

Leading the Era of the Global Environment
The New Hokkaido Comprehensive
Development Plan

July 2008

Concerning Hokkaido Comprehensive Development Plan

Cabinet Decision

July 4 , 2008

The government has decided the following paper, 'Leading the Era of the Global Environment, The New Hokkaido Comprehensive Development Plan'

As Hokkaido Comprehensive Development Plan, stipulated in Paragraph 1 of Article 2 of Hokkaido Development Law (Law No.126,1950).

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※This is an unofficial translation. The translations are to be used solely as reference material to aid in the understanding of this Plan.

Chapter 1 Significance of Formulating the Plan

Section 1 Background of Hokkaido Development

(History of Hokkaido Development)

Since the establishment of the Hokkaido Colonization Commission (*Kaitakushi*) in 1869, the Japanese Government has systematically developed Hokkaido under its special development policy for the purpose of contributing to the stability and development of the nation as a whole, by utilizing Hokkaido's abundant resources and vast land area. Since the enactment of the Hokkaido Development Law (Law No.126,1950), the government has specifically formulated the Hokkaido Comprehensive Development Plan over six terms, based on the law, and actively developed Hokkaido in order to help address national problems of the time, such as revitalizing the economy and increasing food production as well as appropriately distributing population and the location of industries.

As a result, Hokkaido's population, which was approximately 58,000 in 1869, increased to more than 5 million during a development period of just over a century. With the Gross Prefectural Product (GPP) of approximately 20 trillion yen, Hokkaido has now established a regional economy and society corresponding to that of a European nation such as Finland or Ireland. As a major source of food supplies and base for tourism and recreation, Hokkaido is contributing greatly to the stability and development of Japan as a whole.

(Background of the 6th-term Hokkaido Comprehensive Development Plan)

In the late 1990s, Hokkaido witnessed the stagnation of its key industries such as agriculture, forestry, fisheries, and iron and steel industries. While the growth of alternative industries was delayed, the regional economy was shaken by the bankruptcy of financial institutions as well as other debilitating factors. It became an urgent task to improve the economic situation and develop the infrastructure selectively and efficiently. Under these circumstances, the 6th-term Hokkaido Comprehensive Development Plan, which illustrated the guidelines and policies for comprehensive industry promotion and social infrastructure development in Hokkaido, was approved at a Cabinet meeting in April 1998. The policies were promoted until fiscal 2007, the final year of the planned period.

The Plan achieved successful results during that period, such as practical accomplishments by the "Project for the Creation of Hokkaido Industrial Clusters," which was promoted through cooperation among industries, universities and government, and the more than three-fold increase in the number of overseas tourists to Hokkaido, including those from East Asia and skiers from Australia. These can be referred to as Hokkaido's success stories, which serve as new sources of growth.

The Gross Prefectural Product (GPP) turned into negative growth in fiscal 1997 but gradually picked up during the planned period due partly to the underlying support of economic measures. However, Hokkaido's economic recovery has been more sluggish than in the rest of the nation, and the employment situation has remained in the doldrums for a longer period than in other regions. Severe conditions have continued in terms of demographics, as well: the population, which peaked

in 1997 at 5.7 million, is aging and declining more rapidly than the rest of the nation. Furthermore, new regional development issues have also surfaced in areas where the main industries that served as the foundation to the regions' existence have been lost, such as coal-mining areas.

In order to promote policies based on the Plan, more effective programs must be produced through the cooperation and collaboration of people concerned, focusing on their priorities and efficiencies, and pioneering and experimental programs expanded by adapting to the actual conditions in Hokkaido.

Section 2 Significance of the New Hokkaido Comprehensive Development Plan

The fundamental role of Hokkaido development is to help address issues facing the national government by taking advantage of the resources and characteristics of Hokkaido.

Currently being called into question is how the economy and society of Japan, where the decrease and aging of the population as well as the decline of the birthrate are expected to intensify, will deal with the rapid economic growth of East Asia, the deteriorating global environment and the possible shortage of energy resources.

At this crucial juncture of the nation's history, Hokkaido must assume a leading role in shaping the socioeconomic future of Japan.

Hokkaido has abundant space enabling various economic and social activities, as well as a rich natural environment, which will undoubtedly become the most important factor in the 21st century. It is important that we contribute to the nation's efforts to create a sustainable economy and society by making the most of these resources and characteristics.

In Hokkaido, the frontier spirit that was fostered during the history of its development since the Meiji era has enabled people to take on new challenges more readily.

As the nation's economy and society face a major turning point and the people, feeling a sense of stagnation, understandably become increasingly anxious about the future, it is time that Hokkaido demonstrated the frontier spirit as a trailblazer in the new age and embarked on pioneering and experimental programs in order to make our economy and society prosper. Here lies the new role of Hokkaido development.

To promote the development of Hokkaido in a manner reflecting these circumstances, strategic programs for demonstrating the comprehensive nature of policies must be devised through the cooperation of the national government, local governments, citizens, NPOs, businesses and various other entities. Amidst the trends of shifting from the national government to local governments and from public to private sectors, it is important that these entities be aware of the division of roles and responsibilities, share the vision of creating an affluent society based on Hokkaido's regional characteristics, and execute respective programs to realize this vision. As we are about to demonstrate our leadership in tackling global environmental issues in the international community at the Hokkaido Toyako Summit, this Plan was formulated as the guiding principles for promoting sustainable development in Hokkaido and contributing to the nation's efforts in addressing the challenges it faces.

Chapter 2 Goals of the Plan

Section 1 Environmental Changes and Challenges Faced by the Nation

(Progress of Globalization)

The movement of people, goods, funds, technology, information and more beyond national boundaries has become more rapid and easier than ever, intensifying international competition. Negotiations on economic partnership agreements (EPA) and other trade arrangements are under way among various countries within the framework of the World Trade Organization (WTO), and moves toward the liberalization of the global economy have gathered pace.

In particular, amidst the rapid economic growth of East Asia and the upgrading of industrial structures therein, actions to establish production networks covering the entire East Asia region including Japan, as well as moves toward forging economic partnerships, have gained momentum. In terms of Japan's trading partners, the U.S. and European countries accounted for almost 60% of the export destinations in the 1980s. In 2003, however, the percentage of exports destined for China and other Asian nations surpassed this figure. Under these circumstances, we must figure out how regional economies and societies in Japan can take advantage of the rapid economic growth in East Asia to fuel their own development.

In addition, we must also create sustainable agricultural development as well as secure safe and stable food supplies in Japan amid the increasing liberalization of the global economy.

(Global Environmental Problems Threatening the Foundations of Human Survival)

Currently, global greenhouse gas emissions are more than twice the amount absorbed by the natural world, and various adverse effects of global warming on human economic and social activities are feared, including frequent occurrences of abnormal weather conditions, serious damage to agriculture, and intensified disasters.

In addition, as East Asia is experiencing a rapid economic growth, there is a concern that environmental burdens will increase further. That may intensify international competition for energy resources.

Furthermore, the increased environmental burdens have caused a significant loss of biodiversity, which has been cultivated over the long history of the earth, and the balance of ecosystems is being disrupted as a result.

There is a concern that the increase in global environmental problems will disturb the sustainable development of the economy and society, threatening the very foundations of human survival. It is therefore imperative that our nation takes the initiative in establishing a sustainable economy and society in the world and passes on to future generations the beautiful nation's land.

(Unprecedented Population Decrease with Rapid Aging and Falling Birthrate)

The declining birthrate continues to depopulate communities in Japan. The total population, which peaked at 127.79 million in 2004, has declined and is expected to drop below 100 million by the middle of the 21st century. In addition, it is estimated that the share of population aged 65 and over, which was approximately 20% in 2005, will increase to nearly 40% in 2050.

It is feared that the population decline will accelerate the depopulation of local communities, thus sapping their vitality. There are also concerns that the situation will deteriorate to the point at which maintaining administrative services, such as those in health and welfare fields, or maintaining even local communities themselves will become difficult. We must develop regions in which the decrease in population will not cause the decline of the nation.

Section 2 Hokkaido's Resources and Characteristics

The climate of Hokkaido is cool in summer as in Europe, and snowy and cold in winter. Hokkaido has ample resources such as vast land, abundant high-quality water, extensive farmland, fertile fishing grounds, and forests accounting for nearly a quarter of the nation's total forestland. In addition, upward of 80% of all the wetlands in Japan are located in Hokkaido. Hokkaido has a rich natural environment befitting a northern region unique in Asia, as well as beautiful scenery in four distinct seasons. Hokkaido also abounds in energy sources with little environmental burden, such as wind power, biomass¹ and natural gas fields.

Hokkaido accounts for 22% of Japan's total land area. Located at the northern tip of the Japanese archipelago and having a long coastline, Hokkaido is surrounded by three oceans: the Sea of Japan, the Sea of Okhotsk and the Pacific Ocean. While lying adjacent to the Russian Far East, it is also situated at the nodal point between North America and East Asia.

