

## 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 Second National Spatial Strategy (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.

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

In order to give consideration to effective comprehensive policies under both plans, the four technical committees that were established within the National Land Development Council plan promotion task force considered policies for national land that promotes convection, and reported their findings to the National Land Development Council and plan promotion task force. In addition, promotion of Regional Cooperation Projects based on characteristics and resources of each of the eight regional blocks around Japan, as defined in the National Spatial Strategies (Regional Plans), is ongoing, and support is being provided for the creation of early examples.

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) Measures against aging social infrastructure

Going forward, it is anticipated that Japanese infrastructure that was built during or after the period of rapid economic growth will deteriorate simultaneously (Figure II-2-2-1). It is necessary to ensure the safety and security of citizens, and to reduce and standardize the total cost of maintenance and replacement, by maintaining and replacing infrastructure that will simultaneously deteriorate in a systematic manner.

With this in mind, in November 2013, the Basic Plan for Extending Service Life of Infrastructure was devised as a whole of government initiative. It is a basic plan to indicate courses of action for systematic maintenance and replacement, etc.

Based on this plan, MLIT devised the MLIT Plan for Extending Service Life of Infrastructure (action plan) in May 2014 ahead of all other ministries and agencies, which emphasizes preventative maintenance, as a plan to clarify medium to long-term courses of action, in order to thoroughly promote maintenance and replacement of infrastructure under the

jurisdiction of MLIT.

At present, according to the action plan, managers of each facility conduct inspection and repairs, etc., and strive to conduct systematic maintenance and replacement, such as by devising life extension plans (individual facility plans) that include specific policies for each individual facility.

MLIT will continue to work on measures to tackle aging infrastructure in a focused and systematic manner so that the required infrastructure 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 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 “1. 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.

With regard to “2. framework for conducting maintenance and management smoothly and measures for supporting local governments,” we are having discussions in cooperation with local governments on the methods of comprehensively outsourcing maintenance and management work to the private sector for multiple areas and facilities.

With regard to “3. sharing and visualizing of information pertaining to maintenance, management and renewal,” information on maintenance and renewal that is especially important, such as the status inspections at each facility, will be made visible via infrastructure maintenance portal sites.

Also, in an effort to take advantage of technology and know-how from various industries in each stage of the infrastructure maintenance cycle, while striving to cultivate and revitalize the maintenance industry, we established the Japan

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 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 2018	March 2023	March 2033
Highway bridges [about 730,000 bridges <sup>Note 1</sup> (2 m long or longer)]	Approx. 25%	Approx. 39%	Approx. 63%
Tunnels [about 11,000 tunnels <sup>Note 2</sup> ]	Approx. 20%	Approx. 27%	Approx. 42%
River management facilities (such as water gates) [about 10,000 facilities <sup>Note 3</sup> ]	Approx. 32%	Approx. 42%	Approx. 62%
Sewerage pipes [Total distance: approx. 470,000 km <sup>Note 4</sup> ]	Approx. 4%	Approx. 8%	Approx. 21%
Port and harbor quays [Approx. 5,000 facilities <sup>Note 5</sup> (4.5 m deep or deeper)]	Approx. 17%	Approx. 32%	Approx. 58%

Note 1: Of the approximately 730,000 highway bridges, approximately 230,000 bridges for which the year of initial construction is unknown have been excluded from the calculation of percentage. (FY2017 total)

Note 2: Of the approximately 11,000 tunnels, approximately 400 tunnels for which the year of initial construction is unknown have been excluded from the calculation of percentage. (FY2017 total)

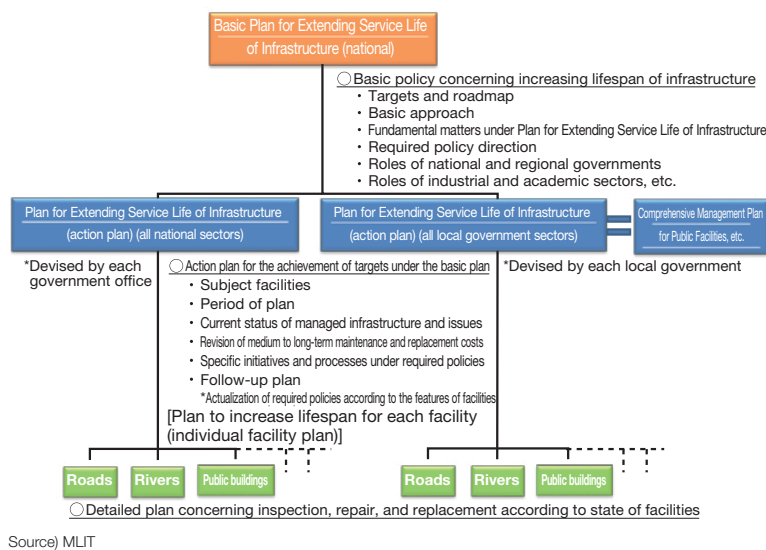
Note 3: State-managed facilities only, including approximately 1,000 facilities whose year of initial construction is unknown. (Since records generally exist for facilities built within the last 50 years, facilities whose year of initial construction is unknown are sorted out as being approximately 50 years of age or older.)(FY2017 total)

Note 4: Including approximately 20,000 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.)(FY2017 total)

Note 5: Approximately 100 quays whose year of initial construction is unknown have been excluded from percentage calculations. (FY2017 total)

Source) MLIT

Figure II-2-2-2 System of Plans to Increase Lifespan of Infrastructure



Source) MLIT

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, and we created the Infrastructure Management Award to recognize outstanding efforts and excellent technical development regarding infrastructure maintenance. In FY2017, we worked to supplement and expand the activities of the Japan Congress for Infrastructure Management to regional areas, and we held the first Infrastructure Management Award presentation ceremony in July 2017.

In addition, in December 2017, we convened the Social Infrastructures Maintenance Strategy Subcommittee (third meeting), which investigated the progress of policies based on the responses and recommendations referred to above and the attitudes, etc., of local governments, reviewed initiatives implemented up to this point, and gave consideration to the future direction of initiatives.

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 Creation of a Maintenance Cycle Centering on Individual Facilities Plans

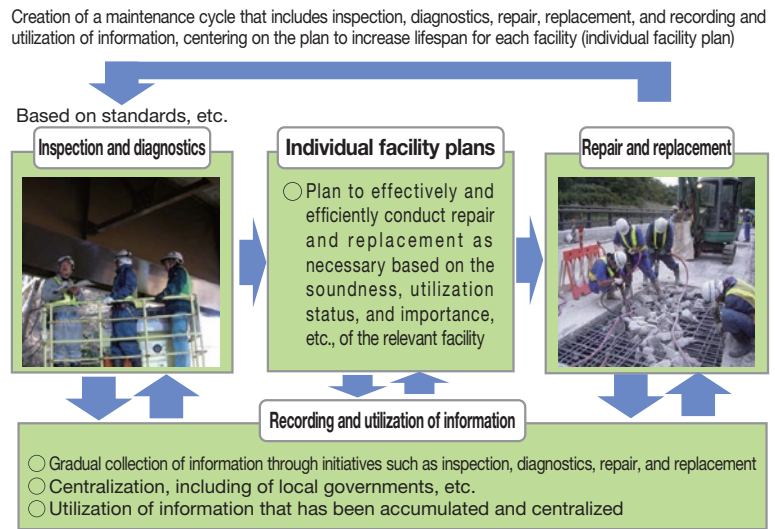
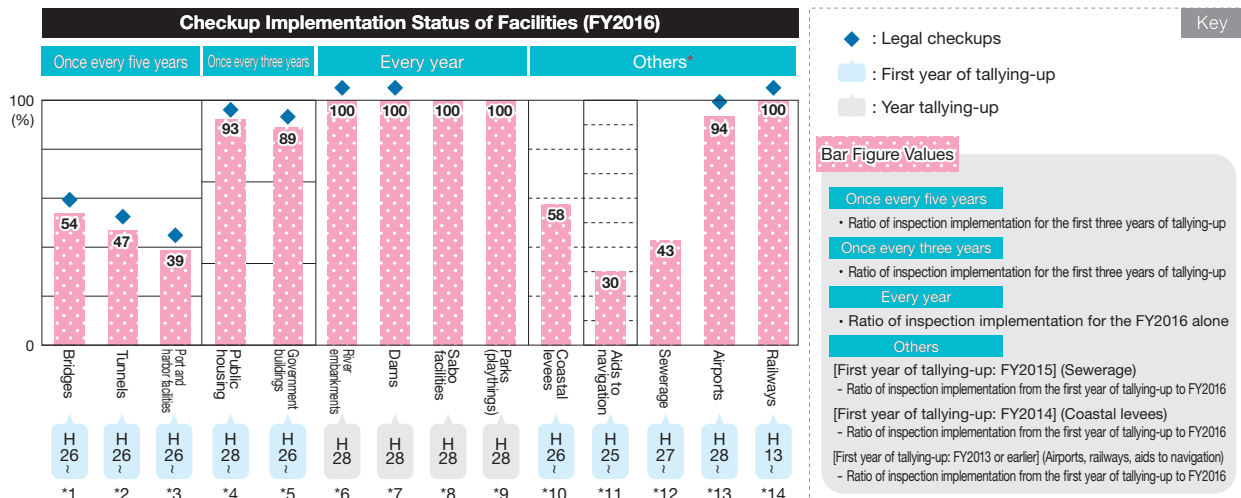


Figure II-2-2-4 Publication of Checkup Implementation Status in Each Field



\*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: 43,000

\*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: 5,652 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: 29,133.

