends**

The population of Japan, which was about 78 million immediately after World War II, exceeded 100 million in 1967 and grew to 125.1 million as of April 1, 1995, thus reaching a scale that positions Japan as the world's eighth most populated country.

During this period, the annual population growth rate of Japan was about 3% right after the war, dropped to about 1% in the mid-1950's, and subsequently remained at the same level until the mid-1970's. From 1977 onward, however, the annual population growth rate began falling below 1% and is currently around 0.3%. According to the population forecast by the Ministry of Health and Welfare's Institute of Population Problems (average forecast as of September 1992), Japan's population will continue growing by an annual rate of about 0.3% until the start of the 21st century after which its growth will gradually slow down and then, after reaching a peak of 130.44 million in 2011, it will shift to minus growth (see Fig. 1). (Unless otherwise specified, the following figures in this section are based on the above-mentioned population forecast.)

The share of Japan's urban population has climbed from 33% in 1947 to 77% in 1990. This overcongestion in urban areas rapidly accelerated during Japan's period of high economic growth in the 1960's. Notably, close to half of the nationwide population is concentrated in the three metropolitan areas of Tokyo, Osaka, and Nagoya, which each has a population density above 1,000 persons per square kilometer. A look at the present trend in the migration of the domestic population shows that overcongestion in metropolitan areas has begun subsiding (see Table 1).

Fig. 1. Shift in the Total Population



Source: "September 1992 Forecast on Japan's Future Population," Institute of Population Problems, Ministry of Health and Welfare, 1992.



Table 1. Shift in the Population of Metropolitan Areas (1950-1990)

Unit: 1,000 persons or %

Region	1950	1960	1970	1980	1990
Population					
Tokyo region	13,051	17,864	24,113	28,699	31,797
Osaka region	9,764	12,186	15,469	17,355	18,117
Nagoya region	6,396	7,330	8,688	9,869	10,550
Subtotal of the above	29,211	37,379	48,270	55,922	60,464
Local regions	54,904	56,923	56,395	61,138	63,147
National total	84,115	94,302	104,665	117,060	123,611
Share					
Tokyo region	15.5	18.9	23.0	24.5	25.7
Osaka region	11.6	12.9	14.8	14.8	14.7
Nagoya region	7.6	7.8	8.3	8.4	8.5
Subtotal of the above	34.7	39.6	46.1	47.8	48.9
Local regions	65.3	60.4	53.9	52.2	51.1
National total	100.0	100.0	100.0	100.0	100.0
Growth vs. 10 yrs ago					
Tokyo region	-	36.9	35.0	19.0	10.8
Osaka region	-	24.8	26.9	12.2	4.4
Nagoya region	-	14.6	18.5	13.6	6.9
Subtotal of the above	-	28.0	29.1	15.9	8.1
Local regions	-	3.7	0.9	8.4	3.3
National total	-	12.1	11.0	11.8	5.6

Source: Population Forecast by Prefecture based on the national census

Note: The Tokyo region consists of the Tokyo Metropolis plus Saitama, Chiba, and Kanagawa Prefectures.

The Osaka region consists of Osaka, Kyoto, and Nara Prefectures.

The Nagoya region consists of Aichi, Gifu, and Mie Prefectures.

### 1.3 Socioeconomic Trends and Economic Planning

Japan's economic plans serve the role of providing the government with medium- to long-term economic guidelines within a market economy. Since the "Five-Year Plan for Economic Self-Support" of 1955, Japan has adopted a succession of economic plans to address problems faced by Japan at different times, changes within the domestic and international environments, and other factors. Among these economic plans, the "Five-Year Economic Plan - Sharing a Better Quality of Life around the Globe" was adopted in June 1992 as the policy for economic management for the period from fiscal 1992 to fiscal 1996.

This "Five-Year Economic Plan" is based on the recognition of the following two needs:

- o To build a society "which harmoniously coexists with the global community" through such means as reconsideration of Japan's socioeconomic system from a global perspective, the promotion of systems that advance global harmony, and production and consumption activities that can be sustained by the finite global environment.
- o To aim at a "better quality of life" in a society where each member can experience affluent and comfortable daily lives, gain equal opportunities to make the choices leading to self-realization, and lead a simple lifestyle in harmony with the environment.

Combining the two perspectives of adopting a global perspective and of respecting each and every individual, this Plan's basic objective is to achieve "sharing a better quality life around globe." In order to achieve "a better quality of life" while observing the fundamental principle of respect for the individual, this Plan points out the need to shift from a simple productivity-first to a perspective that fully considers social justice as well as to shift from a focus on manufacturers to a perspective that attaches more importance to consumers. Such shifts demand that individuals reform their lifestyle and also spur corporations to change their awareness by requiring corporate reform with the aim of conducting corporate activities that are appropriate for the 21st century.

The fruits of economic growth have thus far been returned ultimately to improve the life of Japan's residents as the outcome of economic activities. From now on, however, it will be essential to strive for more direct improvement of the quality of life during the process of economic activities. For this purpose, it will be necessary to reconsider the maintenance of balance on various levels, such as by allotting time for not only production but also for leisure living, by aiming not only for flow (income) but also for increasing and improving stock (for example, the living environment), by rectifying the concentration of population in Tokyo, by promoting local development that takes advantage of distinct regional characteristics, and by also taking future generations into consideration through assuring both present and future affluence.

The "Five-Year Plan" thus places great importance on the development of housing and of infrastructures related to the living environment. This Plan can be said to be characterized by the two following passages excerpted therefrom.

"Ensuring better housing, the essential basis of national life, is one of the most important issues in achieving a better quality of life. Therefore, efforts will be made to upgrade residential standards by accumulating a pool of quality housing stock and providing safe and agreeable residential environments through the continuous expansion of housing-related investment. Land prices in the metropolitan areas, in particular, continue to be at a very high level, making it difficult for average workers to purchase a house. With the aim of making quality houses affordable even in Tokyo and other metropolitan areas, efforts should be made to improve housing measures and other policies to reduce the average price of housing to a sum below criterion that is as close as possible to five times the average annual income of a working household."

"In order to achieve a better quality of life, it is essential to place priority on improvement of social infrastructures which are somewhat lagging behind. Through improvement of such infrastructures on the basis of objectives identified from users' viewpoints and other measures indicated in this plan, the government should thus promote the creation of comfortable living environments and promote more efficient transport and communications within local areas."

## **2. Background of Human Settlement Policies and National Land Policies**

### **2.1 Comprehensive National Development Plan**

#### **2.1.1 General Description**

Formulated on the basis of the Comprehensive National Land Development Act which was legislated in 1950, the Comprehensive National Development Plan is positioned as the most basic plan in Japan's system for comprehensive land development. This plan, which is now in its fourth phase, consistently follows the basic principle of well-balanced development of the national land. While accurately dealing with pressing regional issues and the new demands of changing times, the Comprehensive National Development Plan indicates the basic long-term course for national land development with the aim of building a desirable national land structure, clarifies public investment policy for achieving such development, and encourages investment from the private sector for national land development.

#### **2.2.2 Background to the Adoption of the First to Third Comprehensive National Development Plans**

In the course of the rapid economic growth during the late 1950's, it was recognized that the prevention of oversized cities in conjunction with intense concentration of population and industry in Tokyo and other metropolitan areas and the correction of regional differences in income had become significant problems. As

a result, the First Comprehensive National Development Plan was adopted in 1962. This plan identified the regions to be regarded as the nodes of national development and promoted development of such nodes, thereby attempting to resolve the previously-mentioned problems by aiming for well-balanced development of the national land around the specified nodes.

Partially due to rapid economic growth which far exceeded the estimation of this plan, however, overcongestion in metropolitan areas grew even more serious and depopulation in certain rural areas became notable. To deal with these circumstances, the Second Comprehensive National Development Plan was adopted in 1969. This plan aimed to resolve the immediate problems of overcongestion and depopulation as well as the problem of regional differences by expanding land development possibilities on a nationwide level to equalize the use of national land. As strategies for that purpose, this plan included large-scale projects such the formation of a principal axis extending 2,000 km from north to south for linking seven major highly-populated areas from Sapporo via Tokyo to Fukuoka by traffic and communications networks, new networks that would link this principal axis to other areas, and the construction of large industrial complexes to increase the production scale.

As the Japanese economy entered a phase of stable growth due to the first oil crisis and other events, a strong awareness of the finite nature of resources emerged in Japan and Japan's people began to seek, instead of economic expansion, a more comfortable living environment and other aspects of a better quality of life. Adopted in 1977, the Third Comprehensive National Development Plan recognized the lagging development of the overall living environment and set its basic objective as the creation of a comprehensive environment for healthy and cultured human settlements that are in harmony with historical and cultural traditions and with nature. It adopted a local settlement concept for the development of the environment for human settlements (hereinafter called the "human settlement environment") on the assumption of 200 to 300 settlement areas throughout Japan with a focus on local urban areas.

### **2.2.3 Formulation and Implementation of the Fourth Comprehensive National Development Plan**

By the late 1970's, the concentration of the population in the tri-metropolitan sphere of Tokyo, Osaka, and Nagoya had subsided and local settlement of the population had progressed. In the early 1980's, however, against the backdrop of such factors as international integration and an increasingly information-intensive society, there occurred both a unipolar concentration of high-grade city functions and a fresh influx of population into the Greater Tokyo region, while many local regions suffered escalating employment problems due to the stagnation of the new materials industry and export-dependent industries caused by an abrupt transition of the industrial structure. Under these circumstances, the Fourth Comprehensive National Development Plan was adopted in 1987. Based on the basic strategy of the integrated

interaction policy, this plan aims to correct unipolar concentration in Tokyo and to form a "multi-polar pattern national land" in order to address the problems of (1) vitalization of local regions through local settlement and interaction between areas, (2) international integration and the reorganization of global city functions, and (3) the development of a country with a safe and high-quality environment. A "multi-polar pattern national land" refers to a safe and affluent national land where numerous poles exist without excessive concentration of the population, socioeconomic functions, and administrative functions in specific regions, and where complementary and cooperative interactions are conducted between regions and with the global community.

As mentioned above, the basic strategy of the Fourth Comprehensive National Development Plan is the integrated interaction policy. Stimulating interaction, however, can also be regarded as signifying both the vitalization of the entire society and the creation of new possibilities as a result of (1) vitalizing economic activities and expanding their scope by making inter-regional use of markets and resources, (2) enhancing local identities through self-reliance fostered by the sociocultural climate and history of each region, and (3) promoting contact with the highly individualistic differences between regions. Moreover, the integrated interaction policy is supported by the three following pillars: (1) regional development (node development) due mainly to interaction between areas, which includes support for regional development led mainly by the area concerned, development of integrated local settlement regions, and the cultivation of core cities in each region, (2) development of vehicles for interaction (linking) such as the development of transportation, information, and communications systems, and (3) intangible systems and assets for promoting interaction between people, objects, information, and so on.

Since the Fourth Comprehensive National Development Plan was adopted, such laws as "The Act on the Promotion of Multi-Polar Pattern National Land Formation" and the "Act Concerning the Promotion of the Development of Local Core Areas and the Relocation of Facilities for Industrial Business" have been legislated in order to form a multi-polar pattern national land, and policies to advance the development of infrastructures and other measures are being comprehensively implemented.

## **2.2 Policies for Metropolitan Areas**

The concentration of the population and industry in urban areas triggered by Japan's rapid economic growth is exceptional in Tokyo, Osaka, Nagoya, and their peripheral regions (collectively called the "tri-metropolitan sphere"). These areas, which occupy less than 15% of Japan's total land area, were inhabited by approximately 60 million people, the equivalent to about 50% of the total population. (According to the 1990 National Census, the tri-metropolitan sphere occupied an area of 53,636 km<sup>2</sup> with a population of 60.46 million persons, and was defined as the

three following regions: Tokyo Metropolis plus Saitama, Chiba, and Kanagawa Prefectures; Osaka, Kyoto, Hyogo, and Nara Prefectures; and Aichi, Gifu, and Mie Prefectures.) Consequently, housing shortages, traffic congestion, and other metropolitan problems have emerged in these regions, causing deterioration of the urban environment and a decline in urban functions. Recognizing the need to alleviate the concentration of population and industry in metropolitan areas and to further policies to appropriately decentralize functions which are excessively concentrated in these regions, the Government has systematically advanced the development of metropolitan areas to rid them of the negative effects of overpopulation and to transform them into affluent and comfortable local communities.

Based on the National Capital Region Development Act (enacted in 1956), the Kinki Region Development Act (enacted in 1963), and the Chubu Region Development Act (enacted in 1966) which form the basic legislation regarding the development of metropolitan areas, the Government had made efforts to promote the orderly development of metropolitan areas by adopting comprehensive development plans such as the "Basic Development Plan for the National Capital Region" (now in its fourth phase), "Basic Development Plan for the Kinki Region" (now in its fourth phase), and "Basic Development Plan for the Chubu Region" (now in its third phase). According to such factors as the concentration of functions in each district of a region, the Government has also designated so-called policy "target" areas -- including built-up areas, suburban development and redevelopment areas, suburban green belt preservation zones, and urban development areas -- and has worked both to alleviate the over-concentration of industry and population in built-up areas, to systematically develop urban areas, and so on.

Moreover, regarding the National Capital Region centered in Tokyo where population and industry are the most concentrated in Japan, the Fourth Basic Development Plan for the National Capital Region (adopted in 1986) aims to strategically cultivate core business cities in outlying areas of central Tokyo, correct the structure of unipolar dependence of the Greater Tokyo Region on the 23 wards for employment and urban services, and form a regional structure consisting of multiple cores and multiple regions. Based on these systems, the Government together with the local governments concerned have advanced policies to build sub-center areas; develop "newtown" communities; develop transportation systems such as railways, expressways, airports, ports, and harbors; develop parks, sewerage systems, and other urban infrastructures; develop water resources; and so on. Furthermore, the following policies are being advanced as an integral part of decentralizing and appropriately relocating functions that are concentrated in metropolitan areas: (1) restriction of the construction of new factories, universities, etc. in inner-city districts of metropolitan areas of the National Capital and Kinki Regions; (2) preparation of industrial complex sites to receive dispersed factories from built-up areas and other areas as well as preferential relocation measures such as tax incentives to induce

corporations to move from metropolitan areas to local regions; (3) preservation of wide-area green spaces in metropolitan suburbs; (4) cultivation and development of core business cities, etc. that will initiate the formation of self-reliant urban areas within the National Capital Region; (5) development of the Osaka Bay area to correct the unipolar concentration of functions in the National Capital Region; (6) construction of Tsukuba Academic Newtown to counteract overpopulation in Tokyo by promoting science and technology, improving high school education, and relocating national research laboratories and educational institutes; (7) construction of Kansai Science City to create a base for new advances in culture, science, and research in anticipation of the approaching 21st century; and (8) comprehensive development of Lake Biwa to contribute to the sound development of the Kinki Region by promoting reuse of water resources and improving social welfare for residents while conserving the natural environment, etc.

In addition, with the goal of providing safe and good-quality housing at reasonable prices in locations within a feasible commuting radius to people working in the tri-metropolitan sphere, efforts have been made to supply a large volume of housing and residential land and to develop agreeable residential areas on the basis of "Basic policy concerning the Supply of Housing and Residential Land in Major Metropolitan Areas."

### **2.3 Regional Promotion Policies**

Regions outside of the tri-metropolitan sphere have ample land, water, and other resources, and are blessed with variegated natural environments as well as historical and cultural traditions. From an economic standpoint, however, growth in many regions lags behind that in metropolitan areas, the concentration of urban functions with a focus on high-grade functions is low, and job opportunities are also meager. As a result, the tendency to gravitate to metropolitan areas from local areas continues. Particularly in regions disadvantaged by poor geographical or topographical conditions, it has become difficult to sustain regional communities because their foundation has been altered by a steep drop in population.

To safeguard a sound and cultured living environment promote balanced development of the national land, and form affluent and comfortable local communities, it is necessary to correct regional differences, resolve the problem of depopulation, and form diverse and distinctive high-quality local communities. For this purpose, the Government has been implementing comprehensive regional promotion policies from the dual standpoints of trans-regional development policies for promoting the development of regional blocks, promoting local industries, developing local urban areas and rural areas as well as of policies to promote specific regions such as depopulated areas and remote islands.

In addition, to promote the creation of energetic and individualistic regions, local governments have also been actively engaged in a variety of independent

projects while the national government has been implementing measures necessary to actively support such local independent projects.

### **2.3.1 Comprehensive Advancement of Regional Promotion Policies**

#### **(1) Promotion of Regional Block Development**

According to the local settlement concept indicated in the Third Comprehensive National Development Plan adopted in 1977, respective plans to promote development of regional blocks in Tohoku, Hokuriku, Chugoku, Shikoku, and Kyushu were initially adopted in 1979 and definite results were achieved in the development of the comprehensive living environment. Afterward, because the Fourth Comprehensive National Development Plan was adopted in 1987 and the respective regional plans reached their target year, the current plans were adopted in 1989 by Tohoku and in 1990 by Hokuriku, Chugoku, Shikoku, and Kyushu. Furthermore, to ensure the effective advancement of the policies cited in each plan, the status of policy implementation in each region was inspected in 1991 within Tohoku and in both 1992 and 1994 within Hokuriku, Chugoku, Shikoku, and Kyushu.