The population density of Hokkaido is one fifth of the national average. Since distances between cities are long, decentralized communities have been established covering wide areas, where urban functions concentrated in the hub city of each area are also used by people living in its expansive surrounding areas.

In Hokkaido, the Ainu have long cultivated their unique traditions and culture while interacting with nature. During the history of development since the Meiji era, a social openness has been fostered in which people from at home and abroad are accepted, and various development techniques and foundations have been accumulated.

Section 3 Strategic Goals of Future Hokkaido Development

Aiming to achieve vigorous regional development and help address challenges facing our nation by capitalizing on the resources and characteristics of Hokkaido, this plan sets the following strategic goals: A Northern Base Shining in Asia – Realization of an Open and Competitive Hokkaido; A Northern Land Rich in Forests and Water – Realization of a Sustainable and Beautiful Hokkaido; Vast Decentralized Northern Society with Region Strength – Realization of a Hokkaido with Diverse and Distinct Regions. The plan will be effectively promoted through the cooperation and collaboration of various entities.

1. A Northern Base Shining in Asia – Realization of an Open and Competitive Hokkaido

The beautiful, rich natural environment and cold climate of Hokkaido are distinctive not only in Japan but also in Asia. The food and tourism industries that thrive on this uniqueness can make Hokkaido competitive in the East Asian market. Considering the rapid growth of the economy in East Asia as an opportunity to achieve regional economic development, it is hoped to develop

¹ Biomass: Organic resources originating from animals and plants, excluding fossil-fuel resources

growth industries that can compete in East Asian and global markets, especially those related to food and tourism. While strategically improving conditions for developing such growth industries, we will strive to increase our basic food supply capabilities.

By doing so, we aim to realize an open and competitive Hokkaido.

2. A Northern Land Rich in Forests and Water – Realization of a Sustainable and Beautiful Hokkaido

Seizing the opportunity of the Hokkaido Toyako Summit, where the global environment and climate change will constitute one of the main themes, efforts will be intensified to conserve and restore Hokkaido's rich natural environment and pass it on to future generations as one of the nation's assets. We will also make the most of the local natural beauty, and conserve and create beautiful landscapes through the four seasons, with the goal of creating a Hokkaido in which people can sense the magnificence of nature.

We will also establish local communities where economic activities are in harmony with the natural environment, through pioneering efforts toward the realization of a recycling-oriented society as well as a low-carbon society, where local resources, such as the abundant natural energy sources in Hokkaido, are utilized.

By doing so, we aim to realize a sustainable and beautiful Hokkaido.

3. Vast Decentralized Northern Society with Region Strength – Realization of a Hokkaido with Diverse and Distinct Regions

Regional development will be promoted throughout Hokkaido by taking advantage of excellent and distinct regional resources in order to develop areas that will supply high-quality agricultural and marine products at home and abroad, areas that will conserve globally valuable natural resources and thus contribute to the promotion of tourism, and areas that will become production and logistics centers as a gateway to East Asia.

As the foundation for the development of these areas, efforts will be made to ensure that the urban functions centering on Sapporo will serve as the driving force behind the development of Hokkaido as a whole. We will also maintain urban functions and reinforce exchanges and cooperation in broad community areas consisting of local urban areas and sparsely inhabited areas in the neighborhood, with the aim of creating local community models that accommodate the declining population and birthrate as well as the aging society.

By doing so, we aim to realize a Hokkaido with diverse and distinct regions.

Chapter 3 Basic Principles for the Promotion of the Plan

Section 1 Period of the Plan

The period of the plan is from fiscal 2008 to approximately 2017 with an eye to the first half of the 21st century.

Section 2 Major Policies under the Plan

Major policies for achieving the strategic goals described in Section 3 of the preceding chapter will be promoted in a comprehensive manner and are as follows:

To achieve the first strategic goal of A Northern Base Shining in Asia, policies will be executed with the aim of realizing a self-reliant, stable and globally competitive economy. Specifically, we aim to strengthen food supply capabilities and add value to products to enhance the competitiveness of food-related industries; promote tourism by developing attractive, internationally competitive tourist spots; and establish accumulated industries that will develop together with East Asia.

To achieve the second strategic goal of A Northern Land Rich in Forests and Water, policies will be executed to establish sustainable communities that will lead the era of the global environment and will coexist with nature.

To achieve the third strategic goal of Vast Decentralized Northern Society with Region Strength, policies aimed at attractive and vigorous regional and community development in the northern region will be executed.

In addition, policies designed to enhance networks and mobility² that support domestic and international exchanges, and those intended to ensure safe and reassuring national land development, will be executed as the major common policies for achieving these three strategic goals.

Section 3 Method of promoting the Plan

1. Diverse Cooperation and Collaboration

For Hokkaido to turn the corner and lead the nation's efforts to establish an economy and society in the 21st century, the national government, local governments, citizens, NPOs, businesses and various other entities must join forces to make effective use of characteristic regional resources, independently and creatively.

It is important that all regions in Hokkaido achieve diverse and distinctive development by drawing on their respective regional resources, while increasing the growth potential of the entire Hokkaido by making the most of its resources and characteristics and promoting exchanges and cooperation with other domestic and overseas regions, including East Asia.

In the regions, it is important that the national and local governments take the initiative in facilitating cooperation and collaboration in order to carry out various projects and measures for regional development. It is also vital that various private bodies work with the government in

² Mobility: human movement or ease of movement; the term improvement of mobility refers to the reduction of the time required for movement, enhanced smoothness and safety of movement, etc.

developing programs to produce synergetic effects.

Furthermore, proper use will be made of the special *doshusei* mechanism, a precursory district for the introduction of a regional “state” administrative system, and promote activities intended to increase the independence and discretionary powers of the region.

2. Prioritized Investment Looking to the New Age

In order to make the nation’s economy and society sustainable in the first half of the 21st century under the severe financial conditions, it is necessary to bring about the effects of social infrastructure development early and sufficiently and thus induce related private investment. To this end, we must prioritize public investment and enhance its efficiency according to the Priority Plan for Social Infrastructure Development, while making use of the infrastructure developed to date.

Therefore, priority programs for each of the major policies, which should be implemented in a comprehensive manner ahead of other programs, will be clarified to ensure the effective promotion of the Plan. Policies will be promoted flexibly and promptly, taking changes in circumstances into consideration.

Comprehensive cost reduction efforts will be intensified, such as speeding-up projects; actively using generic products; establishing specifications based on local circumstances; and promoting social infrastructure development methods using private funds and expertise, such as the Private Finance Initiative (PFI).

Furthermore, the dilapidation of the social infrastructure is expected to increase rapidly. We will therefore reinforce our efforts to maintain, manage and upgrade the social infrastructure in a systematic and efficient manner, with the aim of utilizing the existing infrastructure as effectively as possible. Specifically, we will try to minimize the life cycle cost³ through the introduction of comprehensive asset management, and prolong the life of the existing social infrastructure by refining management methods from inspections to repairs. We will also cut down on as many maintenance, management and upgrading costs as possible so that necessary social infrastructure development can be dealt with adequately in the future.

3. Demonstration of the New Hokkaido Initiative

In promoting this Plan, it is imperative that various entities re-acknowledge regional resources and characteristics through active exchanges and cooperation at home and abroad, and mobilize all available resources to implement pioneering and experimental programs toward the establishment of rich and characteristic economy and society.

As part of the New Hokkaido Initiative that will lead the Japanese economy and society, unique undertakings will be promoted in order to tackle issues inherent in Hokkaido, by introducing local standards that differ from national standards, based on the excellent resources and characteristics of Hokkaido (Hokkaido standards). In addition, pioneering and experimental programs will be promoted in order to address challenges common to other regions. These programs will serve as the frontier of institutional design accommodating changes in the nation’s economy and society.

³ Life cycle cost: The overall costs involved in the planning and design of a structure, its construction, maintenance and management, and its eventual demolition, removal and disposal

Chapter 4 Major Policies under the Plan

Section 1 Creating a Self-reliant, Stable, and Globally Competitive Economy

It is important that the rapid economic growth of East Asia be construed as a good opportunity for the development of the regional economy and that the local resources and characteristics be utilized in order to realize an open, competitive Hokkaido.

With a view to supporting Japan's food security in the future, Hokkaido's food supply capabilities must be reinforced to enhance its role as a food supply center.

In addition, value should be added to food-related industries, and distinctive tourist spots should be developed while establishing competitive accumulated industries.

By doing so, it is important to establish a vibrant regional economy that can achieve self-reliant and stable growth.

1. Strengthening Food Supply Capabilities, Adding Value to and Enhancing the Competitiveness of Food-related Industries

With an increasing world population and the economic development in East Asia, global food demands are expected to increase substantially. In terms of food supplies, since there are destabilizing factors, such as less space for water resource development, salt damage, desertification and global warming, there is a possibility of a strain occurring on the world's food supply and demand.

