Chapter 2

Deploying Land, Infrastructure, Transport and Tourism Administration Tailored to Urges of the Times

Section 1 Driving the Implementation of a National Land Policy Package

The MLIT has been driving forward comprehensive land policy based on the National Spatial Strategies (National Plan) (cabinet decision in 2008), Regional Plans for eight blocks nationwide (Minister decision in 2009), and the Fourth National Land Use Plan (National Plan) (cabinet decision in 2008), as comprehensive guidelines on building national land. In order to respond to drastic changes in the situations surrounding national land, including rapidly declining population, low birth rates, and a possibly imminent large-scale disaster, the MLIT published the "Grand Design of National Spatial Development Towards 2050" in July 2014 to share the sense of crisis with the public and show the principles of national land and regional development with a medium- to long-term view (generally 2050 in sight). Also taking this into consideration, in August 2015, changes to the National Spatial Strategies (National Plan) and the National Land Use Plan (National Plan) for roughly the next 10 years were adopted by a Cabinet decision.

The new National Spatial Strategies (National Plan) have the basic vision of building convection-promoting national land that creates active movements of people, goods, money, and information between regions (convection) by refining regional individualities that are varied. Also, as national and regional structures for creating convection, the idea of *compactness and networks*— consolidating various functions that include life services into certain regions in a compact manner and connect regions with networks—was laid out. The building of the convection-promoting national land and compactness and networks for that purpose should contribute to realization of the balanced development of national land that is suitable in the coming age and leveraging the unique individualities of nature, culture, and industries specific to each region. Furthermore, the National Spatial Strategies include the correction of overconcentration of people in Tokyo as Tokyo has congestion problems while net outflows of population, mainly young people, from rural regions to the Tokyo Area continue, also taking into consideration such issues as possibly imminent large-scale disasters that include a Tokyo inland earthquake.

The Fifth National Land Use Plan (National Plan) aims at land use to enhance resilience, sustainability and prosperity in our country.

In order to manage the progress of both National Plans, as well as to examine effective promotion measures, a plan promotion task force was established in February 2016 in the National Land Development Council and started discussions toward the formation of the convection-promoting national land. In March 2016, the Regional Plan of each block was revised based on the National Plans. Also, discussions are ongoing for revising the National Land Use Plan (prefectural plan).

Section 2 Measures, etc. against Aging Social Infrastructures

(1) MLIT's Action Plans for Life Extension of Infrastructure

In Japan, those infrastructures that have been built after the rapid-growth period of the nation's economy, including Tokyo Metropolitan Expressway Route 1 laid after the 1964 Tokyo Olympic Games, are forecast to become aged simultaneously in the future with the proportion of facilities that will reach 50 years of age or older in 20 years to expanding at an accelerating pace. The ratio of the number of such highway bridges, for example, is predicted to surge from about 18% in March 2013 to about 43% 10 years later and to about 67% 20 years later (Figure II-2-2-1). Simultaneously aging infrastructures should dictate strategic maintenance/management and renewal.

In October 2013, the Liaison Conference among Ministries and Agencies Concerned with the Promotion of Measures to Combat Aging Infrastructures was inaugurated. In November of the same year, it came up with the Basic Plan for Life Extension of Infrastructure to envision future approaches directed at infrastructures of all kinds to be taken by the state, local public entities and so on. The MLIT responded by working out the MLIT Action Plans for Life Extension of

Infrastructure in May 2014 ahead of all other ministers and agencies to finalize and visualize specific approaches based on the basic plan, declaring it as a maintenance guide to present a roadmap to the implementation of maintenance cycles (Figure II-2-2-2).

The plan calls for:

- (1) checking up infrastructures perioodically and repairing or renewing them as appropriate and keeping the information in chart form in a database to create maintenance cycles;
- (2) moving ahead with further cost reductions by leveraging maintenance and technologies with lifetime extension strategically based on the concept of preventive maintenance, thereby leveling the burdens of maintenance spending;

Figure II-2-2-1

Present Status of Aging Social Infrastructures

Among all infrastructures that have been built after the rapid-growth period of the nation's economy, including highway bridges, tunnels, rivers, sewage systems and ports and harbors, the proportion of those facilities that will reach 50 years of age or older in 20 years to come will expand at an accelerating pace.

The status of aging of facilities is not uniformly determined by when they were initially built, but it varies depending on where they are located, how they have been maintained and managed and so on. For convenience's sake, an actual age of 50 years after initial construction is used as a measure of aging.

Percentage of social infrastructures that have been built for 50 years or longer>>

	March 2013	March 2023	March 2033
Highway bridges [about 400,000 bridges Note 1 (of about 700,000 bridges having a bride length of 2 m or longer)]	Approx. 18%	Approx. 43%	Approx. 67%
Tunnels	Approx.	Approx.	Approx.
[about 10,000 tunnels ^{Note 2}]	20%	34%	50%
River management facilities (such as water gates)	Approx.	Approx.	Approx.
[about 10,000 facilities Note 3]	25%	43%	64%
Sewerage pipes	Approx.	Approx.	Approx.
[Total distance: approx. 450,000 km Note 4]	2%	9%	24%
Port and harbor quays	Approx.	Approx.	Approx.
[Approx. 5,000 facilities Note 5 (4.5 m deep or deeper)]	8%	32%	58%

Note 1: Approximately 300,000 bridges whose year of initial construction is unknown have been excluded from ercentage calculation

Note 2: Approximately 250 tunnels whose year of initial construction is unknown have been excluded from entage ca Note 3: State-managed facilities only, including approximately 1,000 facilities whose year of initial construction is

Note 3: State-managed radiities only, including approximately 1,000 radiities whose year of initial construction is unknown. (Since records generally exist for facilities built within the last 50 years, facilities whose year of initial construction is unknown are sorted out as being approximately 50 years of age or older.) Note 4: Including approximately 15,000 km of piping whose year of initial construction is unknown. (Since records generally exist for facilities built within the last 30 years, facilities whose year of initial construction is unknown are sorted out as being approximately 30 years of age or older and their length proportionally distributed in the ratio of construction by documented number of years elapsed.) Note 5: Approximately 100 quays whose year of initial construction is unknown have been excluded from percentage calculation.

calculation.

and

(3) Provide financial support by granting subsidies for disaster preparedness and

safety, as well as personnel support for providing training in order to drive forward the initiatives of local governments that manage most of the infrastructures.