#### **(2) Promotion of Local Industries**

Regarding the promotion of local industries, systems for the construction and development of new industrial cities and special industrial areas as well for promoting the development of local under-developed industrial areas have been continued for about 30 years, contributing both to the decentralization of population and industry to local regions and to local development. Moreover, efforts are being made to improve and expand policies to address the increasing sophistication of the industrial structure. For example, the "Law for Accelerating Regional Development based upon High-technology Industrial Complexes" was enacted in 1983 to promote the construction and development of new regions as technopolises supported by high-technology industrial development, whereas the "Law to Promote the Group-siting Types of Businesses Contributing to More Sophisticated Local Industrial Structures" was enacted in 1988 to promote the group-siting into local regions of research laboratories, the software industry, and other elements representing the "brain" of industry.

In conjunction with the increasing leisure time of Japan's people and the diversification of their lifestyles in recent years, the "Act on the Development of Comprehensive Resort Areas" was legislated in 1987 to promote the development of comprehensive functions conducive to various activities that can be enjoyed during a temporary sojourn by people using their free time, thus launching the full-fledged development of resorts in Japan.

#### **(3) Advancement of Comprehensive Development of Local Urban Areas and Rural Areas**

Policies have thus far been advanced to develop model local settlement regions



based on the local settlement concept introduced by the Third Comprehensive National Development Plan, to develop individualistic and attractive local urban areas, and to develop rural areas on the basis of the Comprehensive Rural Development Plan. In 1992, however, the "Act Concerning the Promotion of the Development of Local Core Areas and the Relocation of Facilities for Industrial Business" was legislated and aimed to implement measures for improving urban functions from a wide-area perspective while taking advantage of local ingenuity and to promote the relocation of facilities for industrial business, thereby launching initiatives to promote the self-reliant growth of local regions which integrate urban and rural areas and to promote balanced development of the national land.

### **2.3.2 Promotion and Development of Specific Regions**

Although laws for the promotion of specific regions consist almost entirely of limited-period legislation, they have all been renewed while being revised or expanded as required and the implementation of their respective promotion measures is being continued through, for example, the systematic execution of projects to develop the living environment, industrial foundation, and so on. As for peninsular regions, due to a Diet proposition in response to fervent requests from local governments, the Peninsulas Development Act was legislated in 1985 and the designated peninsulas development area to be developed was specified in 1986 with the aim of advancing comprehensive and wide-area promotion policies. Regarding so-called semi-mountainous regions, to address such problems as the stagnation of agricultural and forestry activities due to the recent decrease in workers to sustain the agricultural and forestry industries and the ageing of the population, the "Act Concerning the Promotion of Infrastructural Development to Stimulate Agricultural and Forestry Activities, etc. in Designated Rural Areas" was legislated in 1993 with the aim of promoting agricultural, forestry, and other industries in semi-mountainous areas as a result of implementing measures to promote the development of infrastructures for stimulating business with a focus on the agricultural and forestry industries while taking advantage of regional ingenuity, thereby contributing to the cultivation of affluent and comfortable rural areas.

### **2.3.3 Advancement of Local Independent Projects**

To push forward the development of energetic and individualistic regions, local governments are actively proceeding with independent projects for the development of roads, parks, and other infrastructures as well as the development of various public facilities. To deal with an ageing population, local independent projects are being used to achieve systematic municipal planning that reflects the needs of residents, including special considerations to accommodate the elderly and physically handicapped. Alongside such projects, active efforts are also being directed toward the organizing of symposiums and other events and toward such projects as human

resources development.

To provide financial support to these self-autonomous or semi-autonomous initiatives of local governments, the Government has been implementing measures to optimize local bonds and tax allocated to local governments.

## 2.4 Land Policies

(1) In Japan, amidst the rapid urbanization and industrial of the post-war period, surges in land prices, intensive land speculation, and disorderly land use have occurred on several occasions. The surges in of land prices commencing in central Tokyo in the early 1980's led to serious socioeconomic problems of a national scale, such as the drag on the development of infrastructures and an increasing sense of social injustice due to the growing disparity of affordable assets.

To deal with land problems which had become the most important issues in terms of government administration, the Basic Land Act was thus legislated on December 22, 1989.

From the standpoint of establishing a common perception toward land among Japan's people and assuring the implementation of comprehensive land policies, the Basic Land Act provides the guidelines for national and local government policies and stipulates the four following "basic land concepts" as the standard for actions to be taken by individuals and businesses: (1) Giving first priority to public welfare in land use; (2) Ensuring appropriate land use and conformity with land use plans; (3) Curbing speculation; and (4) Imposing a reasonable burden on the beneficiaries of increased land prices. This law also clarifies the responsibilities of national and local governments as well as the responsibilities of businesses and individuals which are to observe and respect the basic concepts during land use and land transactions, and also stipulates the fundamentals of land-related policy.

The Basic Land Act has thus been comprehensively advancing land policies to normalize the supply-and-demand relationship and assure reasonable land prices while aiming to safeguard equitable and balanced land use. For this reason, it can be aptly described as a "constitution" concerning land which was established to offer more stability to the daily life of Japan's people and to contribute toward the sound growth of the national economy.

On May 24 of 1990, the issue of "The Ideal Stance of Future Land Policy Based on the Basic Land Act" was submitted for deliberation to the Land Policy Council which had been established on the basis of the Basic Land Act, and that Council provided its report on October 29.

In response, the Government adopted the "Outline for Promoting Comprehensive Land Policies" by a Cabinet decision. Indicating the basic course for comprehensive land policies based on the Basic Land Act, this Outline seeks to give concrete form to the report of the Land Policy Council with the aim of availing of the existence of the Basic Land Act to promote more effective advancement of comprehensive land policies.

that conform to the basic concepts of that Act.

This Outline also defines the objectives of land policies as well as the course for progressively implementing individual policies to attain such objectives. As the objectives of land policy, three are cited: to break down the "land myth," to attain reasonable land price levels, and to safeguard equitable and balanced land use. The Outline also indicates the course for implementing the following 10 policies aimed at achieving these targets: (1) decentralization of national capital functions, urban and industrial functions, etc.; (2) restrictions on land transactions; (3) development and improvement of land use plans; (4) promotion of the supply of housing and residential land; (5) promotion of the effective use of land; (6) restrictions on land-related financing; (7) rationalization of land-related financial burdens; (8) advancement of appropriate land appraisal; (9) development and improvement of land-related information; and (10) dissemination of knowledge regarding the basic land concepts. Structural and comprehensive land policies are thus being progressively enforced in accordance with this Outline.

(2) Regarding the current status of land, land prices have dropped consecutively for four years, which can be partially attributed to the efficacy of the above-mentioned measures. As a result, in comparison with the nominal GDP level, the land price level has returned to its 1983 level prior to the subsequent skyrocketing of land prices. Especially in commercial districts, even from a long-term perspective, land prices can be considered to have assumed a level that runs parallel to the nominal GDP.

Regarding trends in land transactions, the number of land transactions based on sales and purchases within Japan shows a decreasing trend over the long term, but it increased for the first time in five years in 1994 (3.6% increase versus 1993). The number of land transactions within Tokyo's 23 wards showed an increase in 1993 and 1994, but a decreasing trend continues within Tokyo's three central wards.

### **3. Initiatives on Human Settlement Problems since the First United Nations Conference on Human Settlements**

#### **3.1 Support for the United Nations Center on Human Settlements**

Since the United Nations Center for Human Settlements was founded in 1977, Japan has remained a member of the United Nations Commission for Human Settlements which is the decision-making organ of the Center and has been actively involved in policy-related activities, such as the formulation of action plans for the Center.

To the United Nations HABITAT and Human Settlements Foundation, Japan has made an yearly voluntary contribution of US\$500,000 from 1984 to 1986, of US\$750,000 from 1987 to 1991, and of US\$800,000 from 1992 to 1995.

#### **3.2 Promotion of "International Year of Shelter for the Homeless (IYSH)" Projects**

During the "International Year of Shelter for the Homeless" in 1987, the

Government set up "Headquarters for IYSH" to serve as the hub of various activities by local governments and civic organizations, thus enabling diverse activities to be implemented through concerted action between government and the general public.

To support improvement of human settlements in developing countries, the Government has conducted various campaigns to increase international cooperation and cultural interchange in the field of human settlements and to stimulate public interest in global problems concerning human settlements. The main initiatives have included the following.

- o International Symposium on Housing

Discussion of the public sector's future role in solving human settlement problems, with participation by public sector representatives from around the world with a focus on Asia.

- o International Seminar on Innovative Regional Planning for Metropolises

Based on the theme of the conservation and development of metropolitan areas. Discussion of policy guidelines regarding the comprehensive management and development of urban assets while clarifying the current status and problems of the world's metropolises, with participation by specialists from many countries.

- o Dispatch of a Japanese IYSH Mission

Dispatch of a delegation formed by government officials and intellectuals to study the actual conditions of housing problems in ASEAN countries and to exchange ideas with their counterparts in other countries.

- o Seminar on Improvement of Housing and Living Environments

Hosting of a seminar targeting government officials and other people from developing countries.

- o Panel Exhibition "Living and Housing in the World"

Holding of exhibitions at the government booth of EXPO HABITATION and other events to stimulate public interest in Japan concerning human settlement problems in developing countries and other areas.

### 3.3 Activities of NGOs, Academic Community, and Other Groups

As one consequence of the First United Nations Conference on Human Settlements, "building a comprehensive environment for human settlements" was clearly defined as an objective in Japan's Third Comprehensive National Development Plan that was adopted in 1977.

This clarification of the Government policy's focus on the human settlement environment not only spurred local governments and the public corporations that are responsible for developing human settlements, such as the Japan Housing Corporation (currently the Housing and Urban Development Corporation) and Japan Regional Development Corporation, but also notably raised the interest among the academic community and public toward the development of the human settlement environment.

Within the private sector, the Japan HABITAT Society is a representative NGO that

researches government policy in the field of human settlements. Taking over the Japan Society for Human Settlements (JSHS) which was founded in 1977 after the First United Nations Conference on Human Settlements in 1976, the Japan HABITAT Society was established under a cooperative pact with the United Nations Center on Human Settlements, with 30 members of Japan's academic community in the field of human settlements (including scholars and researchers) acting as promoters. While working in coordination with the United Nations University and related groups, it has been conducting activities with the aim of researching and defining policy from the standpoint of a Japanese NGO in connection with the major issues involved in improving Japan's human settlement environment. To make an optimum contribution from its standpoint as a Japanese NGO toward the Second United Nations Conference on Human Settlements, this Society has been examining and defining the ideal approach to policies related to the living environment in which nature and humankind coexist harmoniously, the surface development of human settlements in urban areas, inter-urban coordination, and other topics, with a focus on Japan's problems of overcongestion, depopulation, unipolar concentration of the population in metropolitan areas, crisis management systems to deal with disasters, and so forth.

Moreover, on the occasion of the International Year of Shelter for the Homeless (IYSH) in 1987, the IYSH Memorial Fund was established within the Japan Housing Association through extensive fund-raising among corporations and the general public, and has since been providing support to civic initiatives regarding human settlement problems. As IYSH Memorial Fund activities, with the cooperation of the Ministry of Construction, local governments, corporations, and other groups, the Japan Housing Association holds the "housing seminars" and other events for exchange students from developing countries to transfer Japan's knowledge about systems and technologies concerning housing and urban development. It also provides financial assistance to cultural interchange through international conferences and other events related to human settlements, presents an "IYSH Memorial Prize" to individuals or NGOs for such achievements as contributing to the improvement of human settlement problems in developing countries, and is thus enjoying international acclaim.

Furthermore, NGO participants of the United Nations Conference on Environment and Development held in Brazil in 1992 organized the network, Citizens Forum 21 afterward. This NGO involved in holding seminars and international conferences related to problems concerning environment and development to contribute to make up "Action Plan" for civic action, corresponding to the "Agenda 21: Action Plan for the 21st Century" which was adopted at such conference.

In recent years, civic groups and CBOs (Community-Based Organizations) have also been notably active in organizing meetings and other activities with the aim of improving the human settlement environment.

#### **4. Agenda 21 & Initiatives on Global Strategy for Shelter to the Year 2000**

#### 4.1 Agenda 21

"Agenda 21," which was formed by mutual consensus at the United Nations Conference on Environment and Development (UNCED) in 1992, stipulates a specific plan of action for achieving sustainable development into the 21st century.

The "National Action Plan for Agenda 21" compiled by Japan brings together the policies which Japan intends to implement to provide a firm follow-up to "Agenda 21" and indicates an action plan for Japan that aims at conservation of the global environment through sustainable development. This national action plan was adopted after having released its draft to the public and considering diverse opinions, following which it was submitted to the United Nations Commission on Sustainable Development. This action plan is structured in the style of Agenda 21 and, similar to the Chapter 7 "PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT" in Agenda 21, describes policies covering a wide range of fields, including A) providing adequate shelter for all; B) improving human settlement management; C) promoting sustainable land-use planning and management; D) promoting the integrated provision of environment-related infrastructures: water, sanitation, drainage and solid-waste disposal; E) promoting sustainable energy and transport systems in human settlements; F) promoting human settlement planning and management in disaster-prone areas; and G) promoting sustainable construction industry activities.

Moreover, anticipating that local governments will play a central role in the implementation of Agenda 21 plans, Agenda 21 calls for the adoption of a "Local Agenda 21" to effectively advance initiatives by each local government. Consequently, the national government has compiled Local Agenda 21 guidelines that also give due consideration to trends in other countries, with the aim of supporting efforts by local governments to adopt a Local Agenda 21 in their respective localities.

Furthermore, to promote efforts by local governments toward the actualization of sustainable cities and lifestyles from the perspective that environmental conservation is essential in high-populated urban areas, Japan's Environment Agency hosted the "World Conference on Local Initiatives for Sustainable Cities" in November 1995, with participation of local and national government representatives from all over the world as well as international organs. Discussions were held on initiatives and issues related to achieving sustainable cities and lifestyles, the role of local governments, and other themes, after which a summary of the proceedings was compiled in the form of the "Kanagawa Declaration."

#### 4.2 Global Strategy for Shelter to the Year 2000

Prior to adoption of a global strategy for shelter to the year 2000, international cooperation, cultural interchange, and improvement of human settlement problems within Japan are being furthered on the basis of "Long-Term Action Guidelines in the Field of Human Settlements" that were determined by the Headquarters for IYSH in March 1988.

#### **4.2.1 International Cooperation and Cultural Interchange**

##### **(1) Reinforcement and Qualitative Improvement of Technical Cooperation**

To support improvement of the beneficiary country's capacity to solve its own problems, technical cooperation based on Japan's experience will be advanced, including the organization of seminars and missions that are relevant to actual conditions in the beneficiary country.

Moreover, cooperation will be improved by reinforced training of human resources that have a keen global sensitivity and can carry out such technical cooperation, and by coordinated reinforcement of technical cooperation and financial cooperation.

##### **(2) Vigorous Use of Financial Cooperation**

Financial cooperation and other support will be furthered for projects related to housing development and development of the human settlement environment.

#### **4.2.2 Improvement of Domestic Human Settlement Problems**

##### **(1) Appropriate Positioning of Residential Functions and Business Functions**

In metropolitan areas with a conspicuous concentration of business functions, it is necessary to solve human settlement problems (such as the difficulty of purchasing housing in inner-city districts, longer commuting distances due to greater separation between home and work, congestion during peak commuting hours, and the disappearance of nearby nature spots), to provide comfortable lifestyles with work and home in close proximity, and form an agreeable environment for human settlements. For this purpose, business functions, etc. will be appropriately decentralized and relocated by developing core business cities and new nodes of development, and metropolitan areas will be developed that achieve a proper balance between residential functions and business functions.

##### **(2) Housing Development**

To create a good-quality housing stock that enables Japan's people to lead stable and comfortable lives at each stage of their lives according to the features of the region of settlement, domestic strategies to be implemented include vitalization of the construction of private housing, accurate supply of public housing, supply of housing that reflects regional features, effective use of the existing housing stock, promotion of the development of housing-related technologies, and so on.

##### **(3) Development of the Human Settlement Environment**

Policies concerning the development of the human settlement environment will be systematically and comprehensively implemented in order to actively further the development of social infrastructures; to address the new needs of affluent residents in step with such factors as higher living standards, an ageing population, and increasing leisure time; and to achieve a comfortable and worry-free local

environment of high quality that is richly cultured and offers easy access to lifelong learning, medical care, and welfare while concurrently striving to ensure safety and conserve the natural environment.

## **5. Summary of Successful Cases**

### **5.1 Chiba City's Urban Development Using a Monorail (Structural Formation & Vitalization of Chiba City's Inner-City District)**

Chiba City plays a part in the reorganization of the prevailing regional structure characterized by unipolar dependence on central Tokyo into a wide-sphere type of regional structure with decentralized functions. Rapid urbanization has generated such problems as increased traffic and the deterioration of commercial and business functions, such that the concentration of commercial and business functions as well as the development of traffic facilities have become major issues. A suspended urban monorail has thus been introduced to promote organic coordination between urban development and traffic. This monorail has greatly contributed to the urban development of Chiba City because it (1) further integrates the Chiba City region by linking urban commercial and business districts centering around the JR Chiba Station with peripheral commercial districts and inland housing complexes, and (2) offers greater convenience to passengers as a result of incorporating the monorail station into the redeveloped JR Chiba Station Area that consolidates commercial and business functions.

### **5.2 Large City Development of a Small Town (Type 1 City- District Redevelopment Project at Ushiku Station's West Exit Area)**

In the vicinity of Ushiku Station on the JR Joban Line, development was overdue, housing and commercial facilities were mixed together, wooden buildings were densely concentrated, and the living environment had accordingly deteriorated. In terms of traffic as well, the station front was limited in area and roads within the district were narrow, leading to problems from the standpoint of disaster prevention, traffic congestion, and so on. To assure adequate public facilities, improve the living environment, vitalize commerce, and promote high-grade land use, Ushiku City (Ushiku Town until 1986) launched a type 1 city-district redevelopment project in 1984 and completed the project in 1987. Besides the development of infrastructures such as a road system and the supply of housing, the human settlement environment was significantly improved due to various considerations at the stage of project planning.