Against this backdrop, Japan's food self-sufficiency ratio is the lowest among the major industrialized countries. There is also a concern that domestic food supply capabilities will decline due to the weakening workforce, caused by the decreasing and aging agricultural and fishery populations, an increase of abandoned arable land areas and declining fishery resources.

From the viewpoint of food security, it is therefore necessary to reinforce food supply capabilities while promoting the consumption of domestic agricultural and marine products, toward the improvement of the food self-sufficiency ratio. With the largest food supply capabilities in Japan, Hokkaido will play an increasingly important role in the production capabilities of the agricultural and fishery industries.

On the other hand, demand for food safety as well as high-quality agricultural and marine products is on the rise at home and abroad, primarily in East Asia.

It is thus essential that the competitiveness of foods including agricultural and marine products be enhanced in order to vie with our counterparts abroad. This should be done by securing the safety of foods and thus by adding value to products in industries relating to food production, processing and distribution. Export promotion is also necessary.

(1) Strengthening food supply capabilities

(Strengthening capabilities to supply agricultural products)

Efforts must be stepped up to improve productivity while securing agricultural water supplies and suitable arable land. The capability of supplying agricultural products must also be strengthened through the establishment of sustainable and efficient farm management.

To this end, systematic upgrading of agricultural irrigation facilities is required to enable stable crop production, farmland consolidation through underground drainage and subsoil improvement, and large-sized field lots to allow low-cost agricultural production and promote the concentrated use of land by prospective farmers.

In paddy-field areas, in particular, construction of labor-saving water-management facilities will be carried out. In upland field areas, upland irrigation and drainage will be improved with the aim of enhancing crop quality and yields. In dairy farm areas, management support organizations such as contractors⁴ and TMR centers⁵ will be developed and reinforced while developing grassland and forage crop fields.

Efforts will be made to develop paddy rice varieties suitable for direct seeding, as well as varieties high in cool weather resistance, disease tolerance and profitability. Low-cost production techniques and techniques for converting unused organic resources into feeds will also be developed.

In addition, efficient management entities will be fostered and secured, including incorporation that will lead to the maintenance and development of regional agriculture, while various newcomers will be encouraged to start farming and provided with support to enable them to do so, smoothly.

Also promoted will be multiple farming systems through the introduction of greenhouse vegetables, horticulture and beef cattle, the facilitation of the processing and direct sales of agricultural products by farmers, and the diversification of business through the start-up of new enterprises, such as farm inns and farm restaurants.

(Strengthening capabilities to supply marine products)

Efforts must be redoubled to provide consumers with a stable supply of fresh and safe marine products by improving the resource production capabilities of waters surrounding Hokkaido, where the environment of fishing grounds has been deteriorating. It is also necessary to strengthen the capability to supply marine products by establishing a sustainable fishery production structure commensurate with resource conditions.

For this reason, preparations are being made to appropriately operate the total allowable catch (TAC) system⁶ and the total allowable effort (TAE) system⁷; recover and manage resources through fishing control measures imposed by fishermen; promote fish farming by releasing fry; and develop fishing grounds such as underwater forests and tidal flats, which serve as spawning grounds and habitats for the fish.

⁴ Contractor: Organization entrusted with the cultivation, harvesting and processing of pasture grass and feed crops, compost application and other work carried out by livestock farmers

⁵ TMR center: Organization that combines roughage and concentrated feeds at the appropriate ratios and provides local dairy farmers with the feeds prepared in order to meet the nutritional requirements of dairy cattle (TMR: Total Mixed Rations)

⁶ TAC system: A fishery management system in which a catch limit is set as the total allowable catch (TAC) for species that have high commercial value and high harvest levels, as well as species that need urgent conservation measures due to poor resource conditions.

⁷ TAE system: A fishery management system in which an upper limit is set as the total allowable effort (TAE) on fishing efforts such as the number of fishing days and the number of operating vessels.

Attempts will also be made to refine the hygienic management of marine products at fishing ports, eliminate and consolidate markets in production areas, and reinforce market functions.

Furthermore, the structural reform of the offshore fishing industry will be facilitated through the acquisition of energy- and labor-saving vessels as well as low-cost operational and production systems. Management stabilization measures will also be taken to mitigate the impact of income fluctuation.

(2) Securing food safety

It is important to secure consistent food safety from production to consumption through the production of safe agricultural and marine products, and the improvement of quality control on agricultural and marine products as well as processed foods.

To this end, food safety will be secured by introducing the Good Agricultural Practices (GAP)⁸ and the Hazard Analysis and Critical Control Point (HACCP)⁹ in the agricultural production and food processing phases, and by constructing hygiene control facilities in the distribution phase.

(3) Adding value to and enhancing the competitiveness of food-related industries

While adding value to all sectors of food-related industries through the development of production and processing techniques designed to improve the quality of agricultural and marine products as well as processed food products, competitiveness needs to be enhanced with an eye to overseas markets, by reducing costs, supplying foods that meet the needs of consumers, strengthening the appeal for consumers, and so forth.

In this respect, organic agriculture and other environmentally friendly farming practices will be promoted in the production phase, e.g. minimizing the amount of agricultural chemicals by capitalizing on Hokkaido's cold climate, and utilizing livestock manure and other organic resources. Attempts will be made to facilitate plant breeding and develop new techniques to improve food quality.

Efforts in the distribution and processing stages include: the introduction of a delivery and logistics system making use of electronic tagging; the establishment of diverse distribution channels, including direct delivery from farms; the understanding of consumer needs through marketing activities; and the development and dissemination of various food products based on new technologies developed to meet these needs.

In addition, attempts will be made to establish new food brands through the synergetic effects of the association of brands with regional images and the utilization of Hokkaido's unique agricultural and marine products. Relations between consumers and producers will also be strengthened through the promotion of local production for local consumption, which will revitalize local industries.

⁸ Good Agricultural Practices (GAP): Method of managing a series of agricultural production processes for the safety of agricultural products: farmers in producing areas decide on check items for farm operations, taking crop conditions and local situations into account; perform farm operations according to the checked items and keep records; inspect and evaluate the records and identify matters to be improved; use those results to improve processes during the next cultivation period.

⁹ Hazard Analysis and Critical Control Point (HACCP): Systematic hazard prevention method: identifies potential food safety hazards concerning raw materials as well as production processes; monitors critical control points and records the monitored results.

Furthermore, assistance will be provided in expanding markets with the ultimate goal of promoting the exports of agricultural and marine products and processed foods to East Asia, by means of collecting and sending information and establishing overseas market development functions.

2. Promoting Tourism to Develop Attractive, Internationally Competitive Tourist Spots

Hokkaido has a rich natural environment and its climate differs from that of temperate regions, with refreshing summers, and winters with heavy snowfall and drift ice. With the unique scenery, history and culture fostered in this nature and climate, as well as safe and high-quality agricultural and marine products, Hokkaido has attractive tourism resources that are unique in Asia. It is important that these resources are exploited and tourism exchanges are expanded not only with other regions nationwide but also with other countries, including those in East Asia.

In addition, tourism is expected to play the role of an industry that will lead the regional economy because of the extensive ripple effects it has in Hokkaido, such as the creation of employment opportunities in food-related industries and other industrial sectors.

Tumultuous changes are taking place in the tourism industry, e.g. the diversification of travelers' needs and the intensification of international and regional competition in the field of tourism. Efforts should be made to deal with these changes.

(1) Creating attractive, internationally competitive tourist spots

Since Hokkaido's natural environment is unique in Asia, it is imperative that efforts are made to take advantage of the resources and characteristics of respective regions and develop internationally distinctive tourist spots in response to the diversifying needs of travelers.

To this end, attempts will be made to ensure the conservation and proper use of the natural environment and promote the protection, cultivation and development of tourism resources attractive to tourists from both home and abroad, including outstanding scenic spots, beautiful landscapes and hot springs. What's more, measures to reduce environmental burdens caused by the activities of tourists during their stay will be promoted.

Attempts will also be made to facilitate various projects and programs initiated by local communities. One such example is the Scenic Byway Project, which aims to develop beautiful landscapes, vibrant communities and attractive tourism space through the cooperation between government and various local entities, e.g. residents, NPOs and businesses.

In particular, high-quality services will be provided and facilities developed to promote comfortable and relaxing sightseeing tours such as nature viewing programs, which are popular among overseas tourists visiting Hokkaido; hands-on programs featuring winter events or sports; long-stay programs that foster deep exchanges between tourists and local residents; and cruises. Furthermore, with the aim of encouraging tourists to travel throughout a wide area, attempts will be made to facilitate joint efforts by more than one community in creating tourism resource networks and disseminating information.

In order to attract more overseas tourists to Hokkaido, plans are being made to take advantage of the Hokkaido Toyako Summit scheduled to be held in 2008, among other events, to strategically publicize the appeal of Hokkaido. On top of all this, continued efforts will be made in attracting

international conferences and events, and increasing opportunities for disseminating information while championing the cause of international exchanges.