Summary of the MLIT's Action Plan for Life Extension of Infrastructure and Approaches based on the Action Figure II-2-2-2 Plan Ocompile an action plan based on the Basic Plan for Life Extension of Infrastructure on the basis of approaches taken in the First Year of Social Infrastructures Maintenance.

⊖Focus on building maintenance cycles, cutting and leveling total costs and supporting local governments on the basis of the action plan. (relevant mainly to directions of approaches 1, 3) (relevant mainly to directions of approaches 5, 6) (relevant mainly to directions of approaches 1, 2, 7

Summary of the MLIT Action Plans for Life Extension of Infrastructure (decided at May 21, 2014 meeting of the Social Infrastructure Anti-Aging Conference) 1. MLIT Roles

Source) MLIT

ORoles of the competent authority to build schemes, an	and systems relevant to i	infrastructures ORoles of infrastructure	es managers.	
2. Scope of Planning OTarget: All the facilities whose programs or the like are supervised by the ML OPeriod: FY 2014 to FY 2020	MLIT. ONeed to have more	3. Mid- and Long-Term Cost Prospects ONeed to have more precise estimates of the mid- and long-term prospects of the costs of facility maintenance, management renewal and so on by probing into the actual status of the facilities and by individual facility life extension programming.		
4. Directions and Descriptions of Approaches				
[Directions of approaches] 1 Checkups/diagnostics/repairs, renewals, etc 2 Development of st	f standards	3 Development and use of information infrastructures	4 Formulation of individual facility plans	
- Building maintenance cycles for all facilities - Maintaining standards in order - Reviewing the necessity of facilities and measures - Carry on and enhance support as by subsidization - Kourweldge - Carry on and enhance support as by subsidization		- Promoting planning and enhancing contents		
5 Development and introduction of new technologies 6 Budget managem	ment	7 Constructing of systems	8 Development of legislation, etc.	
Industry-academia-government collaboration, and matching needs with seeds Clarification of field conditions for using new technologies	•	Enhance qualification systems, and utilize technicians versed in advanced technical capabilities Build a plan for partnerships between managers	Define shares of responsibility and respond to changes in social structure	
[Key approaches] Start using new standards and documentation Example: Make close-up visual checks on highway bridges once ev Run new databases and enhance futuristic featu Example: Extend port and harbor databases to port managers, etc. Concentrate and remove facilities as needed Example: Advise on the concentration and removal of bridges, etc. to reflect charges	every five years Example: S atures Build a c. Example: Es Build a	ce qualification systems specify required capabilities and skills, assess and accredit a 1 framework of using technicians wit stablish a system of providing technical support in the road and 1 framework of collaborations among rovide technical assistance, etc. to municipalities by support or	th advanced technical capabilities other fields, such as dispatching governmental officers g administrators	
5. Other OFollow up on plans to enhance	e and deepen efforts	OActive provision of information	n through websites or other means	

Source) MLIT

In addition, in order to push ahead with these initiatives, the Fourth Priority Plan for Social Infrastructure Development adopted by a Cabinet decision in September 2015 set the strategic maintenance and renewal of social overhead capital as one of the priority goals, focusing on measures against aging infrastructures, such as by setting target indicators that include the ratio of life extension programs (individual facility plans) for individual facilities (100% within FY 2020).

In December 2015, the first follow-up was conducted on the Action Plans in order to see the progress of measures against aging infrastructure based on the Action Plans. The MLIT will continue to work on the measures against aging infrastructure in a focused and systematic manner so that required infrastructures will be sustainably maintained.

(2) Development and Expansion of the Maintenance Industry

Based on the report "Recommendations on Maintaining, Managing and Renewing Social Infrastructures" compiled in December 2013, in FY 2014, the Social Infrastructures Maintenance Strategy Subcommittee under the Infrastructure Development Council and the Trafic Policy Council investigated and deliberated matters that require continued discussions for the development of specific measures, and compiled recommendations on future directions concerning:

1. Establishment of a qualification system for inspections and diagnoses

2. Framework for conducting maintenance and management smoothly and measures for supporting local governments

3. Sharing and visualizing information pertaining to maintenance, management and renewal

In regard to the establishment of a qualification system for inspections and diagnoses, a system for registering private qualifications was introduced by announcing the Regulations on Registration of Qualifications of Technicians that Contribute to Ensuring the Quality of Investigations and Designs Concerning Public Works, which set forth required knowledge and skills according to job descriptions in November 2014, and the registered qualifications on inspections, diagnoses and the like have been used since the ordering activity of FY 2015. In addition, the Regulations were revised in October 2015 so that planning, investigation, and design activities in the building and remodeling areas, to which maintenance is complementary, are included within the scope of the registration system.

In regard to a frameworks for conducting maintenance and management smoothly and measures for supporting local governments, we are having specific discussions in cooperation with local governments on the methods of outsorcing maintenance and management works of multiple areas and facilities to the private sector comprehensively in order to leverage technologies and expertise as well as economics of scale of private sector companies for efficient maintenance and management.