\*7 Dams in river management facilities. Total number of facilities within the scope of the inspection: 556.

\*8 Regarding Sabo-related facilities (Sabo facilities, landslide control facilities), the ratio of Sabo facility construction project sites under direct control in which inspections based on individual facility plans are conducted. 44 Sabo facility construction projects. Approximately 62% 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: 82,848.

\*10 Coastal levees in areas within the scope of the plan to increase lifespan by MLIT (embankments, revetments, parapets). Total length within the scope of the inspection: approximately 5,700 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.

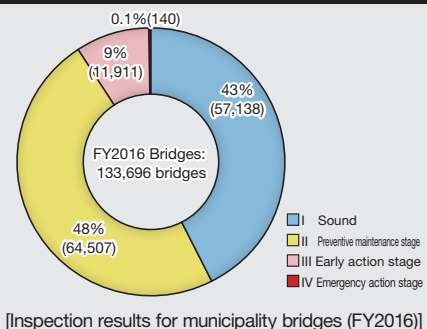
\*13 Limited to airport facilities (runways, taxiways, aprons). Number of facilities within the scope of the inspection: 114.

\*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: 188

[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

Publication of Inspection Results Tallies (Example of annual reports on road maintenance)



### (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 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).

The Planning Task Force under the Panel on Infrastructure Development and the Transport System Subcommittee of the Council of Transport Policy conducts investigation and deliberation with regard to methods of identifying and “visualizing” stock effects from the perspective of generating ideas from the perspective of smart investment and utilization, as well as mechanisms, etc., to promote systematic initiatives to this end. The committee compiled its findings in A Proposal of Practical Strategy for Maximizing the Stock Effect (November 2016). We will continue to make efforts to specifically implement these policies and steadily promote the Fourth Priority Plan for Social Infrastructure Development based on the committee’s proposals.

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, we commenced the Infrastructure Future Map Project in August 2016, which creates a map (visualization) based on the timeline of future infrastructure management, and we are considering how to achieve it.

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

## 1. Four Structural Issues of Social Infrastructure Development

- (1) Increasingly aging infrastructures (2) Vulnerable land (possibly imminent massive earthquakes, severer weather disasters) (3) Exhaustion of the countryside due to population declines (4) Intensifying international competitiveness

Based on the National Spatial Plan (adopted on August 14, 2015, by a Cabinet decision), systematically implement social infrastructure development toward the realization of the Plan.

## 2. Basic policy toward the realization of sustainable social infrastructure development

## Toward strategic infrastructure management aimed at maximizing stock effects of social infrastructure

Thorough management to maximize stock effects of social infrastructure

## (i) Strategic maintenance of existing facilities including consolidation and realignment

- Securing infrastructure safety by building maintenance cycles
- Cutting and leveling total costs in the medium to long term (including creation of proper sizes through consolidation or other means)
- Strengthening competitiveness of the maintenance industry

## (ii) Effective use of existing facilities (efforts for smart use)

- Maximizing the functions of existing facilities (Example: expanding the processing capacity of Haneda Airport by reviewing its flight routes)
- Enhancing and advancing the functions of existing facilities (Example: establishing welfare facilities in association with public housing consolidation)
- Increasing the functions of existing facilities (Example: establishment of power generation facilities using the upper space of wastewater treatment facilities)

## (iii) Ensuring selection and concentration according to the purposes and roles of social infrastructure (considering priorities and time horizon)

Safe and secure infrastructure

Focus on projects for protecting human lives and properties with all-out efforts from both structural and non-structural perspectives, such as countermeasures against the Nankai Trough, Tokyo Inland earthquake, and increasing concentration and severity of precipitation.

Life infrastructure

Focus on projects to secure sustainable and effective local community services and enhance the quality of life.

Growth infrastructure

Focus on projects that boost the production expansion effect by strengthening competitiveness with international strategies and enhanced coordination with private business operators.

## Clear time horizon

- Set the to-be state in the medium to long term (roughly 10–20 years), priority measures and numerical targets to achieve during the plan period (by FY 2020).

## Revitalization of economy and fiscal improvement

- Support stable growth around the consumption tax increase in FY 2017, 2020, and onwards, contributing to economic revitalization and fiscal improvement.

## Active use of PPP/PFI

## Structural reforms concerning workers on the ground and skilled talents who support social infrastructure development

- Secure and foster workers on the ground and skilled talents, who are the guardians of the region, in a stable manner.
- Conduct structural reforms by increasing on-site productivity.
- Promote initiatives by orderers to ensure the quality of public works and secure bearers of the works.
- Secure and develop various talents involved in social infrastructure development (personnel who engage in maintenance and PPP/PFI)

## Necessity for stable and sustainable prospects of public investments

- Sudden increases/decreases in public investments in the past gave rise to various problems (Example: many cases of unqualified entrants and dumping, leaving talent).
- It is necessary to ensure stable and sustainable public investments suitable to the size of the economy to underpin sustainable economic growth so that social infrastructure development, including maintenance, will be conducted in a systematic and steady

Source) MLIT

## Column

## Promotion of the Infrastructure Future Map Project: Release of Kamaishi City, Iwate Prefecture Edition - Infrastructure Future Map Kamaishi (Trial Edition)

MLIT commenced the Infrastructure Future Map Project in 2016, which creates a map (visualization) based on the timeline of future infrastructure management, and we are now considering how to proceed.

The Priority Plan 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 will provide a useful reference for creating life plans or making investment decisions, such as 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.

In FY2017, we unveiled Infrastructure Future Map Kamaishi (Trial Edition), which enables consideration of overlaid information using Kamaishi City, Iwate Prefecture as a model.

<https://www.geospatial.jp/ckan/dataset/sougouseisaku-miraimap-kamaishi>

In addition to being able to check management information for infrastructure such as the Sanriku Expressway and the new Kamaishi City Hall, as well as Kamaishi Unosumai Memorial Stadium, which will be one of the venues of the 2019 Rugby World Cup to be held in Japan, it is possible to overlay various information using GIS (Geospatial Information System) for use by private enterprise to draft investment plans for

new locations, etc., and it is expected that even greater stock effects will become apparent.

We will continue to pursue the Infrastructure Future Map Project, and promote visualization of information concerning infrastructure management.



Source) MLIT

## Column

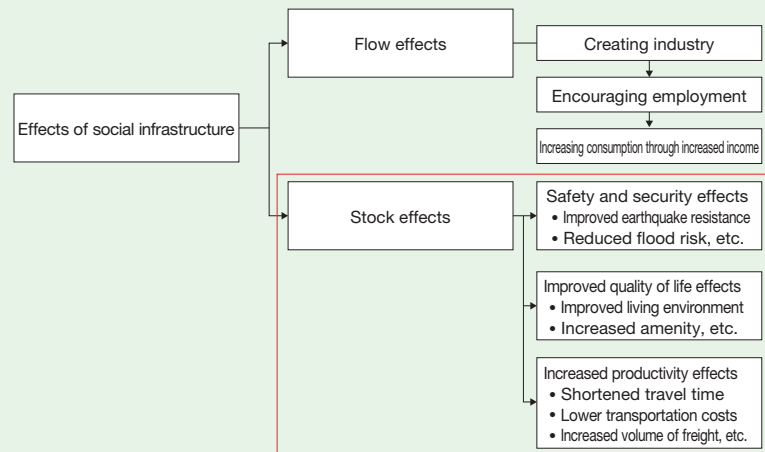
### Aiming to Maximize Stock Effects

Management of social infrastructure has flow effects and stock effects. Flow effects are effects that invigorate the economy through public investment in the enterprise itself, such as employment, temporarily growing the entire economy. On the other hand, stock effects are ongoing effects that are seen in the medium to long term through the accumulation and operation of social infrastructure.

In addition to “safety and security effects,” such as increasing earthquake resistance and reducing flood risk and “improved quality of life effects,” such as improving the living environment and increasing amenity, stock effects include effects “increased productivity effects” that increase the productivity of society by shortening travel time, etc. (Figure 1).

Shortening travel time, etc., through the creation of the Ken-O Expressway is a specific example of a stock effect. At the same time, establishment of large-scale logistics facilities, etc., in municipalities along the route has been encouraged as doing so leads to increased logistics efficiency. Such facilities have created local employment with the number of employees increasing by 9,000 people over 5 years, and they have increased tax revenue for local governments located along the route due to the establishment of businesses, etc.