The expansion of diverse exchanges, including sightseeing, requires the provision of warm hospitality to visitors and developing tourist spots where overseas visitors and elderly people can enjoy trouble-free travel with peace of mind. Most importantly, it is important to eliminate language barriers for foreign tourists.

Therefore, it is necessary to recruit and train tourist guides who are able to inform visitors to Hokkaido about local information and attractions, and provide them with interpretation and other services. Information and telecommunications technology will also be used for providing tourism information. Furthermore, the establishment of tourist information centers, accommodation facilities and other travel-related facilities employing staff that speak foreign languages will be encouraged, and multilingual signposts featuring graphic symbols will also be installed.

In addition, travel-related facilities will continue to be made barrier free with the development of tourist spots and travel-related products carried out with universal design¹⁰ in mind.

(2) Promotion of the tourism industry to lead the regional economy

To ensure the further development of the tourism industry in Hokkaido, it is essential that synergetic effects are pursued toward regional revitalization. Specifically, when promoting tourism, it is important to make use of Hokkaido's unique local resources and characteristics, and value the preferences and needs of tourists from both home and abroad, in terms of food and health promotion.

In this respect, government, industry and academia should work together in creating and disseminating new types of tourism, e.g. green tourism, marine tourism and health tourism, in which the rich natural environment is combined with local industries, including agriculture, forestry and fisheries. The development, marketing and utilization of products based on local resources unique to each region are also promoted.

Furthermore, it is necessary to secure, foster and improve the skills and abilities of those who work in the tourism industry, including leaders of local tourism industries and human resources engaging in the reception of tourists, as well as managers of projects designed to develop tourist spots through the participation of various entities. In this respect, cooperation with universities and other institutions in which human resource development in tourism is under way must be facilitated.

3. Establishing Accumulated Industries that will Develop Together with East Asia

The progress of globalization and the rapid economic growth of East Asia provide a splendid opportunity for our nation to expand its markets. It is vital that Hokkaido establish accumulated industries that will develop together with East Asia, by making the best use of its geographical characteristics, unique resources, cultivated techniques and various types of infrastructures.

To this end, it is indispensable that industries are fostered based on the strengths of the respective regions, e.g. existing industrial concentration and technical accumulation. It is also

¹⁰ Universal design: Approach to the design of cities, living environments, information, services and the like, in which the priority is user friendliness regardless of age, gender, ability, language, etc.

necessary to strengthen logistics functions, develop necessary human resources and improve various other conditions.

(1) Promoting industrial bases by taking advantage of geographical locations

Hokkaido is located on the imaginary line that links North America with East Asia, and is also adjacent to the Russian Far East. It has ports along the Sea of Japan as well as the Pacific Ocean, and situated in between are airports, industrial complexes and other elements of the infrastructure. It is important to take advantage of these geographical aspects to promote faster, smoother and less expensive logistics systems to and from North America and East Asia, for the purpose of establishing accumulated industries that will draw on the economic growth and vitality of East Asia.

In this regard, the international logistics functions of Tomakomai Port, Ishikari Bay New Port, New Chitose Airport and so on, will be reinforced while establishing production bases utilizing the existing areas of industrial concentration. In addition, advances will be made in the concentration of processing and assembly industries by developing basic technology-related industries, e.g. the forges and foundry industries, and improvements made in the technological capabilities of local businesses. By doing so, it is hoped to exert the synergetic effect of integrating production bases with centers for international logistics and exchanges.

The East Tomakomai area, located close to these ports and airport and blessed with an expansive natural environment, is a valuable area with great development potential. Promotion of further concentration of businesses in the automobile, recycling and other existing industries will be carried out through close cooperation with related institutions. Strategic advancements will be made in various projects, such as the establishment of international logistics terminals, with an eye to East Asia, while fostering new industries, including biofuel-related industries; constructing large-scale agricultural produce storage facilities utilizing natural energy sources; exporting high-quality agricultural and marine products; and attracting businesses relating to international logistics. The further development of these areas will be carried out while studying other land uses.

(2) Fostering industries by capitalizing on strengths

(Fostering expected growth industries, e.g. IT, biotechnology, environmental and energy-related industries)

Government, industry and academia have joined forces in fostering the information technology and biotechnology industries through the Project for the Creation of Hokkaido Industrial Clusters. These industries have begun demonstrating regional advantages, such as the inauguration of university-launched venture businesses and the establishment of research and incubation centers¹¹.

¹¹ Incubation center: An incubation center provides low-rent office space to prospective entrepreneurs and start-up businesses. Professional staff at the center help potential businesses draw up business plans and provide them with management know-how, such as marketing support. The center serves as a base for support systems and collaborative activities with the aim of facilitating corporate development.

It is vital that these favorable conditions are exploited and that both the information technology and biotechnology industries are developed to make them internationally competitive. At the same time, since technological innovations in these fields widely affect other industries, it is indispensable that the level of Hokkaido's industry as a whole is improved through proactive transfers of technology in Hokkaido.

From the viewpoint of resource recycling and energy source diversification, it is necessary to concentrate environmental and energy-related technologies in Hokkaido. Business opportunities using these technologies are expanding due to the increasing energy demands and environmental burdens fueled by the rapid economic development of East Asia.

With regard to the information technology and biotechnology industries, it is therefore necessary to conduct advanced research in cooperation with businesses, universities and research institutions, and facilitate the concentration and utilization of intellectual assets for the purpose of creating new projects as well as new industries, by attracting R&D-intensive businesses and securing/improving human resources and organizations responsible for the coordination of such projects. Among other things, value will be added to food-related industries by improving production efficiency, safety and quality of agricultural, fishery and food processing industries, and utilizing these government-industry-academia networks along with new technologies.

R&D, commercialization and corporatization of clean-energy technologies using wind power, biomass and other natural energy sources, as well as the hydrogen energy in which Hokkaido excels, will be accelerated through cooperation among industries, universities and governmental departments, as will technologies concerning environmental businesses, such as the recycling business.

(Fostering industries by capitalizing on forest resources)

While the structure of lumber demands undergoes changes, with an increasing emphasis on the stable supply of large quantities of products with proven quality and performance, many manmade forests of Japanese larch – the wood of which is expected to be used more widely – are entering into the final cutting periods, and other resources available from manmade forests are increasing in Hokkaido. Under these circumstances, it is imperative that the competitiveness of timber produced in Hokkaido is enhanced by increasing the production of high-value-added products that have proven quality and performance and that meet market needs in the lumber industry, and that such products are supplied at low costs in a stable manner.

Therefore, high-grade processing facilities will be constructed, producing plywood, laminated wood and other products at low costs, and sawmills will be encouraged to expand through partnerships and cooperation. Furthermore, stable lumber supply systems will be implemented, e.g. the intensification of forestry operations and the establishment of a working system to make such operations low-cost and highly efficient, while conserving forest resources through systematic felling, planting and so forth.

(3) Improving conditions for industrial development

For Hokkaido to thrive as a vibrant region amidst a declining population, it is essential that human resources are nurtured to support Hokkaido's development and link funds in Hokkaido with

effective investments in Hokkaido.

For that purpose, efforts will be made to promote the revitalization of local knowledge bases through the concentration of universities developing human resources with advanced skills, experimental research institutions and so forth, and through the reinforcement of cooperation among industries, universities and government as well as between businesses. In addition, attempts will be made to create an environment in which talented people from home and abroad will continue to engage in R&D activities in Hokkaido.

What's more, since the exodus of young people threatens to shake the foundation of the nation's prosperity, efforts will be made to improve the employment environment of youths to enable them to find good jobs in Hokkaido. Specifically, efforts will be made to help develop their occupational skills and provide them with local employment information.

Additionally, regions will be encouraged to work together in expanding sales outlets in extra-regional markets, launching new endeavors and establishing brands that utilize regional resources.

Section 2 Establishment of Sustainable Communities to Lead the Era of the Global Environment and Coexistence with Nature

The value of Hokkaido's rich natural environment must be maintained and improved in order to realize a sustainable and beautiful Hokkaido. Global environmental problems are worsening, such as loss of biodiversity and other changes in natural environment, decreasing natural resources and global warming. Amidst the diversifying needs for nature among the general public, it is vital to address these problems head-on in order to create a sustainable society.

The utilization of energy sources with fewer environmental burdens is the field in which Hokkaido has an edge, as Hokkaido can take advantage of its meteorological, geographical and social characteristics. It is necessary that Hokkaido plays a trailblazing role in addressing energy issues and mitigating global warming by capitalizing on its abundant natural energy sources.

(1) Realizing a society based on the harmonious coexistence of nature and humans

(Conservation of a favorable natural environment)

As far as Japan is concerned, Hokkaido's rich natural environment is irreplaceable. Handing down this environment to the next generation in order to establish a society in harmony with rich nature requires the establishment of ecosystem networks through the conservation, restoration and creation of diverse wildlife habitats and the conservation and improvement of water environments.