### **5.3 Rainwater Use at Sumida Ward, Tokyo**

The Tokyo Metropolis is often plagued by water shortage. In Sumida Ward, a proposal for rainwater use to make comprehensive use of rainwater was introduced as a countermeasure against water shortage from the perspective of effectively using water resources. The use of rainwater collected on roofs, etc. as a water supply, for



extinguishing fires, and other applications enables "assurance of a natural home water resource," "prevention of urban-type flooding," and "assurance of water for disaster prevention." Initiatives for rainwater use are now expanding into projects that involve community residents.

#### **5.4 Redevelopment of Hiroshima City's Dambara District**

Located about 1 km south of the JR Hiroshima Station in the eastern part of Hiroshima City, the Dambara district has an area of about 48 hectares. This district does not have sufficient public facilities such as roads and sewerage. Moreover, due to such factors as the dense congestion of decrepit wooden houses in small houses lots, it faced numerous problems in terms of living environment, disaster prevention, and sanitation. Due to the execution of the land readjustment project in combination with a comprehensive living environment development project and other measures, a favorable urban district has been formed as a result of developing wide trunk roads, parks, sewerage, and housing lots as well as renewing decrepit housing.

#### **5.5 Chiyo District as One Example of Fukuoka City's Residential Area Improvement Projects**

The Chiyo district has an area of about 8.78 hectares and is relatively centrally located within a 2-km radius of the Tenjin and Hakata Station districts which are the commercial centers of Fukuoka City. This district formed a crowded residential area that combined decrepit wooden housing and a shopping area of small shops created from remodeled housing. The roads were also narrow and the living environment was extremely poor in terms of disaster prevention and sanitation. Since 1974, Fukuoka City has implemented residential area improvement projects to build multi-storied housing, to fire-proof housing, construct community clubhouses and children's parks, plant trees, and so on, thereby achieving improvement of the district's living environment.

#### **5.6 Residential Area Improvement Project in the Kitagata District: Disaster-Resistant Urban Development by Kitakyushu City**

The Kitagata 3-chome district of Kokura-Minami Ward in Kitakyushu City has an area of about 31.2 hectares in the central area of the city limits. Due to a complicated road layout that resembles a maze, a high concentration of small wooden housing, wooden apartments comprising a 50% share of all housing, and other factors, the district's living environment had been underdeveloped. Kitakyushu City has positioned improvement of the living environment as the foundation of regional improvement policies, has placed top priority on regional improvement while assuring integration with peripheral regions, and has actively advanced development. As a consequence, the Kitagata district has been extensively transformed into a favorable and comfortable living environment.

## **6. Initiatives in Priority Fields of Human Settlement Policies**

### **6.1 Improvement of Urban Areas**

While coping with various rapid changes in socioeconomic conditions following World War II, Japan has been steadily developing housing and other infrastructures to support such changes. In areas stricken by the Great Hanshin-Awaji Earthquake, however, due partially to the fact that it was the biggest earthquake in the post-war period, tremendous damage occurred which centered in areas which had not undergone sufficient urban development, thereby bringing the importance of assuring safety in urban areas into sharper focus.

Urban administrative efforts have been launched for the prompt restoration of urban facilities through such means as the enactment of Special Act on Restoration of Urban Disaster Area which stipulate exceptional treatment of urban planning projects and other matters; the creation of various types of assistance, taxation systems, and financing systems; and the use of the preceding measures. There is now a strong need, however, for the nationwide formation of urban areas that are highly resistant to disasters by further improvement and advancement of urban development on the basis of the lessons learned from the recent earthquake.

Today's policies for urban areas further enhance and push forward past initiatives with a top priority on safety and have also taken on an important role in assuring convenience and comfort while concurrently coping with new problems.

The fundamental system of current policies was formed in accordance with the City Planning Act of 1968 which advocates the basic concepts of safeguarding healthy and cultured urban living and functional urban activities.

Districts that require comprehensive improvement, development, and conservation as an integrated urban area have been designated as city planning areas, and plans regarding such matters as sound municipal development, orderly land use, development of urban facilities, and urban development have been formulated for such designated areas. Although actual development is proceeding in conformance with respective regulations, incentives, and project implementation, the following describes the basic orientation of present initiatives.

#### **6.1.1 Comprehensive and Systematic Urban Development**

##### **(1) Classification of Urbanization Promotion Areas and Urbanization Control Districts**

To ensure sound and orderly urban development, it is necessary to consider such factors as trends in urban growth, distinguish between districts to be actively developed as urban areas and districts where urbanization is to be controlled for the time being, and thus prevent disorderly urbanization. For this purpose, urban planning stipulates the two classifications of "urbanization promotion areas" which consist of built-up areas and priority districts that should be systematically urbanized within the next ten years, and "urbanization control areas" where urbanization should be restrained. Urbanization is thus being systematically advanced

on the basis of policy regarding the improvement, development, and conservation of urbanization promotion areas and urbanization control areas.

In urbanization promotion areas, zoning is designated to specify such factors as the purpose and density of buildings from the standpoint of maintaining a balance with public facilities and of preserving the urban area's environment. In addition, plans are also determined for urban development projects such as projects to develop green spaces and urban facilities such as roads, parks, and sewerage; land readjustment projects; new residential district development projects; and urban redevelopment projects.

## (2) District Planning

Moreover, to address the sophistication and diversification of residents' values in recent years in order to develop urban areas as human settlements where residents can truly feel comfort and affluence, there is a district planning system which serves as a system for advanced detailed municipal planning that corresponds to the characteristics of individual districts.

For a district that requires integrated development and conservation, the district planning system integrally and comprehensively stipulates matters mainly related to the development of roads, parks, and other facilities to be used by residents within the district, the construction of buildings, and so on. As of end of March 1995, district planning has been adopted for 1,755 districts.

### 6.1.2 Steady Development of Urban Facilities

As facilities that safeguard safe and agreeable transportation within an urban area and also form the skeletal framework of an urban area, roads contribute to the formation of both sound urban districts and dynamic, attractive urban landscapes and thus play a significant role in disaster prevention. Streets are principal facilities of urban areas and are equipped with diverse functions including the accommodation of supply and treatment facilities.

Through road projects, multi-purpose urban transportation measures are being advanced, including the assurance of smooth traffic flow within urban districts, development of main roads to form the skeletal framework of the urban district, development of friendly and comfortable roads to promote the formation of an agreeable urban environment, and development projects for new transit systems such as consecutive multi-level railway crossings and intra-city monorails.

Sewerage serves to improve the human settlement environment and prevent flooding. It also fulfills an important role in preserving water quality by purifying waste water that has been reclaimed from rivers and other public water areas and then returning the purified water to public water areas.

The sewerage coverage ratio as of the end of fiscal 1994 was 51% and has been increasing considerably due to focused investment in recent years, but the level of

sewerage development still remains low in comparison with that of industrialized countries in Europe and North America. There also exists a disparity in the development levels in metropolitan areas and rural cities. In contrast with the sewerage coverage ratio in metropolitan areas (cities with population of about 1 million residents or more) which exceeds 90%, the same ratio remains at about 40% in other ordinary cities and is no more than about 10% in cities with a population below 50,000 residents. Consequently, sewerage development must be advanced for such municipalities in the coming years.

While advancing the development of sewerage facilities, the effective use of sewage sludge, purified sewage water, sewage heat, and other resources is also being advanced by promoting the use of sewage sludge as fertilizer for green spaces and farmlands or as construction material, the reuse of purified sewage water for flush toilets, and so on.

As centers of urban greenery, city parks are principal facilities of an urban area that create serenity, prevent pollution and the heat-island phenomenon, and also address the diverse needs of the residents including interaction with nature, formation of communities, and recreation activities.

After the Great Hanshin-Awaji Earthquake occurred, city parks served such functions as refugee, evacuation routes, and hubs for disaster relief, restoration, and rehabilitation activities, thus proving to be facilities crucial to safe and comfortable living. Therefore, based on the Basic Green Plan which is a comprehensive master plan regarding greenery that is formulated by municipal governments, efforts are being aimed toward the systematic establishment of parks within walking range (such as block parks, neighborhood parks, and district parks), comprehensive parks, sports parks, and regional parks according to the accessible distance and standard area specified for each park type. Agreeable green oases within urban areas are also being safeguarded by urban green area, green buffer belts, and green pathways. Nevertheless, the current development level of city parks is 6.7 m<sup>2</sup> of park area per capita (as of the end of fiscal 1993), which is still low at one-third of the long-term goal. Consequently, the Five-year Development Program of City Parks has been adopted (since 1972) and city park development is being systematically fostered.

Land acquisition is an important issue of city park development. Besides the active purchasing of lots, efforts are being made to secure lots in connection with land readjustment projects and urban redevelopment, to make use of state-owned public land and former factory sites, to make use of riverbeds, and so forth. Furthermore, various measures are being carried out to preserve the precious greenery existing in urban areas such as purchasing of land, restrictions on development areas by zoning specifications within urban planning such as scenic areas, protected green areas, green preservation areas, and so forth.

### 6.1.3 Advancement of the Surface Development of Urban Districts

Alongside the development of individual urban facilities, surface development projects of urban districts are being conducted by the public and private sectors in order to advance comprehensive and efficient urban development. Regarding residential land development, private developers account for a considerable share of the total development area but most of their development projects are of small scale, whereas large-scale projects for residential land development and comprehensive newtown development are mainly conducted by the Housing and Urban Development Corporation, local governments, and other public authorities.

Cities are presently facing various problems including the subdivision of land ownership, inefficient land use, mixed-purpose land use, decreased population in inner city areas, and the decline of local communities. It is becoming an important task to proceed to systematically develop agreeable urban districts by urban redevelopment, land readjustment, and other surface development projects while aiming for equitable and balanced land use based on urban planning.

In districts such as a built-up area with a high concentration of decrepit wooden buildings, urban redevelopment projects are widely used to foster rational, healthy, high-grade land use and the renovation of urban functions by the common use of subdivided plots and the construction of multi-storied buildings for communal use. Such projects are an effective means for developing public facilities, supplying good-quality housing, improving disaster resistance, and so on. Up to now, projects have been completed in 330 districts nationwide covering about 454 hectares.

Land readjustment projects prepare sound urban districts to promote social welfare by the creation or renovation of land lots and public facilities with the dual aims of promoting the use of residential land as well as developing and improving public facilities. Land readjustment has been executed as means of reconstruction after the Great Kanto Earthquake, World War II, renewal of existing urban districts, and development of new town. Moreover, it is also being used for new initiatives such as the development of new urban centers in regional core cities and business core cities, improvement of disaster-resistance by renewing existing built-up areas crowded with wooden buildings, supply of large-volume housing lot in areas along railway lines, and so forth. In Japan, the area where land readjustment projects have been started has already reached about 360,000 hectares, which accounts for about one-third of all the urbanized area.

Land readjustment projects are thus widely used in Japan as a means of comprehensive urban development and their basic characteristics are summarized in the following.

- (1) Excellent urban space is formed by the comprehensive and integrated development of housing lot and public facilities such as road network, parks, sewerage, and rivers.
- (2) Land readjustment projects be executed to achieve diverse purposes in various areas ranging from built-up areas to newly urbanizing areas.

(3) Utilizing the private sector's energy through private resources (revenue from disposal of reserve land) that nearly equal the amount of public investment, land readjustment projects generate a tremendous ripple effect on the economy by, for example, inducing private investment in connection with the relocation of buildings.

(4) Land readjustment projects permit landowners to participate in urban development while preserving land titles, thus preserving the community.

Other surface development projects that have been systemized up to the present time include new residential district development projects, residential district improvement projects, projects for integrated development of residential districts, projects to promote development of congested residential districts, and so on.

#### **6.1.4 Development of Urban Transportation**

To deal with such problems as congestion during peak commuting hours of workers and students mainly in large metropolitan areas, passenger capacity is being reinforced by developing and improving urban railways and other public transit systems.

Regarding the development of urban railways, passenger capacity is being actively reinforced by constructing new railway lines, converting existing lines into four-track lines, and other means. Much progress has been made with various types of development; for example, as of September 1995, the total national length of subway lines reached 539.5 km for 36 lines and the total national length of four-track lines reached 335.7 km between 17 blocks. Regarding projects now underway, the total national length of subway lines has reached 102.3 km for 10 lines and the total national length of four-track lines has reached 33.7 km between 5 blocks.

Furthermore, to both alleviate road congestion and promote environmental measures in urban areas, other policies being advanced include the promotion of public transit use by developing a bus vitalization system, the development of parking areas, and the development of distribution points that will contribute to the smoother flow of traffic within urban areas.

#### **6.2 Improvement of Rural Areas**

In rural areas, the full-scale development of the human settlement environment began in the 1970's when the development of the production base was brought to a pause by measures to increase food production. Against a backdrop of rapid economic growth, a growing need emerged among residents in rural areas for development of the human settlement environment, and activities to solicit a living environment that would meet the so-called "city level" became conspicuous. As a result, besides developing the agricultural production base, the human settlement environment in rural areas has been comprehensively developed in the form of roads, domestic and commercial waste water treatment facilities, rural parks, health care and welfare facilities, and so on.

Furthermore, due to the migration of laborers from rural areas to urban areas to support the period of rapid economic growth, rural communities underwent an abrupt transformation which led to increasing concern for community reconstruction and the establishment of nodal community facilities, including the Rural Environment Improvement Center, Main Villages Center, and Center for the Development of Mountain Villages in Snowy Areas.

The fundamental pillar of policy regarding the development of the human settlement environment in rural areas has been the "Basic Direction of Agricultural Policy in the '80s" (October 1980 report of the Agricultural Policy Council). Around this time, as economic growth began slowing down and people reconsidered the materialism of the economic boom years, "spiritual affluence" took on greater significance, there was a rising interest in the natural environment, history, and culture, and the concepts of "scenic beauty" and "amenities" were incorporated into the rural development policy.

With the aim of giving concrete form to these concepts, the "Fourth Comprehensive National Development Plan" adopted in 1987 has aimed to develop comfortable environments that optimize the special features of rural communities (farming, mountain, or fishing villages) by such measures as developing social infrastructures including community roads and drainage facilities, preserving and improving attractive rural scenery, and the multi-purpose use of production facilities by, for example, creating hydrophilic spaces by taking advantage of irrigation canals. This plan also strives to develop educational and cultural facilities, develop cable TV networks and other new media, and form new communities through cooperation among regional residents. Moreover, to encourage interaction with urban areas, networking via the exchange of information is being advanced between urban and rural areas as well as between rural areas.

In line with the direction of such development of the human settlement environment, projects are now being improved to incorporate considerations regarding environmental conservation and the formation of scenic beauty. Special countermeasures for forming scenic rural towns and projects that address new needs, such as the development of the water environment to create hydrophilic spaces, are now being created and advanced. Furthermore, while giving due consideration to the conservation of ecosystems, efforts are being made to promote formation of "eco-villages" that are blessed with diverse flora and fauna and a rich natural environment and to also improve rural amenities.

In addition, concerning the development of the living environment, the development level of domestic and commercial waste water treatment facilities in rural areas lags particularly far behind that in urban areas. The development of drainage facilities in rural communities is being actively advanced to raise the level to that in cities (about 45%) by the early 21st century.

### 6.3 Environmental Conservation

In Japan, during the period of rapid economic growth after World War II, pollution and destruction of the natural environment became serious social problems. Efforts were then launched through environmental policies based on the Basic Law for Environmental Pollution Control and the Nature Conservation Law, which were respectively enacted in 1967 and 1972 to cope with these problems, and considerable results have been achieved in overcoming severe pollution and in conserving an excellent natural environment as a result of such environmental policies, the efforts of corporations, and so on.

Nevertheless, as socioeconomic activities characterized by mass production, mass consumption, and mass disposal become implanted and both population and socioeconomic activities become increasingly concentrated in large urban centers, the growing burden imposed on the environment by routine business activities and daily household activities is now turning into a major problem, as evidenced by such issues as urban pollution, household-generated pollution, and global warming. As seen in global environmental problems, today's environmental problems are becoming common issues facing all of humankind, which extend spatially throughout the planet and stretch temporally into future generations.

To resolve today's environmental problems, it is thus crucial to reform the socioeconomic system and lifestyles that encourage mass production, mass consumption, and mass disposal as well as to construct a society that will allow sustainable development with reduced load on the environment. For this purpose, the Basic Environment Law was enacted in 1993 to define a new conceptual approach to environmental conservation and to stipulate a comprehensive framework for basic policies based on such an approach. Moreover, based on said law, the Government adopted the Basic Environment Plan in December 1994, which indicates the basic concepts and long-term objectives of environmental policy into the mid-21st century and clarifies the course of government policies regarding environmental conservation up to the early 21st century.

The Basic Environment Plan sets four long-term objectives of environmental policy as (1) building a socioeconomic system that fosters a sound material cycle, (2) harmonious coexistence between humankind and nature; (3) participation by all sectors of society, and (4) promotion of international activities through global cooperation. It specifies measures required to build a society capable of sustainable development that can sustain healthy economic growth with minimal environmental load while maintaining a sound and fertile environment. To attain this plan's long-term objectives, the Government is working to comprehensively and systematically implement diverse policies.

Among such policies, the following policies are being advanced as measures that are particularly closely linked to human settlements.

