

## 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

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). 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 through a Cabinet decision. In March 2016, the National Spatial Strategies (Regional Plans) were adopted through a decision of the Minister of Land, Infrastructure Transport and Tourism.

The 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, four technical committees were established within the National Land Development Council plan promotion task force in April 2016, and are currently engaged in discussions toward the formation of convection-promoting national land. In addition, discussions based on characteristics and resources of each Region are ongoing toward the specific contents of Regional Cooperation Projects defined in the National Spatial Strategies (Regional Plans). Furthermore, the formulation and modification of the National Land Use Plan (prefectural and municipal plans) continues to progress, and investigations and assistance are being implemented toward their promotion.

## 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 ministries and agencies to finalize and visualize specific approaches based on the basic plan, declaring it a maintenance guide presenting a roadmap to the implementation of maintenance cycles (Figure II-2-2-2).

The plan calls for:

- (1) Checking infrastructure periodically and repairing or renewing it as appropriate, and maintaining the information in chart form in a database to create maintenance cycles;
- (2) Moving ahead with further cost reductions by leveraging maintenance technologies and with lifetime extension strategically based on the concept of preventive maintenance, thereby leveling the burdens of maintenance spending; and
- (3) Providing financial support by granting subsidies for disaster preparedness and safety, etc., as well as personnel support for providing training in order to drive forward the initiatives of local governments that manage most of the infrastructure.

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 infrastructure, such as by setting target indicators that include the ratio of life extension programs (individual facility plans) for individual facilities (100% within FY2020).

Follow-ups are conducted on the Action Plans every year in order to observe the progress of measures against aging infrastructure based on the Action Plans. The MLIT will continue to work on measures against aging infrastructure in a focused and systematic manner so that the required infrastructure will be sustainably maintained.

Figure II-2-2-1 Present Status of Aging Social Infrastructure

Of all the infrastructure that was 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 will expand at an accelerating pace.  
\*The status of aging facilities is not uniformly determined by when they were initially built, but 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 infrastructure that is 50 years old or older>>

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

Note 1: Approximately 300,000 bridges whose year of initial construction is unknown have been excluded from percentage calculations.

Note 2: Approximately 250 tunnels whose year of initial construction is unknown have been excluded from percentage calculations.

Note 3: State-managed facilities only, including approximately 1,000 facilities 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 calculations.

Source) MLIT

Figure II-2-2-2 Summary of the MLIT's Action Plan for Life Extension of Infrastructure and Approaches based on the Action Plan

- Compile 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)

<b>1. MLIT Roles</b>	
○ Roles of the competent authority to build schemes, and systems relevant to infrastructures ○ Roles of infrastructures managers.	
<b>2. Scope of Planning</b>	<b>3. Mid- and Long-Term Cost Prospects</b>
○ Target: All the facilities whose programs or the like are supervised by the MLIT. ○ Period: FY 2014 to FY 2020	○ Need 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.
<b>4. Directions and Descriptions of Approaches</b>	
<b>[Directions of approaches]</b>	
<b>1 Checkups/diagnostics/repairs, renewals, etc.</b>	<b>2 Development of standards</b>
- Building maintenance cycles for all facilities - Reviewing the necessity of facilities and measures - Carry on and enhance support as by subsidization	- Maintaining standards in order - Update standards with new technologies and knowledge
<b>5 Development and introduction of new technologies</b>	<b>6 Budget management</b>
- Industry-academia-government collaboration, and matching needs with seeds - Clarification of field conditions for using new technologies	- Reduction and leveling of total costs - Review of benefits and obligations
<b>3 Development and use of information infrastructures</b>	<b>4 Formulation of individual facility plans</b>
- Gathering information through checkups and repairs - Accumulating information and centrally consolidating information, including that available from local governments	- Promoting planning and enhancing contents
<b>7 Constructing of systems</b>	<b>8 Development of legislation, etc.</b>
- 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
<b>[Key approaches]</b>	
○ Start using new standards and documentation Example: Make close-up visual checks on highway bridges once every five years	○ Enhance qualification systems Example: Specify required capabilities and skills, assess and accredit associated private qualifications and so on
○ Run new databases and enhance futuristic features Example: Extend port and harbor databases to port managers, etc.	○ Build a framework of using technicians with advanced technical capabilities Example: Establish a system of providing technical support in the road and other fields, such as dispatching governmental officers
○ Concentrate and remove facilities as needed Example: Advise on the concentration and removal of bridges, etc. to reflect changes in social structures	○ Build a framework of collaborations among administrators Example: Provide technical assistance, etc. to municipalities by support organizations composed of the national and local public entities
<b>5. Other</b>	○ Follow up on plans to enhance and deepen efforts ○ Active provision of information through websites or other means

Source) MLIT

## (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 Traffic 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.

With regard to the establishment of a qualification system for inspections and diagnoses, required knowledge and skills were set forth according to job descriptions, a system for registering private qualifications was introduced, and the registered qualifications on inspections, diagnoses and the like have been used since the ordering activity of FY2015.

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 outsourcing 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 sectors for efficient maintenance and management. In addition, we are conducting engineer dispatch on a trial basis, sending private-sector engineers to municipalities that are struggling to maintain and manage social infrastructure, and are identifying effective tasks, verifying the technological standards required of dispatched engineers, and discussing the standardization of procedures.

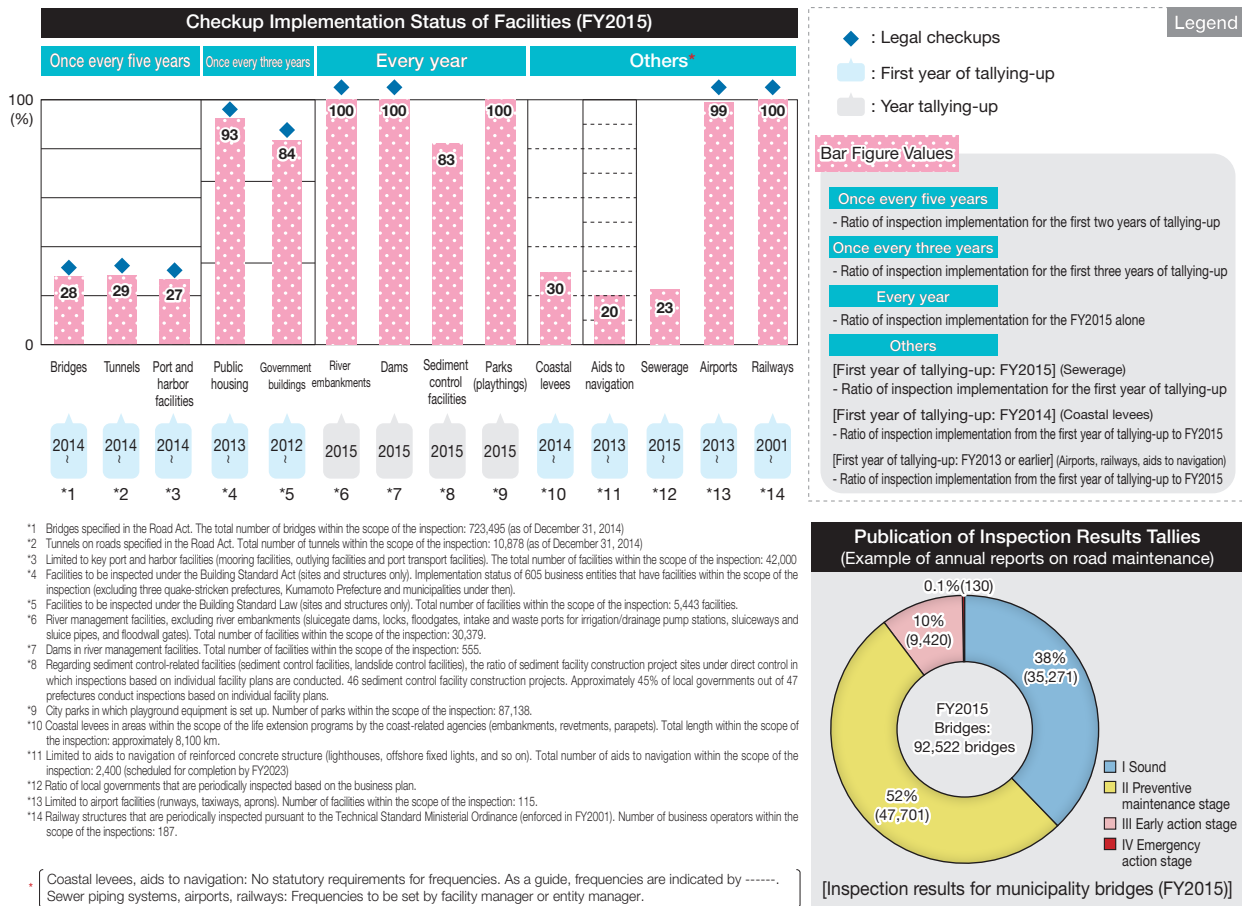
In regard to sharing and visualizing of information pertaining to maintenance, management and renewal, information on maintenance and renewal, especially important information such as the status of facility inspections, will be made visible.

