

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

Taking the “Grand Design of National Spatial Development Toward 2050”, published by the MLIT in July 2014, 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 new value by generating active movements of people, goods, money, and information between regions (convection) by refining regional individualities that are varied in a society whose population is in serious decline. Also, as national and regional structures for creating convection, plans were laid out for the formation of compactness and of networks that connect compact regions capable of providing various services necessary for everyday life with traffic and telecommunications networks. These efforts should contribute to the realization of a balanced development of national land that is suitable in the coming age and to 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 Plans (prefectural and municipal plans) continue 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 at the same time (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 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 that indicates courses of action for systematic maintenance and replacement, etc.

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

At present, according to the action plan, managers of each facility conduct inspections 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.

The 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.

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 ^{Note 1} (2 m long or longer)] | Approx. 25% | Approx. 39% | Approx. 63% |
| Tunnels [about 11,000 tunnels ^{Note 2}] | Approx. 20% | Approx. 27% | Approx. 42% |
| River management facilities (such as water gates) [about 10,000 facilities ^{Note 3}] | Approx. 32% | Approx. 42% | Approx. 62% |
| Sewerage pipes [Total distance: approx. 470,000 km ^{Note 4}] | Approx. 4% | Approx. 8% | Approx. 21% |
| Port and harbor quays [Approx. 5,000 facilities ^{Note 5} (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)

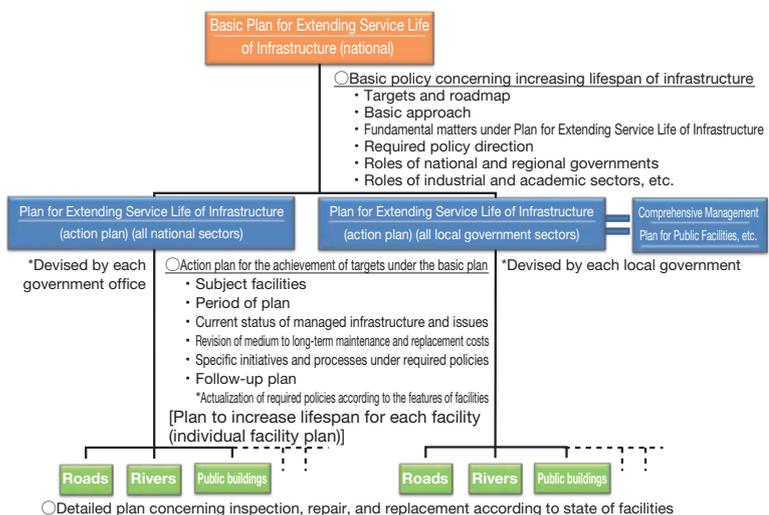
Note 3: State-managed facilities only, including approximately 1,000 facilities whose year of initial construction is unknown. (Since records generally exist for facilities built within the last 50 years, facilities whose year of initial construction is unknown are sorted out as being approximately 50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



(2) Development and Expansion of the Maintenance Industry

With regard to how social infrastructures should be maintained and replaced in the future, steady progress is being made based on a 2013 report by the Social Infrastructures Maintenance Strategy Sub-committee under the Infrastructure Development Council and the Traffic Policy Council. Concerning 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 a “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 “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.

A third meeting of the Social Infrastructures Maintenance Strategy Sub-committee was held after FY2017, and in 2018, it laid out urgent measures to be taken within the next five years for systematic maintenance and replacement, the concept of “Infrastructure Maintenance 2.0,” which is a maintenance format for new technology and types of data use, and directions for efforts for proactive preventative maintenance in coordination among all fields under the jurisdiction of the MLIT. The MLIT also published projections of maintenance and replacement costs for social infrastructure in the fields under the jurisdiction of the MLIT for the next 30 years.

In addition, in an effort to take advantage of technology and know-how from various industries, while striving to cultivate and revitalize the maintenance industry, activities are now well underway in each region, with the establishment of regional forums in 10 regions across the country in 2018 under the Japan Congress for Infrastructure Management established in 2016. Also, the Committee on New Introduction of Infrastructure Maintenance Technology and Systems was formed in February 2019 to promote the introduction of new technology used at the Japan Congress.

Furthermore, in August 2018, we held the second presentation ceremony of the Infrastructure Management Award, which was created in 2017 to recognize outstanding efforts and excellent technical development regarding infrastructure maintenance, and we exhibited good case examples nationwide.

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.