The conservation of the atmosphere involves a variety of problems including global problems such as global warming and depletion of the ozone layer; wide-area problems



such as acid rain and photochemical oxidants; air pollution problems caused by the accumulated atmospheric load imposed by nitrogen oxides and suspended particulate matter in metropolitan areas; potential health hazards posed by diverse hazardous substances; and pollution problems related to community living environments such as noise, vibrations, and offensive odors. In order to solve these problems, targets have been set for environmental conditions such as environmental standards addressing the nature of each problem and for reducing environmental load, and various policies are being pushed forward in a comprehensive and systematic manner to alleviate the atmospheric load caused by diverse socioeconomic activities including industrial production, transportation systems, and daily household activities.

To preserve the water environment, various policies are being systemically and comprehensively advanced to deal with various problems, including global problems such as marine pollution as well as domestic problems such as water contamination by industrial waste water as well as domestic and commercial waste water, the contamination of soil and groundwater by hazardous substances, and so on. Environmental quality standards and other targets have been set to address the nature of each problem, appropriate waste water treatment regulations have been established for factories and worksites, waste water treatment facilities are being built for domestic and commercial waste water, and various policies are being pushed forward in a comprehensive and systematic manner to promote public awareness. For closed water systems where water quality cannot be improved, environmental standards concerning nitrogen and phosphorus will be specified and regulations controlling the total emissions of nitrogen and phosphorus will be fortified to prevent eutrophication. As for countermeasures against marine pollution, initiatives conforming to relevant international conventions and protocols shall be progressively implemented.

Furthermore, the environmental load is presently increasing in step with the increasing volume of waste generated by such factors as the socioeconomic system and way of life in which mass production, mass consumption, and mass disposal have become an integral part. As a consequence, the reduction of environmental load by advancing waste reduction and recycling measures is a vital issue. The Basic Environment Plan has positioned waste reduction and recycling measures as one of the essential pillars of environmental policy. More concisely, the basic approach to the required measures is prioritized as follows: (1) reduction of the amount of waste generated, (2) reuse of used products, (3) recycling of collected waste matter, and (4) proper treatment and disposal of waste matter. In conformance with this basic approach, various initiatives have been launched including the appropriate application of the "Law for Promotion of Utilization of Recyclable Resources" (enacted in 1991), the legislation of the "Law for Promotion of Sorted Collection and Valorization Concerning Containers and Packaging Waste" (1995).

Regarding policies on environmental risks of chemicals, regulations controlling preliminary examination, manufacture, import, and use of new hazardous substances

have been implemented based on the "Law Concerning the Examination and Regulation of Manufacture, etc. of Chemical Substances (enacted in 1973), and regulations controlling chemical emissions have also be implemented based on the "Air Pollution Control Law (enacted in 1968) and "Water Pollution Control Law (enacted in 1970). However, the potential hazard to human health and ecosystems (environmental risks) posed by chemical substances is being quantitatively assessed as precisely as possible, and various policies are being implemented with the aim of reducing the overall environmental risk.

To ensure a harmonious coexistence between nature and humankind, various policies are being comprehensively and systematically advanced with consideration of the social and natural features of each region. Such policies aim to provide people with opportunities to interact with nature and thus learn from, experience, and appreciate nature as well as to ensure a healthy natural environment through sustainable development activities for food products, timber and other products provided by the natural environment by, for example, positioning the basis of production capacity within a sound material cycle.

Particularly in natural flatland regions that can be considered the regions containing the majority of Japan's urban areas with a relatively high population density and much arable land, efforts shall be made to conserve superior natural areas; to maintain and form natural environments within forests, farmlands, and waterside areas; to assure natural environments in urban areas; to give due consideration to the natural environment when implementing public projects for infrastructural development; and to organically integrate the diverse natural environments.

Moreover, to safeguard biological diversity, measures are being enforced in conformance with the National Biodiversity Strategy based on the "United Nations Convention on Biological Diversity."

Note that, as a result of revision of the "Urban Green Space Conservation Act" in 1994, the "Master Plan of Open Spaces and Greenery" system was created to provide a comprehensive master plan for promoting greenery in urban areas. Each municipality is now striving to form agreeable urban environments by formulating policies to enforce their own version of this plan and also by comprehensively and systematically conserving and creating green spaces according to such policies.

As policies to assure environmental amenities with respect to the safeguarding and use of a sound and fertile natural environment for such activities as regional development, initiatives are being advanced to assure a favorable atmospheric environment; to assure favorable aquatic ecosystems; and to give due consideration to protecting scenic areas and environments of historic value. Initiatives are also being advanced to promote civic environmental conservation activities including national trust campaigns and volunteer activities such as tree-planting and cleanup campaigns; to encourage exchange between urban and rural areas from the standpoint of

providing opportunities to interact with nature; and to promote interactions with and use of a sound natural environment.

In addition, as fundamental policies related to environmental conservation, various policies are being pushed forward to provide the environmental safeguards and infrastructures instrumental to environmental conservation, including environmental impact assessments, sewerage systems, urban parks, waste treatment facilities, and so on.

### **PART III. NATIONAL ACTION PLANS**

#### **1. Basic Concepts of Forthcoming Human Settlement Policies**

##### **1.1 New Comprehensive National Development Plan**

Japan's economy annually reaches the world's highest levels in terms of flow and its people enjoy affluence in terms of income, goods consumption, and so on. Due to the lagging development of social infrastructures such as housing, regional differences in the living environment, and other factors, however, a considerable gap can be seen between the affluence signified by economic indicators and the affluence actually experienced by the individual. It will also be necessary to appropriately cope with such problems as the declining vitality of local communities caused by the predicted population decrease, ageing of the population and the intensifying inter-regional competition that transcends national limits as well as to respond to the diversifying needs of Japan's people including a renewed appreciation of nature. For this purpose, to replace the current Fourth Comprehensive National Development Plan, the National Land Development Council convened in November 1994 and approved the formulation of a new Comprehensive National Development Plan with a target year of 2010 to indicate guidelines for land development suitable for the approaching 21st century. In January 1995, a planning group was set up in the National Land Council and full-scale policy formulation activities have been launched for the new Comprehensive National Development Plan.

Within the new Comprehensive National Development Plan, the issues that should be addressed are thought include the following: (1) initiatives related to welfare, culture, and environment, which have become ever more important themes, with a focus on coexistence between humankind and nature and on the achievement of lifestyles that provide a real sense of affluence; (2) harmonious coexistence with the global community by continuously advancing interaction and cooperation with the world, particularly with Asia, amidst the conditions of increasing interdependence between the world's countries due to such factors as the collapse of the cold-war structure as well as the rapidly expanding economic scale of East Asian countries; (3) greater respect for the standpoint of local regions in the planning process through efforts to reflect local opinions in planning and other means, on the basis of reviving discussion about increasing local initiatives by such measures as the decentralization of power; (4) formation of a safe and worry-free national land in

view of the frequent occurrence of natural disasters such as the recent earthquake; (5) interaction and cooperation between regions as strategies for regional vitalization to cope with the full-scale decline and ageing of the population as well as the formation of a new national axis within an area distanced from the Pacific Ocean belt region.

The new Comprehensive National Development Plan is scheduled for formulation during fiscal 1996. Until then, the basic concepts of the new plan were made public in December 1995 and a summary of the new plan's intermediate draft will be made public in autumn 1996, on the basis of which the Government will strive to receive feedback from local governments and from all sectors of the general public so that the new Comprehensive National Development Plan can fully reflect the opinions of the people.

## **1.2 Policies for Metropolitan Areas**

To cope with recent changes in socioeconomic conditions, the Government is presently conducting investigations for formulating a new Basic Development Plan for the National Capital Region which will serve as the comprehensive plan for development in metropolitan areas into the 21st century. These investigations will also include a renewed inquiry into the ideal stance of future human settlement policies for metropolitan areas.

In metropolitan areas in recent years, housing can be said to have become sufficient in terms of quantity, but numerous problems still persist such as the small floor area of housing and other issues related to housing quality, greater separation between home and work, and so on. Problems are also emerging in conjunction with greater separation between home and work, including the decrease in residents in inner-city districts of metropolitan areas, particularly Tokyo; the deterioration of communities in step with such decrease; and longer commuting distances. As a result, one of the primary tasks now consists of striving to improve the overall environment for human settlements by safeguarding comfortable lives in which home and work are in close proximity and vigorous urban functions within inner-city districts through such measures as promoting settlement in inner-city districts and cultivating core business cities.

To cope with vulnerability to natural catastrophes and other disasters in metropolitan areas as revealed by the Great Hanshin-Awaji Earthquake, another important task will be to improve safety and to safeguard urban functions during emergency situations.

Also for the Kinki and Chubu Regions which are metropolitan regions which rank with the National Capital Region in Japan, the Government is similarly proceeding with investigations to formulate a new Basic Development Plan for the Kinki Region and a new Basic Development Plan for the Chubu Region.

### **1.3 Regional Promotion Policies**

In the coming years, various policies for regional promotion will be systematically unfolded with the continuing aim of the balanced development of the national land. In particular, measures will be required that fully consider the following two points: (1) the increase in local areas with diminishing populations and demographic imbalance in local areas, and (2) signs of recovery in local populations and new regional promotion possibilities such as the increasingly information-intensive social structure.

#### **1.3.1 Coping with the Increase in Local Areas with Diminishing Populations and Demographic Imbalance in Local Area**

Due to a falling birth rate and other factors, Japan's total population has been gradually decreasing and is expected to shift to negative growth in the early 21st century. Within local areas, where population growth does not reveal a natural decrease that exceeds the social decrease, the population in 16 prefectures shifted to negative growth during the period from 1985 to 1990 and, according to the forecast of the Ministry of Health and Welfare's Institute of Population Problems (October 1992 estimate), the population in 26 prefectures is expected to decrease over the 20-year period from 1990 to 2010.

Furthermore, the demographic distribution within local regions is predicted to generate imbalances in the coming years. That is, the rate of population increase in local core cities will be higher than the national average and it is conceivable that such local core cities will show a greater gravitation of population and become increasingly nodal in the future. In municipalities located within a one-hour radius of local core cities, however, it is feared that the rate of population decrease will rise and cause further escalation of depopulation and ageing.

In consideration of such population trends, appropriate development plans and promotion policies will be required that refrain from impeding new unipolar concentration within local regions and promote the equitable and balanced use of the national land. Regional promotion policies will also be essential for maintaining and increasing the vitality of local communities in areas suffering severe population decline and ageing as well as for appropriate management of the national land.

#### **1.3.2 Signs of Population Recovery in Local Regions and New Regional Promotion Possibilities such as the Increasingly Information-Intensive Social Structure**

In recent years, new changes can be seen in demographic trends. In other words, the excess influx into the Kanto and Greater Tokyo Regions has already begun dropping since 1987, shifting to an excess efflux in fiscal 1993 for not only the Greater Tokyo Region but also the entire tri-metropolitan sphere. On the other hand, local regions marked an excess influx of about 40,000 people in 1994, which can be interpreted as a sign of population recovery in local regions.

Furthermore, according to the results of public-opinion polls, the majority of the public expressed such attitudes as "the population should be decentralized to local regions" and "it is preferable to spend one's old age in local regions," thereby supporting the signs of recovery in local populations.

Moreover, the share of industrial production, information dispatch, and other functions in local regions shows an increasing tendency and, despite recent apprehensions of a hollowing-out effect, it is believed that there has been an increase in local job opportunities which has brought about decentralization of the population into local regions.

New movements anticipating the arrival of the 21st century include the deepening of "integrated interaction"; further progress toward a high-grade information-intensive society that holds potential for eliminating differentials in time and distance and for opening up new industries; international integration that promotes the development of regions that are opened to the world; a trend toward decentralization of power that expands the freedom of local governments; and movements toward coexistence with nature as seen in nature-oriented activities. Such movements are expected to further expand possibilities for regional promotion.

To actively seize these optimistic omens for local regions and to stabilize the signs of population recovery in local areas, it will be necessary to advance the formation of individualistic and distinctive local areas while properly dealing with the rise in new regional possibilities. Since it will also be crucial to address rapidly growing public awareness concerning safety and to give full consideration to achieving a decentralized national land structure capable of coping with large-scale disasters and other problems, the appropriate decentralization and relocation of high-grade national functions will also be desirable.

For this purpose, it will be vital to actively advance diverse regional promotion policies such as the vitalization of local industries, while taking into account the formation of a beautiful national land with the continuing aim of balanced development of the national land through such measures as equitable and balanced use and management of the national land.

In anticipation of the rapid approach of full-fledged ageing of the population within socioeconomic conditions that are undergoing tremendous transformation due to the more information-intensive nature of society and progressing international integration, local governments which are the comprehensive and leading bodies in local areas must play an increasingly significant role in building energetic and attractive local communities while responding to the diverse needs of residents.

To address such expectations of Japan's people, it has become an urgent task to build relationships between national and local governments that properly anticipate the approaching 21st century by pushing forward decentralization of power, reinforcing the autonomy and self-reliance of local governments, and accelerating administrative reform throughout national and local governments.

Regarding the decentralization of power, to enable local governments to implement autonomous policies from the standpoint that administrative tasks within close range of the residents should be handled by the nearby local authorities, it will be necessary to review the division of duties between the national and local governments and to actively proceed to transfer authority from the national government to local governments. In conjunction with these measures, it will be necessary to strive toward enlarging and fortifying local tax resources in order to facilitate the performance of duties by local governments.

## **2. Disaster Prevention Initiatives Based on Experience Gained from the Great Hanshin-Awaji Earthquake**

Resulting in over 6,300 persons dead or missing, the Great Hanshin-Awaji Earthquake which occurred on January 17 of 1995 caused the greatest damage in Japan since World War II. Until then, Japan's disaster countermeasures had been implemented on the basis of four pillars: (1) scientific and technologic research; (2) disaster prevention by increasing disaster prevention awareness, publicizing disaster prevention knowledge, disaster prevention drills, development of disaster prevention facilities, etc.; (3) land conservation; and (4) emergency disaster countermeasures and restoration measures after occurrence of a disaster. Although these four pillars will not be changed in the wake of the Great Hanshin-Awaji Earthquake, Japan is reviewing such factors as the human and physical damage caused by this earthquake and the rescue activities for earthquake victims, and has started considering new disaster countermeasures.

Japan's disaster countermeasures are implemented on the basis of the Disaster Countermeasures Basic Act and the national Basic Plan for Disaster Prevention which was adopted on the basis of the preceding law. Both this law and this plan were revised after the Great Hanshin-Awaji Earthquake, and the drastically revised Basic Plan for Disaster Prevention was adopted on July 18 of 1995 whereas the revised Disaster Countermeasures Basic Act was adopted on December 8 of 1995. The following new countermeasures which include the previously-mentioned revisions are being planned and implemented.

### **(1) Development of an Information-Gathering System and Information-Liaison System**

To conduct mobile information gathering activities, the national and local governments are proceeding to develop systems with access to diverse means of gathering information including planes, patrol boats, and automobiles as required, and systems for collecting and relaying video information such as helicopter TV systems, surveillance cameras, and so on.

Efforts have also been launched to build a geographic information system to support disaster countermeasures, with the aim of expediting early assessment of the scale of damage and prompt execution of emergency disaster countermeasures.

## (2) Emergency Disaster Countermeasures System

Because the presence of a cooperative system between authorities involved in disaster prevention is vital when a disaster occurs, the national government, public authorities, and local governments are reinforcing cooperation to also include normal situations by, for example, the formation of mutual-support agreements concerning emergency and restoration activities between the entities concerned.

Furthermore, prefectural governments and the Self-Defence Forces are reinforcing their cooperative system to also include normal situations by such means as efforts to develop their respective disaster countermeasures plans and the determination of cooperative relations. The emergency dispatch of the Self-Defence Forces formerly required the order of a prefectural governor or other equivalent authority. According to the actual conditions of the disaster, however, especially in urgent cases where every moment counts, SDF troops can now be dispatched without waiting for such order.

## (3) Local Headquarters for Disaster Countermeasures

When a large-scale disaster occurs, the Government sets up Headquarters for Major Disaster Countermeasures or Headquarters for Extraordinary Disaster Countermeasures, depending on the extent of the damage. To obtain a better grasp of the situation in the stricken region and to expedite the prompt and accurate execution of emergency countermeasures, however, local headquarters for disaster countermeasures will also be set up.

## (4) Evacuation and Accommodation Activities

To maintain an agreeable living environment for evacuees in civic halls, schools, and other public facilities designated as evacuation sites for people when a disaster occurs, local governments are striving to provide ventilation, lighting, and related facilities, water tanks, wells, provisional toilets, mats, communications devices, etc. as required.

To also quickly assure a healthy living environment for the evacuees, the national and local governments are working in concert with corporations and other entities to develop advance systems for procuring and supplying emergency temporary housing, based on the stance of striving for the quick dissolution of evacuation sites by such means as promptly providing emergency temporary housing.

## (5) Acceptance of Spontaneous Support

In cooperation with Japan Red Cross, Social Welfare Council, and volunteer groups, the national and local governments are endeavoring to support volunteer activities by, for example, working to develop an environment conducive to volunteer activities; studying the feasibility of volunteer registration and training, the operation of volunteer centers, etc. during normal situations; striving to safeguard a system for receiving volunteers and assuring optimum use of the skills of volunteers during



emergency situations; supplying centers for volunteer activities if necessary; and so on.

#### (6) Vulnerable Groups

Elderly people, the physically handicapped, foreigners, and other vulnerable groups require special considerations in terms of disseminating knowledge concerning disaster prevention, providing information during a disaster, evacuation guidance, relief and rescue measures, and so forth. For this reason, efforts are being made to develop a system within each region for supporting vulnerable groups during normal situations, to give due consideration to vulnerable groups during emergency situations with respect to evacuation guidance, the living environment in evacuation sites, and accommodation in emergency temporary housing. Particular efforts will be directed toward keeping a grasp of the health conditions of vulnerable groups in evacuation sites, priority occupation in emergency temporary housing, the establishment of emergency temporary housing suitable for the elderly and physically handicapped, and so on.