Figure 1 Stock Effects of Social Infrastructure



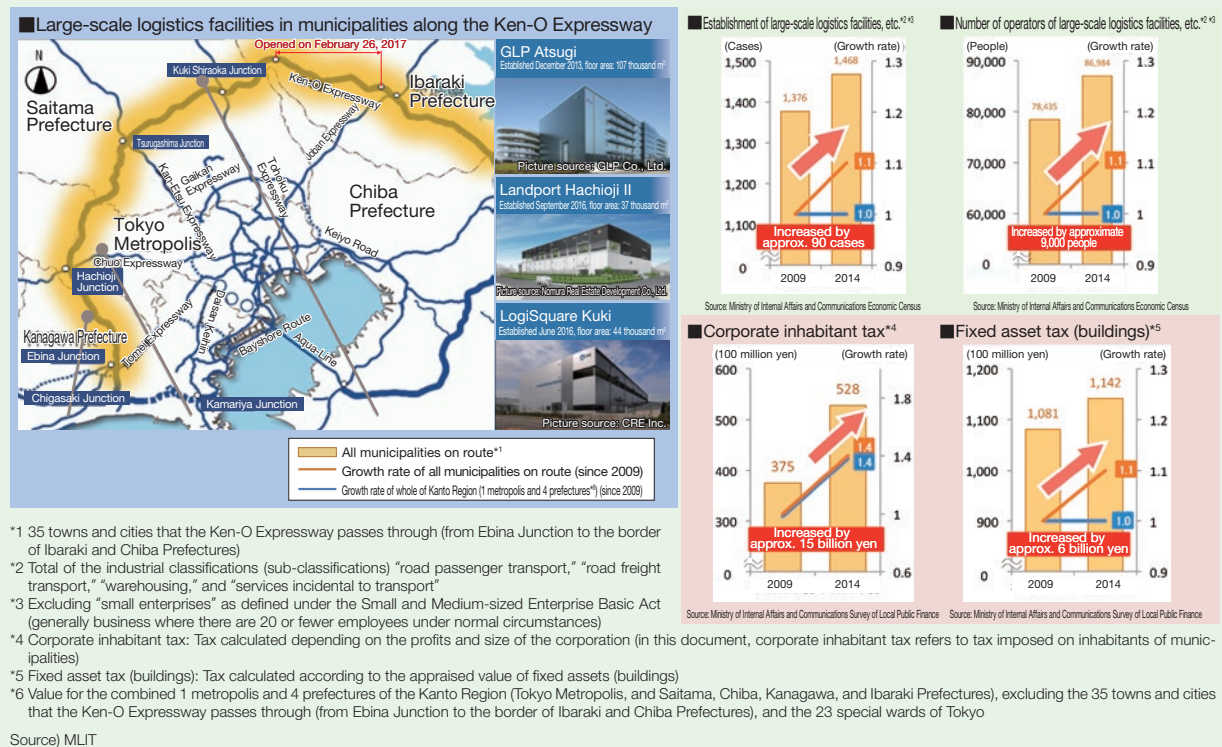
Source) MLIT

(Figure 2).

Even though Japan's population is shrinking, creation of social infrastructure that maximizes stock effects is needed, in order to ensure economic growth, safety, and security and achieve sustainable improvements in the quality of life of citizens.

To this end, MLIT aims to actively grasp the wide range of stock effects that occur and to visualize them, as well as to ensure smart investment and utilization to further maximize stock effects, such as by promoting initiatives including pinpoint measures to combat traffic congestion, effective utilization of existing infrastructure through rejuvenation of dams, and all-out hard and soft measures to prevent or mitigate disasters, etc.

Figure 2 Examples of Stock Effects



## Section 4 Promoting the Implementation of Transport Policy

### 1 Developing Policies Based on the Basic Act on Transport Policy

Based on the Basic Act on Transport Policy, the Basic Plan on Transport Policy was adopted through a cabinet decision in February 2015. The Basic Plan on Transport Policy defines the period from FY2014 to FY2020 as the period of operation and provides for basic policies, goals, and measures, etc., to be taken by the government on a comprehensive and systematic 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.

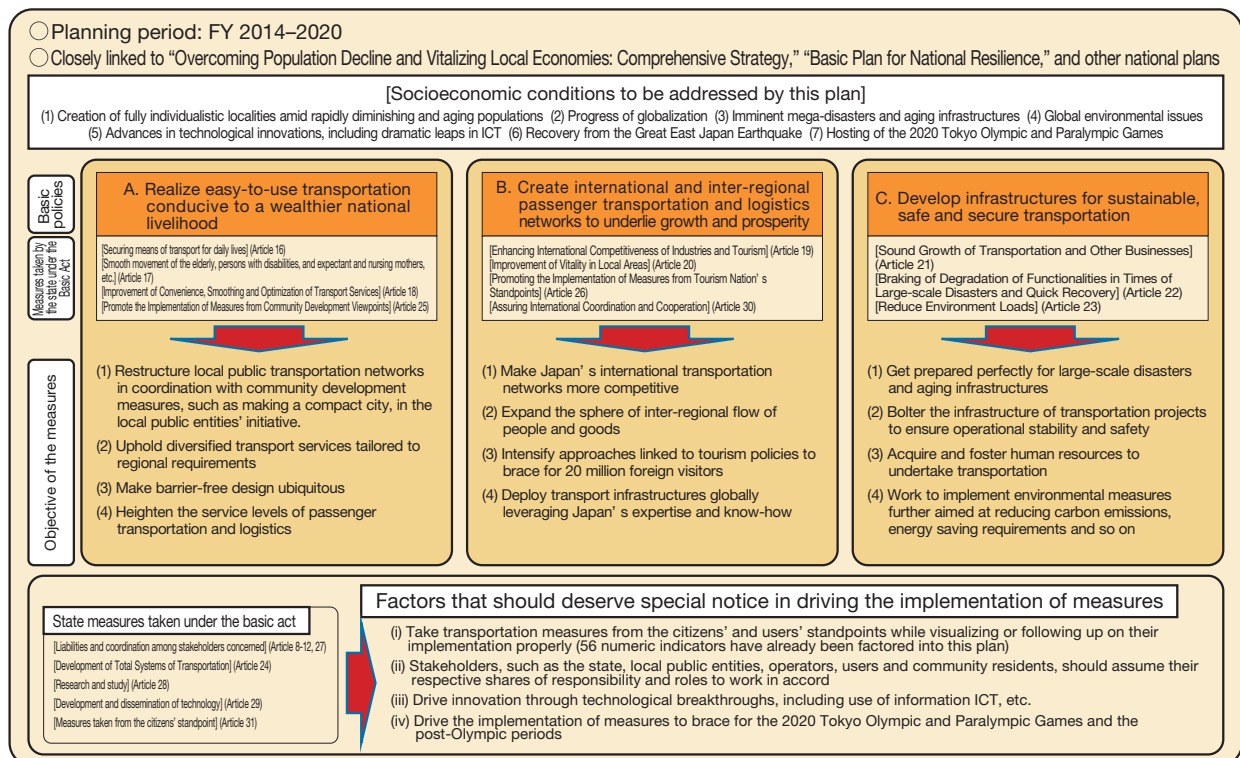
Numeric indicators have also been defined to verify the progress of initiatives to follow up said plan, and to indicate factors for consideration in implementing measures in accordance with the three basic policies above. We are promoting policies accordingly.

In May 2017, the 2017 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



Source) MLIT

## 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, 410 local public transportation networking plans were submitted to the Minister of Land, Infrastructure, Transport and Tourism by the end of FY 2017, and 23 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, the Japan Railway Construction, Transport and Technology Agency established a program for investing in new companies that engage in businesses relating to rebuilding local public transportation networks, in order to diver-



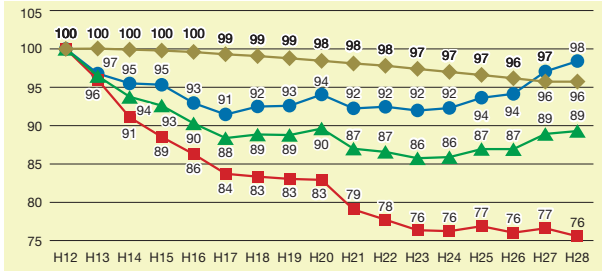
sify and enhance support.

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

Figure II-2-4-2 Status of Local Public Transportation and Related Issues

- Passengers carried by regional public transit was on a long-term declining trend; however, in recent years, a recovery has been observed, centered on the three major metropolitan areas. The wide-ranging declining trend is also grinding to a halt in regional areas.
- Regional public transport operators are in a difficult position, as local public transportation networks shrink due to withdrawing from unprofitable routes, particularly in regional areas, and service levels such as the number of trains/busses per day decline greatly.