To this end, efforts will be made to conserve and restore the natural environment, including World Natural Heritage-listed Shiretoko and its environs, Ramsar Convention-registered sites represented by the Kushiro Wetland and Sarobetsu Mire, and other natural parks. With regard to forests blessed with excellent natural environments suitable for the habitation of valuable flora and fauna, conservation and management will be promoted so that the functions of such forests are continuously demonstrated. Furthermore, nature-oriented river works will be initiated with the aim of securing habitats of various flora and fauna. Also conserved and restored will be favorable marine environments as well as coastal waters, such as rivers, wetlands, underwater forests, tidal

flats and brackish-water regions.

What's more, people must strive to coexist with rich ecosystems through the development of coasts, ports and fishing ports that take the habitats of aquatic organisms into account; road construction that maintains the migratory pathways of wildlife intact; and the promotion of agriculture, forestry and fisheries with an emphasis on the conservation of biodiversity.

With reference to the conservation and improvement of water environments, e.g. water quality and river flows, and the improvement of efforts to block sediment movement, sound water circulatory systems will be established in river basin areas, and comprehensive sediment management programs will be executed, covering mountainous and coastal areas alike. For the purpose of minimizing pollution burdens in river basins, domestic wastewater treatment measures, including the construction of sewerage, wastewater treatment tanks, rural agricultural community sewerage, and water pollution prevention measures for livestock farming will be implemented in a systematic and efficient manner. In closed water areas such as rivers, lakes and swamps, where water quality has deteriorated, water purification measures, such as water conveyance and bed mud dredging, will be promoted together with pollution burden reduction measures for river basins. At the same time, efforts will be made to improve marine environments at ports and surrounding waters with considerably deteriorated water quality, by means of dredging, sand capping and so forth.

(Creating distinctive landscape befitting of Hokkaido, and space where people can come into contact with nature)

Hokkaido has a distinct landscape as its rich natural environment is combined with historical and social conditions that are different from those of other prefectures. It is necessary to hand this landscape down to future generations and maintain relations between people and nature by creating opportunities for them to come into contact with each other.

In this regard, the formation of scenic landscapes unique to rural areas in Hokkaido will be promoted, and efforts to conserve and restore the rich natural environment of rural areas will be supported. In addition, attempts to conserve and restore wetlands, implement nature-oriented river works, develop snowbreak forests and plant trees in road compounds will be promoted. In city areas, the development of urban spaces filled with water and greenery will be facilitated by integrating community development, river improvement and other projects, thus securing the continuity of water and greenery.

In addition, city parks, waterfront and seaside areas, footpaths¹² and so on will be improved in order to provide both locals and overseas visitors with opportunities for recreation, exchanges with one another, and to come into contact with nature, by making use of the charm of Hokkaido's natural environment.

(Fostering an awareness that values a rich natural environment)

In order to hand down Hokkaido's rich nature to the next generation, the national government, local governments, citizens, NPOs, businesses and various other entities need to work together in

¹² Footpath: A trail designed to enable the enjoyment of walking while coming in contact with aspects of nature, culture, etc. that are unique to each region

carrying out environmental conservation activities. It is also important to cultivate the awareness of protecting the rich natural environment by providing education and information concerning environmental conservation.

To this end, environmental education will be extensively provided at schools, in local communities and so forth. In addition, registration systems will be introduced for programs designed to develop human resources that provide environmental education and certify human resources. Moreover, environmental education programs will be made more effective, and information supply systems will be improved using the Internet in order to ensure the accuracy of environment-related information.

(Promoting Ainu culture, which is closely related with nature)

Considering the circumstances surrounding Ainu tradition and culture, measures to promote Ainu culture need to be implemented.

Therefore, support will be provided for the restoration of traditional Ainu living habitats (Ioru), where Ainu culture, which was fostered through the Ainu's relations with nature, will be comprehensively handed down. Also supported will be the promotion of the Ainu language as well as Ainu culture, the spread of knowledge and education about Ainu tradition and culture and comprehensive and practical Ainu research programs.

(Promoting forest development according to the functions to be valued)

In order to ensure the continuous demonstration of multiple forest functions, forests must be classified into those for water and soil conservation, those that are symbiotic with people, and those for resource cyclic use, according to the functions to be emphasized. Then, forests must be directed toward the desired classification in accordance with the functions to be emphasized.

Given this situation, efforts to develop diverse and healthy forests will be promoted, such as the steadfast implementation of tree thinning, the gradual alteration of forests into mixed woodland consisting of conifers and broad-leaved trees, and the extension of rotation periods. Specifically, the profitability of tree thinning will be improved by promoting lumber use as well as structural reforms of the forest and lumber industries; people who will engage in forest development and conservation will be recruited and trained; mountain village regions will be revitalized; and forest development will be promoted by a wide range of entities including forest owners and urban residents and businesses, through the National Campaign for Growing Beautiful Forests.

(2) Creating a recycling-oriented society

A recycling-oriented society needs to be established. To this end, the 3Rs (the reduction of waste, and the reuse and recycling of recyclable resources) will be promoted in an effort to minimize the amount of new resources extracted and environmental burdens, through all phases of socioeconomic activities, such as resource collection, production, distribution, consumption and disposal.

In Hokkaido in particular, efforts must be stepped up in order to establish a recycling-oriented society, since Hokkaido's amount of waste generated per capita is greater than the national average, the percentage of direct landfill disposal of waste is high, and the recycling ratio is low.

In terms of the aforementioned reduction of waste and reuse of resources, through the proper maintenance and renovation of dilapidated public facilities, functions will be adequately improved, life cycle costs will be reduced and the life of facilities will be extended. In addition, in order to create a society in which existing high-quality housing is cared for and continue to be used for a long time, durable houses and structures that can flexibly accommodate lifestyle changes will be disseminated, and the establishment of house history information systems will be promoted.

With regard to the above-mentioned recycling, emphasis will be attached to the effective use of unused waste biomass, such as the recovery of sewage heat and other types of waste heat in urban areas, as well as biogas from livestock excreta and sewage sludge. At the same time, waste disposal facilities, including final disposal sites, will be developed. An efficient network system for recycling¹³ will be established through the development of hub ports for comprehensive network system for recycling (recycling ports).

The national government and other administrative institutions will take the initiative in procuring eco-friendly goods and services while considering project characteristics, required functions, costs and other factors. In addition, they will encourage the effective use of waste soil generated by public works projects with the goal of achieving zero emission¹⁴ during construction work. Since the establishment of a recycling-oriented society requires changes in both people's awareness and behavior, attempts will also be made to raise people's awareness through environmental education.

(3) Achieving a low-carbon society

(Promoting the utilization and application of energy with fewer burdens on the global environment)

As global warming is becoming as apparent as ever, it is imperative that a low-carbon society is achieved, where people can live affluent lives while at the same time reducing carbon dioxide emissions.

Hokkaido abounds in clean energy sources such as wind power, solar power, snow-and-ice cryogenic energy, and biomass. Attempts should be made to reduce carbon dioxide emissions through the active introduction of environmentally friendly energy sources based on these resources, and to play a pioneering and leading role in reducing global environmental burdens.

To realize this goal, energy sources will be diversified through the use of nuclear power, natural gas, natural energy sources and so forth, and their use particularly promoted from the viewpoint of

¹³ network system for recycling: A network system for recycling can be likened to human blood vessels. While arterial logistics refers to the transportation of products, venous logistics means the transportation of waste discharged during production or consumption activities. The collection, transportation and treatment of recyclable resources are optimized through the establishment of venous logistics centers, by means of concentrated construction of recycling facilities in waterfront areas, for example, and through the formation of networks utilizing low-cost marine transportation with small environmental burdens.

¹⁴ Zero emission: Efforts to achieve zero in terms of volume of final disposal by promoting the reduction and recycling of construction waste.

producing clean energy locally for local consumption.

In addition, the development and active utilization of technologies for generating bioethanol and biodiesel fuels from resource crops and unused waste biomass will be promoted, and local communities in which such technological development and utilization forms the core of new local industries will be reinvigorated.

(Creating a society in which energy is used efficiently)

Given the characteristics of Hokkaido as having a cold and snowy climate and being a vast decentralized society, it is necessary to create local communities high in energy consumption efficiency through the cascade use of heat¹⁵ and the establishment of efficient transportation systems.

In this context, technologies and facilities contributing to the efficient use of energy in houses and buildings will be promoted in the civil sector, while the introduction of cogeneration and district heating and cooling will be promoted in urban areas.

In the transportation sector, efforts will be made to establish efficient, environmentally friendly logistics systems (promotion of green logistics). Specific measures in this regard include the introduction of low-emission vehicles; the promotion of eco driving (use of environmentally friendly vehicles); measures to mitigate traffic congestions in urban areas; the promoted utilization of arterial high-standard highways; improvements in the supply of road traffic information using information and telecommunications technology; and the shortening of land transportation distances by use of ports close to the sources and destinations of cargos. In addition, environmentally friendly transportation systems will be established in which the use of public transportation is encouraged, and measures will be promoted to minimize vessels idling.