Countermeasures against sediment disasters will also be promoted for facilities related to vulnerable groups, such as hospitals and homes for the aged.

#### (7) Review of Local Disaster Prevention Plans

Based on the preceding perspective, local governments have immediately reviewed local disaster prevention plans of an urgent nature such as the development of systems for initiating action and liaison; are implementing disaster prevention assessments and damage hypotheses in order to extensively fortify disaster countermeasures including the standpoint of creating safe municipalities that are highly disaster-resistant; and are proceeding with overall reconsideration of local disaster prevention plans that deal with the above-mentioned issues.

#### (8) Determination of the Basic Course for the Restoration or Rehabilitation of Stricken Regions

Local governments immediately investigated the options of prompt restoration of original conditions or systematic rehabilitation that would also solve mid- to long-term problems such as the creation of a more disaster-resistant municipality, and have determined the basic course of restoration or rehabilitation.

#### (9) Waste Treatment

The occurrence of a disaster leads to the temporary discharge of large volumes of ordinary waste, bulky waste, trash resulting from destroyed homes, and sewage generated due to the breakdown of waterworks systems. To deal promptly with such large volumes of waste, since it is necessary to develop routes for collection and transport, treatment methods, and other measures in advance, wide-area collection and

treatment systems are being established.

**(10) Earthquake-proofing of and Emergency Countermeasures for Waterworks**

Water is a crucial element of daily life. The Great Hanshin-Awaji Earthquake caused vast damage to waterworks, resulting in the suspension of the water supply for an extended period. Consequently, the national government, prefectural governments, and sewerage enterprises are striving to fortify earthquake-proofing of the waterworks system by improving earthquake-proofing of filtration plants, main conduits, and other main facilities; promoting the renovation of decrepit facilities; developing emergency water supply bases; developing a system of countermeasures for emergency situations; and so forth.

**(11) Earthquake-proofing of and Emergency Countermeasures for Sewerage Facilities**

Sewerage facilities are indispensable to the improvement of the living environment, flood control, and preservation of the water quality in public water areas. The Great Hanshin-Awaji Earthquake caused extensive damage to sewerage facilities, resulting in declined treatment functions in a number of sewage treatment plants. Consequently, the national government, prefectural governments, and sewerage enterprises are striving to improve earthquake-proofing of the sewerage system by fortifying earthquake-proofing of sewage treatment plants, main pipes, and other main facilities; developing a system of countermeasures for emergency situations; developing a dual structure of main pipelines; advancing the networking of sewage treatment plants; and so forth.

**3. Field-Specific Goals and Action Plans for the Year 2000**

**3.1 Housing**

**3.1.1 Housing Conditions and Social Changes in Japan**

In Japan, due to the tremendous loss of housing as a result of World War II, a housing shortage of about 4.2 million dwellings occurred after the war ended (1945). With the subsequent economic growth, the housing shortage was gradually resolved such that, in 1968, the total number of residences surpassed the total number of households and the quantitative goal of one dwelling per household was by and large attained. In 1993, the housing stock totaled 45.88 million residences, reaching a level equivalent to 1.12 residences per household.

Viewing the scale of housing against the backdrop of the deep-rooted preference of Japan's people for home ownership, the scale of housing has been steadily increasing with a focus on owned homes, and the residential floor area per house reached about 92 sq. meters in 1993. As for rented homes which abound in large cities, however, the improvement of residential standards continues to lag behind and, in 1993, the residential floor space per rented home was about 45 sq. meters, showing a large disparity with that of owned homes at 112 sq. meters.

From the standpoint of price, although prices in metropolitan areas are recently tending to drop, they remain at high levels in comparison with the average home purchasing capacity of the average worker. In addition, the remote locations of affordable housing and the longer commuting times of workers are placing a considerable burden on city residents.

Socioeconomic circumstances surrounding home life are also changing significantly. Households are further fragmenting and becoming even smaller. In 2010, it is estimated that the average number of household members will drop to 2.55 persons and the combined share of households consisting of a single person or a married couple will climb to about 51%. On the other hand, the ageing of the population will steadily increase and it is estimated that, in 2010, the share of the total population consisting of persons aged 65 years or more will reach about 21%.

Moreover, lifestyles are diversifying as a result of an increase in double-income households due to the advance of women into the labor force, changes in family values, the emergence of service agencies to perform housecleaning and other housework, and other factors.

### **3.1.2 Housing Construction Five-Year Program**

To accurately address such housing circumstances and socioeconomic changes, the Government has thus far adopted the Housing Construction Five-Year Program over six phases and is thereby advancing the comprehensive construction of housing with the aim of improving the quality of the residential life of Japan's people.

The Seventh Housing Construction Five-Year Program, which is currently under planning and will begin in fiscal 1996, includes stipulations of target residential standards, the number of residences to be constructed, and the policies to be implemented.

#### **(1) Housing Standards**

The minimum housing standard and the targeted housing standard will be stipulated as guidelines for the scale of housing to be ensured according to household size.

The targeted housing standard is a guideline for inducing qualitative improvement of the housing stock and the attainment of this standard for 50% of all households is targeted for the year 2000.

On the other hand, the minimum housing standard is an indispensable standard for laying the foundation for health and cultural residential lifestyles. Efforts will be focused on households that are currently below this standard, with a special priority on households in rented homes in metropolitan areas.

Furthermore, this Program aims to increase the average floor area per residence for the entire housing stock to about 100 sq. meters by the year 2000.

The respective attainment rates and targets are as follows;

#### **o Targeted housing standard attainment**

1993: 40.5%	->	2000: 50%
-------------	----	-----------

o Below minimum housing standard

1993: 7.8%                      ->                      2000: Strive toward 0%

o Average floor space per residence

1993: 91.9 m<sup>2</sup>                      ->                      2000: 100 m<sup>2</sup>

(2) Number of Residences to be Constructed

Within the program period of 1996 to 2000, to provide housing for newly formed households and deal with households living in housing below a fixed standard, it is estimated that about 7.3 million residences will be constructed out of which about 50% will require funding by public assistance.

(3) Implementation of Policies

The national and local governments will place priority on implementing the following policies on the basis of appropriate role assignment and close cooperation between the public sectors and the private sectors.

a. Building both a housing stock and living environment of good quality that address the needs of Japan's residents

Construction will be advanced on the conditions of forming and preserving good-quality housing stock and of addressing the residents' diverse needs by utilizing the existing housing stock.

o To form both a housing stock and living environment of good quality, the construction of infrastructures that is integrated with developments of housing and residential land will be actively promoted.

o The supply of housing and residential land will be promoted by shifting the focus from land ownership to land use, by making use of a leasehold right system, and so on.

o To enable consumers to acquire desirable housing within the housing market and smoothly switch homes through such market, the market for housing will be furthered developed by providing housing information to consumers, improving the system for indicating the features of housing, and so on.

o Efforts will be directed to advance technological development for the industrialization of housing and improve the productivity of traditional wooden houses.

o To induce the supply of good-quality housing, the provision of a specific scale and certain housing properties will be demanded to receive public financing of new homes.

o To ensure the effective use of existing housing stock, the home remodeling industry will be cultivated.

o To vigorously promote settlement in local regions, construction will be advanced of individualistic housing and living environments that reflect regional characteristics, such as a uniquely regional design or a historical arrangement of

buildings, and that exhibit originality.

b. Advancing safe and comfortable urban living

o In conjunction with the skyrocketing of land prices some time ago, population has decreased in the inner-city districts of metropolitan areas, whereas the locations of affordable suburban housing have become increasingly remote. To improve such circumstances, to promote closer proximity between work and home, and to improve residence-related functions, the supply of apartment houses will be promoted with a special focus on inner-city districts.

o To apply the lessons learned from the Great Hanshin-Awaji Earthquake and to increase safety in case of earthquakes, earthquake-resistance inspections and seismic remodeling will be promoted.

o In urban areas with a high density of decrepit wooden housing that urgently require improvement from the standpoint of disaster prevention, reconstruction will be promoted to switch to a ferro-concrete or another fire-proof structure and efforts will be made to improve disaster prevention by such means as securing empty lots.

c. Developing the environment to make possible a long-living society

o To enable the elderly, physically handicapped, and other vulnerable groups to lead active daily lives, stable and high-quality settlements will be safeguarded by the supply of public housing equipped with alternatives to steps, the possibility of installing hand rails, and other special considerations for such vulnerable groups and by the popularization of design guidelines for housing targeting such vulnerable groups.

o Efforts will be made to expand and improve the welfare services required by the elderly, physically handicapped, and other vulnerable groups by advancing the consolidation or annexing of day-care centers and other welfare services to public housing complexes, by reinforcing policy coordination with welfare and medical care policies, and so on.

d. Developing comfortable urban residential areas that take advantage of such factors as pleasing waterside areas while assuring safety against disasters

o To prevent devastating damage due to destroyed embankments and flooding in metropolitan areas like Tokyo or Osaka, development will be promoted of sufficiently wide "super embankments" that are unlikely to collapse, and efforts will be made to create agreeable urban residential spaces that are hydrophilic by developing housing, parks, etc. on embankments.

o In lowlands on the periphery of metropolitan areas, retarding basins and regulating reservoirs will be developed as an integral part of urban development, and the development of agreeable urban residential areas that take advantage of waterside areas will be promoted while working to improve safety against flooding.

o In sloping foothills adjacent to urban areas, efforts will be made to advance countermeasures to prevent sediment and sand disasters with the aim of harmonious coexistence with nature, including scenic considerations such as the preservation of existing trees and active tree-planting to develop safe and verdant green belts. Agreeable urban residential areas will be developed while improving safety against landslides.

### **3.2 Improvement of Urban Areas**

#### **3.2.1 Development Standards for Urban Infrastructures**

##### **(1) Sewerage**

Although the average sewerage coverage ratio has exceeded 50% on a national level, development lags behind in small to medium-sized cities and there is a disparity in development levels between cities and between regions. To build a society where residents can actually experience affluent living, further development is required to create a clean and comfortable environment.

As the volume of sewage and rainwater passing through sewerage increases, sewerage will exert a growing impact on the water volume and water quality of water areas in the years to come. The present water environment is also confronting new challenges such as the safeguarding of safe and good-tasting water, countermeasures against eutrophication in closed areas systems, revival of diverse ecosystems, development of nearby waterside areas, and countermeasures against water shortage.

Five-year programs have thus far been implemented in seven phases. The Seventh Five-Year Program aims to raise the sewerage coverage ratio to 54% by the target year of 1995. The Eighth Five-Year Program is currently under planning to cope with the previously-mentioned problems, and sewerage development will be advanced to attain the following goals by the target year of 2000: raise the ratio of the population covered by sewerage to about 70%, raise the ratio of the development of sewerage rainwater countermeasures to about 60%, and increase the ratio of the population covered by advanced sewage treatment to about 15 million persons.

##### **(2) City Parks**

Regarding the long-term goal for city parks, since the report of the Central City Planning Council in 1971 and with reference to levels in North America and Europe, the target has been to safeguard about 20 m<sup>2</sup> or park area per person on the basis of calculations of the predicted recreation demand, effective area ratio, and so on.

Although such development has been systematically advanced according to the Five-year Development Program for City Parks over five phases since 1972, the development level of city parks is still low at 6.7 m<sup>2</sup> of park area per person (as of the end of fiscal 1993) which represents about one-third of the long-term goal. City park development in Japan thus continues to lag far behind that in North America and Europe.

As the current plan, the Sixth Five-year Development Program for City Parks are now being formulated to begin in fiscal 1996 and will aim to safeguard about 9.5 m<sup>2</sup> of park area per person by the end of fiscal 2000. This program will also aim to eliminate the segment of the population with evacuation difficulties in 65% of the urban areas by developing parks as refuges that will serve as wide-area refuges during earthquake damage and to develop a network of parks within walking range in 65% of the urban areas.

### (3) Streets

Development of streets is dragging conspicuously behind and cannot keep up with the pace of urbanization. Among the roads already targeted for development by urban planning, the improvement rate of principal roads was only 47% as of March 1994.

Moreover, it is considered preferable from a long-term perspective that principal roads in urban districts be developed at a density of 3.5-km length per each square kilometer of an urban district (at intervals of about 500 to 600 m). At present, however, the density of principal roads that has been improved according to urban planning averages no more than 1.3 km per km<sup>2</sup>.

As a result, efforts are being made to raise the average principal road density in urban districts to 2.3 km per km<sup>2</sup> -- which corresponds the target density rate of current urban planning -- by the early 21st century.

### (4) Rivers, etc.

Regarding river development, the present objectives consist of the development of large rivers that can contend with medium-scale flooding (flooding due to rainfall on a level that occurs once every 30 to 40 years), the development of small- to medium-sized rivers that can contend with an hourly rainfall of 50 mm, and the development of flood control facilities to prevent damage due to sediment disasters caused by 50-mm hourly rainfall.

Among the approximately 63 million persons in districts that face possible inundation due to flooding, the share of the population requiring protection by the development of flood control facilities (about 25 million as of 1994) will be reduced to about 17 million persons in 2000, with a priority on urban areas.

In addition, chronic above-floor flooding damage which occurs frequently in about 450 municipalities across the nation, including about 70% of the seats of prefectural governments, will be eliminated by 2000.

## 3.2.2 Targets for Surface Development of Urban Districts

### (1) Redevelopment Projects for Urban Districts

To strengthen the disaster-resistance capacity of urban districts where population is conspicuously concentrated, efforts are being directed to complete about 80% of the urban redevelopment projects for districts requiring the promotion of integrated

and comprehensive redevelopment (about 300 districts) by the early 21st century.

## (2) Land Readjustment Projects

In Japan, land readjustment project is a typical means of developing urban districts. Before and after World War II up to the present time, projects have been implemented to deal with diverse problems in various areas ranging from built-up areas to newly urbanizing areas. The area of initiated projects was about 3,600 km<sup>2</sup> as of the end of fiscal 1994, out of which the area of replotted projects was about 2,800 km<sup>2</sup> and the area of projects under execution was about 780 km<sup>2</sup>. This area of initiated projects account for about one-third of all the urbanized area.

To create a excellent urban environment for the early 21st century, urban development projects will be required for an area of about 4,200 km<sup>2</sup>, out of which land readjustment projects will be implemented for a total of 2,500 km<sup>2</sup> which consists of 300 km<sup>2</sup> of built-up areas and 2,200 km<sup>2</sup> of newly urbanizing areas.

## 3.3 Urban Transportation

### 3.3.1 Current Situation and Problems

Within the field of urban transportation, public transit systems such as railways and buses are social infrastructures that are vital to urban living.

In recent years, however, trains have become severely congested during commuting hours for work or school due to the large volume of passengers between suburban residential areas and urban business areas, caused by the over-concentration of population and economic activities in metropolitan areas and an urban structure in which home and work become increasingly distant. In 1993, the congestion rate (the ratio of passengers to passenger capacity, which is 100% for full passenger capacity when trains are full) in the National Capital Region (Tokyo, Yokohama, etc.) and Kinki Region (Osaka, Kyoto, Kobe, etc.) remained high at 197% and 166%, respectively. Consequently, the progressive development of urban railways by such means as reinforcing passenger capacity and building new railroad lines has become a challenge. Furthermore, the deterioration of the traffic flow environment is making the punctual operation of buses difficult (in 1993 and has caused the raised speed limits in Tokyo and Osaka to respectively drop to 11.4 km/hour and 12.8 km/hour), thereby presenting the problem of assuring punctual bus operation. In addition, for the creation of a more agreeable urban environment, the expansion and improvement of bus lines and faster train operation are becoming major problems in large cities, while the maintenance of buses and railroads are becoming major problems in local small to medium-sized cities.

Despite the increasing demand for road transportation in urban areas, urban living and urban activities are being seriously affected by such problems as absolute shortage of parking space, the prevalence of parking violations, intense traffic congestion, and the increasing number of traffic accidents. Promoting development



of parking areas has thus become an urgent task.

### 3.3.2 Countermeasures and the Future Course

(1) As an example of initiatives to overcome these problems, budget measures are being taken. Out of the fiscal 1995 budget, about 70 billion yen has been allocated for developing subways and other urban railways, about 3 billion yen for securing local railways, about 600 million yen for promoting measures to vitalize bus transit, and about 10 billion yen for securing local bus lines.

(2) In the future, as Japan becomes an increasingly aged society, it will be the role of public transit systems to promote comfortable and affluent urban living that can be sustained by the environment. For this purpose, it will be necessary to take such administrative measures as expansion and improvement of the subsidy system and to further develop and fortify railways, buses, and other public transit systems. The course of such activities is described in the following.

(a) In particular, public transportation must be made more convenient and comfortable. It will also necessary to remove travelling barriers for the elderly and physically handicapped by assuring smooth transit connections, constructing elevators and escalators, and so forth.

(b) To alleviate traffic congestion and improve traffic flow, the driving environment will be improved through such measures as establishing bus-priority or bus-only lanes, popularizing off-peak commuting, and promoting the use of public transit systems.

(c) The creation of attractive workplaces for commuters will be furthered by such measures as shortening work hours and improving welfare benefits.

(d) It will be necessary to deal with environmental problems by shifting the demand away from the use of family cars through such measures as adopting a park-and-ride system, by developing and providing incentives for low-pollution vehicles, and so on.

(e) During the implementation of such policies, efforts will be made to ensure close coordination and cooperation between the national government offices concerned and relevant authorities including local governments.