**Users of Local Public Transportation Services**  
(with Users in FY2000 Given a Value of 100)



Legend:  
 ● Users (three major metropolitan areas)  
 ■ Users (outside three major metropolitan areas)  
 ▲ Users (nationwide)  
 ◆ Population (outside three major metropolitan areas)

\*Figures for passenger vehicle ownership are as of the end of March in each year and figures for passenger buses (users) are those for each fiscal year  
 \*\*Three major metropolitan areas\* refers to Saitama, Chiba, Tokyo, Kanagawa, Aichi, Kyoto, Osaka, and Hyogo prefectures  
 \*Source: Prepared by MLIT, based on the "Annual Report of Motor Vehicle Transportation Statistics" and the "Materials Released by the Automobile Inspection & Registration Information Association"

	1991	2000	2010	2016
Passenger bus services	6.5 billion	4.8 billion	4.2 billion	4.3 billion (34% 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 MLIT

**Decline of Local Public Transportation Services**

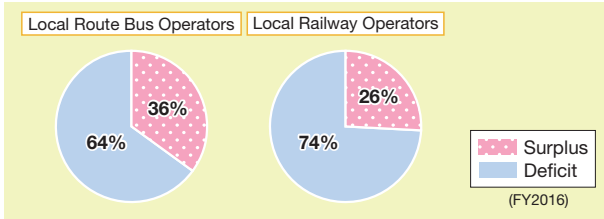
- Roughly 8,392 km of local bus routes were completely eliminated in the seven years from FY2010 to FY2016. 39 railways (roughly 771 km) became defunct in the 17 years from FY2000 to FY2016.

- Existence of Areas Not Served by Public Transportation

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

Source) MLIT survey in FY2011

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



(Operators that own at least 30 vehicles (FY2016))

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

Source) Materials created by the MLIT Policy Bureau, Public Transportation Policy Department

Source) MLIT

Figure II-2-4-3 Outline of the Revision of the Act on Revitalization and Rehabilitation of Local Public Transportation Systems, etc.

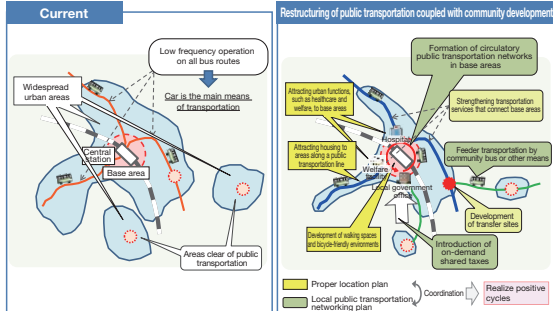
○Act on Partial Amendment of the Act on Revitalization and Rehabilitation of Local Public Transportation Systems (promulgated in May 2014, enacted in November 2014)

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

Points

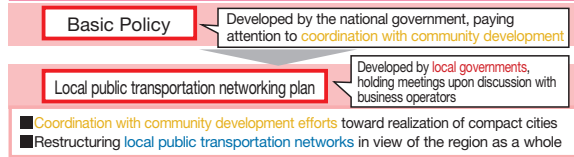
- ➔ (i) Local governments led (ii) Community development efforts to (iii) Restructure local public transportation networks

Example of restructuring public transportation in unified efforts to create compact cities

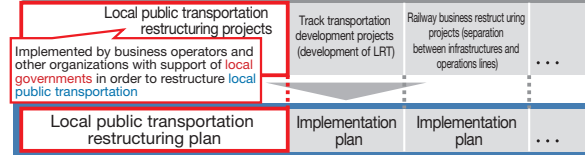


\*Prepared in reference to initiatives by Toyama City, Kumamoto City, Toyooka City, Sanjo City and other municipalities

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



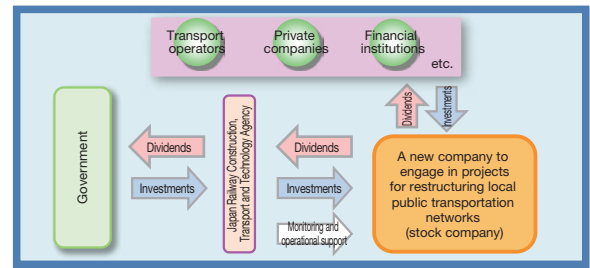
Local public transportation designating projects



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 the Minister of Land, Infrastructure, Transport and Tourism under the Act on Revitalization and Rehabilitation of Local Public Transportation Systems.



Source) MLIT

### 3 Promotion of Comprehensive Logistics 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, we are working to promote the "Logistics Productivity Revolution" project, which was selected as one of the productivity revolution projects of the MLIT Productivity Revolution Headquarters in April 2016.

Its aim is to improve the productivity of logistics operations by 20% by FY2020, by promoting the approval of general efficiency plans covering joint transportation, modal shifts, consolidation of the transportation network to warehouses that have introduced truck reservation systems, etc., as well as promoting initiatives that contribute to increased efficiency and high added value by reducing re-delivery by home-delivery services and promoting international standardization of logistics systems, based on the Act on Advancement of Integration and Streamlining of Distribution Business, which was revised in 2016 (Act No. 85 of 2005) (the Revised Act on Advancement of Integration and Streamlining of Distribution Business) for the purpose of supporting a range of initiatives relating to integration and streamlining of logistics, in partnership with interested parties.

Initiatives under this “Logistics Productivity Revolution,” have been positioned as whole-of-government initiatives, and the Comprehensive Logistics Policy Guidelines (FY2017-2020) received cabinet approval in July 2017, in order for multiple ministries and agencies to promote these policies in partnership. The guidelines set out goals for future logistics policies from six perspectives, incorporating new perspectives such as work style reforms and utilization of new technology, in order to achieve resilient logistics to sustainably realize social infrastructure functions that will support Japanese economic growth and the lifestyles of citizens as the social makeup surrounding logistics changes.

Furthermore, in January 2018, we developed the General Logistics Policy Promotion Program, based on the policy direction indicated by these guidelines, to systematically conduct specific policies as whole-of-government initiatives.

## Column

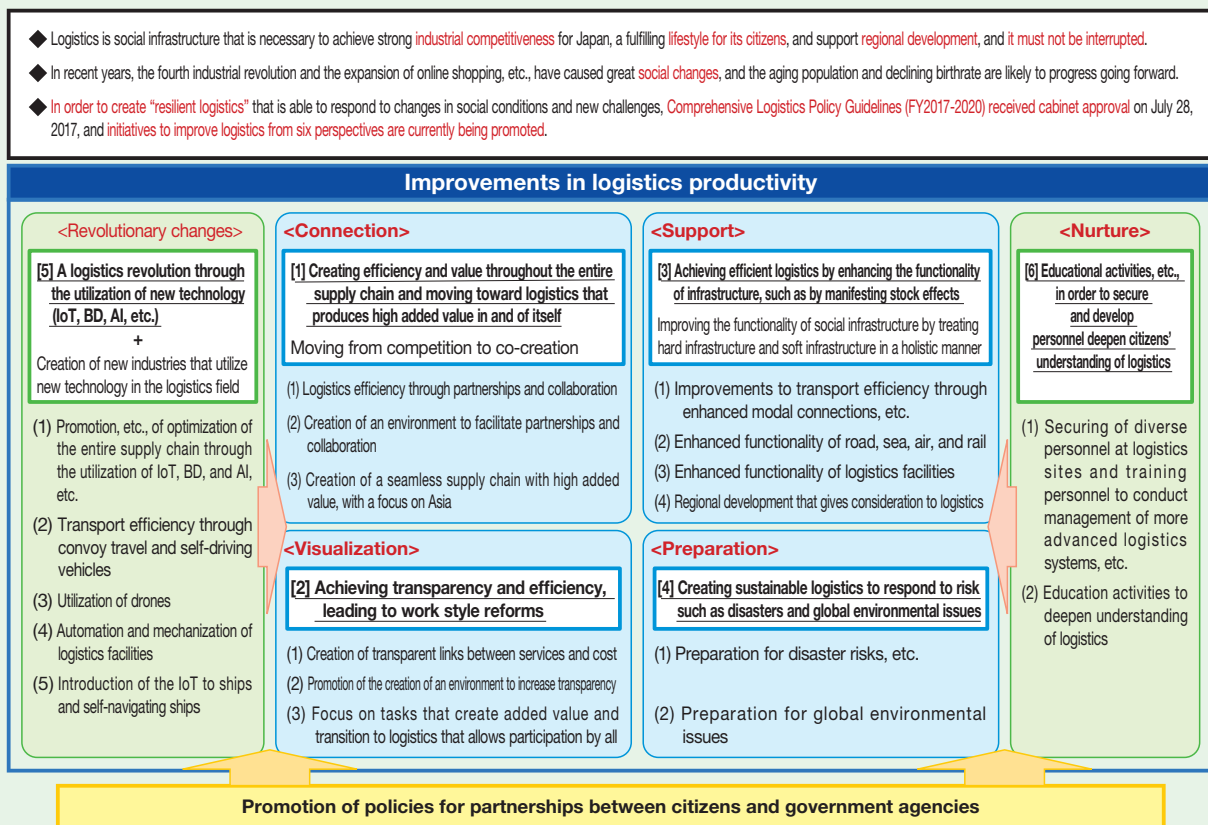
### New Comprehensive Logistics Policy Guidelines (FY2017-2020): Working to Achieve Resilient Logistics

In July 2017, new Comprehensive Logistics Policy Guidelines (FY2017-2020) received cabinet approval.