In regard to sharing and visualizing of information pertaing to maintenance, management and renewal, among information on maintenance and renewal, especially important information will be made visible in the first five years in which soundness of many facilities will become clear after finishing the first round of facility inspections that based on the new standards in each field starting in FY 2013.

Also, in order to facilitate the development and revitalization of the infrastructures maintenance industry, we started examination by holding information exchange meetings toward the establishment of the Japan Infrastructure Management Council (tentative name) in FY 2016, which will serve as the platform for the unified efforts of government, industry and academia.

We will work on the development and revitalization of the maintenance industry and local industrialization through the above measures.



(3) Development and introduction of monitoring technologies

Bracing for the development and introduction of monitoring technologies that provide an efficient insight into the conditions of social infrastructures, the MLIT has directed studies on the field verification of monitoring technologies to match field needs and seeds and to assess and analyze their effectiveness at the Committee for Exploring and Promoting Usage of Social Infrastructure Monitoring Technologies in October 2013. Monitoring technology hopefuls have been sought from the general public since September 2014, and their field verifications, etc. are now underway.

(4) Development and introduction of robots

The MLIT promotes the development and introduction of robots of practical usefulness that are capable of checking up growing volumes of infrastructures effectively and efficiently while probing disaster sites that are hardly accessible by human beings and expediting recovery quickly and precisely.

Section 3 Driving the Social Infrastructure Development

Priority Plans for Social Infrastructure Development are formulated to drive the efficient and prioritized implementation of social infrastructure development projects in accordance with the Act on Priority Plan for Social Infrastructure Development. In September 2015, the Fourth Priority Plan for Social Infrastructure Development (FY 2015–2020) was adopted by a Cabinet decision. The Fourth Plan has the basic principles of maximizing stock effects of social infrastructures in order to address the following four structural issues under severe fiscal constraint: (i) possibly imminent massive earthquakes and increasingly severe weather disasters, (ii) accelerating aging of infrastructures, (iii) battered countryside in association of declining population, and (iv) intensifying international competitions. Based on the basic principles, the Plan aims to ensure selection and concentration on projects whose stock effects are high while pushing forward the effective use (smart use) of existing facilities, as well consolidation and realignment of them. Also, the Plan for the first

time includes the positioning of the stable securing and development of on-site and skilled human resources for supporting social infrastructure development, stating that it is important to ensure stable and sustainable prospects of public investments in light of systematic implementation of social infrastructure development and securing and developing personnel who conduct it. Furthermore, in order to develop social infrastructures with medium- to long-term prospects, the Plan set four priority goals (implementing strategic maintenance and renewal of social infrastructure; mitigating disaster risk in accordance with characteristics of disasters and vulnerabilities of regions; building sustainable local communities that respond to declining/aging population; inducing private investments and enhance infrastructures that support economic growth) and 13 policy packages, and positioned typical indicators as key performance indicators (KPIs).

In order to capture the progress of plans and discuss improvements, the planning taskforce under the Panel on Infrastructure Development and Transportation Policy Council's transportation subcommittee is to appropriately conduct follow-ups going forward. As part of this activity, an expert committee was established under the planning taskforce in December 2015 and started working on the maximization and visibility of stock effects. Furthermore, the Priority Plans for Social Infrastructure Development of Regional Blocks was established in March 2016 based on the Fourth Priority Plan for Social Infrastructure Development as plans for developing social infrastructure in a focused, efficient and effective manner in accordance with characteristics of each region.



Section 4 Promoting the Implementation of Transport Policy

Developing Policies Based on the Basic Act on Transport Policy

In December 2013, the Basic Act on Transport Policy was promulgated and enacted. Based on the Act, the Basic Plan on Transport Policy was adopted by a Cabinet decision in February 2015 after deliberations at the Council of Transport Policy and the Infrastructure Development Council of the MLIT.

The Basic Plan on Transport Policy defines the period from FY 2014 to FY 2020 as a planning period and provides for basic policies, measure goals, and measures to be taken by the state on a comprehensive and planned basis. More specifically, three basic policies have been set forth as follows: (A) Realize easy-to-use transportation conducive to a wealthier national livelihood; (B) create international and inter-regional passenger transportation and logistics networks to underlie growth and prosperity; and (C) develop infrastructures for sustainable, safe and secure transportation. For each of these basic policies, four measure goals have been presented along with specific measures to approach them. Numeric indicators have also been defined to verify the progress of approaches in following up the said plan, and factors for consideration in implementing measures in accordance with the three basic policies above.

Furthermore, in June 2015, the first Transport Policy White Paper based on the Basic Act on Transport Policy was approved by a Cabinet decision and reported to the Diet. The Transport Policy White Paper is to report annually to the Diet on transport trends and measures taken, and to be taken, by the government concerning transport, and the Paper follows up on the progress of measures and numerical targets stated in the Basic Plan on Transport Policy. Going forward, leveraging the Transport Policy White Paper that is prepared annually, we will appropriately follow up on the Plan to ensure the steady progress of the Plan.



2 Reconstructing Local Public Transportation Networks

While population progresses to decline in an aging society with falling birthrates, concerns grow over downsized public transport networking and a degraded quality of services particularly in rural areas. In the meantime, local public transportation is of vital importance particularly to those who are unable to drive car, such as students and elderly people. Keeping up and even consolidating local vitalities calls for enhancing local public transportation in coordination with a compact community development endeavor.

Based on these circumstances, the Act on Revitalization and Rehabilitation of Local Public Transportation was amended in 2014, thereby establishing a framework for achieving the optimum transportation networks and services for each region in agreement, led by local governments in charge of regional administration with appropriate division of roles among relevant parties, taking into consideration town development and tourism revitalization. Under the amended Act, 92 local public transportation networking plans were submitted to the Minister of Land, Infrastructure, Transport and Tourism by



the end of FY 2015 and a regional public transportation restructuring plan on the reorganization of bus routes having JR Gifu Station as the hub terminal in Gifu-shi received the government approval. This indicates that efforts toward the



formation of sustainable public transportation networks are gathering momentum.