(Promoting measures to increase greenhouse gas sinks)

Since forests can, during the course of their growths, absorb carbon dioxide and store it for long periods of time, and since lumber has the characteristic of being carbon neutral¹⁶, it is vital that forests are developed and conserved through lumber use.

Hence, proper forest development and conservation, e.g. tree thinning, will be promoted while efforts to involve the general public in forest development will be advanced with the cooperation of local residents, NPOs and so forth from the viewpoint of encouraging the general public to take actions. In addition, attempts will be made to promote afforestation along roads and rivers as well as the development of parks and green belts in ports.

On top of all that, the use of lumber will be expanded in housing and public sectors, while the utilization of unused woody biomass, e.g. waste wood remaining in forests, will be increased.

¹⁵ Cascade use of heat: Heat used for various purposes in accordance with its temperature ranges. For example, heat in the high-temperature range is used for power generation while its exhaust heat is used to create steam and hot water.

¹⁶ Carbon neutral: Since carbon dioxide is discharged by burning lumber, and carbon dioxide in the atmosphere is absorbed by plants through photosynthesis during the course of their growth, the overall amount of atmospheric CO₂ remains unchanged.

Section 3 Attractive and Vigorous Regional and Community Development in the Northern Region

In order to realize a Hokkaido with diverse and distinct regions, urban functions that support the lives of the people in those communities, such as medical care, welfare, education, information and commerce, must be maintained over vast regional areas, so that attractive, vigorous local communities that maximize the characteristics of the respective regions are created.

Furthermore, efforts should be made to establish vigorous community models through the reinforcement of urban functions, the fostering of local industries in sparsely inhabited areas, and the creation of dual-residence lifestyles and other new living styles.

(1) Creating vast regional areas and strengthening exchanges and cooperation

In order to create vigorous local communities in Hokkaido's vast decentralized society, it is necessary for the six vast regional areas – which are related to one another in terms of regional economies and daily living – to support people's lives and economic activities in the respective regions as a whole.

Therefore, urban functions concentrated in core cities will be maintained and enhanced in the vast regional areas, while accessibility will be improved in a manner that will complement the functions of each city.

Hokkaido's most advanced urban functions are concentrated in the urban area centering on Sapporo, in particular. The city's role of leading Hokkaido's entire economy and society is important, in addition to the role as the core city of a vast regional area. Therefore, the international appeal of urban areas will be enhanced with the aim of developing exchanges with other regions, including foreign countries. In addition, high-order urban functions in the whole of Hokkaido will be maintained and enhanced, and the nature of core cities will be improved by concentrating advanced intellectual capital, reinforcing collaborative relations among industries, universities and government and between businesses, and promoting cultural and artistic activities. Advanced land utilization and the reorganization of urban structures that support the aforementioned efforts will also be carried out.

Transportation, information and personal networks will be reinforced so that various collaborative relations, both in and outside the regional areas, will produce synergetic effects toward the creation of diverse and unique vast regional areas. In this respect, direct exchanges with the rest of the nation and the world will be promoted.

In addition, attempts will be made to practice open regional development by various entities, including the private sector, in order to involve the entire general public in supporting the beautiful, rich national land and hand it down to future generations, based on the notion of regional development by “national management of national land.” In this regard, pioneering programs that will serve as a model for vigorous local communities will be promoted.

(2) Strengthening urban functions and enhancing urban attraction

(Transition toward an urban structure with intensified urban functions)

With the aim of maintaining a vigorous regional economy and society amidst the decrease in and

aging of the population, as well as the decline of the birthrate, various policies need to be executed based on transition to the urban structure with intensified urban functions, which is considered to be what we should strive for in the future.

Therefore, efforts will be made to attract people to core cities through the promotion of inner-city habitation and the intensification of urban functions. In addition, urban functions will be properly allocated by regulating land use in suburban areas, so that city management costs will be reduced by means of reduced snow removal expenses, for example. In underused and unused land areas near major stations, which can become hubs, blocks will be reorganized to enhance the efficiency of urban functions, and infrastructure facilities will be improved in a comprehensive manner. These efforts will help reinforce public transportation networks and road networks that lead to and from the hubs.

(Improving the attraction and vitality of urban areas)

Unique community development under local initiative, such as the reacknowledgement of pride in local history, industries and so forth, and the utilization of them as tourism resources, must be implemented in order to enhance the attraction and vitality of urban areas and facilitate diverse and robust exchanges.

In this context, cultural assets and industrial heritage will be conserved and utilized; beautiful city landscape will be created; tourist information centers and other facilities designed to enhance the functions of local information dissemination and exchanges will be constructed; events attracting many people will be held; and the discovery of tourism resources will be promoted. Since it is essential that these activities are carried out through the unified efforts of communities by cooperation among citizens, businesses and governments, community development based on community collaboration will be promoted.

Furthermore, in order to ensure that citizens can work without undue worries and live vigorous lives, a housing market will be developed where safe, reliable and high-quality houses can be chosen promptly. Efforts will also be made to build a “safety net” into the housing system and improve water supply and sewage systems.

(Creating a comfortable living environment in winter)

Hokkaido’s cold, snowy climate sometimes hinders regional economic activities and livelihoods, making it necessary to facilitate policies aimed at making a comfortable living environment in winter.

Therefore, since typical northern houses are well insulated and draught free, their performance improvement specifications and constructions methods will be developed and disseminated. In addition, attempts will be made to popularize housing complexes designed to overcome heavy snowfall, with the installation of communal corridors that are warm even in winter, for example. Moreover, city parks that can also be used as snow-piling spaces, as well as snow melting tanks and so forth will be developed.

To secure comfortable walking spaces in winter, the elimination of barriers from walking spaces and the development of underground pedestrian passageways in consideration of winter seasons will be promoted near stations and public facilities. At the same time, efforts will be promoted in cooperation

with local residents to prevent falling accidents.

Furthermore, as part of leisure activities in winter, the revitalization of ski areas will be promoted, and indoor play facilities, gymnasiums and city parks equipped with winter sports facilities will be developed.

(Community development based on the universal design concept)

In order to create a vigorous society with the participation of everybody, including the elderly and those with disabilities, it is necessary to facilitate community development based on the universal design concept.

For that reason, public transportation, buildings, roads, parks and so forth will be made barrier free. Efforts will also be made to eliminate invisible barriers in people's minds through awareness enhancement and exchanges.

Furthermore, rented housing for families, and facilities to support families raising children will be improved in order to secure an environment in which people can raise children without fearing for the future. Green belts and city parks will also be developed within walking distances from these environments.

Moreover, support will be provided for programs through which people with disabilities will be deinstitutionalized, enabling them to enjoy more opportunities for social participation and deepening their exchanges with various people.

(3) Striving to create a model for vibrant local communities in sparsely inhabited areas

In sparsely inhabited areas where people primarily engage in agriculture, forestry or fisheries, it is feared that the declining population will sap the vitality of local communities and deteriorate social services.

In such areas, the vitality of local communities needs to be maintained and improved through the expansion of exchanges with urban areas. In doing so, efforts should be made to maximize the areas' appeal and characteristics, while properly conserving regional resources, such as a favorable environment and good production infrastructure, as well as beautiful landscapes that can be appreciated in relation to the production activities carried out there.

Therefore, joint activities by local producers and residents will be carried out concerning the conservation and utilization of regional resources, and local industries making use of local resources will be fostered. In addition, green tourism and marine tourism will be promoted along with forestry development and conservation programs, hands-on forest study programs and forest therapy programs by businesses and NPOs.

On top of that, vigorous community models with comfortable living environments as well as tourism promotion using regional resources will be established through the cooperation and collaboration of various entities, both in and outside the regions. Such models will have high-quality production environments, secure mobility, and accommodate various living styles such as long stays, dual-residence lifestyles and collective housing in winter¹⁷.

¹⁷ Collective housing in winter: A new housing style in which several households in the same community share a living space during winter, with the aim of preventing accidents such as the collapse of houses under the weight of heavy snow covering the roofs, and of mitigating and avoiding the burdens of snow removal on citizens and the government.

(4) Creating diverse and distinctive local communities in the northern region

The vast region of Hokkaido is not a single, homogeneous region but consists of diverse, distinct smaller regions with different climates, populations, industries, histories, cultures, etc. These regions need to achieve unique development by capitalizing on their respective regional resources. In order to increase their growth potentials, exchanges and cooperation need to be facilitated with various regions at home and abroad, including East Asia.

Various local entities in the public and private sectors will thus promote wide-ranging cooperation and collaboration in executing both structural and nonstructural measures, based on the appropriate division of roles for the purpose of fulfilling the vision of those regions. Furthermore, exchange infrastructures such as transportation networks will be improved, and exchanges with various regions both at home and abroad accelerated, including those with the Tohoku Region, with Sakhalin and with other neighbors of Hokkaido.