High-quality and low-cost logistics which was aimed for as part of the Comprehensive Logistics Policy Guidelines initially developed in 1997, has supported Japanese economic growth; however, issues relating to sustainability and stability in the logistics industry have become apparent, such as the aging and workforce and labor shortages, etc. In addition, increasing the productivity of logistics has become a pressing need, in order to respond to increasingly complicated needs such as small-lot high-frequency transport and tight time constraints, due to the rapid expansion of the EC market, etc.

These guidelines set out goals for future logistics policies from six perspectives, including work style reforms and utilization of new technology, in order to achieve resilient logistics to sustainably support Japanese economic growth and the lifestyles of citizens.

- (1) “Creating efficiency and value throughout the entire supply chain and moving toward logistics that produces high added value in and of itself” (=connection): Moving from competition to co-creation
- (2) “Achieving transparency and efficiency, leading to work style reforms” (=visualization)
- (3) “Achieving efficient logistics by enhancing the functionality of infrastructure, such as by manifesting stock effects” (=support): Improving the functionality of social infrastructure by treating hard infrastructure and soft infrastructure in a holistic manner
- (4) “Creating sustainable logistics to respond to risk such as disasters and global environmental issues” (=preparation)
- (5) “A logistics revolution through the utilization of new technology (IoT, big data, AI, etc.)” (=revolutionary change)
- (6) “Educational activities, etc., in order to secure and develop personnel deepen citizens’ understanding of logistics” (=nurture)



Source) MLIT

Through these initiatives, we aim for logistics that is able to respond to structural changes and new challenges, as well as catering to a range of different needs, while also achieving work style reforms for workers.

In January 2018, we developed the General Logistics Policy Promotion Program, which contains specific measures based on the guidelines, and relevant government agencies are promoting comprehensive and integrated policies based on the guidelines and this program.

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

### 1 Steady Promotion of the "New Tourism Strategy to Invigorate the Japanese Economy"

In March 2016 "Meeting of the Council for a Tourism Vision to Support the Future of Japan," chaired by the Prime Minister, drafted the "New Tourism Strategy to Invigorate the Japanese Economy," which aims to achieve new goals such as attracting 40 million international visitors to Japan and achieving tourism consumption by international visitors to Japan of 8 trillion yen in 2020.

We have formulated the "Tourism Vision Realization Program 2017" as a government action plan aimed at one year from now, in order to ensure the achievement of the goals laid out in the Tourism Vision in May 2017. Specifically, it includes policies based on the 3 themes of (1) "increasing the level of protection and utilization of tourist resources" such as by boldly opening attractive public facilities, (2) "achieving 'Enjoy My Japan'" through development of new tourism resources that are not limited to history or culture, and (3) "boldly reforming JNTO," such as by following separate strategies to promote Japan to each country.

Through initiatives based on the Tourism Vision, etc., in 2017, we achieved a 19.3% increase in international visitors to Japan at 28.69 million visitors, and a 17.8% increase in tourism consumption by international visitors to Japan at 4.4162

trillion yen, which were the highest figures ever. The number of international visitors has increased 3.5-fold and consumption has increased 4-fold over the most recent 5-year period.

Going forward, we will devote all of our resources to implementing more high-level tourism policies in order to achieve the 2020 goals of 40 million international visitors and 8 trillion yen of tourism consumption by international visitors to Japan, etc., listed in the Tourism Vision, and become a “world-class tourist destination”.

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

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

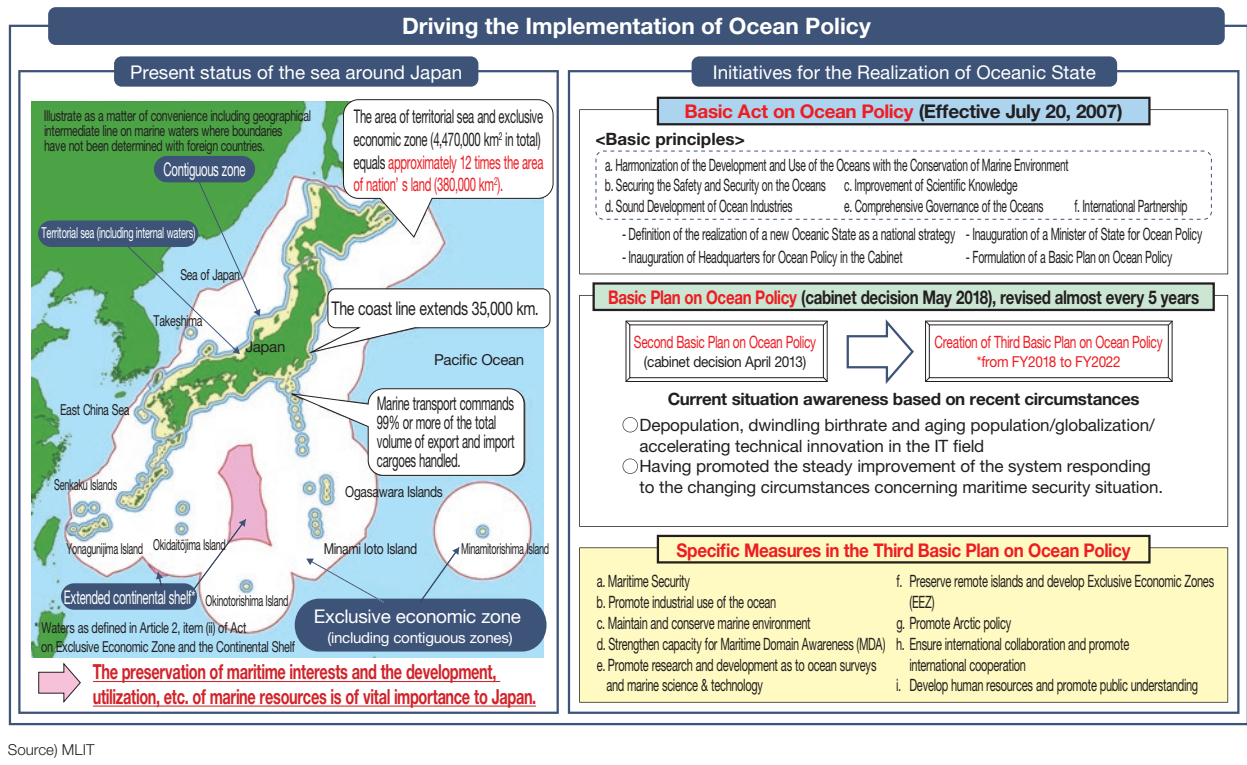
A nation surrounded by sea on its four sides, Japan recognizes the vast expanses of surrounding sea as a frontier, which urges the nation to grow into an “oceanic state” in its true sense. The Ministry of Land, Infrastructure, Transport and Tourism has been driving the implementation of ocean policies 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, we are promoting the development of strategic maritime safety and security systems, dealing with natural disasters originating in the ocean, conservation of Okinotorishima Island, preservation of the low-tide lines, and developing and managing bases of activities on specified remote islands.

In addition, Act on Special Measures concerning Conservation of Inhabited Remote Border Islands and Maintaining Local Communities on Specific Inhabited Remote Border Islands was enacted in April 2017, and we developed Basic Policy on Conservation of Inhabited Remote Border Islands and Maintaining Local Communities on Specific Inhabited Remote Border Islands in accordance with the Act. Based on the Act and the Policy, we are proceeding with development of ports, etc., that play an important role as operating bases on inhabited remote border islands. In a message to herald Marine Day in 2017, Prime Minister Abe announced the importance of all of Japan’s municipalities, etc., working together to further implement maritime education and the global coast guards working together to realize open and stable oceans. In light of these announcements, we are proceeding with creation of maritime education programs for primary and secondary school education, and implementing efforts to encourage occupational outlooks (career education) to ensure that Japan has the human resources to run maritime industries in the future. In September 2017, the world’s first Global Coast Guard Summit was held in Tokyo, which was participated in by heads of coast guards from countries and regions around the world.

Furthermore, a new Basic Plan on Ocean Policy received cabinet approval in May 2018, and MLIT will continue to steadily promote ocean policies under this plan.

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 Cabinet Secretariat for the Promotion of General Ocean Policy, the Marine Information Clearinghouse, which centrally gathers, manages, and provides sources of marine information, and the Marine Cadastre, which is a web service that overlays various natural information (sea bottom topography, ocean currents, water temperature, etc.) and social information (port areas, fishing rights areas, etc.) on maps, are being operated. Furthermore, based on "Efforts to Consolidate the Capability of Maritime Domain Awareness," which was adopted in July 2016 by the Headquarters for Ocean Policy, we are promoting the establishment of the Maritime Situation Indication System, which is an information system for aggregating, sharing and providing marine-related 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 Oki-Daito 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 National Ocean Policy Secretariat of Cabinet Office.