Also, in an effort to take advantage of technology from various industries and know-how from the private sector in each

stage of the infrastructure maintenance cycle, and improve the productivity of the maintenance industry while striving to cultivate and revitalize it, we established the Japan Congress for Infrastructure Management in November 2016 as a platform for people in government, industry, academia and the private sector to mobilize their knowledge and technical skills into maintenance efforts, and created the Infrastructure Management Award to recognize outstanding efforts and excellent technical development regarding infrastructure maintenance.

We will continue to work toward the realization of steady, efficient infrastructure maintenance and regional revitalization by enhancing the efforts described previously, and by developing and revitalizing the maintenance industry.

Figure II-2-2-3 Publication of Checkup Implementation Status in Each Field



\*1 Bridges specified in the Road Act. The total number of bridges within the scope of the inspection: 723,495 (as of December 31, 2014)  
 \*2 Tunnels on roads specified in the Road Act. Total number of tunnels within the scope of the inspection: 10,878 (as of December 31, 2014)  
 \*3 Limited to key port and harbor facilities (mooring facilities, outlying facilities and port transport facilities). The total number of facilities within the scope of the inspection: 42,000  
 \*4 Facilities to be inspected under the Building Standard Act (sites and structures only). Implementation status of 605 business entities that have facilities within the scope of the inspection (excluding three quake-stricken prefectures, Kumamoto Prefecture and municipalities under then).  
 \*5 Facilities to be inspected under the Building Standard Law (sites and structures only). Total number of facilities within the scope of the inspection: 5,443 facilities.  
 \*6 River management facilities, excluding river embankments (sluiceway dams, locks, floodgates, intake and waste ports for irrigation/drainage pump stations, sluiceways and sluice pipes, and floodwall gates). Total number of facilities within the scope of the inspection: 30,379.  
 \*7 Dams in river management facilities. Total number of facilities within the scope of the inspection: 355.  
 \*8 Regarding sediment control-related facilities (sediment control facilities, landslide control facilities), the ratio of sediment facility construction project sites under direct control in which inspections based on individual facility plans are conducted. 46 sediment control facility construction projects. Approximately 45% of local governments out of 47 prefectures conduct inspections based on individual facility plans.  
 \*9 City parks in which playground equipment is set up. Number of parks within the scope of the inspection: 87,138.  
 \*10 Coastal levees in areas within the scope of the life extension programs by the coast-related agencies (embankments, revetments, parapets). Total length within the scope of the inspection: approximately 8,100 km.  
 \*11 Limited to aids to navigation of reinforced concrete structure (lighthouses, offshore fixed lights, and so on). Total number of aids to navigation within the scope of the inspection: 2,400 (scheduled for completion by FY2023)  
 \*12 Ratio of local governments that are periodically inspected based on the business plan.  
 \*13 Limited to airport facilities (runways, taxiways, aprons). Number of facilities within the scope of the inspection: 115.  
 \*14 Railway structures that are periodically inspected pursuant to the Technical Standard Ministerial Ordinance (enforced in FY2001). Number of business operators within the scope of the inspections: 187.

• [Coastal levees, aids to navigation: No statutory requirements for frequencies. As a guide, frequencies are indicated by -----.]  
 [Sewer piping systems, airports, railways: Frequencies to be set by facility manager or entity manager.]

Source) MLIT

## Column Japan Congress for Infrastructure Management —Platform for Society-wide Infrastructure Management Efforts—

Based on the awareness that infrastructure maintenance, management and renewal must be addressed by society as a whole, the Japan Congress for Infrastructure Management was founded on November 28, 2016, as an industry-academia-government-civil society collaboration platform for infrastructure management using Japan's wealth of technologies and wisdom.

The Congress aims to achieve the following objectives, with a membership of companies, local public bodies and NPOs not only in the construction sector, but also in a wide range of industries such as the information technology, big data analysis, materials and processing technology industries.

1. Discovery and social implementation of innovative technologies
2. Greater cooperation with companies, etc.
3. Provision of support to local governments

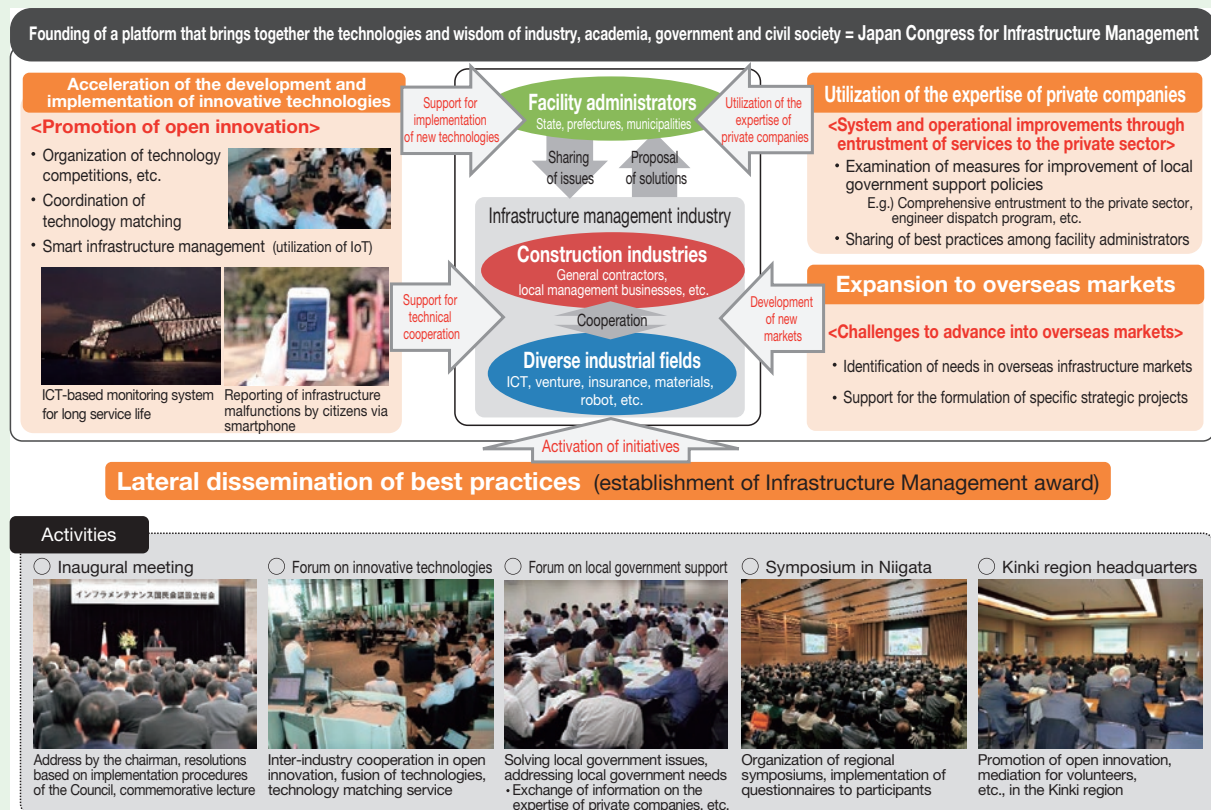


4. Dissemination of the principles of infrastructure management
5. Promotion of public participation in infrastructure management

The Congress's broad membership, including people from industry, academia, government and civil society, provides a platform of cooperation in which facility administrators can address the issues they face with the help of relevant companies and organizations, using open innovation methods. To maximize this advantage, public forums are established on specific matters and issues of interest to members, to promote discussions through mutual interaction and exchange of information among freely participating members.

Since the Congress's founding, five forums have been established, related to innovative technologies, local government support, engineer development, public participation, and Kinki region headquarters. These forums have so far implemented an innovative river management project that aimed to apply information technologies, aerial survey technologies and other such latest technologies to river management, and organized regional forums (on a trial basis) for promoting inter-industry exchanges with the objective of addressing local government issues mainly in the Kinki and Chubu regions, among other initiatives.

By addressing important topics for achieving steady and efficient infrastructure management in the future, such as promoting the implementation of new technologies and addressing local government issues as mentioned above through the concerted initiatives of industry, academia, government and civil society, the Congress will make continued efforts to develop and revitalize the infrastructure industry.