Furthermore, in 2015, the Japan Railway Construction, Transport and Technology Agency established a program for investing in new companies that engage in businesses of rebuilding local public transportation networks, in order to diversify and enhance support. The MLIT will also continue to provide necessary support to the initiatives of local governments.

3 Promotion of Comprehensive Logistics Policy

In order to speedily and appropriately respond to socioeconomic circumstances surrounding logistics of Japan, such as the deepening of global supply chains, global warming countermeasures, and heightening needs for ensuring safety and security, the Comprehensive Logistics Policy Guidelines (2013–2017) were adopted by a Cabinet decision in June 2013. In accordance with the Guidelines, relevant ministries are pushing forward logistics policies in coordination with each other in a comprehensive and unified manner, together with other plans and policies, such as the National Land Grand Design 2050, the National Spatial Strategies (national plan), the Priority Plan for Social Infrastructure Development, and the Basic Plan on Transport Policy.

Japan has detailed and high-standard logistics services in terms of punctuality, safety, stability and reliability, conformity with shipper's orders and the like mainly through track transportation, which underpinned the just-in-time system of the manufacturing industry, and contributed to the development of the distribution industry, including convenience stores and the improved convenience of daily lives of citizens through delivery and other services. On the other hand, in recent years, the socioeconomic circumstances surrounding logistics are changing dramatically, including declining/aging population, innovations in such areas as information communication technology (ICT), heightening disaster risk, increasingly frequent deliveries of smaller goods, and diversification of customer needs. Moreover, labor shortages are especially evident and posing challenges in the logistics sector, with aging truck drivers and possibilities of increased difficulties in securing personnel in the medium to long term; therefore, actions need to be taken as early as possible.

Based on these circumstances, the logistics taskforce was newly established under the Infrastructure Development Council's subcommittee in order to deliberate on matters, such as basic directions of the future logistics policy, had a joint deliberation with the Basic Policy Taskforce of the Infrastructure Development Council's transportation subcommittee, and reported to the Minister of Land, Infrastructure, Transport and Tourism in December 2015. In order to *realize productivity innovation* and *evolve into attractive logistics of the future* as recommended in the report, we will promote labor saving and further improvement of efficiency, development of new markets, including overseas, and release of new services. We will also work to establish work environments for securing necessary human resources and contribute to the resolution of social problems, such as environmental measures and enhancement of disaster response capabilities.

Furthermore, from the perspective of realizing the report by reviewing systems, a bill to amend the Act on Promotion of Integration and Rationalization of the Distribution Services was submitted to the Diet on February 2016 in order to establish a framework for promoting labor saving and improved efficiency of overall logistics networks that include transportation by, for example, promoting coordination among various relevant parties that include the government, local governments, shippers, and logistics companies for achieving further efficiency and optimization of logistics systems that are important social infrastructures that support socio-economic activities.

Section 5 Driving the Implementation of Ocean Policy (Oceanic State)

Driving the Basic Plan on Ocean Policy Steadily

A nation surrounded by sea on its four sides, Japan recognizes the vast expanses of surrounding sea as a frontier, which urges the nation to grow into an "oceanic state" in its true sense. The Ministry of Land, Infrastructure, Transport and Tourism has been driving the implementation of ocean policies by working in conjunction with the governmental agencies concerned pursuant to the "Basic Plan on Ocean Policy" based on the "Basic Act on Ocean Policy" as many of the administrative fields relevant to oceans fall under its jurisdiction.

Specifically, we are working on, among other efforts, the use of marine renewable energy, development and use of marine resources, fostering of human resources in ocean development, efficient marine transportation of energy resources, promotion of marine industries, and marine surveys that contribute to conservation of marine interests. Furthermore, in June 2015, the "Basic Policy concerning Preservation and Management of Islands for Management of Sea" based on the "Basic Plan on Ocean Policy" was revised by Headquarters for Ocean Policy. Taking into consideration this revised Policy, we are promoting the development of strategic maritime safety and security system, preservation of the low-tide lines **Note** that serves as the basis of the exclusive economic zone and establishment of environments, such as bases of activities in Minamitorishima Island and Okinotorishima Island. Also, in October 2015, the "Japan's Arctic Policy" was decided by Headquarters for Ocean Policy. Based on this, we promote the preparation of an environment for using the Arctic Sea route.

Furthermore, on the Marine Day of 2015, we held a special event to commemorate the 20th anniversary of the national holiday and promote the understanding and interest of the public concerning the ocean. In a speech at the opening ceremony, Prime Minister Abe set the goal of having 10,000 marine development engineers by 2030 and declared to establish the world's first master's program in maritime safety and security policy. In addition, the IMO World Marine Day Parallel Event 2015 was jointly held with the International Maritime Organization (IMO) and other entities for the first time in Japan, where an international symposium with the theme of maritime education and training and Yokohama Declaration was put together.



Note Refers to the boundary between the land and water surface when the water surface reaches its lowest point.

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2 Protecting Our Country's Interests in Maritime Rights and Interests

Promoting Maritime Surveys in Territorial Waters and the Exclusive Economic Zone and Consolidating Maritime Information

In our country's territorial waters and the exclusive economic zone there are waters lacking adequate survey data and the Japan Coast Guard is conducting intensive maritime surveys in these waters including submarine topography, crustal structure, and the baselines of territorial waters to strategically and continuously implement the development of basic information that will contribute to the safety of ship traffic, protecting our country's maritime rights and interests, and maritime development.