(3) Although the volume of cars owned is significantly increasing each year, the development level of Japan's roads and other transportation systems remains not so high. Therefore, measures are being comprehensively and systematically advanced for constructing looped roads, radial roads, bypasses for intra-urban roads to improve the efficiency of vehicular traffic as well as for constructing parking areas to cope

with the growing demand for parking space. Especially in local urban areas and metropolitan areas where the development of trunk roads is at low levels, the above-mentioned construction is becoming a pressing issue. In addition, the creation of sidewalks will be furthered to furnish a safe road environment for pedestrians, the safe use of bicycles as a part of daily life will be promoted, and the building of parking areas for bicycles and other two-wheeled vehicles will be advanced as a parking countermeasure for such vehicles.

Furthermore, the development of distribution bases will be advanced to improve intra-urban distribution functions and to alleviate road traffic congestion.

### **3.4 Social Security (including Housing for the Elderly)**

In Japan, the decreasing birth rate and increased ageing of the population are trends which are expected to accelerate sharply in the years to come. To enable all national residents to enjoy good health and security throughout their lives even during the approaching "low-birth ageing" society, it will be essential to provide a reliable social welfare system -- including pensions, medical care, and social welfare -- which addresses the needs of the times. Compiled in March 1994, "The Welfare Vision for the 21st Century" indicates the basic concepts and basic course for future social welfare. In the coming years, on the basis of this course, measures will be implemented to materialize this vision in each sector, including measures for elderly care and to support child-raising.

Alongside the rapid ageing of the Japanese population, the capacity for elderly care within the home has declined due to such factors as the drop in multi-generation households and the increasing age of elderly persons requiring care. In terms of enabling Japan's residents to live comfortably in their old age, therefore, the problem of care for the elderly is becoming the utmost concern.

Under these circumstances, the "Ten-Year Strategy to Promote Health Care and Welfare for the Aged" (the Gold Plan) was adopted in December 1989. With the aim of providing comprehensive health care and welfare services for the elderly, this strategy defined quantitative targets for services which would be urgently required within the decade leading up to the 21st century.

Furthermore, the health care and welfare plans for the elderly which were adopted by local governments throughout Japan in fiscal 1993 revealed the need for services vastly exceeding the scope of the Gold Plan. As a result of this discovery combined with such factors as the systemization of new projects since the adoption of the Gold Plan, the Gold Plan was completely reviewed in December 1994 and replaced by the "New Gold Plan" which was launched in fiscal 1995.

Besides setting higher targets for providing services than the Gold Plan, the New Gold Plan newly stipulates the basic framework for implementing the relevant policies.

Moreover, measures are being advanced through cooperative efforts with the national authorities concerned to construct housing equipped with additional

functions to support the daily lives of the elderly, to improve and expand policies and allocate funds for promoting the construction of private housing that can adequately accommodate the elderly and physically handicapped, and so on.

On the other hand, to both cope with Japan's decreasing birth rate and provide society-wide support for childcare, the Angel Plan was adopted in December 1994 with the aim of the comprehensive and systematic implementation of policies to support child-raising. "Five-Year Projects including Emergency Day Care Measures" have been launched as an integral part of the Angel Plan, systemically providing a wide variety of day care services such as day care for infants and extended day care which are in particularly high demand.

For the long-term and reliable management of systems that enable every Japanese resident to enter a medical insurance policy and receive medical care without worry, medical insurance systems that enjoy public confidence will be established by striving for a fair balance of insurance benefits and premiums between insurance systems and between those insured.

Regarding the public pension system, because this system must continue to satisfactorily fulfil its role as the mainstay of life plans charted by Japan's residents, the public pension system was extensively reformed in 1994 in order to ensure balance in pension benefits and pension fees between the generation drawing pensions and the generation paying pension fees.

In the future as well, efforts will be continued to establish a public pension system that can adapt to structural changes in both industry and employment as well as to rectify any imbalances between pension benefits and fees. To enable Japan's residents to live more comfortably in their old age, efforts will be directed to popularize and cultivate systems to supplement public pensions such as corporate pensions and national pension funds.

Concerning housing for the elderly, support is being provided to promote the acquisition and remodeling of housing that is structurally equipped to accommodate the elderly from the standpoint of social security through such measures as a new loan system within the pension reserve for refund and financing.

### 3.5 Waste Disposal

Waste disposal in Japan is conducted on the basis of the "Waste Management Law." That is, municipal governments bear responsibility for the management of primary waste consisting of domestic waste and raw sewage, prefectural governments provide the necessary guidance to municipal governments, and the national government provides the necessary guidance and financial assistance to municipal and prefectural governments. In addition, this law stipulates that the management of sludge, waste oil, and other industrial waste generated in the course of business activities is the responsibility of the enterprise that generated such waste.

Regarding the status of waste generation and disposal in fiscal 1995, total of

50.2 million tons of ordinary waste was generated, of which 48% were collected directly by municipal governments, 33% by collectors commissioned by municipal governments, and the remainder by licensed collectors. Its disposal can be broadly categorized into three categories: incineration (74%), direct land-fill burial (15%), and crushing, sorting, composting, etc. (11%). In the same year, a total of approximately 403 million tons of industrial waste was generated and its disposal was as follows: incineration or intermediate processing (62%), direct recycling or reuse (23%), and direct land-fill burial (15%).

The circumstances surrounding ordinary waste disposal have become increasingly severe in recent years. In step with diversifying lifestyles and changes in consumption patterns, the volume of waste generated has grown steeply while the variety of waste also increases. In addition, it becomes harder each year to secure final disposal sites and other waste treatment facilities, thus making ordinary waste disposal an extremely serious problem. Amidst such circumstances, in order to build an agreeable urban environment with the aim of becoming a "zero-waste" society by the early 21st century, almost all waste disposal activities will be converted from "the simple incineration and burial of waste" to a system that circulates ordinary waste within the socioeconomic system by reducing the generation of waste, recycling all waste capable of being recycled, incinerating the remaining combustible waste, and using the heat generated by incineration. This conversion concept is also incorporated both in the "Economic Plan" which forms the economic working guidelines stipulated by national government and in the "Basic Plan for Public Investments" which forms the guidelines for the construction of infrastructures.

Furthermore, concerning containers and packaging waste which account for about 60% of all ordinary waste generated, "The Packaging Recycling Law" was enacted in June 1995 to promote the recycling of containers and packaging waste based on the shared burden of recycling costs among consumers, municipal governments, and corporations. According to this law, municipal governments conduct sorted collection of containers and packaging waste, consumers cooperate by sorting such waste prior to collection, and corporations are responsible for recycling the containers and packaging waste obtained by sorted collection. Consequently, an arrangement which grants economic benefits in proportion to the decrease in containers and packaging waste has been incorporated into the socioeconomic system, thus greatly decreasing the volume of waste generated by reducing the use of inappropriate containers or packaging (e.g., excessive packaging practices) and by promoting a shift to materials that can be easily recycled.

Regarding industrial waste, each corporation is responsible for appropriately disposing of the waste it generates, and standards for industrial waste disposal and for the commission of such disposal have been stipulated to conserve the human settlement environment. As countermeasures against hazardous waste, in conjunction with the revision of the Waste Management Law in July 1992, waste possessing

properties that may be injurious to human health or may damage the human settlement environment (e.g., explosive, toxic, or infectious properties) have been categorized as specially-controlled waste and regulations for this category, such as treatment standards, have been strengthened. In addition, in order to enforce the "Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal" and the import/export restrictions on hazardous waste which conform to the decision reached by the OECD Council, the "Law for the Control of Export, Import, and Others of Specified Hazardous Waste and other Wastes" was enacted in December 1994.

Regarding the management of domestic waste water, the present challenges involve promoting the sanitary disposal of night soil (as of fiscal 1992, purification by sewerage and johkasou (on-site domestic wastewater treatment systems, which are composed of gappei-johkasou and tandoku-johkasou): 70%; sanitary treatment by night soil treatment facilities: 91%), and advancing the treatment of gray water (all domestic waste water excluding that used by flush toilets) to preserve water quality. In particular, the gappei-johkasou, which can be installed in every household and can treat both night soil and gray water, is an extremely effective measure for treating household waste water in rural areas where residences are dispersed. Consequently, to promote the use of gappei-johkasou, about 60% of all municipalities nationwide grant subsidies to households that install a gappei-johkasou. The national government also provides financial support to municipal governments that conduct such a program.

Regarding the construction of waste disposal facilities, the "Plan for Developing Waste Disposal Facilities" has been established and systematically pushed forward over seven consecutive phases of five years each. Since the Seventh Plan for Developing Waste Disposal Facilities will end in March 1996, the formulation of an eighth long-term plan (1996 to 2000) is now underway to further advance development of waste disposal facilities. The main points of this plan are as follows:

(1) Based on the objectives of the Packaging Recycling Law and other related regulations, the volume of waste generated shall be reduced as much as possible, the annual increase in waste generated per capita during the plan period shall be reduced to 0.5%, and sorting of waste prior to collection shall be promoted.

(2) To promote the recycling and reuse of waste, group collection and sorting of waste that can be recycled or reused shall be furthered by seeking the participation of community residents and promoting sorted collection by municipal governments. In addition, facilities shall be constructed for the recycling and disposal of waste, including recycling facilities that conduct sorting, compression, and other activities as well as facilities capable of using the heat generated by incineration.

(3) Efforts will be directed to progressively construct waste disposal facilities and simultaneously secure wide-area sites of final disposal.

(4) To further advance measures for treating domestic waste water, for all johkasou installed in the future, efforts will be made to switch from tandoku-johkasou that can treat only night soil to gappei-johkasou.

(5) Waste disposal centers established by local public bodies with financial cooperation from private enterprises offer the merits of being able to use private capital and human resources to promote waste disposal and the construction of such centers while taking advantage of the power of public credit to assure safety and reliability. By promoting the establishment of such centers, appropriate and wide-area disposal shall be conducted of hazardous waste and other waste that require special management for disposal as well as of large household appliances and other waste which cannot be easily managed by the facilities and/or technologies of municipal governments.

### 3.6 Waterworks Improvement

In Japan, the number of people serviced by municipal water has reached about 119,090,000 persons (as of March 31, 1994) which is equivalent to 95.3% of the total population. Nearly all of Japan's residents can use municipal water and, regarding its water quality, safe water is being supplied in conformance with the water quality standards stipulated in the "Water Supply Law." Although the annual volume of water supplied in fiscal 1993 was 16.9 billion cubic meters, which was 100 million cubic meters less than in fiscal 1993 due to such factors as the cold summer, the water supply is showing an increasing tendency in recent years as a result of higher living standards, the development of urban activities, and so on.

Waterworks have now entered an era of wide-spread use. In 1994, however, suspension of or reduction in the water supply occurred as a result of an unprecedented water shortage. The "Sanriku Offshore Earthquake" of 1994 and the "Great Hanshin-Awaji Earthquake" of 1995 also caused tremendous damage to waterworks, seriously affecting community life in stricken areas. Regarding the quality of municipal water, the ongoing assurance of the safety and reliability of water quality has become a consequential challenge because of progressing eutrophication in lakes, marshes, and other water resources, the generation of trihalomethane by chlorination in the filtration process, the detection of various microscopic chemical substances, and other factors.

In response to such circumstances, to improve national living standards in terms of waterworks and to achieve a society that provides a real sense of affluence to its members, the "Long-Term Goal for the Improvement of Water Supply Facilities Towards the 21st Century" was established as described in the following and waterworks enterprises are actively advancing the development of the required facilities in conformance with such goals.

### **3.6.1 Basic Policies**

To enable the supply of safe and good-tasting water anytime and anywhere, policies will take concrete form from the following three directions to build "high-quality waterworks" that properly anticipate the approaching 21st century.

#### **(1) Waterworks Usable by Japan's Entire Population**

Further coverage of waterworks will be promoted so that municipal water is available everywhere in the Japan, especially in rural areas where the waterworks coverage ratio is low and in areas where groundwater is contaminated.

#### **(2) Highly Stable Water Supply**

Efforts will be made to maintain an appropriate balance between supply and demand by safeguarding the required water resources and to develop waterworks that are highly resistant to dry seasons, earthquakes, and other disasters.

#### **(3) Safe Water**

To enable people to confidently use municipal water anytime without fear, measures will be advanced to safeguard the water quality of water resources.

### **3.6.2 Targets of Waterworks Improvement**

The objectives of waterworks improvement have been set as follows, with the aim of achieving a waterworks system that is in harmonious balance with the overall region on the basis of wide-area considerations during the execution of such projects.

#### **(1) Development of Water Resources for Waterworks**

The water demand is increasing more than ever due to the increase in the serviced population, higher living standards, vitalization of urban activities, and so on. The necessary water resources for waterworks will be developed to appropriately address this rising demand and resolve the present problem of unstable water acquisition, thereby substantially alleviating the adverse effect of a water shortage on waterworks.

#### **(2) Construction of Municipal Water Facilities**

Waterworks coverage will be furthered by placing priority on the construction of wide-area municipal water facilities and by building additional facilities in conjunction with the expansion of serviced districts and increased water demand.

#### **(3) Construction of Simplified Waterworks, etc.**

Regarding simplified waterworks, new facilities will be built in rural areas with a relatively low ratio of waterworks coverage and with a priority on the expansion of serviced districts, aiming at a nationwide waterworks coverage ratio of 99% that

includes municipal water facilities.

**(4) Renovation of Decrepit Facilities and Earthquake-proofing of Trunk Facilities**

Decrepit waterworks, such as conduits and filtration plants, will be systematically renovated while striving toward improved functions as required.

In particular, all asbestos cement pipes will be renovated by replacing them with pipes of other materials.

Furthermore, filtration plants, service reservoirs, main conduits, and other trunk facilities will be earthquake-proofed to enhance the safety of the overall waterworks system, thereby also serving as countermeasures against water seepage and earthquake damage.

**(5) Safeguarding of Emergency Water Supply Bases**

To safeguard the functions of water supply bases in case a large-scale disaster or other emergency situation occurs, additional service reservoirs will be constructed that can each assure a service capacity equivalent to the projected daily maximum water supply volume for 12 hours and the installation of emergency water tanks will be advanced as an integral part of water supply facilities.

**(6) Construction of High-grade Filtration Facilities**

To achieve the supply of safe and good-tasting water without offensive odor to all districts in Japan, for filtration plants that are forced to use water resources that are becoming progressively contaminated, high-grade filtration facilities will be built that employ activated charcoal processing, ozone processing, biotic processing, or other filtration methods.

**(7) Expansion of Direct Supply Countermeasures**

To advance the direct supply of water to buildings that are no higher than three stories high, the construction of the necessary facilities will be furthered from a long-term perspective. This will help to improve water service and to resolve sanitation problems caused by small water catchment tanks.

**3.7 Improvement of Rural Areas.**

Rural areas (consisting of farming, mountain, and fishing villages) are production bases for the agricultural, forestry, and fishery industries and are also residential spaces for community residents, thereby possessing the characteristic of multi-purpose activities within the same area. Rural areas also manifest effects that promote the public interest such as land conservation and offering health resorts to Japan's people, while also possessing typically rural features such as an environment blessed with ample water and lush greenery, historical and cultural traditions, and so forth.



Recently, however, amidst the expanding liberalization of trade in agricultural, forestry, and marine products, ageing and depopulation in rural areas are progressing as evidenced by the increase in abandoned arable lands and the deterioration of local communities.

Under such circumstances, in consideration of the multi-faceted role played by rural areas in land conservation and other fields, there is a strong need to promote interaction between people in urban and rural areas and to form comfortable rural spaces that enable local people to settle down in their region with pride and affection, while simultaneously conserving the natural environment, assuring a comfortable living environment, forming scenic beauty, inheriting historical and cultural traditions, and otherwise exploiting the special features of each rural area.

Present efforts are directed at attaining the objectives of the "Fourth Comprehensive National Development Plan" (adopted in June 1987) and to proceed with formulation of the subsequent "Fifth Comprehensive National Development Plan." Moreover, because the development level of domestic water treatment facilities in rural areas lags conspicuously far behind that in urban areas, one of the targets of the "Fourth Long-Term Land Improvement Plan" (adopted April 1993) is to develop drainage facilities in rural areas to raise the development level to equal that in medium-sized cities (cities with a population of at least 100,000 residents, excluding special districts and cities designated by government ordinance) by the early 21st century. Moreover, according to the "Guidelines to Promote the Formation of Comfortable Rural Areas" adopted in March 1995, development of the human settlement environment is being advanced with the prerequisite of safe, healthy, and convenient daily living, in order to safeguard attractive living spaces that correspond to regional features and lifestyles.

Based on the preceding plans and guidelines, development of rural areas is being furthered in anticipation of the 21st century with a focus on the following development targets.

(1) With the basic aim of the sound promotion of agricultural, forestry, and fishery industries which are the main industries in rural areas, other industries will be systematically introduced to increase job opportunities and the formation of highly individualistic and energetic rural areas that make the most of local resources will be advanced.

(2) In addition to development of the living environment -- that is, roads, domestic water treatment facilities, waste disposal facilities, recycling facilities, etc. -- that is integrated with the development of the agricultural, forestry, and fishery industries, the development of comfortable rural spaces that exploit rural characteristics will be advanced by preserving attractive, beautiful rural scenery and by promoting the multi-faceted use of production facilities through such means as

making use of irrigation canals to create hydrophilic spaces.

(3) To vitalize rural areas by optimizing interaction with residents of urban areas and to promote local agriculture, conditions to improve traffic access will be promoted, private farms and other facilities will be developed, and green tourism will be advanced in the form of lodging and leisure activities that enable visitors to experience rural cuisine of the locale, farming, and so forth.

To further complement leisure activities, multi-habitation will be advanced by promoting the ownership of second homes for weekend use, and so forth.