### (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.

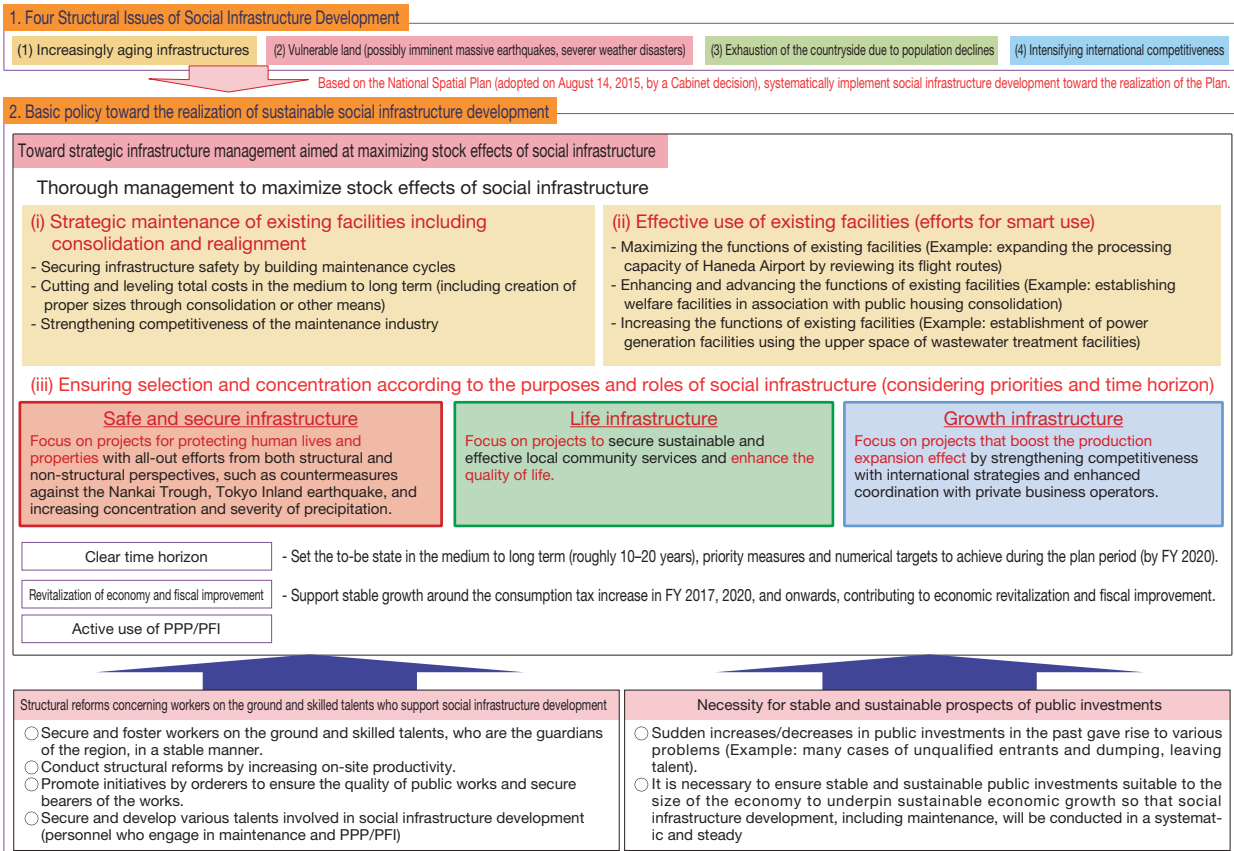
### Section 3 Driving the Social Infrastructure Development

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 (FY2015–2020) was adopted through 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 as their consolidation and realignment. 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 for public investment in light of systematic implementation of social infrastructure development and securing and developing personnel to 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 check the progress of the Priority Plan and propose improvements, the Planning Task Force under the Panel on Infrastructure Development and the Transport System Subcommittee of the Council of Transport Policy is supposed to appropriately conduct follow-ups. As part of this activity, the expert committee established under the Planning Task Force conducted investigations and reviews of viewpoints and types of efforts to “smartly” invest in and utilize the infrastructure, methods of identifying and “visualizing” the stock effects, and measures for driving forward these efforts. The committee compiled their findings in “A Proposal of Practical Strategy for Maximizing the Stock Effect” (November 2016). In the near future, we will make efforts to realize these measures and steadily promote the Priority Plan based on the committee’s proposal.

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 the characteristics of each region. Additionally, in August 2016, the public and private sectors joined forces to begin basic research toward launching the Infrastructure Future Map Project (tentative name) to visualize in map form a timeline for future infrastructure development as set out in the Priority Plans of Regional Blocks.

Figure II-2-3-1 The Fourth Priority Plan for Social Infrastructure Development



Source) MLIT

## Column Launch of Basic Research for the Infrastructure Future Map Project (tentative name)

In preparation for the launching of the Infrastructure Future Map Project (tentative name), which will aim to create a map and visualize the time series for future infrastructure management, the MLIT commenced basic studies with the cooperation of private companies in August 2016.

In light of Japan's aging population, low birthrate and population decline, social infrastructure improvement that would maximize the stock effect is sought to ensure economic growth, safety and security, and enhanced standards of living in a sustainable manner even under severe financial constraints.

In November 2016, an expert committee of the Planning Task Force in the Transport System Subcommittee under the Panel on Infrastructure Development and the Council of Transport Policy compiled a report titled "A Proposal of Practical Strategy for Maximizing the Stock Effect." In it, the committee states that disclosure of information such as of business plans and project completion outlook is an important requirement for maximizing the stock effect.

The Priority Plans for Social Infrastructure Development of Regional Blocks, which was established in March 2016, contains some 2,800 projects, and unlike previous plans, specifies the slated date of completion of major projects to the extent possible, to facilitate understanding of the outlook of infrastructure management plans along a time axis.

By creating a map of such information and visualizing the future management of infrastructure, the Infrastructure Future Map Project (tentative name) will provide a useful reference for creating life plans or making investment decisions, for example for deciding the location of residences and plants or planning a store opening, with hopes of contributing to attracting greater private investment and promoting regional

revitalization.

**Priority Plans for Social Infrastructure Development of Regional Blocks\***


Specification of the scheduled year of completion of approx. 2,800 projects for roads, rivers, ports and harbors, airports, etc.

**Examples of major projects**


- Hakodate Port Honko District Main Harbor Road (Phase II zone) Development Project (Hakodate City) [Completed in FY2016]
- Gotanda River Discharge Channel Development Project (Kawasaki City) [To be completed in FY2020]
- National Highway No. 42 Susami-Kushimoto Road (Wakayama Prefecture) [Completion year yet to be determined. \*Project launched in FY2014]
- Naha Airport Runway Construction Project (Naha City) [To be completed in FY2019]

••• etc.

▼Image of completed runway at Naha Airport



Runway under construction

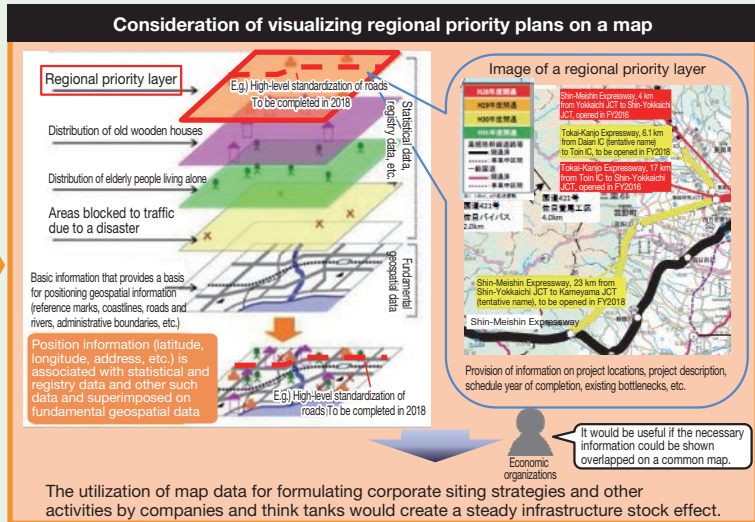


Kisei Expressway (Nanki-Tanabe – Susami-minami) ▲

\*Examples of plans formulated in March 2016

Source) MLIT

Consideration of mapping the time axis of future infrastructure development plans



Section 4 Promoting the Implementation of Transport Policy

1 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 through a Cabinet decision in February 2015 after deliberations at the Council of Transport Policy and the Panel on Infrastructure Development of the MLIT.