The Northern Territories, an integral part of Japan, are still illegally occupied by Russia more than 60 years after the end of the World War II. The areas, like Nemuro, adjacent to the Northern Territories once established a socioeconomic zone that was integrated with the said territories both administratively and economically. Since the end of the World War II, however, they have been prevented from developing into prosperous local communities because the Northern Territories issues remain unresolved. The said areas, inhabited by numerous former residents of the Northern Territories, serve as the base of the campaign for the reversion of the territories.

In this context, stabilization measures will be systematically promoted and further efforts will be made to improve the environment in order to realize the early return of those territories through the improvement of visa-free, passport-free exchanges with those living on the four islands, as well as programs intended to raise the awareness of the general public.

Section 4 Enhancement of Networks and Mobility that Support Domestic and International Exchanges

In order to achieve the strategic goals of this Plan, it is necessary to improve mobility and reinforce networks that connect various bases in and outside Hokkaido, and support economic activities in conjunction with the execution of the aforementioned major policies. It is also vital to develop a vigorous regional socioeconomic foundation by establishing infrastructures for regional transportation, information and communication that accommodate a vast decentralized society, and by developing various means of transportation suitable for the cold and snowy climate.

(1) Establishing wide-area traffic networks connected to the rest of the nation and the world

(Strengthening high-speed transportation networks)

In the vast decentralized society of Hokkaido, backbone networks will be developed, including arterial high-standard highways, with the aim of establishing convenient, high-speed transportation networks in which various modes of transport are seamlessly connected. The development of the *shinkansen* (bullet train) and airports will also be promoted since they serve as the foundation of exchanges with the rest of the nation and the world.

With regard to arterial high-standard highways and other backbone networks, primarily high-standard highways connecting major cities, access roads to and from hub airports and ports, and roads necessary to make Hokkaido internationally competitive will be developed efficiently based on the mid-term plans illustrating specific policies on future road development.

As far as the *Hokkaido Shinkansen* is concerned, construction work on facilities in areas where the construction of new Shinkansen lines has already begun will be steadily implemented based on the agreement reached between the government and the ruling political party in December 2004, entitled “Handling of New Shinkansen Lines.” For the remaining section where the construction has planned between Shin Hakodate and Sapporo, necessary projects will be carried out.

As for aviation services, the international airport functions will be improved at New Chitose Airport, which serves as a gateway to foreign countries. Also for other airports in Hokkaido, necessary international airport functions will be improved, considering the fact that more frequent and deeper exchanges with East Asia are under way. In addition, support will be provided to improve domestic and international airline networks. The quality of airport functions will be improved in order to enhance international competitiveness, strengthen the local competitiveness of airport hinterland areas and make the airport more convenient for users.

(Reinforcing logistics network functions in order to enhance international competitiveness)

Hokkaido is located on the imaginary line that links North America with East Asia, and is also adjacent to the Russian Far East. Hokkaido is also connected to Europe via the Siberia Land Bridge¹⁸. In order to establish a major international logistics base in Hokkaido capitalizing on these geographic advantages, the functionality of Tomakomai Port in international ocean container transportation and that of New Chitose Airport in international air cargo transportation will be strengthened. Further improvements will also be made to port services by standardizing and simplifying port procedures, while new modes of transportation, like International Multimodal Transport, will be established.

With the aim of bolstering Hokkaido’s competitive edge in the agricultural and paper manufacturing industries, which are Hokkaido’s key industries, multi-purpose international terminals will be constructed, helping reduce the transportation costs of feed, fertilizer and raw materials.

In addition, access will be strengthened between arterial high-standard highways and ports, airports, logistics and production bases throughout Hokkaido, and a trunk road network will be established to ensure problem-free travel for international-standard container trucks.

Also with regard to domestic logistics, high transportation efficiency will be promoted using the sea routes of ferries and RORO vessels¹⁹ connecting Hokkaido with Honshu. To this end, the Domestic Multimodal Transport functions will also be maintained and improved.

(2) Creating regional transport infrastructures as well as information and communication infrastructures

¹⁸ Siberia Land Bridge: A type of International Multimodal Transport for shipping cargos to Europe and the Middle East by combining ocean container transportation from Japan with the Trans-Siberian Railway.

¹⁹ RORO vessels: The acronym of Roll-On/Roll-Off vessels. Vessels that have gates at the stern and bow to enable the loading and unloading of cargos using trucks and forklifts.

(Creating a well-balanced inner-city transportation system)

With the aim of fulfilling the ideal vision of cities and regions, a transportation system must be established in which a balance is maintained between traveling on foot, by bicycle, car and public transportation services.

To this end, in order to secure the everyday mobility of elderly people and commuters, regional public transportation services should be revitalized and restored, and traffic junctures, pedestrian space and bicycle lanes should be improved. In addition, considering the fact that cars are the primary means of transportation in Hokkaido, which is a vast decentralized society, smoother negotiation of railway crossings will be introduced to mitigate traffic congestion, and access to urban areas will also be improved. What's more, those concerned will join hands in strategically promoting comprehensive transportation measures, addressing both structural and nonstructural aspects.

(Securing mobility in response to the actual circumstances of regions)

Buses play a central role in Hokkaido's local public transportation systems, except for those of densely populated urban areas. With declining numbers of services due to the decreasing number of users and deteriorating profit structures, however, it is difficult to maintain bus services.

In order to secure mobility based on the actual circumstances of each area, municipal governments, public transportation operators and local residents should work together to take the initiative in addressing the situation. Local public transportation services will be reinvigorated and restored through the introduction of community buses²⁰ and demand-responsive shared taxis²¹.

Efforts will be made to accelerate the commercialization of the DMV (Dual Mode Vehicle)²², a new mode of public transportation that is also expected to serve as a tourism resource.

With regard to the transportation between the main island of Hokkaido and isolated islands, efforts will be made to secure stable access by maintaining air and sea routes and constructing breakwaters, for example.

In order to attentively meet the diversifying needs of regions and users of transportation services, and to efficiently and effectively improve mobility amidst the declining population, it is important to make use of ideas and activities of not only the government but also various other stakeholders, including regions and users of transportation services. Based on the knowledge acquired through the Scenic Byway Hokkaido project, when addressing regional problems and constructing and utilizing traffic infrastructure facilities, maximum use will be made of ideas hatched in the regions, as well as regional resources and existing infrastructures.

(Developing information and telecommunication systems, and promoting their utilization and

²⁰ Community bus: A community-based bus system that is safe and easy to use for the elderly and people with disabilities and that accommodates the diverse needs of local residents in residential areas where public transportation services are non-existent or inconvenient

²¹ Demand-responsive shared taxis: Shared taxis with a maximum capacity of 10 people, which are operated in accordance with user demands.

²² DMV (Dual Mode Vehicle): Vehicles that can run both on railway tracks and roads.

application)

The utilization of information and communication aimed at facilitating broad exchanges within Hokkaido, as well as with the rest of the nation and the world, is indispensable for creating vibrant local communities. Information and communication systems must be improved, particularly in sparsely inhabited areas, including rural farming and fishing villages that supply high-quality foods and have tourist spots with magnificent nature, in order to promote competitive local industries and maintain the vitality of local communities.

To this end, optical fiber networks, radio access systems²³ and other information and communication systems will be developed, and public services improved and made more efficient using information and telecommunications technology.

(3) Improving the reliability of transportation services in winter

Road transportation in winter has numerous problems: congestions in urban areas due to snow cover and icy road surfaces; roads being closed to traffic because of drifting snow and avalanches. These problems must be overcome, and safe, reliable road transportation must be secured by efficiently carrying out snow removal and disposal, constructing avalanche prevention facilities and snowbreak forests, securing sufficient snow-piling space and taking road de-icing measures.

In addition, the punctuality and safety of air transportation services must be secured by using the ILS for landing in both directions²⁴, improving runways and reinforcing snow removal systems.

Section 5 Safe and Reassuring National Land Development

The economy, society and people's lives are never stable without safety and security. Ensuring the safety and security of the people, such as protecting people's lives and property from earthquakes, flood damage and other disasters, and securing traffic safety, is one of the national government's most important responsibilities. It also serves as the foundation for economic and social activities. Hokkaido has suffered some of the greatest flood damage in Japan. With numerous active volcanoes and potential earthquakes on the Japan and Kuril trenches, Hokkaido is vulnerable to natural disasters. Furthermore, it is feared that the risk of disasters, such as more frequent and concentrated heavy rains and sea-level rises, will increase due to climate change caused by global warming. Therefore, the safe and reassuring development of national land must be steadily promoted.