**(3) Conservation of Okinotorishima Island, Preservation of the Low-Tide Line and Developing the Base of Activities****(i) Conservation and Maintenance 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-2-6-3 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>>

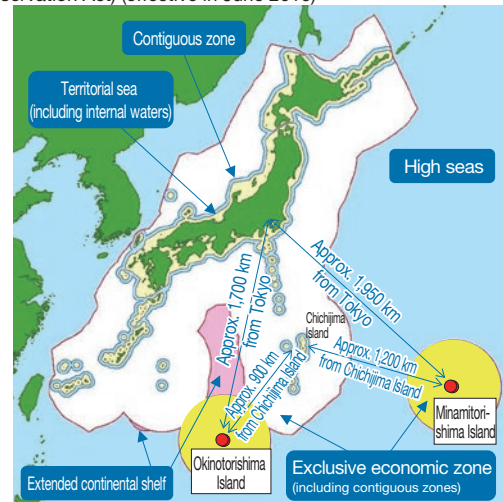
- In the waters surrounding the low-tide lines that form the basis for demarcating the limits of the exclusive economic zone and others, areas requiring conservation are specified as the low-water line preservation areas (185 areas) where activities are restricted.
- Satellite images, disaster prevention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

#### <<Developing and Managing Bases of Activities on 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. Increases in the size, armament, and number of Chinese government-owned vessels has been confirmed recently. We must remain vigilant, as there have been cases such as Chinese government-owned vessels repeatedly intruding into Japanese territorial waters following Chinese fishing vessels in August 2016, an object that appeared to be a drone being spotted above a Chinese government-owned vessel in Japanese territorial waters in May 2017, and Chinese naval vessels repeatedly entering Japan's contiguous zone in January 2018.

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.

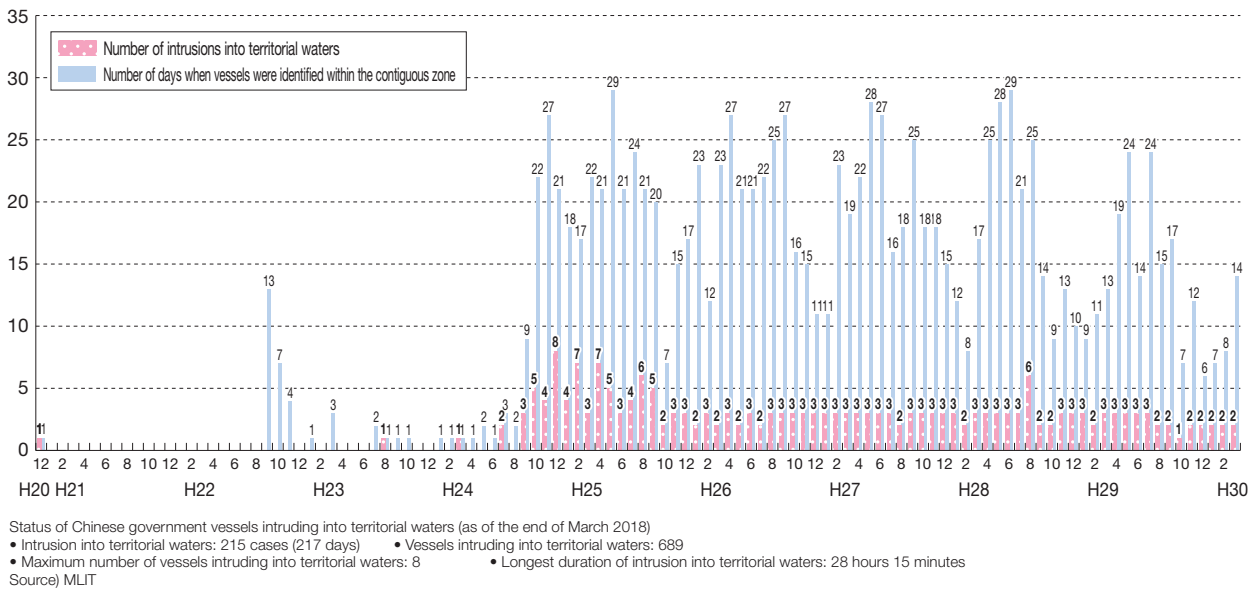
In addition, in Japan's exclusive economic zone around the East China Sea, surveys and other activities of foreign ocean survey vessels without Japan's consent were found. The Japan Coast Guard is taking appropriate measures on a case-by-case basis according to the situation, such as by requesting suspension 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 Boat Guarding the Territorial Sea



Source) MLIT

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



(2) Promotion of Strengthening the Maritime Security System

Based on the increasing severity of the situation in Japanese territorial waters, the Ministerial Council on the Strengthening of the Coast Guard System held on December 21, 2016. The Council adopted the Policy on Strengthening the Coast Guard System, which is based on the following five pillars, in order to enhance the maritime law enforcement, maritime monitoring and marine research capabilities. The Japan Coast Guard has been promoting enhancement to the maritime security system according to the policy.

- Strengthening of the security system of the territorial sea around the Senkaku Islands and the improvement of systems to respond to simultaneous occurrences of large-scale incidents (cases)
- Strengthening of the maritime monitoring systems capable of monitoring the vast sea area around Japan
- Strengthening of the response system for important cases such as countermeasures against terrorism and security of the

territorial sea in the remote islands and in areas of ocean far from the land

- Strengthening of the marine research system to protect our marine interests
- Improvement of the infrastructure such as training human resources to support the above systems

With regard to the recent status of Japanese territorial waters, Chinese official vessels in the waters surrounding the Senkaku Islands have been growing in size and armament. With regard to North Korea, it has been confirmed that there have been many North Korean fishing boats in the waters surrounding the Yamatotai in the Sea of Japan, and wooden boats supposed to be from Korean Peninsula have been successively drifting/drifted ashore.

Under these conditions of increasing severity, the second Ministerial Council on the Strengthening of the Coast Guard System was held on December 18, 2017. The Council confirmed that the necessity to promote the strengthening of the Coast Guard System, such as by increasing the number of large patrol vessels including patrol vessels that carry helicopters, new-model jets, and large hydrographic survey vessels, and securing necessary personnel. In addition, it also confirmed that the necessity to promote international collaboration for a free and open maritime order that is based on the rule of law.

Furthermore, the next Basic Plan on Ocean Policy newly included policies relating to maritime security, as well as policies based on the Policy on Strengthening the Coast Guard System and international collaboration, etc. Therefore, the Japan Coast Guard will implement these policies steadily.

### (3) Holding the Global Coast Guard Summit

In recent years, there have been environmental changes on a global scale, and the scale of natural disasters has increased due to climate change, while dramatic changes in the navigation environment have occurred in regions around the world. Furthermore, the social environment is changing on a global scale, and the threat of terrorism and extremism is growing in regions around the world, so the importance of cooperation between coast guards that operate on the front line is increasing.

The Japan Coast Guard jointly held the world's first Global Coast Guard Summit with the Nippon Foundation in September 2017, inviting heads of coast guards, etc., of 34 countries, one region, and three international organizations, in order for coast guards from around the world to tackle the issue of global climate change without being bound by regional borders.

Figure II-2-7-3

The Ministerial Council on the Strengthening the Maritime Security System



Source) MLIT

Figure II-2-7-4

Global Coast Guard Summit



Welcome reception



Japan Coast Guard and Nippon Foundation logos



Source) MLIT

The Summit involved presentations and discussions of leading initiatives under the three themes of “maritime safety and marine environmental protection,” “maritime security,” and “human resources development,” and the chairman’s summary confirmed the importance of strengthening cooperation and expanding dialog, etc., to overcome the issues facing the world today.

Furthermore, prior to the Summit, a welcome reception was held at the State Guest House in Akasaka, which was attended by Prime Minister Abe. Prime Minister Abe gave a speech in which he stated that coast guards play an important role in achieving maritime peace and safety, and that it is extremely valuable for coast guards around the world to form connections across the sea, deepen mutual understanding, and concentrate their capabilities to solve difficult issues.

## Section 8 Protecting Territorial Land and Territorial Waters Firmly

### 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 May 2017, the 2017 White Paper on Water Cycles, based on the Basic Act on Water Cycles, was approved by a Cabinet decision and reported to the Diet. The White Paper on Water Cycles stipulates measures to be undertaken by the government and reported to the Diet each year with regard to water cycles.

Part 1 contains simple explanations, including examples, such as the relationship between people and water, as well as recent initiatives and future developments relating to water cycles, etc., and it can be used as a teaching resource.

### 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, and we are promoting further dissemination of information and revitalization of activities.