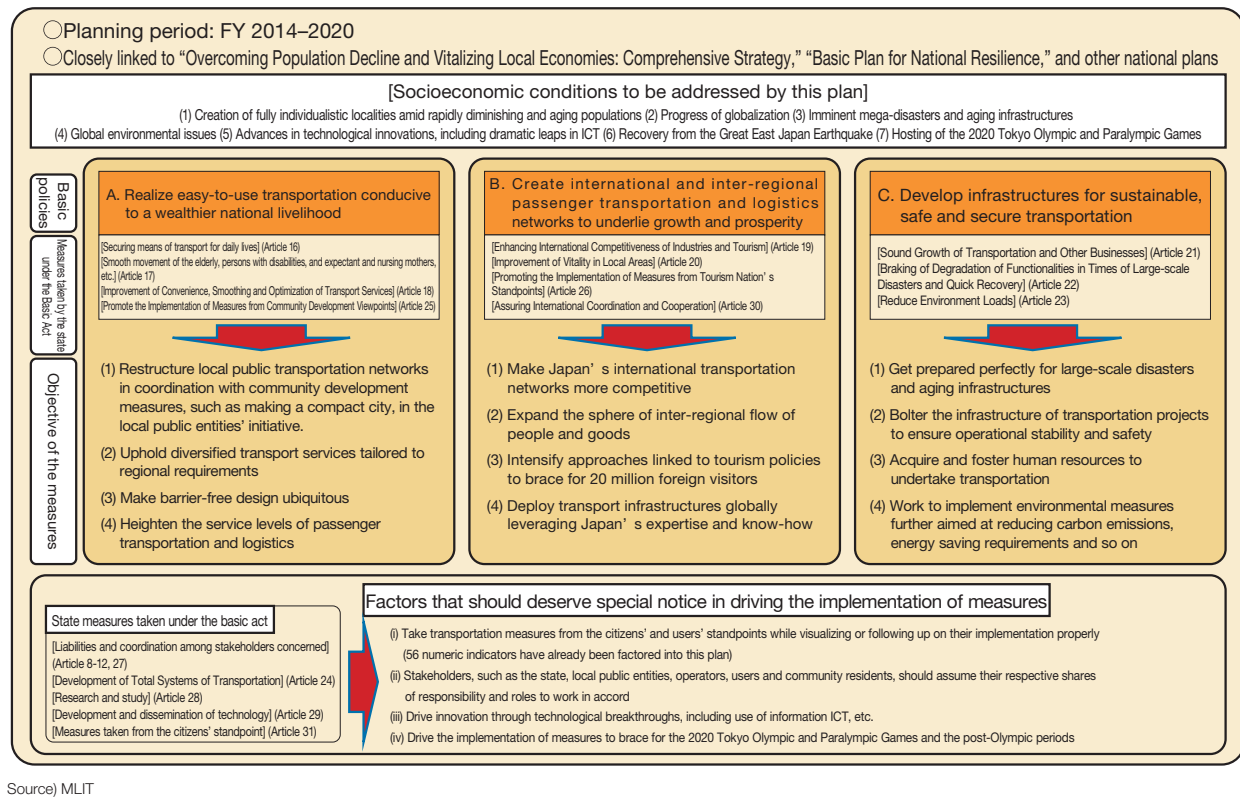
The Basic Plan on Transport Policy defines the period from FY2014 to FY2020 as a planning period and provides for basic policies, measure goals, and measures to be taken by the state on a comprehensive and planned basis. More specifically, three basic policies have been set forth as follows: (A) Realize 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.

In May 2016, the second 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.

Continuously, 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.



Figure II-2-4-1 Summary of the Basic Plan on Transport Policy



## 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. To contribute to the realization of regional communities that are full of vitality, it is important to collaborate with efforts to create compact towns, and strive to revitalize and revive local public transportation.

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 formulation of optimum public transportation networks and services for each region in agreement with relevant personnel, led by local governments in charge of regional administration with appropriate division of roles among relevant parties, and in collaboration with town development, tourism revitalization and other regional strategies.

Under the amended Act, 273 local public transportation networking plans were submitted to the Minister of Land, Infrastructure, Transport and Tourism by the end of FY 2016, and 15 local public transportation restructuring plans received the Minister’s approval. This indicates that efforts toward the formation of sustainable local 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.

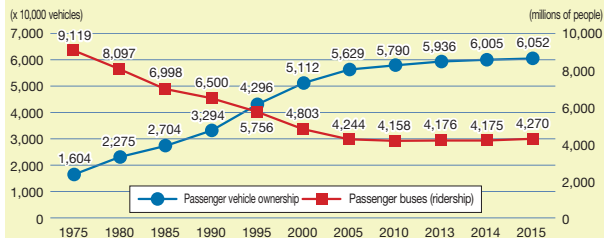
The MLIT will also continue to provide necessary support to the initiatives of local governments.

Figure II-2-4-2 Present Status of Local Transportation

The progression of motorization has resulted in a decline in the role of local public transportation. Local public transportation networks continue to shrink due to the withdrawal of transportation operators from unprofitable routes, the number of trains/buses per day and other indicators of the level of service continue to decline drastically, and private operators who provide local transportation services find it harder and harder to run profitable businesses.

Progression of Motorization and Declining Ridership

Substantial Progression of Motorization



\*Figures for passenger vehicle ownership are as of the end of March in each fiscal year, and figures for passenger buses (ridership) are those for each fiscal year. Source: Prepared by the MLIT based on "Annual Report of Motor Vehicle Transportation Statistics" and "Materials Released by the Automobile Inspection & Registration Information Association"

Drastic Decline in Ridership

	1990	2000	2010	2015
Passenger bus service	6.5 billion	4.8 billion	4.2 billion	4.2 billion (35% decrease from 1990)
Local railways	510 million	430 million	380 million	410 million (20% decrease from 1990)

Source) Annual Report on Road Transport Statistics, Annual Report on Railway Transport Statistics, and surveys by the MLIT

Decline of Local Public Transportation Services

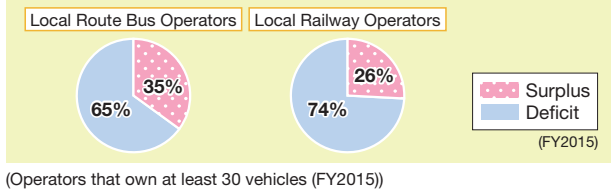
- Roughly 7,509 km of local bus routes were completely eliminated in the six years from FY2010 to FY2015.
- 37 railways (roughly 754 km) became defunct in the 15 years from FY2000 to FY2015.

Appearance of Areas Not Served by Public Transportation

	Land Area of Unserved Area	Population of Unserved Area
Nearest bus stop: 500 m+	36,477km <sup>2</sup>	7,351,000 people
Nearest train station: 1 km+	(Roughly 30% of Japan's inhabitable land area)	(5.8% of Japan's population)

Source) MLIT survey in FY2011

- Over 60% of local route bus operators and over 70% of local railway operators are operating at a loss



The impending precipitous decline in population is expected to further restrict the regional public transportation situation.

Source) MLIT

Figure II-2-4-3 Summary of the Amended Act on Revitalization and Rehabilitation of Local Public Transportation Systems (passed in May 2014)

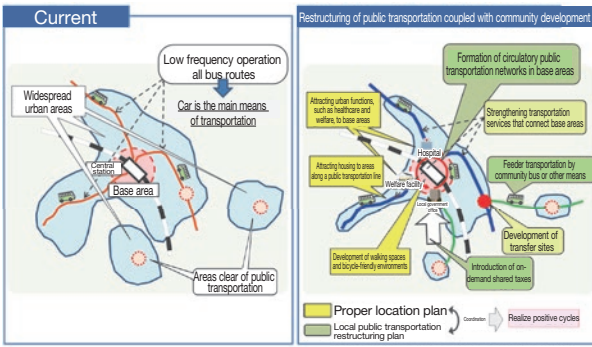
Act on Partial Amendment of the Act on Revitalization and Rehabilitation of Local Public Transportation Systems (promulgated in May 2014, enacted in November 2014)

Maintaining and enhancing the vitality of local communities in a society whose population is in serious decline

Points

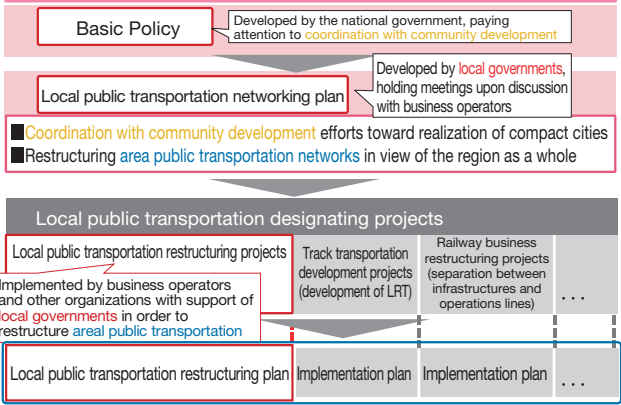
- (i) Local governments led (ii) Community development efforts to (iii) Restructure areal public transportation networks

The image of restructuring public transportation in unified efforts to create compact cities



Prepared in reference to initiatives by Toyama City, Kamado City, Toyooka City, Sappo City and other municipalities.

Principal scheme of the Amended Act on Revitalization and Rehabilitation of Local Public Transportation Systems



Approval of MLIT Minister to support realization of the plan

Act on Partial Amendment of the Act on Revitalization and Rehabilitation of Local Public Transportation Systems and the Act on Japan Railway Construction, Transport and Technology Agency (promulgated in May 2015, enacted on August 2015)

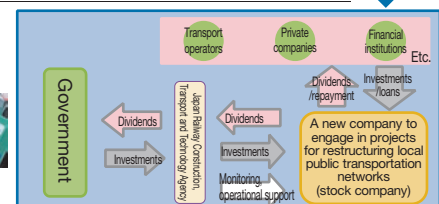
Enhance and diversify support by creating a framework for investing through Japan Railway Construction, Transport and Technology Agency, by way of industrial investments in projects for restructuring local public transportation networks approved by MLIT Minister under the Act on Revitalization and Rehabilitation of Local Public Transportation Systems.



(LRT)

(BRT)

(IC Card)



Source) MLIT

### 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 Priority Plan for Social Infrastructure Development and the Basic Plan on Transport Policy.