(4) To promote the formation of new communities through interaction between local residents with diversifying lifestyles and to establish a local identity, the development of educational facilities, cultural facilities, and new media such as cable TV networks will be advanced.

To also enhance the functions of rural areas for transmitting and receiving information, networks for information exchange will be furthered between urban and rural areas as well as between rural areas.

(5) To promote orderly use of land and water and conserve the regional environment so as to maintain a balance between production activities of such industries as agriculture, forestry, and fishery and the daily lives of local residents, land use will be systematically managed, amply spacious residential space will be assured, and the development of parks, green spaces, and other spots for relaxation will be advanced.

(6) In mountain villages, to promote industries that make optimum use of regional features and to expand job opportunities, development of conditions for permanent settlement will be advanced which include improvement of conditions for traffic access, development of the living environment and information structures, and the expansion and improvement of medical care and welfare.

(7) In fishing villages, to advance comprehensive development of the living environment, fishing ports and other production facilities of the fishing industry are being developed and both the effective use and creation land are being promoted.

According to regional circumstances, moreover, regional vitalization is being furthered by actively incorporating fisheries, unique scenic beauty of fishing communities, marine recreation, and tourism.

### 3.8 Environment

In the field of environmental conservation, the Government adopted the National Environment Plan in December 1994 which indicates the basic concepts and long-term

objectives of environmental policy into the mid-21st century and clarifies the course of government policy regarding environmental conservation up to the early 21st century, and has since been actively advancing new environmental policy in anticipation of the approaching 21st century.

To reform today's socioeconomic system and lifestyles characterized by mass production, mass consumption and mass disposal in order to build a society that allows sustainable development with minimal environmental load, the Basic Environment Plan sets four long-term objectives of environmental policy as (1) building a socioeconomic system that fosters a sound material cycle, (2) harmonious coexistence between humankind and nature; (3) participation by all sectors of society, and (4) promotion of international activities through global cooperation. To attain these long-term objectives, this plan stipulates the comprehensive and systematic implementation of the following policies while maintaining an organic integration between all of the policies concerned.

Regarding "building a socioeconomic system that fosters a sound material cycle," the Basic Environmental Plan stipulates the advancement of measures for preservation of the atmospheric environment, water environment, and soil and ground environments; measures regarding waste disposal and recycling; measures to reduce environmental risks due to chemical substances; environmental considerations on the development of technologies and the approach to dealing with new problems generated by the use of new technologies.

To assure "harmonious coexistence between humankind and nature," the Basic Environmental Plan stipulates the advancement of measures for the safeguarding and use of a sound and fertile natural environment by coexistence between nature and humankind in a manner that is compatible with the social and natural features of each region, conservation of biological diversity, protection and management of fauna and flora, regional development, and so on.

Regarding "participation by all sectors of society," the Plan stipulates the promotion of dynamic autonomous activities according to each sector's role in environmental conservation; the fair sharing of the financial burden of environmental conservation; and the national government's leadership role in environmental conservation activities as an enterprise and consumer of Japan.

As measures forming the basis of policies related to environmental conservation, the Plan stipulates measures concerning environmental impact assessments; economic and regulatory measures; and measures required for infrastructural development projects. It also stipulates the expansion and improvement of scientific research, monitoring, and observation; the promotion of appropriate technologies; and the management and provision of environmental information.

Regarding the "promotion of international activities through global cooperation," the Plan stipulates the furtherance of global policy coordination for conservation of the global environment; the safeguarding of global cooperation in such activities as

scientific research, monitoring, and observation; the encouragement of activities by local governments, civic groups, and other entities; due environmental consideration when cooperating in international projects; and the furtherance of efforts based on international agreements to conserve the global environment.

### **3.9 Land**

In the course of the rise and fall of land prices in recent years, such problems as unused land and low-use land have occurred in inner-city districts and other areas of metropolitan regions. It will thus be essential to promote efficient land use in the coming years and this will also contribute to such aims as supplying good-quality, low-cost residential land. Furthermore, in such areas as farmlands within urbanization promotion areas and abandoned arable land within metropolitan suburbs, there is also a strong need for a systematic change in land use.

In the future, Japan's socioeconomic system will be facing new circumstances, such as rapid ageing of the population, accelerated intensification of global competition due to the increasingly borderless nature of economic activities, and apprehensions of the hollowing-out of industry.

In the years to come, comprehensive land policies will be progressively implemented in accordance with the basic concepts regarding land as defined in the Basic Land Act in order to promote efficient development of housing and other social infrastructures and reduce the financial burden of housing expenses to enable lifestyles whereby people can actually feel affluent.

### **3.10 Water Resources**

Water is an indispensable resource for the survival of living beings on the planet and is also an important natural resource alongside land, forests, and so forth.

Because water is also an important and basic resource that supports human activities in such fields as economy, industry, and culture, the stable supply of water is a basic prerequisite for enabling Japan's residents to lead affluent lives and for attaining balanced development of the national land.

Japan is located in the Asian monsoon belt. Whereas its average annual rainfall is about twice the global average, the average annual rainfall per capita is about one-fifth of the global average. Moreover, the use of water resources in Japan is subject to difficult conditions, such as the great regional and seasonal differences in rainfall, the topography consisting of steep yet short rivers, and so forth.

From the late 1950's, in conjunction with the booming growth of Japan's economy and rapid urbanization, the volume of water used in households, for urban activities, at plants, and other applications increased conspicuously. As a result, a strong demand emerged for the wide-area and systematic development of water resources facilities including dams and raceways, leading to the adoption of "The Water

Resources Development Promotion Act" and "The Water Resources Development Public Corporation Act" in 1961. "The Water Resources Development Promotion Act" designates water systems required to supply municipal water to areas requiring urgent implementation of wide-area municipal water measures as "designated river systems for promoting water resources development," and the Government also adopted the "Basic Plan for Water Resources Development" to define the fundamental guidelines for the development and rationalization of water resources in such areas. "The Water Resources Development Public Corporation Act" allowed the establishment of the Water Resources Development Public Corporation as the authority in charge of the urgent implementation of wide-area and large-scale projects or multipurpose projects on the basis of the "Basic Plan for Water Resources Development."

Based on these two acts, seven major water systems associated with Tokyo, Osaka, Nagoya, and other metropolitan areas have become "designated river systems for promoting water resources development," and projects have been accordingly advanced on the basis of the "Basic Plan for Water Resources Development" (the current target year is 2000). As of the end of 1994, 48 projects were completed which represent the new development of about 290 m<sup>3</sup>/s of water resources, 56 projects (representing a development volume of about 175 m<sup>3</sup>/s) were under construction or investigation.

The water demand is showing an increasing trend due to such factors as rising living standards and changing lifestyles, and there are even areas that rely on water resources which only permit water withdrawal at times when water is plentiful. Furthermore, in step with such recent circumstances as the rising living standards of Japan's people and the increasing sophistication of its socioeconomic functions, the adverse influence exerted by a water shortage is greatly escalating. In recent years, on the other hand, there are apprehensions that water shortages will frequently occur due to the trend toward low rainfall and the increasing disparity in the total annual rainfall.

Meanwhile, because the construction of dams and other facilities for water resources development and management require a long period of time and the land suitable for such construction is limited, it will be necessary to promote the effective use of water resources by promoting the development of technologies related to new water resources such as desalination of sea water, by eliminating wasteful use of water, by promoting the reuse of domestic waste water, and so forth.

Moreover, there are growing demands from Japan's residents for affluence, comfort, and more interaction with nature, and there is a growing movement throughout Japan that calls for the reconsideration of the significance of water within living and for recovering an even closer relationship between people and water.

Consequently, in combination with the adoption of the Fourth Comprehensive National Development Plan in June 1987, the "National Integrated Water Resources Plan (Water Plan 2000)" was adopted in October of the same year as a comprehensive plan concerning water resources. Setting 2000 as its target year, this plan is the basic

objectives of (1) developing a stable water supply system, (2) improving the safety of water resources against water shortages, and (3) preserving water quality and promoting the effective use of water.

Though comprehensive water resources policies are being advanced on the basis of this plan, planning is now underway for the formulation of a new National Integrated Water Resources Plan in view of socioeconomic changes which have occurred since the original plan was adopted.

### **3.11 Disaster Prevention**

Japan's disaster countermeasures will continue being implemented on the basis of the four pillars of: (1) scientific and technologic research; (2) disaster prevention; (3) land conservation; and (4) emergency disaster countermeasures and restoration measures.

#### **3.11.1 Scientific and Technologic Research**

On the basis of the "Basic Plan for Research and Development Regarding Disaster Prevention" which was adopted (by the decision of the Prime Minister) in 1993, research and development activities regarding disaster prevention are being comprehensively and efficiently advanced from a long-term perspective, with special priority on the following fields.

- (1) Clarification, prediction, and forecast of natural phenomena;
- (2) Technologies to prevent damage due to natural catastrophes;
- (3) Technologies to prevent meteorological damage; and
- (4) Science and technologies related to comprehensive disaster prevention

#### **3.11.2 Disaster Prevention**

Based on hypothetical scenarios of the occurrence or possible occurrence of a disaster, authorities involved in disaster prevention, community residents, civic organizations, and other bodies will cooperate in the execution of disaster prevention drills including the transmission of advance alarms, evacuation, fire fighting, and rescue.

The fundamental principle of disaster prevention is that each individual is responsible for his/her personal safety. It is thus important for each person to be constantly aware of this duty, to strive to be prepared for a disaster during normal times, and to take action to protect his/her personal safety when a disaster occurs. For this purpose, the national government, local governments, and other bodies will endeavor to raise public awareness regarding disaster prevention and disseminate knowledge about disaster prevention through school education, community activities, and other means.

To enable the smooth execution of disaster prevention activities, observation equipment (such as weather satellites, a meteorological radar system, and

seismographs), apparel and equipment required for emergency relief activities, communications and broadcasting facilities that can function even during a disaster, transport equipment, fire-fighting equipment, evacuation facilities, and so forth will be prepared. In addition, other measures that will be enforced include the fire-proofing and earthquake-proofing of buildings, safeguarding of sites and routes for evacuation, safeguarding of open spaces in urban areas, promotion of urban greenery, earthquake-proofing of lifeline facilities, and multiplexing of various network systems.

### **3.11.3 Land Conservation**

To create a national land that is highly resistant to floods, sediment disasters, coastal damage, and other disasters, land conservation projects will be pushed forward regarding antiflood afforestation, flood control, coastal development, steep slope landslip prevention, sewerage development, and so on. Because such projects require an enormous investment over a long period of time, they will be systematically advanced following the formulation of long-term plans.

### **3.11.4 Emergency Disaster Countermeasures and Restoration Measures**

When a disaster occurs, the national government, local governments, public authorities, and other bodies will work in close cooperation to promptly and accurately enforce emergency disaster countermeasures including the declaration and transmission of alarms, recommendations and directions regarding evacuation, fire fighting and flood control activities, and rescue and assistance for disaster victims.

At such time, according to the extent of the damage, municipal and prefectural governments will set up local Headquarters for Disaster Countermeasures and the national government will set up Headquarters for Major Disaster Countermeasures. Moreover, in case extraordinary and severe damage has occurred, the national government will set up Headquarters for Extraordinary Disaster Countermeasures to permit more powerful enforcement of emergency disaster countermeasures.

Regarding afflicted public facilities, damage restoration will be accurately and promptly conducted. In addition, financial measures will also be implemented such as the financing of restoration and rehabilitation funds to afflicted rural enterprises, small and medium-sized businesses, afflicted residents, and others in need.

Furthermore, local governments of the afflicted area will further local restoration and rehabilitation by establishing guidelines for local restoration and rehabilitation and, if so required, by formulating rehabilitation plans based on such guidelines.

## **4. Action Plans of Local Governments**

### **4.1 Project to Construct the New Joban Line and Develop its Peripheral Area**

By application of the "Special Measures Law Concerning Residential Land

Development and Multi-level Railway Crossing Development in Metropolitan Areas" legislated in June 1989, the Tokyo Metropolis and the Saitama, Chiba, and Ibaraki Prefectures are undertaking an integrated project for construction of a railway (New Joban Line) and development of its peripheral areas, with the aim of alleviating congestion on the Joban Line and the smooth supply of residential land in the northeast part of the National Capital Region. This project involves the construction of a new railway line (scheduled to begin operation in 2000) of 19 stations extending for 58.3 km from Akihabara in Tokyo to Tsukuba City in Ibaraki Prefecture in combination with (residential land) development of the areas along that line. The following summarizes the portion of this project being handled by Ibaraki Prefecture.

#### **4.1.1 Construction Overview of the New Joban Line**

- o Intra-prefectural length: about 24.2 km (tunnel section: about 1.6 km)
- o No. of intra-prefectural stations: 5 (tentatively named the Moriya, Ina-Yawara, Kayamaru, Katsuragi, and Tsukuba Stations)
- o Non-station facilities: Rolling stock base (northeast of Moriya Station; approx. 20-hectare area)

#### **4.1.2 Overview of Development Along the Railway Line**

##### **(1) Target Districts for Development**

Along a line extending northeast from Tokyo, nine districts occupying about 1,950 hectares will be developed along the New Joban Line: Moriya Station vicinity and Moriya-Higashi (both in Moriya Town); Ina-Yawara hills (Ina Town and Yawara Village); and Kayamaru, Shimana-Fukudatsubo, Teshirogi-Seibu, Kamikawarazaki-Nakanishi, Katsuragi, and Nakane-Kondadai (the preceding six districts are in Tsukuba City).

The four districts to be provided with a station are the Moriya Station vicinity, Ina-Yawara hills, Kayamaru, and Katsuragi. With the aim of forming nodal areas focusing on commercial and business functions in the vicinity of these four stations, the basic course will be to safeguard the peripheral land for use as residential land or for the facilities of induced enterprises.

##### **(2) Overview of Each Target Area**

###### **o Moriya Station vicinity:**

Development area: about 40 ha. Land readjustment executed by Moriya Town. Municipal planning was decided in March 1994, and the project plan was approved in February 1995.

###### **o Moriya-Higashi:**

Development area: about 90 ha. Land readjustment by a land readjustment association. Town planning was decided in August 1988, the project plan was approved in December 1988 and

###### **o Ina-Yawara hills:**



Development area: about 280 ha. Planned population of 16,000 persons. Land readjustment by Ibaraki Prefecture. Municipal planning was decided in June 1992, and the project plan was approved in May 1993. Based on the theme of creating a healthy and creative town, the aim is to form a node that will support integrated growth of Ina Town and Yawara Village.

o Tsukuba City's 6 districts:

Total development area: about 1,540 ha. Planned population of 100,000 persons. Advance acquisition of lots now in progress as a preemptive-style land readjustment project by Ibaraki Prefecture and other public authorities. About 93% of the target area had been bought as of July 1995. Required work and procedures are underway to decide municipal planning. The themes of town planning and development concepts are described in Table 2.

Table 2. Themes and Development Concepts of Tsukuba City's Six Target Districts

District	Area (ha)	Planned population (persons)	Development concepts
Kayamaru	300	20,900	<ul style="list-style-type: none"> <li>o By making the most of a unique triangular form that extends from the station in three directions through peripheral communities, the aim is to form a garden suburb that will serve as a model for the future development of urban areas that harmonize with rural areas.</li> <li>o Based on the planning theme of coexistence between old and new, the existing local functions of neighboring communities, the Yatabe urban area, the industrial zone associated with Yawara Village, etc. will be merged with Kayamaru district's newly developed functions to achieve high-grade local functions around the new hub in the Yatabe area.</li> </ul>
Shimana -Fukudatsubo	250	18,100	<ul style="list-style-type: none"> <li>o Based on the theme of creating a forest suburb out of the local scenery, the aim is to form a city that provides comfortable living within the locale and inspires affection and pride in its residents.</li> <li>o Efforts will be made to form a pleasing living environment by taking advantage of diverse housing configurations and the existing forest, to form individualistic and friendly traffic junctions, and to form a core city with uniquely scenic streets that is in harmony with surrounding communities.</li> </ul>
Teshirogi -Seibu	90	5,600	<ul style="list-style-type: none"> <li>o An attractive city will be created by forming a highly accessible road system, forming a living environment that offer cultured elegance, introducing service functions that make daily life more convenient, etc.</li> <li>o Development will aim at integration with the surroundings and the enhancement of functions as a global core garden suburb.</li> </ul>
Kamikawarazaki -Nakanishi	180	12,000	<ul style="list-style-type: none"> <li>o Efforts will be directed at the formation of a district integrated with the peripheral target districts, the subsistence and revival of agriculture and local commerce, and systematic land readjustment that optimize the ripple effect caused by the New Joban Line.</li> <li>o Development will aim at the formation of a rural residential district that assures integration with existing communities and harmony between new and old residents, and the formation of a distribution node that takes advantage of a wide-area road system.</li> </ul>
Katsuragi	530	26,900	<ul style="list-style-type: none"> <li>o A new node will be formed that will serve as an important turning point in the further development of Tsukuba Academic Newtown.</li> <li>o A group-siting node of specialized functions will be formed as a new local hub based on global contribution and global cooperation, and a station-front node will be formed that responds to the rising demand for urban functions and high-grade service functions in order to accommodate the 100,000 new residents along the New Joban Line.</li> </ul>
Nakane -Kondadai	190	16,500	<ul style="list-style-type: none"> <li>o Development will aim at creating a residential environment within a rich natural environment, backed by the inducement of R &amp; D functions and business functions that exploit such conditions of location as being near Tsukuba Academic Newtown and adjacent to Tsukuba Techno Park as well as the fact that the district runs one wing of the core business urban area formed by Tsukuba, Tsuchiura, and northern Utsunomiya in southern Ibaraki Prefecture.</li> </ul>

## **4.2 Toward Creating a Comfortable Environment in Harmony with the Environment:**

### **Adoption of the Fukuoka Prefecture Comprehensive Basic Environment Plan**

Today's environmental problems have grown from daily problems faced by individuals to problems of global proportions that require the prompt action of the entire world. The Earth Summit was held in Brazil in 1992, the Basic Environment Law was enacted in 1993, and the Basic Environment Plan which is based on the preceding law was adopted in 1994 by a Cabinet decision.