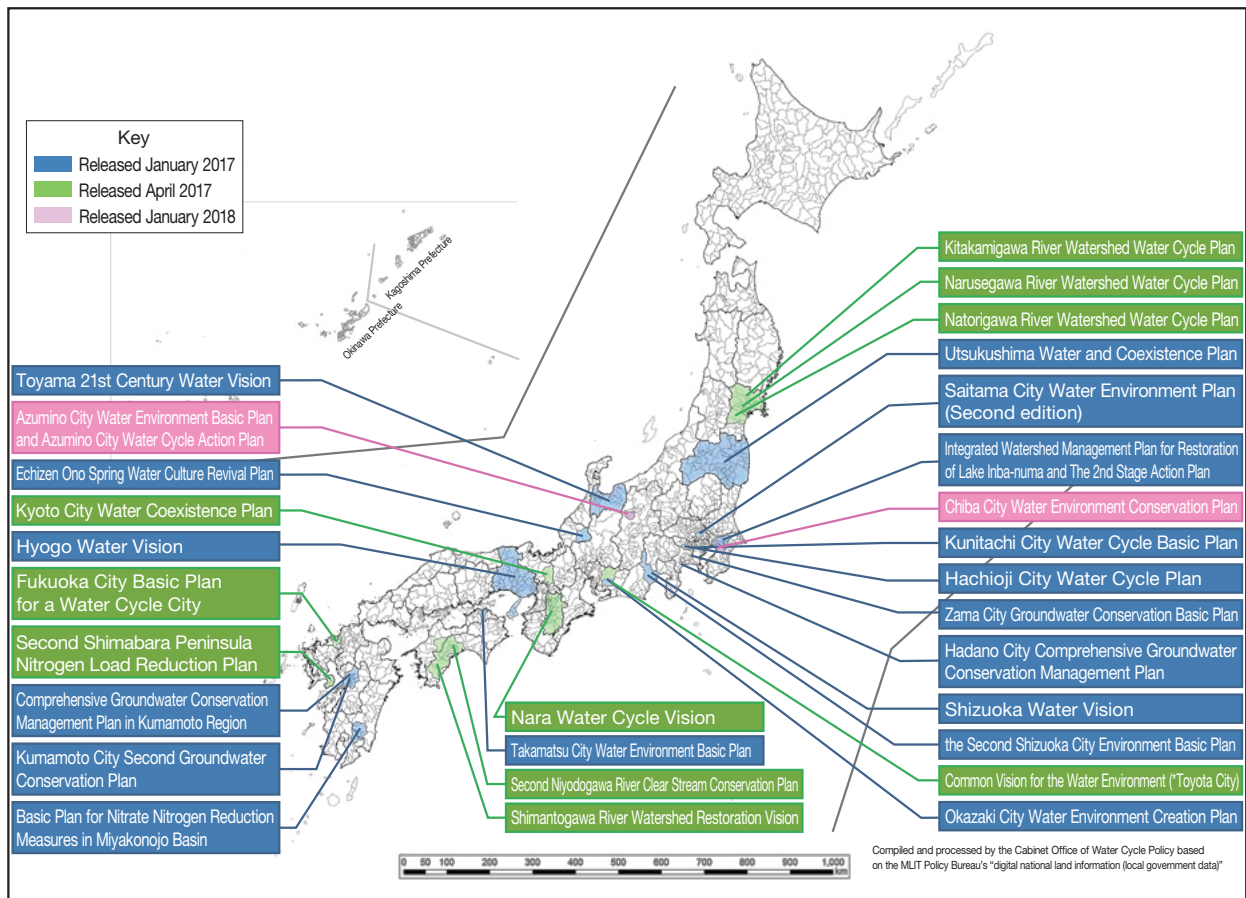
In FY2017, we implemented the “Model Study Regarding Visionary River Basin Management,” which comprised activity support and fact-finding surveys in collaboration with six groups, and released 10 plans in April 2017 and two plans in January 2018 (for a total of 29 plans as of March 2018) as River Basin Water Cycle Plans for various regions to work toward maintenance and recovery of healthy water cycles.

Furthermore, in March 2018, we established the River Basin Water Cycle Councils and released River Basin Management Procedures, which showcase River Basin Water Cycle Plan planning knowhow, and Examples of River Basin Management Initiatives, which showcases key points of river basin management initiatives using specific examples.

Furthermore, with the allocation of the General Grant for Social Infrastructure Maintenance from FY2018, which will be our first ever financial support, we will give a certain amount of consideration to whether maintenance plans include projects based on a River Basin Water Cycle Plan.

In addition, with regard to public awareness, the Cabinet Office of Water Cycle Policy held its first ever symposium (Water Cycle Symposium 2017) on November 24, 2017, which gathered suggestions to accelerate initiatives to strengthen cooperation between organizations and managers that conduct initiatives relating to water cycles throughout Japan.

Figure II-2-8-1 FY2017 River Basin Management Promotion Measures (Model Study/River Basin Water Cycle Plan)



Source) MLIT

## Section 9 Promotion of Policies to Increase Bicycle Use

### 1 Development of the Plan to Promote the Use of Bicycles Based on the Act on Promotion of Use of Bicycles

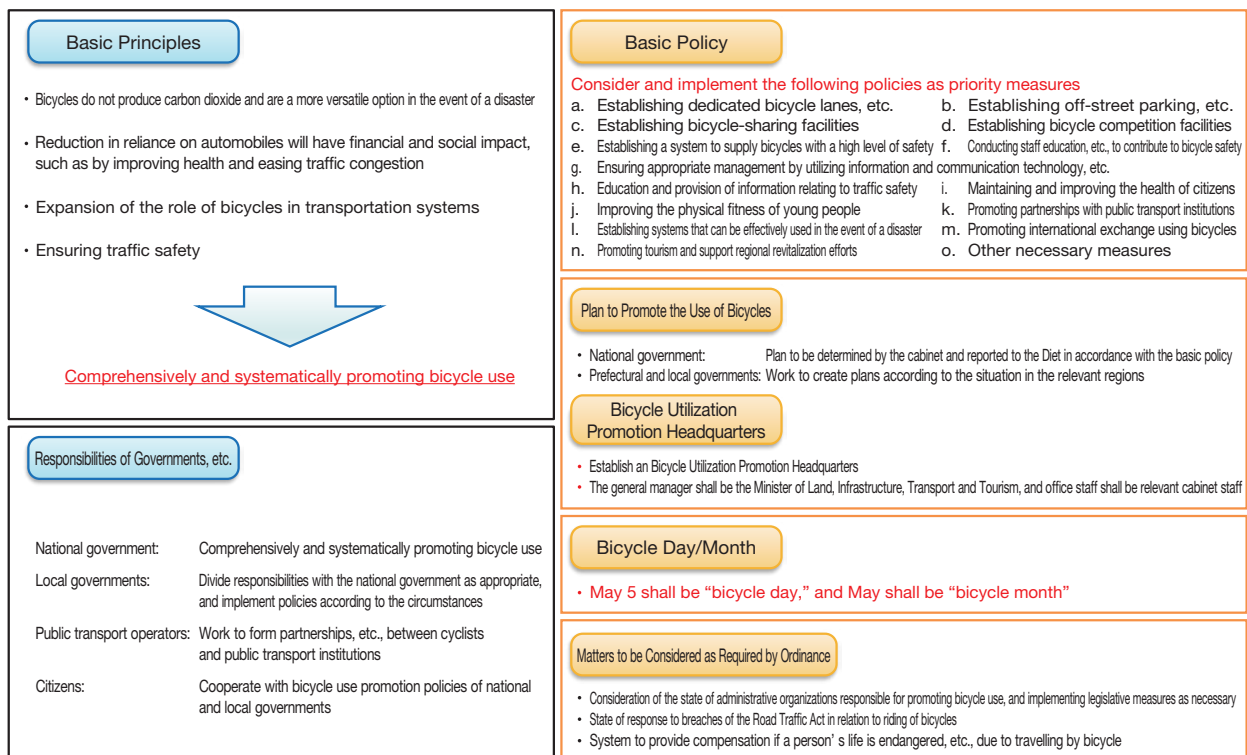
Bicycles are an environmentally-friendly means of transportation, and it is more important than ever to have policies to further promote their use in Japan, where the environment, traffic, and improving health, etc., are all important issues, as they provide transport and delivery in the event of a disaster, improve the health of citizens, and contribute to easing traffic congestion, etc.

To this end, the Act on the Promotion of Use of Bicycles (Act No. 113 of 2016) was enacted on May 1, 2017, and the Bicycle Utilization Promotion Headquarters was established at MLIT with the Minister as the general manager, to promote comprehensive and systematic planning as a government, with regard to the use of bicycles.

A basic principle under the Act is that we must promote the use of bicycles by expanding the role that bicycles play in transportation systems, while ensuring traffic safety, with the fundamental awareness that promotion of the use of bicycles contributes to the public good. Furthermore, there are 15 basic policies that must be given priority when considered and implemented, including the establishment of bicycle lanes, and bicycle-only times, etc.

Based on the Act, the Bicycle Utilization Promotion Headquarters is going to draft a Plan to Promote the Use of Bicycles, which includes targets and measures to be taken to promote bicycle use by the summer of 2018, in accordance with these basic policies.