As the result of conducting submarine topography surveys by the Japan Coast Guard's autonomous underwater vehicle (AUV) *Gondou*, in May to June 2015, records that indicate discharging of hot water/gas from the seabed was confirmed at Shirahama Sone, approximately 10 km in the northwest of Takarajima Island of the Tokara Islands, Kagoshima. It is characterized by very shallow water depth of approximately 80 m to 100 m compared to those that have been found so far in the East China Sea.

In addition, in July and November, a submarine volcanic landform, such as the trace of lava flow eruption, was confirmed at the Daisan-Miyako knoll, approximately 120 km in the north of Miyako Island, Okinawa. These findings and results are expected to be utilized as base information for the interpretation of volcanic activities going forward.

Also, under the comprehensive coordination of the Headquarters for Ocean Policy Secretariat, Cabinet Secretariat, the Maritime Information Clearinghouse, which aggregates the gathering, management, and provision of maritime information, is being operated. Additionally, the Marine Cadastre was developed which is a web service that can overlay information on maps and allows general users to utilize various natural information (submarine topography, ocean currents, water temperature) and social information (port areas, fishing rights areas, etc.).

(2) Initiatives to Delineate the Limits of the Continental Shelf

In April 20, 2012, the UN "Commission on the Limits of the Continental Shelf" adopted the recommendations on the limits of the continental shelf beyond 200 nautical miles in regard to the submission made by Japan in November 2008 in accordance with the United Nations Convention on the Law of the Sea. Since the recommendation granted an extension to Japan's continental shelf accounting for approximately 80% of her land area, the Shikoku basin sea area and the Okidaito ridge sea area were newly designated as Japan's continental shelf by a cabinet order in October 2014. In the meantime, since the review of some water areas has been postponed, the Japan Coast Guard will continue working towards the delimitation of a continental shelf by partnering with the ministries and agencies concerned under coordinated supervision of the Secretariat of the Cabinet Secretariat Headquarters for Ocean Policy.

(3) Conservation of Okinotorishima Island, Preservation of the Low-Tide Line and Developing the Base of Activities

(i) Conservation of Okinotorishima Island

Okinotorishima Island is Japan's southernmost territory and is a very important island that forms the foundation of the 400,000 km² area exclusive economic zone which exceeds the area of national land, so the observation and gathering of basic data, checkups of damages, and repairs are carried out. In addition to the two islands, the state is taking direct control to ensure adequate measures to preserve the entire atoll.

(ii) Preservation of Low-Tide Lines

In accordance with the Law on the Development of Base Facilities and Preservation of the Low-Tide Line for the Promotion of Use and Conservation of the Exclusive Economic Zone and Continental Shelf (Low-Tide Preservation Act), 185 domestic locations are designated by government decree as the low-tide lines preservation areas to implement restrictions on excavation in the area. Furthermore, surveys are conducted on low-tide lines and its surrounding conditions, using patrols by disaster prevention helicopters and ships as well as satellite images, in order to check whether any restricted activities took place or any topographical changes were caused by natural erosion. Also, information related to the low tide lines is appropriately managed so that preservation activity will be carried out in a steady and efficient manner.



(iii) Developing and Managing Bases of Activities in Specified Remote Islands (Minamitorishima Island and Okinotorishima Island)

In accordance with the Low-Tide Preservation Act, port facilities are being developed in Minamitorishima Island and Okinotorishima Island, which are located in areas remote from the mainland, to enable the mooring and berthing of vessels and cargo handling as operational bases for the conservation and usage of the exclusive economic zone and continental shelf with a management system by the government being established.

Section 6 Protecting Territorial Land and Territorial Waters Firmly

(1) Situation in Recent Years

Intrusions into Japan's territorial waters around the Senkaku Islands by Chinese government vessels, etc. and sovereignty claims by activitists of Chinese, Taiwanense and others have taken place in recent years. Especially, since September 2012, China's government-owned vessels navigated into the contiguous zone almost every day, except days of bad weather, and repeatedly intruded into the waters at a frequency of about three times a month. Moreover, foreign fishing vessels continue to operate in the same waters. Under the policy of protecting Japan's territories and waters at all cost, the Japan Coast Guard is responding to these circumstances in a calm but firm manner by taking such measures as deploying patrol vessels in the waters so that the situation will not escalate. In February 2016, a full-time security system for Senkaku waters by 14 large patrol vessels was established in order to make sure to be able to handle China's government-owned vessels in the waters surrounding the Senkaku Islands.

In the waters around the Ogasawara Islands, Chinese coral vessels, which were found in large numbers since September 2014, have not been detected after the detection in late January 2015. However, given that the situation is still unpredictable, with the subsequent occurrence of an arrest in the Japan's exclusive economic zone in the west Kyushu region, the Japan Coast Guard is continuing strict monitoring and crackdown in coordination with the Fisheries Agency and other relevant organizations.

Furthermore, in Japan's exclusive economic zone around the East China Sea, surveys and other activities of foreign ocean survey vessels without Japan's consent were found. The Japan Coast Guard is taking appropriate measures on a case-by-case basis according to the situation, such as by requesting suspension of such activities and ongoing monitoring by patrol vessels in coordination with relevant organizations.

The Japan Coast Guard established a system for full-time operations in the waters around the Senkaku Islands to ensure security of the territorial waters and crackdown on foreign fishing vessels in February 2016, and strives to develop strategic coast guard systems steadily in order to sufficiently and effectively respond to suspicious events, illegal activities and the like in the waters across Japan that include remote islands and territorial waters.