In Fukuoka Prefecture as well, the Fukuoka Prefecture Comprehensive Basic Environment Plan was adopted in March 1995 as a master plan for environmental conservation activities that could contribute to the solution of environmental problems on not only the regional level but also the global level.

#### **(1) Basic Concepts of the Plan (see Fig. 2)**

With the ultimate goal of creating a comfortable and balanced environment, this plan aims to pass on such an environment to future generations, to promote coexistence between humankind and nature on the basis of the fair assignment of roles among local government, corporations, and prefectural residents, and to form a society that circulates waste and imposes little environmental load.

#### **(2) Action Based on the Plan's Objectives**

The three basic concepts for attaining the plan's ultimate objective are the creation of an affluent, comfortable environment to be passed onto future generations, the formation of human activities that harmonize with the environment, and fair role assignment and autonomous activities. Based on these basic concepts, the plan sets targets and also stipulates the policies and action required to attain each target.

#### **(3) Applicable Period of the Plan**

Although this plan covers a period of ten years, it may be reviewed if circumstances so require.

#### **(4) Adoption of the Fukuoka Prefecture Environment Charter**

An environment charter has been adopted by Fukuoka Prefecture to facilitate understanding of the plan's objectives. The articles of the environment charter are as follows.

- o With the aim of passing on Fukuoka Prefecture's abundant natural environment to future generations, we shall strive to fully understand that the environment is sustained by delicately balanced ecosystems and to conserve that environment.
- o We shall strive to conserve the natural environment by becoming better acquainted with nature and to deepen our understanding of the workings of nature.
- o We shall reconsider our lifestyles, promote recycling, and endeavor to make appropriate use of resources.

appropriately positioned. Note that six such facilities already exist.

#### (4) Development of the Traffic System

##### (a) Railway: Introduction of a new line (Chiba Kyuko Line)

Regarding the existing JR Kamatori Station, the project will aim to raise the station building onto a bridge to increase convenience to passengers and harmoniously integrate the station with the town's scenery.

To also cope with future demand, the new Chiba Kyuko Line has been brought into the district and two new stations (the Gakuenmae and Oyumino Stations) have been established. The station buildings of these stations also incorporate design considerations to harmonize with the peripheral town landscape.

##### (b) Roads: Multi-level crossing of principal roads

Principal roads within the district form multi-level crossings to alleviate traffic congestion and assure pedestrian safety, and "bridges" are being constructed at the crossings. Such bridges, each provided with a "vehicular traffic bridge" and "pedestrian-only bridge" are planned for construction at 32 locations. These bridges will also incorporate design considerations to harmonize with their environment, and will be provided with slopes, etc. to enable worry-free use by the physically handicapped and elderly.

#### 4.3.4 Future Outlook

As of September 1 of 1995, residents of this newtown totalled 17,200 persons (5,900 households) which represents only 22% of the planned population.

Nevertheless, considering that the new railway line long awaited by the residents will begin operation in April 1995 and such work as the preparation of housing sites has been 70% completed, if the planned execution is completed in combination with that of the neighboring Chiharadai district, a magnificent newtown (130,000 persons in a 1,000-hectare area) worthy of the 21st century will be born.

#### 5. Action Plans of NGOs and the Academic Community

On the occasion of the Second United Nations Conference on Human Settlements, related academic societies including the Japan HABITAT Society, civic associations, NGOs, and other groups are aiming to deepen mutual cooperation and to build a cooperative organization based on mutual support.

More specifically, while maintaining close contact with the national government, local governments, the United Nations Centre on Human Settlements, and other agencies affiliated with the United Nations, the groups mentioned in the previous paragraph will conduct research and define policy for improving the human settlement environment in accordance with the "Global Action Plan" to be adopted at the Second United Nations Conference on Human Settlements, and will promote supporting activities on the civic level both inside and outside of Japan.

As government policies to support the activities of Japan's NGOs for extending cooperation to developing countries, the national government is advancing such measures as the NGO programme aid system (e.g., the International Volunteer Deposit system of which 20% of the interest paid on postal deposits is donated to an international cooperation fund) and the CBO grant aid system, whereas local governments are also advancing a funding system to assist NGO activities. As preferential measures for NGOs, the feasibility of revising legislation to grant corporate status and other privileges to NGOs is currently being examined. Great expectations are thus being placed on the future activities of NGOs and the academic community.

## **6. Future Advancement of Human Settlement Policies**

Regarding the advancement of human settlement policies, the fundamental plan consists of the promotion of comprehensive sphere-wide development for the smooth manifestation of metropolitan functions through mutual cooperation between the national government, local government, and private sector on the basis of the forthcoming Basic Development Plan for the National Capital Region, Basic Development Plan for the Kinki Region, and Basic Development Plan for the Chubu Region that will be newly formulated in the near future.

Housing policies are divided into two general systems consisting of (1) "The Housing Construction Five-year Program" which stipulates the goals of housing construction over a five-year period and (2) "Basic Policy Concerning the Supply of Housing and Residential Land in Major Metropolitan Areas" which stipulate quantitative goals concerning the supply of housing and residential land in major metropolitan areas, basic policies for attaining such goals, and other matters. Based on these two systems, various housing-related policies are being implemented through mutual cooperation between national and local governments; public corporations established by government capital such as the Housing and Urban Development Corporation, Government Housing Loan Corporation, and Local Housing Supply Corporation; and the private sector.

### **6.1 Housing Construction Five-Year Program**

Based on the Housing Construction Program Law, the national government will seek the opinions of the prefectural governments concerned and related government authorities to formulate a "Housing Construction Five-Year Program" which stipulates the goal of the housing standards to be attained within the next five-year period, the goal of the number of residences for construction, and the number of construction projects for publicly-financed housing such as publicly operated housing of the Housing and Urban Development Corporation, and housing of the Government Housing Loan Corporation.

In conformance with this national program, each prefecture will also formulate the

formulation of a prefectural housing construction five-year program and implement comprehensive policies corresponding to local circumstances.

## **6.2 Basic Policy Concerning for the Supply of Housing and Residential Land in Major Metropolitan Areas**

Based on the "Special Measures Law for Facilitating the Supply of Housing and Residential Land in Major Metropolitan Areas (Law for Major Metropolitan Areas)," the Minister of Construction will seek the opinions of the prefectural governments concerned and related government authorities to formulate basic supply policies that stipulate basic matters concerning the mid- to long-term supply of housing and residential land in major metropolitan areas, quantitative supply goals, and basic policies for attaining such goals.

In accordance with these basic supply policies, the prefectures associated with major metropolitan areas will also respectively formulate a program regarding the supply of housing and residential land within the prefecture concerned.

## **6.3 Main Housing Policies**

Based on the above-mentioned programs and policies determined by various sectors such as the national and local governments, the local governments, Housing and Urban Development Corporation, Government Housing Loan Corporation, Local Housing Supply Corporation, the private sector and others will proceed to implement housing policies while extending mutual cooperation.

The overview, implementation systems, and implementation status of the principal housing policies are described in the following.

### **(1) Publicly Operated housing System**

Based on the Publicly-operated Housing Law, publicly operated housing is constructed by local governments with assistance from the national government and is rented at low rental fees to low-income households in need of housing.

As of the end of fiscal 1994, 2,090,000 residences were under management.

### **(2) Project to Facilitate the Supply of Special Good Quality Rental Housing**

The project to facilitate the supply of special high-quality rental housing aims to supply high-quality housing to mainly middle-income households which form the class above the target group of public housing. Through this project, the national and local governments provide assistance for reducing construction costs and rent with respect to high-quality housing that will be built by landowners, etc. in the private sector and will meet fixed conditions.

Founded in fiscal 1993, this project has supplied an aggregate total of 50,000 residences as of the end of fiscal 1994.

### **(3) Housing Supply by the Housing and Urban Development Corporation**

In metropolitan areas and other urban areas that particularly require improvement of housing conditions from the perspective of forming a comprehensive human settlement environment, the Housing and Urban Development Corporation is a public agency that comprehensively advances such measures as the supply of good-quality housing, supply of residential land, the urban renewal, and the development of core city parks.

Housing constructed by the Housing and Urban Development Corporation possesses favorable properties and environment for human settlement, and are rented or sold to middle-income households. Such housing construction projects are financed by the use of treasury investment and loans, government subsidies, and so on.

As of the end of fiscal 1994, the Housing and Urban Development Corporation was managing about 710,000 rental residences and had supplied about 360,000 special houses for sale to be used as rental residences and about 270,000 residences for sale.

#### (4) Housing Supply by Local Housing Supply Corporations

A Local Housing Supply Corporation is a public agency which has been established with capital subscription from a local government with the aim of receiving funds from workers in need of housing, managing such funds together with other funds, and supplying housing and residential land possessing a good human settlement environment to such workers.

56 Local Public Housing Corporations total have been established by prefectural governments, cities designated by government ordinance, and other local authorities, and they were managing about 130,000 residences as of the end of fiscal 1994.

#### (5) Financing by the Government Housing Loan Corporation

The Government Housing Loan Corporation is a public agency that was established with the dual aims of promoting housing acquisition through self-efforts by granting long-term low-interest loans for the construction or purchase of housing, and of raising the human settlement standards of Japan by working to form a stock of good-quality housing.

To promote the supply of residential land as well as to advance the equitable and balanced use of land, the Government Housing Loan Corporation also finances such projects as residential land preparation projects and redevelopment projects.

As of the end of fiscal 1993, the Government Housing Loan Corporation has financed an aggregate total of about 14,000 residences.

#### (6) Other Projects for Developing Residential Districts

To improve urban districts that have a high density of decrepit wooden housing, clearance-type redevelopment projects by local governments and projects to promote phased, restorative rebuilding by residents are being actively advanced.

Moreover, projects are also being pushed forward to make use of low-use or unused

sites (such as former factory sites) in metropolitan areas to develop favorable urban residential districts that allow close proximity between home and work.

For such projects, various builders -- including local governments, the Housing and Urban Development Corporation, Local Housing Supply Corporation, private enterprises, etc -- receive assistance from the national or local government, make use of incentives provided by urban planning or construction regulations, and implement the projects while extending mutual cooperation.

#### **PART IV. ACTION PLAN RELATED TO INTERNATIONAL COOPERATION**

##### **1. Support for the United Nations Center for Human Settlements**

Human settlement problems in developing countries are caused not only by the lack of social infrastructures such as waterworks and waste treatment sites, but also by the shortage of human resources capable of dealing with such problems. For this reason, Japan particularly plans to provide support to projects that focus on the development of human resources. Insofar as possible, Japan also plans to support projects that provide advice on policy-making in the field of human settlements on the national and/or regional level.

Moreover, because the scope of human settlement problems is expanding in conjunction with increasing population, Japan believes that the United Nations Center for Human Settlements should provide support in fields which exploit its own fields of specialization while acting in concert with other United Nation bodies and other organizations.

##### **2. Financial Aid, Technical Cooperation, and Human Resources Development**

###### **2.1 Basic Policies**

In the Official Development Assistance Charter, Japan clarifies its environment-oriented stance by, for example, citing environmental conservation as its ODA philosophy and positioning sustainable development as the guiding principle for implementing ODA. Regarding projects concerning the human settlement environment as well, Japan decided to provide assistance after having communicated Japan's policy which places priority on environmental projects via dialogues with recipient countries and having taken into account comprehensively each recipient country's requests, its socio-economic conditions and etc.

At the United Nations Conference on Environment and Development (UNCED) in 1992, the Government announced its intention to work to greatly expand and enhance its support to developing countries through environment-related ODA with the goal of allocating from 900 billion yen to one trillion yen over a five-year period starting in fiscal 1992. During the three-year period since fiscal 1992, the Government has attained over 70% of this target and plans to actively continue environment-related assistance in the future.

Furthermore, local governments will proceed to extend international cooperation



that takes advantage of their accumulated expertise by implementing environment-related policies that address the actual conditions in the beneficiary region concerned.

## **2.2 Priority Areas**

(1) Projects for developing the human settlement environment, including the construction of waste disposal facilities and waterworks, are linked to countermeasures for urban sanitation problems and are also fundamental to solving various urban problems that are caused by increasing population. As a result, such projects will account for a majority of environment-related ODA.

(2) Among middle-income countries, examples can be seen of pollution problems caused by rapid industrial development, growth in vehicular traffic, and so on. Among these countries, Japan's policy is to extend assistance to conserve and improve comprehensively the human settlement environment, by providing ODA loans for well-designed projects to countries whose per capita GNP is higher than the threshold standard for qualifying for ODA loans.

In addition, during the revision of interest rates applicable to fiscal 1995 ODA loans, Japan established for the first time a sector-specific preferential interest rates (reduced by 0.2%) for projects concerning environmental conservation. As a result, it has become possible to extend cooperation through ODA loans under more concessional terms when a developing country wishes to implement an environment-related project.

(3) In developing countries, the migration to urban areas is particularly intense and the construction of traffic and transportation infrastructures required by an increasing population cannot keep up with the pace of vehicular traffic needs, as a result of which traffic congestion and deterioration of the urban environment have become grave problems. The resolution of urban traffic problems is indispensable to the creation of a sound environment for human settlements, so Japan plans to continue providing cooperation in this field by conducting development surveys for planning and policy-making related to the construction of roads, railways, and so on; other forms of technical cooperation; ODA loans and other aid for constructing transportation facilities; and so forth.

## **2.3 Human Resources Development**

For the effective improvement of the human settlement environment in a developing country, the Government believes that it is vital that the developing country itself possess the capacity to solve its problems and work to tackle them, and that there is a pressing need to train pertinent government officials and engineers in fields related to the human settlement environment. Based on this perspective, the

Government constructs environmental conservation bases through grant aid and extends technical cooperation for human resources development by receiving trainees in developing countries, and also plans to provide even further cooperation in the coming years.

Local governments will also extend cooperation toward human resources development in order to transfer technical expertise by receiving trainees and dispatching experts.

**The Second United Nations Conference on Human Settlements**  
**(HABITAT II)**

**National Report**

**March 1996**

**Japan's National Committee**

### 6.3 Environmental Conservation

## PART III. NATIONAL ACTION PLANS

1. Basic Concepts of Forthcoming Human Settlement Policies
  - 1.1 New Comprehensive National Development Plan
  - 1.2 Policies for Metropolitan Areas
  - 1.3 Regional Promotion Policies
2. Disaster Prevention Initiatives Based on Experience Gained from the Great Hanshin-Awaji Earthquake
3. Field-Specific Goals and Action Plans for the Year 2000
  - 3.1 Housing
  - 3.2 Improvement of Urban Areas
  - 3.3 Urban Transportation
  - 3.4 Social Security (including Housing for the Elderly)
  - 3.5 Waste Disposal
  - 3.6 Waterworks Improvement
  - 3.7 Improvement of Rural Areas
  - 3.8 Environmental
  - 3.9 Land
  - 3.10 Water Resources
  - 3.11 Disaster Prevention
4. Action Plan of Local Governments
5. Action Plan of NGOs and the Academic Community
6. Future Advancement of Human Settlement Policies

## PART IV. ACTION PLAN RELATED TO INTERNATIONAL COOPERATION

1. Support for the United Nations Center for Human Settlements
2. Financial Cooperation, Technical Cooperation, and Human Resources Development
  - 2.1 Basic Policies
  - 2.2 Priority Fields
  - 2.3 Human Resources Development



## PART I. INTRODUCTION

### 1. Compilation Procedures of the National Report

This National Report has been compiled by Japan's National Committee consisting of ministries, national agencies, local governments, and NGOs concerned with human settlement problems (see Section 2 below). The National Committee members prepare drafts for this National Report in their respective fields of speciality, and exchange views among them for elaborating the integral National Report.

### 2. Members of Japan's National Committee

Japan's National Committee was established in June 1995. It consists of 24 members: the Vice-Minister for Foreign Affairs as chairperson, 13 members of Director-General level representing ministries or national agencies, three heads of local governments, and seven members representing NGOs and the academics. The members are listed as follows.

[Committee chairperson]

Sadayuki Hayashi Vice-Minister for Foreign Affairs

[Committee members]

Toshinori Kanemoto Director General of International Affairs Department,  
National Police Agency

Michisato Sakamoto Director-General, Social Policy Bureau,  
Economic Planning Agency

Hironori Hamanaka Director-General, Global Environment Department, Planning and  
Coordination Bureau, Environment Agency

Shiro Mizutani Councillor to the Minister's Secretariat, National Land Agency

Kazuo Asakai Director-General, Multilateral Cooperation Department,  
Foreign Policy Bureau, Ministry of Foreign Affairs

Yutaka Okamura Director-General, Science and International Affairs Bureau,  
Ministry of Education, Science and Culture

Katsuhiko Kameda Senior Councillor, Minister's Secretariat,  
Ministry of Health and Welfare

Hisao Azuma Director-General, Economic Affairs Bureau,  
Ministry of Agriculture, Forestry and Fisheries

Hisashi Hosokawa Director-General, International Trade Policy Bureau,  
Ministry of International Trade and Industry

Tsutomu Aihara Director-General for Policy Coordination,  
Ministry of Transport

Kazuo Hiromi Assistant Minister of Labour, Ministry of Labour

Kunihisa Ono Deputy Vice-Minister for Policy Coordination,