Figure II-2-9-1 Outline of the Act on Promotion of Use of Bicycles (Promulgated on December 16, 2016, Enacted on May 1, 2017)



Source) MLIT

## 2 Creation of a Safe and Comfortable Environment for Bicycle Use

While the total number of traffic accidents has decreased by 40% over the last 10 years, the number of accidents involving both bicycle and pedestrian has decreased only by 10%, which calls for a creation of a safer and more comfortable bicycle usage environment. To this end, we published the Guidelines for Creating a Safe and Comfortable Cycling Environment in conjunction with the National Police Agency, and we are promoting creation of bicycle network plans, establishment of bicycle lanes in spaces that are generally utilized by automobiles, and effectively raising public awareness of complying with bicycle traffic rules.

## 3 Promotion of Cycling Tourism by Improving the Cycling Environment

Although regional development through cycling is a promising prospect to spread the effects of inbound tourism throughout Japan, the environment for receiving cyclists and the cycling environment are still insufficient. Therefore, we are promoting initiatives including selected routes that will serve as models in each region, creating a cycling environment through public-private partnership, and establishing an environment for receiving cyclists, in order to improve the environment for cyclists.

## Section 10 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.

From FY2016, ICT has been introduced to earthworks, and we have confirmed that this has reduced hours by approximately 30%. Since FY2017, we have extended ICT into the fields of paving and dredging, and we have been conducting trials in the field of bridges through i-Bridge. In FY2017, we undertook 815 earthworks projects, 79 paving projects, 24 dredging projects, and used CIM for 35 i-Bridge projects.

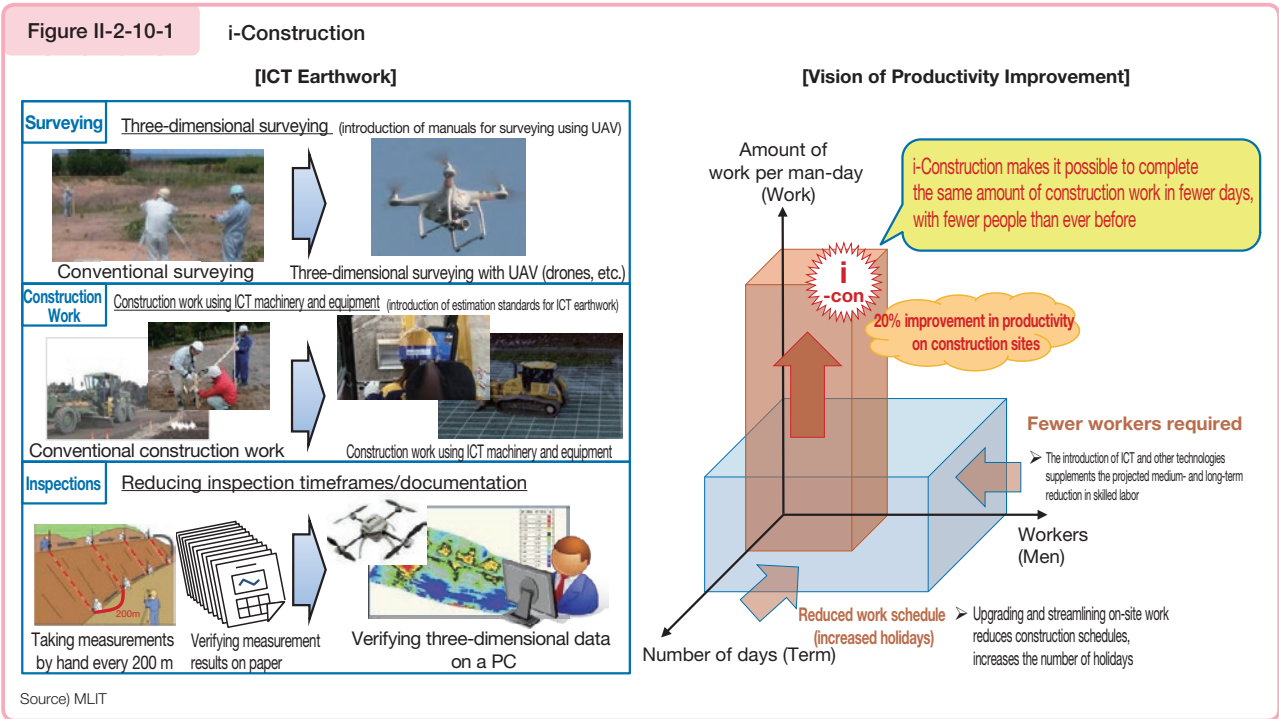
Furthermore we are working towards leveling construction time through standardization of concrete construction standards, and acts incurring treasury liability, etc. With regard to leveling, we confirmed that projects in the off-season, from April to June 2017, were up by a factor of 1.2 year on year.

With regard to utilization of three-dimensional data, which is important for the on-site introduction of new technology such as ICT and robots, we developed the 3D Data Utilization Policy in November last year, which indicates methods and future initiatives for the utilization of three-dimensional data at each stage of the construction process.

Additionally, the i-Construction Promotion Consortium, which was established in January last year through a collaboration between industry, academia and government and has over 800 members is working to accelerate the development and introduction of technology by matching on-site needs with technological seeds in five projects.

In addition, we instituted the i-Construction Award, which recognizes initiatives that have led to improved productivity at construction sites. The first award was granted to a total of 12 organizations (Minister of Land, Infrastructure, Transport and Tourism Award x 2 and Award for Excellence x 10) as an initiative to spread and promote i-Construction.

Going forward, we will further promote the initiatives we have promoted until now and engage in expanding the introduction of ICT to the maintenance and construction fields, expanding three-dimensional design for large-scale construction, etc., promoting the introduction of new technology to create innovation in public projects and providing comprehensive support to accelerate the initiatives of small and medium sized businesses. We will also further extend i-Construction initiatives to create attractive construction sites that are conducive to participation in work by young and female workers.



## 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 (Public Works Quality Assurance Act), the Act for Promoting Proper Tendering and Contracting for Public Works (Proper 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 Public Works 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 Public Works 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 orderers” 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-2-10-2 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>➤ 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>➤ 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, and MLIT has been using every opportunity to consider options for the prompt introduction of the low bid price survey system or the lowest price limit system at regional public organizations that have not yet introduced them. As a result, the number of organizations that has not yet introduced these systems has reduced from 181 as of March 2015 to 126 as of March 2017.



**(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.**

We are steadily promoting actively leveraging the multi-year budget system, incorporating and announcing order outlooks on a regional basis, setting appropriate construction work schedules, and using systems that allow leeway. We are working to promote further leveling of construction periods, etc., such as by revising and disseminating The ABCs of Leading Cases of Leveling, which is a collection of forward-thinking examples of efforts by local governments, in March 2017.

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

New additions to the Public Works Quality Assurance Act include the selection and utilization of various 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**

With regard to initiatives to contribute to assuring quality of public works, etc., MLIT is working to share information and achieve further coordination between orderers through the Regional Council of Orderers, the MLIT Committee of Ordering Institutions for Public Works, and the Regional Committee on Public Works Contracts, etc. In addition, in the public construction works sector, we are working toward the uptake of the “Ideal State of Orderers in Public Agency Facility Improvement,” which was released by the Panel on Infrastructure Development in January 2017, and Recommendations and Explanations, etc., which was developed in June 2017 at local government offices and the like based on the “responsibilities of orderers” set out in the Quality Assurance Act.

**Section 11 Forming a New Phase of Relationships between the Central and Local Governments and Private Sectors****1 Promoting Public-Private Partnerships, etc.**

In order to promote the formation of public-private partnerships (PPP/PFI), MLIT provides support to local governments, etc., and facilitates the formation of forums for industry-academia-finance-government discussions (regional platforms).

In FY2017, we adopted 25 pioneering public-private partnership projects, including considering rejuvenation and revitalization of city parks through the introduction of Park-PFI, etc.

In addition, within regional platforms established in each of the nine blocks throughout Japan, we are conducting practical training, etc., for the sounding of specific projects and acquisition of knowhow through public private dialogue, and we supported 31 local governments to create local government platforms.

## Section 12 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 FY2017, (i) 13 policy objectives/44 measure goals/141 performance indicators, (ii) 4 themes, and (iii) 12 new measures were evaluated by the respective systems<sup>Note</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 15 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. In addition, 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.

Furthermore, in FY2017, we revised the business evaluation procedures, such as flexibly conducting reevaluation, having confirmed the progress of the project in a timely and appropriate manner.

### 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

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

encouraging the participation of various entities, including local residents, in the process.

## Section 13 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. In addition, the Games belong not only to Tokyo, but to the whole of Japan, and MLIT will promote initiatives to lure foreign visitors into every little locality of Japan to create vibrant regional areas.

Specifically, MLIT will work on such measures as the development of road transportation infrastructure, enhancement of the functionality of Tokyo's airports, which are Japan's gateway, enhancement of barrier-free measures, development of an environment for receiving foreign travelers that includes multi-language information signs/maps and free public wireless LAN, strategies to combat heat for athletes and tourists through greening of roadsides and environmentally-friendly paving, etc., 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, in coordination with interested parties, including the Games Committee and Tokyo.