Figure II-2-6-1

Patrol vessels dedicated to Senkaku waters security (patrol vessels Tarama, Ikema, Irabu)





• Intrusion into territorial waters: 147 cases (149 days) Maximum number of vessels intruding into territorial waters: 8
 Source) MLIT

• Longest duration of intrusion into territorial waters: 28 hours 15 minutes

(2) Establishment of a Maritime Safety and Security Policy Program

For the peace and prosperity of the international community as a whole, it is critical to strengthen maritime order governed by law and rules and not by coercion as stated in the National Security Strategy adopted by a Cabinet decision in December 2013. To this end, effective support provided by the Japan Coast Guard to the maritime law enforcement organizations of other countries in strengthening their capabilities and deepening mutual understanding is expected to

contribute to enhanced maritime order governed by law and rules. In October 2015, the world's first master's level program in maritime safety and security policy was opened for young high-ranking officials of the Japan Coast Guard and coast guard organizations of other Asian countries.



Driving the Implementation of Water Cycle Section 7

Formulation of the Water Cycle Basic Plan

The Basic Act on Water Cycle, which was promulgated in April 2014 and enacted in July of the same year, stipulates the establishment of the Water Cycle Basic Plan in order to promote water cycle measures in a comprehensive and systematic manner; at the first meeting of the Headquarters for Water Cycle Policy on July 18, 2014, Prime Minister Abe instructed the earliest possible formulation of the plan by the summer of 2015. Since then, the secretariat of the Headquarters for Water Cycle Policy examined the Water Cycle Basic Plan while listening to the opinions of experts and the public and coordinating with government agencies, and the plan was adopted by a Cabinet decision after the second meeting of the Headquarters for Water Cycle Policy on July 10, 2015. The Water Cycle Basic Plan aims to comprehensively and systematically push forward nine measures, including promotion of river basin coordination, maintenance and enhancement of storage and groundwater recharging functions, facilitation of proper and effective use of water, promotion of education on sound water cycle and voluntary activities of private organizations, implementation of surveys and promotion of science and technology, securing international coordination and promoting international cooperation, and developing water cycle related talents.

Especially, defining River Basin Management as coordinated activity of relevant parties through water cycle-related measures aimed at maintaining and improving natural environments that concern human activities, water volume and quality and water in forests, rivers, agricultural land, cities, lakes, coastal area and the like in river basins; in order to facilitate the activity, we will establish the river basin water cycle council according to regional circumstances, establish the River Basin Water Cycle Plan that sets forth basic policy on the River Basin Management, and strive to realize appropriate conservation and management with coordination among public organizations that shall include relevant administrative agencies, business operators, organizations, and residents.



Summary of the Basic Act on Water Cycle

Outline of Basic Plan on Water Cycle

General	(4) Efficient and effective water use
1 Our Relations with the Water Cycle 2 Definition,Period and Structure of the Basic Plan on Water Cycle	 (5) Water environment (6) Water environment and ecosystems (7) Waterfront spaces (8) Water culture
Part 1 Basic Policy of Water Cycle Measures 1 Comprehensive and Integrated River Basin Management 2 Approach to Maintain/Restore Sound Water Cycles 3 Adequate Use and Benefits of Water 4 Maintenance of Sound Water Cycles in Water Use 5 Actions Concerning Water Cycle under International Cooperation	 (9) Water environment and global warming 4 Education of Sound Water Cycles (1) Promotion of water cycle education (2) Raising awareness of water cycles 5 Voluntary Activities by Private Entities 6 Research for Developing and Implementing Water Cycle Measures
Part 2 Comprehensive and Systematic Measures on Water Cycles Implemented by the Government 1 River Basin Cooperation -Framework for Comprehensive and Integrated River Basin Management-	 Research on the current situation of water cycles in river basins Research on the effect of climate change on water cycles and adaptability Promotion of Science and Technology International Partnerships and Cooperation
 River basin area Concepts of comprehensive and integrated river basin management River basin water cycle council and river basin water cycle plan Contents of River basin water cycle plan Development process and assessment of the river basin water cycle plan Measures for developing and promoting the river basin water cycle plan 	 International partnerships International cooperation International cooperation Overseas expansion of water business Human Resource Development in Water Cycles Human resource development and international personnel exchange under industry-academic-government collaboration
 2 Maintenance and improvement of Water Retention/Recharge Function (1) Forests (2) Rivers (3) Farmland (4) Cities 3 Adequate and Effective Water Use 	Part 3 Requirements for the Comprehensive and Systematic Promotion of Measures on Water Cycles
 Stable water supply and drainage Sustainable maintenance and use of groundwater Strategic maintenance, management and renewal of water infrastructure 	1 Effective Measures on Water Cycles 2 Responsibilities, Collaboration and Cooperation of Stakeholders 3 Announcement of Measures on Water Cycles

2 Future Initiatives on Water Cycle Policy

Going forward, under the Headquarters for Water Cycle Policy, the MLIT will push forward various measures of the Water Cycle Basic Plan in an efficient and effective manner in coordination with water cycle related government agencies while establishing coordination structures at the regional levels.

Section 8 Efficient, Prioritized Deployment of Measures

Efforts to Improve Productivity in Construction Production Systems Including "i-Construction"

As Japanese workface continues to shrink as a whole, the need augments to automate, streamline and upgrade construction management system workflow for higher productivity while endeavoring to improve the cost structures in the successive stages of social infrastructure development planning, engineering, construction and management in order to develop social infrastructures efficiently and effectively for maximized social infrastructure stock effects and to assure their quality in the future. The MLIT promotes a variety of approaches that help improve productivity from perspectives of developing and utilizing new technologies and methods, leveling construction timings and maintaining fair construction periods, expediting communication, making efficient use of technicians and craftspersons.