(1) Promoting disaster prevention measures in preparation for frequently occurring natural disasters

(Promoting fundamental disaster prevention measures)

Considering the frequent occurrence of natural disasters and possible increases in disaster risks, emphasis will be attached to the following flood disaster prevention measures: the construction of

²³ Radio access system: A general term for the mechanism of Internet connections (data transmission) using radio networks

²⁴ Use of ILS for landing in both directions: The Instrument Landing System (ILS) is used for landing in both directions on a runway, not for just a single direction. This increases opportunities for aircraft to make safe landings even with poor visibility and in poor weather conditions.

fundamental flood control facilities, such as levees and stormwater treatment facilities; the implementation of flood control measures, including those designed to prevent the recurrence of disasters involving rivers that have recently been devastated; and anti-inundation measures by means of improved sewerage systems.

Landslide disaster countermeasures will be promoted to protect human life against landslide disasters caused by torrential rain, volcanic eruptions and so forth. Importance will be attached to measures to secure evacuation routes and shelters for residents, and to ensure the safety, in emergencies, of people with special needs. If the functions of the central transportation infrastructure are damaged by a volcanic eruption, for example, it will have extremely significant socioeconomic impact. Therefore, the preservation of such infrastructures will be promoted, as will be the measures to secure alternative functions.

Since Hokkaido has a long coastline, comprehensive coastal protection will be facilitated to protect beaches against tsunamis, high tide and ocean wave damage.

With regard to roads, disaster prevention measures will take top priority and include those for rock slopes in sections subject to traffic regulations in abnormal weather conditions. Reliable road networks will be established in Hokkaido, where road density is low.

The development of forest reserves will be systematically promoted with the aim of preventing landslides. At the same time, efforts will be made to gain an accurate understanding of hazardous mountain areas based on recent changes in disaster patterns. In addition, various forest programs covering national, private and communal forests will be systematically carried out. By doing so, forest conservation facilities will be established more effectively.

With the aim of protecting farmland and agricultural facilities against disasters, disaster prevention measures such as landslide prevention projects will be promoted.

Large-scale water supply cuts due to disasters significantly affect people's lives. Hence, water supply facilities will be developed so that stable city water supplies can be ensured even at the time of disasters.

(Promoting disaster prevention measures in preparation for tsunamis and earthquakes, including trench-type earthquakes occurring near the Japan and Kuril trenches)

Large-scale earthquakes have recently occurred in Hokkaido, including the *Kushiro-oki* Earthquake, Hokkaido *Nansei-oki* Earthquake and *Tokachi-oki* Earthquake. In addition, Hokkaido was designated as the area in which earthquake disaster prevention measures should be promoted in preparation for the Japan/Kuril Trench- and other trench-type earthquakes. For these reasons, it is necessary for disaster prevention agencies, NPOs, businesses and local residents to work together in promoting measures to prevent damage caused by earthquakes and tsunamis.

In this regard, shelter construction, the early dissemination of earthquake and tsunami information, and the utilization of earthquake early-warning systems will be promoted. In addition, the earthquake-resistance strengthening of bridges will be promoted along emergency transportation roads in order to secure emergency medical care, evacuation and the transportation of emergency relief supplies. In ports, seaside disaster prevention bases will be developed in waterfront areas equipped with earthquake-proof quays. The earthquake-resistant reinforcement of airports, fishing port facilities, river structures and coast protection facilities will be promoted, as

will tsunami countermeasures to mitigate damage near rivers, at ports and on the coast. Furthermore, earthquake-resistant reinforcement of houses and structures will also be facilitated with the aim of mitigating damage caused by the collapse of houses and buildings along evacuation routes and roads for transporting emergency relief supplies.

(Promoting measures to counter heavy snowfall, as well as disaster prevention measures for cold, snowy areas)

In order to mitigate the impact of heavy snowfall on people's lives as well as socioeconomic activities, cooperation among organizations involved in snow removal and disposal will be strengthened by establishing information liaison headquarters during heavy snowfall. If earthquakes and tsunamis occur in winter, evacuation may be impeded by snow cover and/or freezing conditions on evacuation routes. Therefore, measures for snow removal, protection against snow, and frost and snow damage prevention will be reinforced along evacuation routes, and disaster prevention measures based on the characteristics of cold, snowy areas will be promoted, including the execution of wintertime evacuation drills.

(2) Promoting comprehensive disaster prevention and mitigation measures integrating structural and nonstructural measures

(Promoting efforts to improve regional capabilities to cope with disaster risks)

To secure safety and security, it is important to promote both structural and nonstructural measures so that even in the event of disaster, people's lives and socioeconomic activities will not be seriously affected. Structural measures cover facility construction, for example, while nonstructural measures aim to mitigate damage and include the sophistication of disaster information and the establishment of disaster information communication systems for disaster prevention agencies. In addition, there are fears that regional capabilities to cope with disaster risks will decline due to socioeconomic changes caused by the aging of population. Therefore, comprehensive disaster prevention and mitigation measures need to be taken, such as the re-establishment of regional capabilities of coping with disaster risks, including self-help, mutual assistance and public aid involving local residents and businesses.

Therefore, in order to respond to disasters promptly and smoothly, disaster information should be sophisticated, a system of sharing the said information should be put in place, and the infrastructure for communicating disaster information should be reinforced. Also necessary is the reinforced cooperation among disaster prevention agencies. In this regard, a system of transporting emergency relief supplies to devastated areas will be developed in order to be able to take prompt emergency action and support recovery efforts at the devastated areas. Moreover, the efficient operation of machinery and the appropriate allocation of equipment and materials are also needed.

In addition, support will be provided to municipalities preparing and disseminating hazard maps for floods, tsunamis, high tides, landslide disasters, volcanic disasters and so on. Workshops will be held for municipal government employees, with the aim of improving their disaster prevention skills, and programs will be promoted aimed at supporting the improvement of local governments'

capabilities to cope with disaster risks.

All these disaster prevention measures will be implemented in collaboration with the regions. Specifically, teaching materials on disaster prevention will be prepared and disseminated in cooperation with NPOs, and local educational activities regarding disaster prevention will be promoted. Furthermore, disaster-prevention drills will be conducted with the participation of disaster prevention agencies and local residents.

(Promoting the development of disaster-resistant communities)

In order to implement community-based disaster prevention and mitigation measures, it is necessary for all stakeholders to work together in a comprehensive manner to make their communities and houses resistant to disasters.

Therefore, landslide disaster-prone areas should be designated, and specific acts of developments restricted, while pursuing systematic land use in consideration of the degrees of disaster risks. In the meantime, parks, green belts, evacuation routes and disaster prevention stations will be developed in the form of disaster prevention shelter bases. Efforts will also be made to create disaster-resistant communities by combining the development of levees, retarding basins and other structures, with community development and regional promotion measures.

(Reinforcing systems to cope with various disasters, accidents, etc.)

Various programs will be carried out to mitigate the damage caused by various disasters and accidents, and to prevent terrorist attacks. In preparation for possible oil spills, a system of preventing the spread of marine pollution will be implemented. Counterterrorism measures will be reinforced at ports and airports, which are interfaces of international exchange, as well as other important facilities and public transportation systems.

(Securing an operational and business execution system in case of an emergency, e.g. large-scale disaster)

The national and local governments assume the responsibility of carrying out important tasks extensively related to the lives of the general public, not just by responding to disasters and accidents. In the event of a large-scale disaster that causes a serious impact on the nation's socioeconomic activities, support from not only a local but a national viewpoint is necessary to achieve prompt recovery and reconstruction of devastated areas.

In order to minimize the impact of disasters and accidents on socioeconomic activities, a system will be put in place under which those in the public and private sectors can execute their duties from their respective positions, in the event of emergencies. At the same time, efforts will also be made to establish a broad support system.

(3) Promoting traffic safety measures with the aim of creating a traffic accident-free society

Since the annual number of traffic accident fatalities remains high in Hokkaido, the development of a safe road traffic environment is essential. Along with the systematic improvement of road networks, intensive automotive safety measures must be taken in areas with high accident ratios, based on the objective analysis of accident data. At the same time, safe and reassuring pedestrian

space should be created.

Road information will be provided and wintertime road management will be improved using information and telecommunications technology. R&D into transportation issues unique to Hokkaido will be promoted, such as road traffic safety in cold, snowy areas, and serious accidents in suburban areas.

With the aim of improving the safety and stability of marine transportation through the enhancement of calmness in ports, breakwaters and other outlying facilities as well as sea routes, berths and other port facilities will be improved.

In order to secure the safety and security of air transportation, attempts will be made to maintain, upgrade and improve the functions of basic facilities, as well as air navigation facilities, at Hokkaido's airports.

Additional Statement

With regard to policy promotion, policy evaluation will be performed according to the management cycle of “policy planning, do, check and action.” The major policies and the period of the Plan will be flexibly handled and reviewed whenever deemed necessary. The Plan will be reviewed in a comprehensive manner approximately five years after formulation. The Plan will also be reviewed when needs arise due to domestic and international changes, including the introduction of the *doshusei* regional administrative system.

If and when the situation changes with regard to the Northern Territories, which remain under special circumstances, the Plan will be revised and the basic development policy outlined once again.