Japan has high-standard logistics services in terms of punctuality, safety, and conformity with shippers' 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 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, and given the December 2015 report “On Basic Directions of the Future Logistics Policy” of the Council of Transport Policy and the Panel on Infrastructure Development, the “Logistics Productivity Revolution” recommended in the report was selected in April 2016 as one of the revolution in productivity projects of the MLIT Productivity Revolution Headquarters. In addition, the Amended Act on the Total Efficiency of Logistics, which sets out assistance for a wide range of efforts related to the integration and streamlining of logistics and collaboration with officials, was passed in May 2016, and we have driven forward with accreditation for total efficiency plans that comprise joint transportation, modal shifts, and aggregation of transportation network to warehouses that have introduced truck reservation systems.

The objective under the “Logistics Productivity Revolution” Project is to improve labor productivity in logistics operations by 20% by FY2020, and we are proceeding with the promotion of modal shifts and joint transportation that use the framework of the Amended Act on the Total Efficiency of Logistics, the reduction of redelivery in home delivery services, the promotion of the international standardization of logistics systems, and other efforts to contribute to the streamlining and creation of high value-added in logistics operations.

## Section 5 Driving the Implementation of a Tourism Policy Package

### 1 Steady Promotion of the “New Tourism Strategy to Invigorate the Japanese Economy” and the New “Tourism Nation Promotion Basic Plan” Based on the New Tourism Strategy

The number of foreign visitors to Japan has increased rapidly in recent years. In 2011, the year the Great East Japan Earthquake struck, the number of foreign visitors was 6.22 million, which was nearly 30% less than the previous year. However, the figure has increased dramatically since then, first to 8.36 million visitors in 2012, then nearly tripling to 24.04 million visitors in 2016. Tourist spending has also increased, to 3.7476 trillion yen in 2016, which is roughly 3.5 times the 1.846 trillion yen spent in 2012; tourism is growing into an industry that helps support the Japanese economy.

Based on these changes to the circumstances surrounding tourism in recent years, on March 28, 2017, a new Tourism Nation Promotion Basic Plan for the period from FY2017 to FY2020 was adopted through a Cabinet decision based on the provisions of Article 10 of the Tourism-based Country Promotion Basic Act (Act No. 117, December 20, 2006). The plan aims to comprehensively and systematically promote measures related to the realization of a Tourism Nation, and to allow Japan to flourish as “a place that the world wants to visit.”

The plan was drafted on March 30, 2016, with consideration given to the objectives and measures set out in the New Tourism Strategy to Invigorate the Japanese Economy, drafted at the Meeting of the Counsel for a Tourism Vision to

Support the Future of Japan chaired by Prime Minister Abe, and while receiving various viewpoints from private-sector experts, relevant organizations, local governments and others. The new Tourism Nation Promotion Basic Plan incorporates the five objectives set out in the New Tourism Strategy (which include objectives for numbers of foreign visitors as well as money spent), and also sets out a specific objective for the number of international conferences hosted in pursuit of proactively incorporating business travelers, who tend to spend a lot of money, and a specific objective for the number of Japanese people (including young people), who travel abroad in consideration of the significance of mutual exchange. In addition, the committee aggregated measures for the various efforts toward achieving these objectives. This includes measures for the creation of highly attractive tourism areas that are globally competitive, the development of human resources who can strengthen the global competitiveness of the tourism industry and contribute to the promotion of tourism, the promotion of international tourism, and the establishment of an environment for promoting sightseeing travel.

The number of foreign visitors to Japan eclipsed 20 million in 2016, but this figure is no more than a checkpoint. As people continue to move throughout the world more actively in the future, our government will align, and our public and private sectors will join together in their efforts to ensure that many people choose Japan as a tourism destination, and that Japan becomes a “world-class tourist destination” that people want to visit again and again.

## Section 6 Driving the Implementation of Ocean Policy (Oceanic State)

### 1 Steadily Driving the Basic Plan on Ocean Policy

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, and promotion of marine industries. Furthermore, in July 2016, “Efforts to Consolidate the Capability of Maritime Domain Awareness” were adopted by Headquarters for Ocean Policy, and were used to guide efforts toward the improvement and enhancement of marine surveys, and the establishment of the Maritime Situation Indication System, an information system for aggregating, sharing and providing marine-related information, including satellite information. Also, the “Basic Policy concerning Preservation and Management of Islands for Management of Sea” was partially revised, and taking this into consideration, we are promoting the development of strategic maritime safety and security systems, preservation of the low-tide lines<sup>Note</sup> that serve as the basis of the exclusive economic zone and establishment of bases of activities on Minami-torishima Island and Okino-torishima Island.

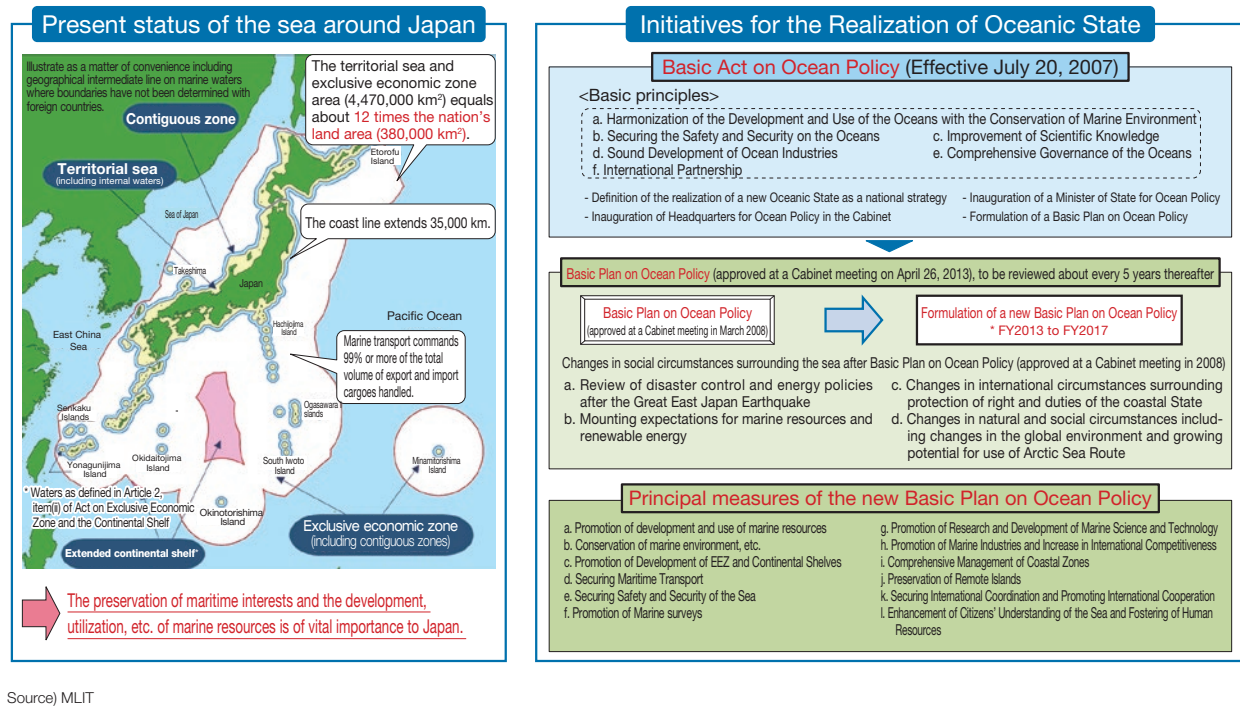
In addition, in a message to herald Marine Day in 2016, Prime Minister Abe announced the launch of the “Nippon Platform for Marine Education,” an organization promoting marine education through ‘all-Japan’ efforts by industry, academia, and government, to intensify efforts toward marine education. The prime minister also announced the goal to have marine education put into practice in every municipality by 2025. In light of these announcements, we are proceeding with discussions of marine education programs for primary and secondary school education, and implementing efforts to encourage outlooks of occupations (career education) to ensure that Japan has the human resources to run the marine industry in the future.

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



Figure II-2-6-1

## Driving the Implementation of Ocean Policy



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

### (1) Promoting Ocean Surveys in Territorial Sea and the Exclusive Economic Zone and Integrating Marine-related Information

In our country's territorial sea and the exclusive economic zone, there are waters lacking adequate survey data and the Japan Coast Guard has been conducting intensive ocean surveys in these waters including sea bottom topography, crustal structure, and the low-water lines to strategically and continuously implement the development of basic information that will contribute to the safety of vessel traffic, protecting our country's maritime rights and interests, and development in the sea.

Also, under the comprehensive coordination of the Secretariat of the Headquarters for Ocean Policy, Cabinet Secretariat, the Marine Information Clearinghouse, which centralizedly provides the gathering, management, and provision of location of marine information, and the Marine Cadastre, which is a web service that allows general users to utilize various natural information (sea bottom topography, ocean currents, water temperature, etc.) and social information (port areas, fishing rights areas, etc.) by overlaying on maps are being operated. Furthermore, in July 2016, "Efforts to Consolidate the Capability of Maritime Domain Awareness" was adopted by the Headquarters for Ocean Policy, and based on this, initiatives are being taken for the improvement and enhancement of ocean observation, and the establishment of the Maritime Situation Indication System, an information system for aggregating, sharing and providing marine information, including satellite information.