In November 2015, it was decided to promote i-Construction, a new initiative aimed at drastic improvement in productivity in lagging areas that includes civil engineering and concrete work by working on three measures—full use of ICT, standardization of specifications and leveling of construction timing, thereby dramatically increasing the productivity per skilled worker of construction sites as a whole. In order to examine the basic policy and promotion measures to this end, the establishment of i-Construction Committee (chaired by Hiroshi Komiya, Chairman of Mitsubishi Research Institute) was announced. The i-Construction Committee met four times since December 2015, and broad opinions received were put together as a report in April 2016. Based on the report, positioning 2016 as the beginning year of productivity revolution, the MLIT will make all-out efforts to enhance productivity, increase each worker's productivity

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in construction sites, improve the operating environment of companies, and raise wedge levels of people engaged in construction, while promoting safety.

Assuring Public Works Quality and developing and securing leaders

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With the aim of ensuring the present and future quality of public works and developing and securing leaders of public works over the medium- to long-term, the Act for Promoting the Assurance of Quality of Public Works (Quality Assurance Act), the Act for Promoting Proper Tendering and Contracting for Public works (Tendering and Contracting Act), and the Construction Business Act were amended in June 2014 (the so-called Three Public Work Bearers Acts), and the amendment of the Basic Policy under Article 9 of the Quality Assurance Act and the Rationalization Guidelines under Article 17 of Contracting Act was adopted by a Cabinet decision in September 2014. Furthermore, the Guidelines on Implementation of Order Administration (Guidelines) under Article 22 of the Quality Assurance Act were established in January 2015 (agreement of the liaison committee of relevant ministries on the promotion of quality assurance in public works). FY 2015 marked the first year for full-scale implementation of the Tendering and Contracting Act, and all orderers of public works that include municipalities are required to work on specific initiatives based on the Guidelines. Going forward, the MLIT will periodically conduct surveys on whether order administration is appropriately implemented by the orderers based on the Guidelines and put together the results for publication.



(1) Approaches to fulfilling duty of orders

The Guidelines systemically put together each stage of order administration—survey and design, preparation for ordering construction projects, tendering and contracting, construction and completion—as well as selection and use of various tendering and contracting methods, so that orderers are able to implement order administration in an appropriate and efficient manner in light of orderers' responsibilities. The MLIT is taking various initiatives for the appropriate implementation of order administration based on the Guidelines.

In the area of appropriate setting of predetermined prices, as an effort to eliminate the so-called *bugiri*, which is the practice of deducting part of construction specification amounts that are based on fair estimation, the MLIT has surveyed local governments four times with respect to the state of affairs and reasons for conducting *bugiri*, and requested the local governments that engaged in *bugiri* to rectify the practice at an early state through every opportunity. As the result, all local governments (459 organizations) that engaged in *bugiri* as of January 2015 due to precedents, fiscal reforms of municipalities, and other reasons decided to abolish the practice as of April 2016. Also, the MLIT is striving to establish and promulgate up-to-date standards and manuals concerning estimations. In regards to appropriate design changes, we aim for appropriate stipulation of construction conditions in design documents, as well as appropriate changes of design documents if deemed necessary, and revised the Guidelines on Design Changes. In regards to leveling of construction timing, we strive to achieve it by, among other measures, promoting systematic order placements, setting appropriate construction periods, and utilizing the system of allowing leeway periods.

(2) Review of varied tendering and contracting options, etc.

New additions to the Quality Assurance Act include the selection and utilization of varied tendering and contracting options (Article 14), phased screening system (Article 16), technical proposal integrated negotiation system (Article 18) and system that contributes for maintenance and management of regional social capital (multi-year contract, bulk orders, joint order acceptance) (Article 20). The MLIT has worked to explore recommended sequences of processes from planning of the development of social infrastructures to their engineering, construction, and management to orders' viewpoints and responses to various issues occurring since November 2013 at the "Conference on How Future Construction Production

and Management Systems Should Be to Fulfill Purchasers' Liabilities." Based on the discussions at the Conference, the MLIT puts together the Guidelines for Applying Tendering and Contracting Methods to Public Works Projects to show how to apply tendering and contracting methods according to the characteristics of projects in May 2015.

(3) Coordination and Support among Orderers

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In order to ensure the effectiveness of the Guidelines, the MLIT works to enhance coordination among orderers through the regional council of orderers and the coordination meeting on public works contracts, and pushes forward handling of shared issues of orderers and various measures. Specifically, we reviewed the structure of the regional council of orderers by establishing prefectural working groups, setting up various consultation desks at Regional Development Bureaus, and creating the headquarters for supporting orderers of public works headed by Development Bureaus and the like.

Section 9 Forming a New Phase of Relationships between the Central and Local Governments and Private Sectors

New Phase of Relationships between the Central and Local Governments

Based on appropriate division of roles between the central and regional governments, the MLIT promotes decentralization by transferring administration and authority in responding to important issues that include the formation of a vibrant economic society and regions. In FY 2014, a proposal solicitation program has started to invite local governments to submit their own proposals and explore ways to implement them with the aim of promoting new initiatives based on proposals of local governments. As a result, response polices were adopted by a Cabinet decision, and matters that require amendments to the laws were incorporated in the Act Concerning Establishment of Relevant Laws to Promote Reforms to Enhance Regional Autonomy and Independence (the Fifth Omnibus Decentralization Act), thereby revising obligations and frameworks, including the removal of the requirement to obtain consent of the prefectural governor when municipalities assign building officials. Examination results of FY 2015 were adopted as response policies by a Cabinet decision, and the sixth omnibus decentralization bill, which includes the provision that enables municipalities to develop their own plans for securing stable residency for the elderly was submitted to the Diet.