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

On 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 with an area equivalent to 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 sea areas has been postponed, the Japan Coast Guard is working towards the establishment of the extended continental shelf in those areas 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-km<sup>2</sup> 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. The state is taking direct control to ensure adequate measures to preserve the entire island.

(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 low-tide lines preservation areas to implement restrictions on excavation in the area. Furthermore, surveys are conducted on low-tide lines and the 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.

Figure II-2-6-2 Preservation of the Low-Tide Lines

Promoting Measures Regarding 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) (effective in June 2010)

<<Preservation of Low-Tide Lines>>

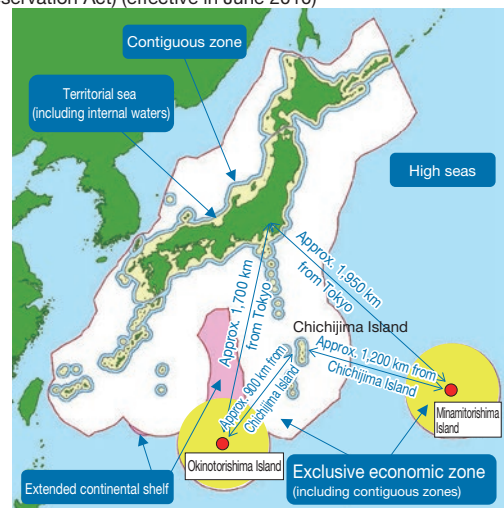
- In the waters surrounding the low-tide lines that form the basis for demarcating the limits of the exclusive economic zone and others, areas requiring conservation are specified as the low-water line preservation areas (185 areas) where activities are restricted.
- Satellite images, disaster prevention helicopters, and ships are used to monitor and research the conditions of the low-tide line and any artificial damages or natural erosion.

<<Development and Managing the Base of Activity in Specified Remote Islands>>

- In order to ensure that the development and usage of maritime resources and maritime research activities are implemented safely and steadily in waters located far away from the mainland, the MLIT Minister implements the development and management of port facilities (the development details are stated in the basic plan based on the Low-Tide Preservation Act).

(Minamitorishima Island) Project started FY2010

(Okinotorishima Island) Project started in FY2011



<Exclusive Economic Zone and position of Minamitorishima Island and Okinotorishima Island> (Quoted from the website of the marine information division of the Japan Coast Guard, with additions made)



Source) MLIT

(iii) Developing and managing bases of activities on specified remote islands (Minamitorishima Island and Okinotorishima Island)

In accordance with the Low-Tide Preservation Act, port facilities are being developed on 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 management of the ports by the government.

## Section 7 Protecting Territorial Land and Territorial Waters Firmly

### (1) Situation in Recent Years

Since September 2012, Chinese government-owned vessels have navigated into the contiguous zone around the Senkaku Islands almost every day, except in bad weather, and have repeatedly intruded into Japanese territorial waters at a frequency of about three times per month. The situation remains unpredictable; increases in the size, number and fortification of Chinese government-owned vessels has been confirmed recently, and in August 2016, Chinese government-owned vessels repeatedly intruded into Japanese territorial waters following Chinese fishing vessels.

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.

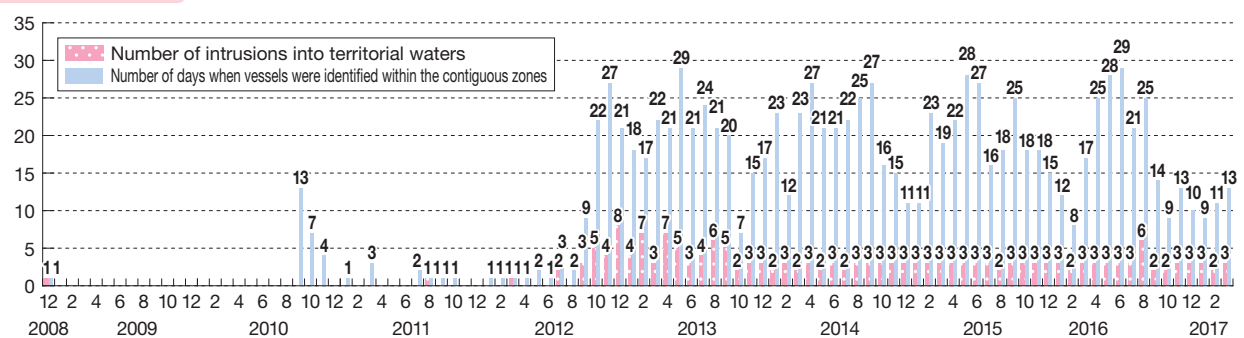
In addition, in Japan’s exclusive economic zone around the East China Sea, surveys and other activities of foreign ocean survey vessels without Japan’s consent were found. The Japan Coast Guard is taking appropriate measures on a case-by-case basis according to the situation, such as by requesting suspension of such activities and ongoing monitoring by patrol vessels in coordination with relevant organizations. Furthermore, in addition to the illegal operation of foreign fishing vessels, North Korea’s repeated nuclear tests and ballistic missile launches and other developments have increased the seriousness of the situation surrounding not only the Senkaku Islands, but all Japanese territorial waters.

Figure II-2-7-1 Patrol vessels ensure the security of territorial waters



Source) MLIT

Figure II-2-7-2 Number of Chinese Government Vessels Entering the Contiguous Zones and Intruding into Territorial Waters



– Status of Chinese government vessels intruding into territorial waters (as of the end of March 2017) –  
 • Intrusion into territorial waters: 188 cases (190 days) • Vessels intruding into territorial waters: 588  
 • Maximum number of vessels intruding into territorial waters: 8 • Longest duration of intrusion into territorial waters: 28 hours 15 minutes  
 Source) MLIT

### (2) Decision on the Policy on Strengthening the Maritime Security System

The situation in the sea areas around Japan has grown more serious, with the intrusion of foreign Government vessels and foreign fishing vessels into the territorial waters surrounding the Senkaku Islands, the increased activity of foreign oceanographic research vessels, the illegal operation of foreign fishing vessels in the water surrounding the Ogasawara Islands and elsewhere, and North Korea’s repeated nuclear tests and ballistic missile launches. To respond to these problems, we must enhance the capacity of maritime law enforcement, maritime surveillance and ocean survey of the Japan

Coast Guard. Therefore, the Ministerial Council on the Strengthening of the Maritime Security System was held on December 21, 2016, at which the Policy on Strengthening the Maritime Security System was adopted.

From now on, in accordance with above-mentioned policy, the Japan Coast Guard will promote the strengthening of the Maritime Security System according to the following five pillars.

- Strengthening the guarding system in territorial waters surrounding the Senkaku Islands, and implementing a system for responding to the simultaneous occurrence of major incidents
- Strengthening the maritime surveillance system capable of monitoring the far-ranging sea areas around Japan
- Strengthening the responding system for countering terrorism, ensuring security on remote islands and in remote waters, and otherwise responding to serious incidents
- Strengthening the ocean survey system for defending Japan's maritime rights and interests
- Developing human resources and other infrastructure to support these systems

### (3) Expanding of a Maritime Safety and Security Policy Program

To encourage the collaboration and cooperation to ensure maritime safety and security by fostering mutual understanding and the promotion of exchange among Asian coast guard agencies, and to strive for a common understanding of the importance of reinforcing maritime order governed by law and rules and not by coercion, a Maritime Safety and Security Policy program offering masters-level education and aimed at young executive officers of the Japan Coast Guard and Asian coast guard agencies was opened in October 2015. In September 2016, the first class of graduates (from Japan, Indonesia, Malaysia, the Philippines and Vietnam) was granted a Master of Policy Studies. Presently, the second class of students (from Japan, Indonesia, Malaysia and the Philippines) is participating in the program.

In the future, we will continue to improve the educational content, encourage people from many countries to participate, and promote the strengthening of the establishment of a global network in the area of maritime safety and security.

Figure II-2-7-3

The Ministerial Council on the Strengthening the Maritime Security System



Source) MLIT

Figure II-2-7-4

The First Class to Complete the Maritime Safety and Security Policy Program



Source) MLIT



## Section 8 Driving the Implementation of Water Cycle

### 1 Developing Policies Based on the Basic Act on Water Cycles

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 Basic Plan on Water Cycle in order to promote water cycle measures in a comprehensive and systematic manner. The Water Cycle Basic Plan was adopted through a Cabinet decision on July 10, 2015.

The Basic Plan on Water Cycle sets out nine measures, including “promotion of river basin coordination,” to serve as a framework for the comprehensive and integrated management of river basins, and as “measures for the government to undertake comprehensively and systematically regarding measures regarding the water cycle,” and relevant ministries and agencies are engaged in efforts based on this plan.

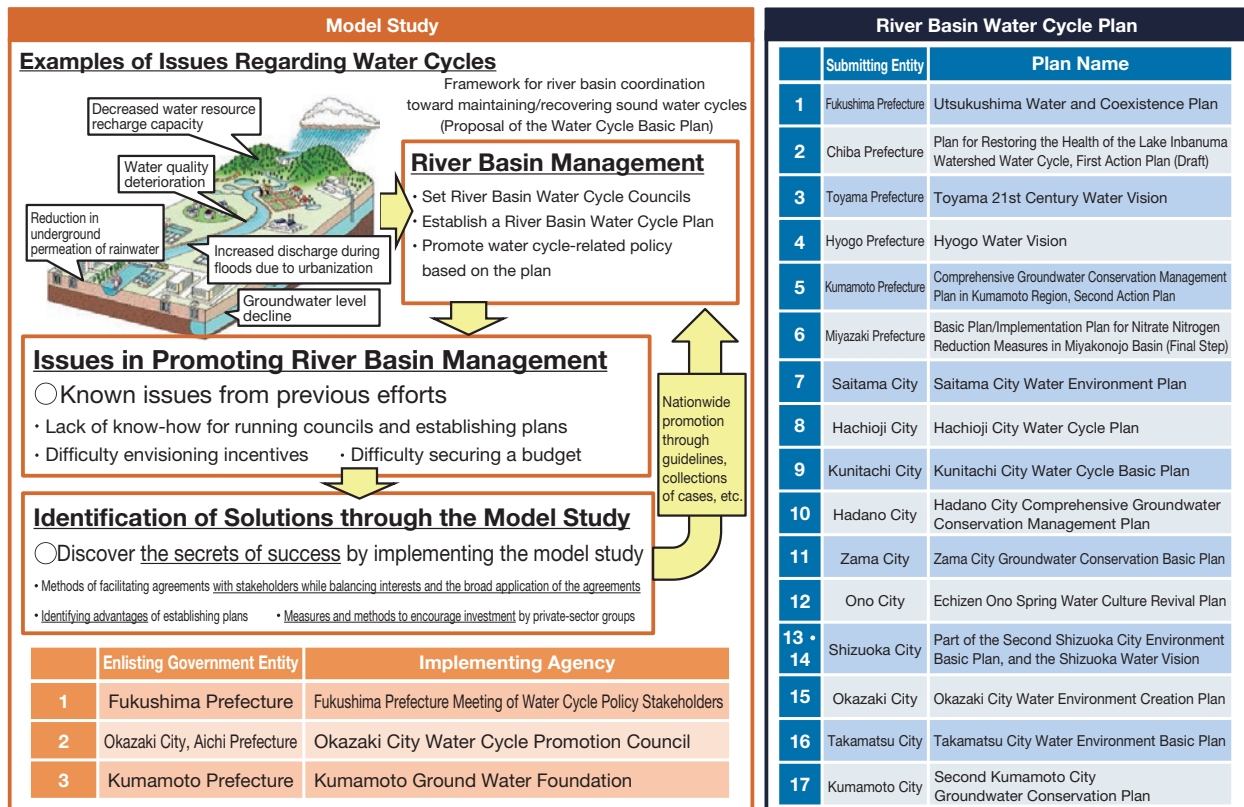
Furthermore, in July 2016, the first White Paper on Water Cycles based on the Basic Act on Water Cycles was adopted through a Cabinet decision and reported to the Diet. The White Paper on Water Cycles stipulates measures to be undertaken by the government regarding the water cycle, and to report to the Diet each year. In the most recent session, we clarified the present state and issues of the water cycle in response to the five basic policies set out in the Basic Plan on Water Cycle as trends surrounding water cycle measures, and reported on the enactment of the Basic Act on Water Cycle and the development of the Basic Plan on Water Cycle.

### 2 River Basin Management Promotion

River basin management is defined as the coordinated activity of relevant government and other public agencies, businesses, groups, residents and others 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 drive forward with this activity, we will set River Basin Water Cycle Councils in accordance with regional circumstances to create a River Basin Water Cycle Plan to set out basic policy, and implement appropriate conservation and management for river basins.

In FY2016, we implemented the “Model Study Regarding Visionary River Basin Management,” which comprised activity support and fact-finding surveys in collaboration with three groups, and put together Japan’s first plan for various regions to work toward maintaining and recovering sound water cycles, and released 17 plans on January 16, 2017, as the first round of action for the River Basin Water Cycle Plan.

Figure II-2-8-1 FY2016 River Basin Management Promotion Measures (Model Study/River Basin Water Cycle Plan)



Source) MLIT

Section 9 Efficient, Prioritized Deployment of Measures

1 Promoting i-Construction: Improving Construction Site Productivity

The construction industry is not only responsible for the development of social infrastructure, but as the protector of communities, which is a vital role in the conservation of Japanese national land, it is also tasked with ensuring the safety and security of our society. In order for the construction industry to continue to fulfill these roles even as the population continues to decline and age, they must reform the way they work by raising the level of wages or increasing holidays, and in addition, it is crucial to improve productivity. The MLIT is continuing its work on i-Construction, an initiative that incorporates the use of ICT and other technologies to drastically improve productivity in all construction and manufacturing processes, from studies and surveying to designing, execution of construction work, inspections, maintenance and renovations.

In i-Construction, the three measures of full-scale use of ICT (ICT earthwork), introduction of total optimization (standardization of concrete work standards, etc.), and the construction schedule leveling are promoted as a Top-Runner measure. Productivity improvement in earthwork (embankments, cut earth) has been lagging, and since FY2016, we have established new standards for using ICT and three-dimensional data and made all-out efforts to use ICT in earthwork performed by the government.

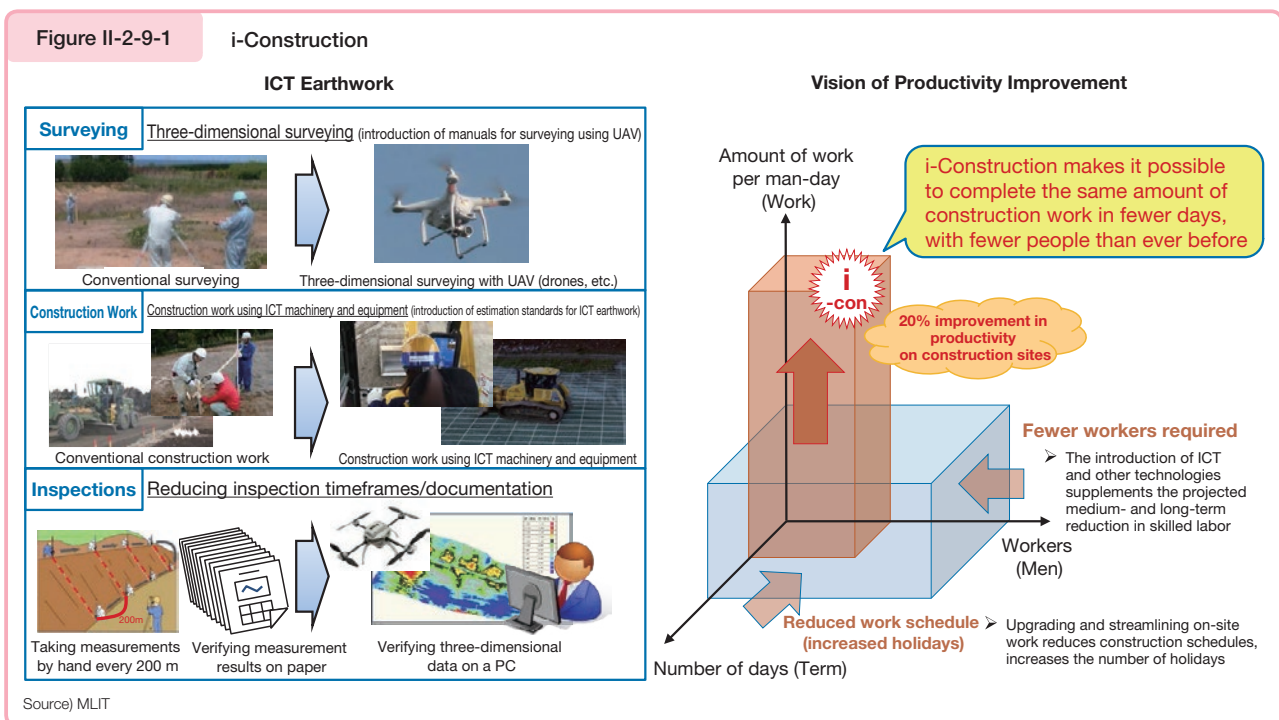
To introduce total optimization (standardized concrete work standards, etc.), we are establishing guidelines that set out ranges of application and optimal construction conditions with the aim of diffusing the latest technology and construction methods for improving productivity. To level construction schedules, we are striving to steadily implement various efforts, including the further use of two-year government bonds or obligatory assurance of national subsidization to encourage suitable construction work schedules.

Additionally, the i-Construction Promotion Consortium (chaired by Hiroshi Komiyama, Chairman of Mitsubishi Re-



search Institute) was established on January 30, 2017, to accelerate the efforts of collaboration between industry, academia and government. The consortium has established three working groups: the Technological Development and Introduction Working Group, the Three-Dimensional Data Distribution and Application Working Group, and the Global Standards Working Group. The consortium has resolved to discuss various matters, including the search for new, advanced technology for use in the field and the transition to open data for distributing three-dimensional data.