2 Driving Public-Private Partnerships, etc.

In order to promote the forming of specific projects towards the expansion of PPP/PFI markets, the MLIT subsidizes local governments and facilitates the formation of forums for industry-academia- finance-government discussions (regional platform) aimed at sharing and acquiring expertise and enhancing coordination between relevant parties. In FY 2015, the MLIT adopted 20 pioneering PPP projects and 12 public-private partnership projects for earthquake reconstruction. The MLIT provided support, for example, in conducting surveys in Sanjo-shi, Niigata, on the ideal ways of comprehensively contracting out multiple public facilities under different jurisdictions to the private sector. Also, a meeting was set up for eight blocks across Japan for core members of each regional platform consisting of local governments that have at least 200,000 people, universities, companies, regional banks, and other organizations.

Section 10 Policy Evaluations, Project Evaluations, and Interactive Administration

1 Driving Policy Evaluations

Based on the MLIT Basic Plan for Policy Evaluations under the Government Policy Evaluations Act, the MLIT uses three basic policy evaluation methods—(i) checking policies by periodically measuring and evaluating the achievement of each measure, (ii) reviewing policies by conducting in-depth analysis on specific focused themes and (iii) conducting policy assessment by analyzing the necessity of new measures—and runs management cycles for policies by linking those methods. In FY 2015, (i) 13 policy objectives/44 measure goals/166 performance indicators, (ii) 4 themes and (iii) 24 new measures were evaluated by respective systems Note 1. In addition, policy evaluation of individual public-works projects, individual research and development issues, regulations, and special taxation measures are conducted as a method of policy evaluation according to the characteristics of policies, and the results of the evaluation are reflected in budget request and development of new measures. Also, in accordance with the Act on General Rules for Incorporated Administrative Agencies as amended in June 2014, the first performance evaluation of 19 incorporated administrative agencies as the competent minister was performed.

2 Implementation of Project Evaluations

A fully integrated scheme of evaluating individual public-works projects is built in place to enhance the efficiency and transparency of their implementation. Under this scheme, new public-works projects are evaluated upon initial adoption and then reevaluated and post-evaluated upon completion. Project appraisal charts organized to present a background of the evaluations of public-works projects, including supporting data relevant to their cost effective analyses upon initial adoption, reevaluation, and post-evaluation upon completion and posted on the Internet and elsewhere. Furthermore, starting from FY 2015, maintenance costs are specified in evaluation reports for projects under direct control for further visibility ^{Note 2}. Furthermore, the MLIT conducts planning-phase evaluations on public-works projects implemented under its direct control as its own approach in the preliminary phase of new project evaluation upon initial adoption.

3 Driving Administrative Management Open to the Public, and Interactive Administration

(1) MLIT Hotline Station

In driving the land, infrastructure, transport, and tourism administration that has a very close bearing on people's living, it would be essential to gain a broad insight into people's views, requests and so on and deploy administrative actions directly related to the people. To this end, the MLIT has opened the MLIT Hotline Station to receive about 1,100 views on a monthly average.

(2) Keeping consumers informed

The MLIT has opened the Negative Information Search Site at its website to provide a summary listing of the records of contractors, etc. relating to buildings, such as housing, and public transportation facilities, including administrative dispositions imposed on them, to ensure safety and security through proper selection by consumers, etc. and supervision by markets, as well as by administration as in the past.

Note 1 Ministry of Land, Infrastructure and Transport and Tourism Policy Evaluations Website: http://www.mlit.go.jp/seisakutokatsu/hyouka/index.html

Note 2 Project Appraisal Website: http://www.mlit.go.jp/tec/hyouka/public/index.html Project Appraisal Chart: http://www.mlit.go.jp/tec/hyouka/public/jghks/chart.htm

(3) Making the planning process in the development of social infrastructures more transparent

In driving the development of social infrastructures, it is important to ensure the transparency and fairness of the planning process and win understanding and cooperation from the local residents. The MLIT is working to make the planning process more transparent by using guidelines that stipulate present key conceptual approaches to formulating plans efficiently with socioeconomic, environmental, and all other relevant perspectives taken into consideration while encouraging the participation of various entities, including local residents, in the process.

Section 11 Approaches to Hosting Tokyo 2020 Olympic and Paralympic Games

Act on Special Measures for the 2020 Tokyo Olympics and Paralympics was enacted on June 25, 2015, and the government has established promotion headquarters to contribute to smooth preparation toward Tokyo Olympics and Paralympics to be held in 2020. Also, in accordance with the Act, the Basic Policy was adopted on November 27, 2015, by a Cabinet decision. The MLIT launched the MLIT Preparatory Headquarters for the 2020 Olympic and Paralympic Games headed by the MLIT Minister on April 18, 2014 to render all-out assistance.

It will take whatsoever responses necessary to get the Games running smoothly, including assuring safety and keeping lodgings and transportation comfortable. It will also move ahead with necessary approaches to realize the future visions of a Tokyo and Japan defined for the Grand Design of National Spatial Development Towards 2050, instead of viewing the year 2020 as a goal. Further, the MLIT is keen to lure foreign visitors into every little locality of the land of Japan to help make for its buoyancy as we conduct the Games not only in Tokyo but nationwide.

Specifically, the MLIT will, in coordination with the game committee and Tokyo, work on such measures as the development of road transportation infrastructures (section between Okegawa-Kitamoto IC and Shiraoka-Shobu IC on the Ken-O Expressway was opened on October 31, 2015), enhancement of the functionalities of metropolitan airports that are Japan's gateway, strengthening of barrier-free measures (the MLIT put together comprehensive measures of the ministry in August 2015), development of the environment for receiving foreign travelers that include multi-language information signs/maps and free public wireless LAN, improvement of the waterfront environment, disaster-prevention measures against typhoons and other disasters, security measures, such as maritime security, and issuance of special license plates.