In addition to these efforts, we will expand the use of ICT in construction work on bridges, tunnels, dams and maintenance, and establish a platform to use three-dimensional data obtainable from public works, aiming for a 20% improvement in productivity on construction sites by FY2025. The MLIT will make all-out efforts for i-Construction, and will strive to increase each worker's productivity on construction sites, improve the operating environment of companies, and raise wage levels of people engaged in construction, while promoting safety.



## 2 Assuring Public Works Quality and Securing and Developing Leaders

With the aim of ensuring the present and future quality of public works and securing and developing 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 Tendering and Contracting Act was adopted by a Cabinet decision in September 2014. Furthermore, Guidelines on Implementation of Order Administration (Operation Guidelines) (an agreement of an advisory committee of relevant ministries and agencies for promoting quality assurance of public works) pursuant to Article 22 of the Quality Assurance Act were developed in January 2015 to enable commissioning entities to appropriately and efficiently implement order administration in order to fulfill the Responsibilities of Orderer set out in Article 7 of the Act.

Given the full-scale implementation of the Three Public Works Bearers Acts, the MLIT requires municipalities and all other commissioning entities of public works to move forward with specific efforts based on the Guiding Principles.

Figure II-2-9-2 Key Points of the Guidelines on Implementation of Order Administration (Operation Guidelines)

Key Points of the Guidelines on Implementation of Order Administration (Operation Guidelines)	
<p>The national government prepared the Operation Guidelines under Article 22 of the Quality Assurance Act, listening to the opinions of local governments, academic experts and private business operators and others.</p> <ul style="list-style-type: none"> <li>&gt;The Guidelines were put together in a systematic manner as common guidelines for orderers so that they can operate order administration appropriately and efficiently.</li> <li>&gt;The national government periodically conducts surveys on whether order administration is conducted appropriately in accordance with the Guidelines, and puts together the results for publication.</li> </ul>	
Mandatory action items	Action items to work on
<p><b>Appropriate setting of predetermined prices</b></p> <p>In setting predetermined prices, estimates must correctly reflect transaction prices of labor, materials and the like in the market as well as state of affairs of construction so that appropriate profits will be secured. In calculating estimates, the up-to-date estimation standards should be used on the assumption of a proper construction period.</p>	<p><b>Selection and use of tendering and contracting methods according to the characteristics and other factors of works</b></p> <p>Orderers select appropriate tendering and contracting methods among various methods according to the characteristics of works and regional conditions, or apply a combination of methods.</p>
<p><b>Elimination of <i>Bugiri</i> practice</b></p> <p>The <i>bugiri</i> practice must not be conducted as it violates the provisions of Article 7, Paragraph 1, Item 1 of the Act for Promoting the Assurance of Quality of Public Works.</p>	<p><b>Leveling of order and construction periods</b></p> <p>The leveling of ordering and construction periods should be a goal in order to devise better ways to execute budgets, such as by actively leveraging the multi-year budget system and ensuring budget execution from the first fiscal year, as well as devising contracting methods, such as setting leeway periods, and setting construction periods that take into consideration non-operating days by securing two days off a week.</p>
<p><b>Ensuring setting up and use of survey standards on low bid prices or the lowest price limits</b></p> <p>In order to prevent the practice of winning orders by presenting extremely low prices, appropriate use of the low bid price survey system or the lowest price limit system must be ensured. In principle, predetermined prices are published after bidding.</p>	<p><b>Use of quotations</b></p> <p>In the case of inviting bids, if a gap between a standard estimate and actual situations at construction sites is assumed, such as when there has been no bidder or no successful bid, predetermined prices should be reviewed appropriately using quotations.</p>
<p><b>Appropriate design changes</b></p> <p>If construction conditions and actual state of construction sites do not match or there are other similar situations, the design documents and associated contract prices and construction period must be changed appropriately.</p>	<p><b>Expediting information sharing and discussions with contractors</b></p> <p>Orderers strive to respond to consultations from contractors speedily and appropriately. Hold meetings of all relevant parties of both orderers and contractors as necessary to discuss and deliberate the appropriateness of the design changes and suspension of construction works and the like with the aim of expediting design change procedures.</p>
<p><b>Establishment of a system for support among orderers</b></p> <p>In addition to capturing the order administration status of orderers through the regional council of orderers, orderers make necessary coordination and adjustments, and municipalities and other orderers that require assistance seek support from the national and prefectural governments through the regional council of orderers.</p>	<p><b>Confirm and evaluate construction status after elapse of specified periods after completion</b></p> <p>Implement confirmation and evaluation of construction status as necessary after elapse of specified periods after completion.</p>

Source) MLIT

### (1) Approaches to Fulfilling Duty of Orders

The MLIT is taking various initiatives for the appropriate implementation of order administration based on the Rationalization Guidelines and Operation Guidelines. In addition, to verify whether orderers are properly implementing order administration based on these Guidelines, we are conducting fact-finding investigations of tendering and contracting procedures pursuant to the Tendering and Contracting Act, and organizing and publicizing the results.

#### (i) Appropriate setting of predetermined prices

As an effort to eliminate so-called *bugiri*, which is the practice of deducting part of construction specification amounts that are based on fair estimation, the MLIT (with collaboration from the Ministry of Internal Affairs and Communications) has requested that local governments rectify the practice as soon as possible through every opportunity. As a 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. In addition to the popular version of the Implementation Manual for the Repair Cost Estimation Method, which is a compilation of public construction works estimation standards and efforts regarding their implementation that was created in January 2015, we created a version for affected regions in Kumamoto in January 2017, and have continued efforts to develop and spread the word about the latest standards and manuals regarding estimation.

#### (ii) Measures against dumping

Dumping inhibits the healthy development of the construction industry; thus, the MLIT has requested that groups that have not yet introduced this anti-dumping system take every opportunity to engage in discussions toward introducing it as soon as possible.

#### (iii) Appropriate design changes

The MLIT aims for the appropriate stipulation of construction conditions in design documents, as well as appropriate

changes of design documents if deemed necessary, and has revised the Guidelines on Design Changes to facilitate design change work.

(iv) Leveling of construction work schedules, etc.

The MLIT has steadily driven forward with the promotion of systematic order administration, the setting of appropriate construction work schedules, the use of systems that allow leeway, and other efforts. In addition, we published “The ABCs of Leading Cases of Leveling,” a collection of forward-thinking examples of efforts by local governments, in April 2016, and continue to encourage local governments to further level construction work schedules and the like.

(v) 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, phased screening systems, technical proposal integrated negotiation systems and systems that contribute to the maintenance and management of regional social capital (multi-year contracts, bulk orders, joint order acceptance). In May 2015, the MLIT drafted Guidelines Regarding the Implementation of Tendering and Contracting Options for Public Works to enable various orderers to select the tendering and contracting options that correspond to the peculiarities of each project.

(2) Coordination and Support among Orderers

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 have 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. In addition, in the public construction works sector, we are working toward the diffusion of the “Ideal State of Orderers in Public Agency Facility Improvement,” which was released by the Panel on Infrastructure Development in January 2017, in local government offices and the like based on the Responsibilities of Orderers set out in the Quality Assurance Act.

## Section 10 Forming a New Phase of Relationships between the Central and Local Governments and Private Sectors

### 1 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 was 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 implementing revisions such as enabling municipalities to develop their own plans for securing stable residency for the elderly.

The examination results of FY2016 were adopted as response policies through a Cabinet decision, and the seventh omnibus decentralization bill, which includes a provision that changes discussion with the national government concerning the Land Use Basic Plan to gathering opinions and that enables regional governments to implement public housing reconstruction projects that allow reconstruction in areas adjacent to aggregations of public housing, was submitted to the Diet.

## 2 Driving Public-Private Partnerships, etc.

In order to promote the forming of specific projects for PPP/PFI endeavors, 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 FY2016, the MLIT adopted 24 pioneering public-private partnerships projects and five public-private partnerships projects for earthquake reconstruction. The MLIT provided support, for example, surveys regarding area management conducted by the Japan version of LABV in Chikujo Town, Fukuoka Prefecture. In addition, within regional platforms established in each of the nine blocks throughout Japan, we held events for exchanging information with leaders, core member meetings and seminars, and supported 20 local governments launch regional councils.

## Section 11 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 FY2016, (i) monitoring of 142 performance indicators was conducted, (ii) 4 themes and (iii) 15 new measures were evaluated by the respective systems<sup>Note 1</sup>. 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 evaluations are reflected in budget requests and the development of new measures.

Also, in accordance with the Act on General Rules for Incorporated Administrative Agencies, performance evaluations of 19 incorporated administrative agencies as the competent minister were 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 are 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 are posted on the Internet and elsewhere. Furthermore, starting from FY2015, maintenance costs have been specified in evaluation reports for projects under direct control for further transparency<sup>Note 2</sup>.

In addition, 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.

**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 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, Etc. 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.

#### (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 12 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 (the section between Sakai-Koga IC and Tsukuba-Chuo IC on the Metropolitan Intercity Expressway (Ken-O Expressway) was opened on February 26, 2017), 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.