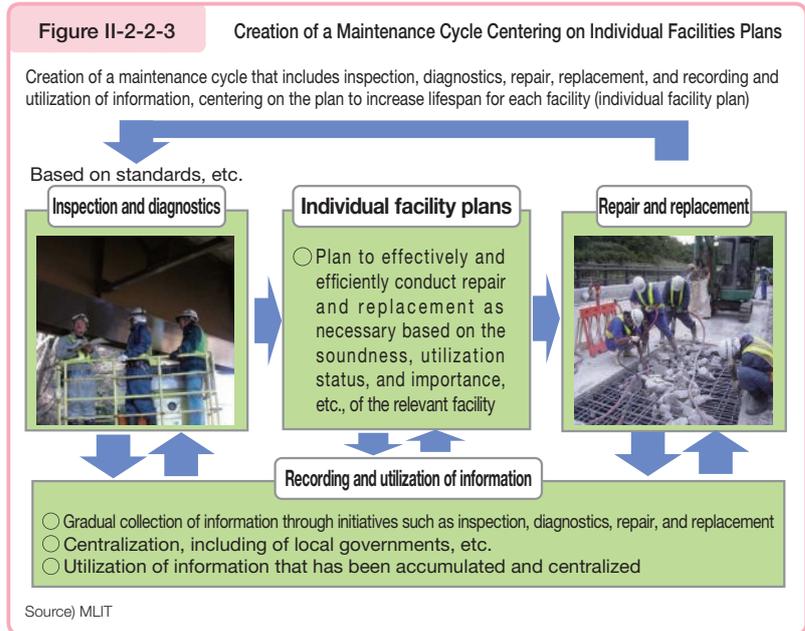
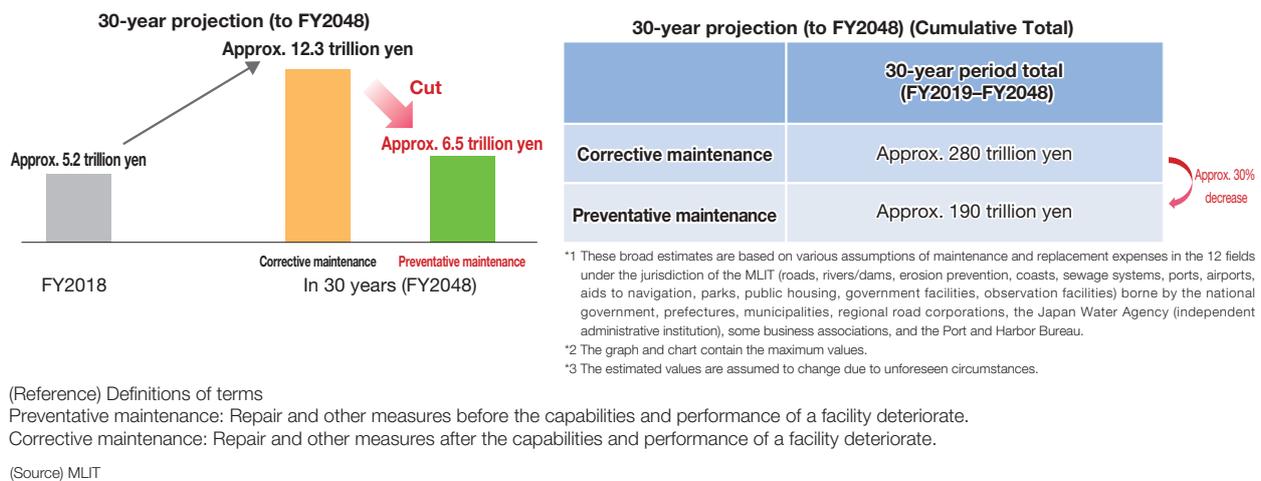


Figure II-2-2-4 Estimation Results for Future Maintenance and Replacement Expenses



(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 conducted field verification of monitoring technologies and finalized the formulation of challenges to their introduction and measures to overcome them at the Committee for Exploring and Promoting Usage of Social Infrastructure Monitoring Technologies.

(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 infrastructure, (iii) battered countryside in association with 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 the systematic implementation of social infrastructure development and securing and developing personnel to conduct it.

Furthermore, in order to develop social infrastructure 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 investigations and deliberations with regard to methods of identifying and “vi-

ualizing” 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)

The MLIT began 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 store openings, with hopes of contributing to attracting greater private investment and promoting regional revitalization. In FY2018, we conducted studies necessary for the creation of an Infrastructure Future Map (Nationwide Edition) (tentative name), based on such factors as the status of use of the Infrastructure Future Map Kamaishi (Trial Edition), which uses Kamaishi City, Iwate Prefecture, as a model.

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

In addition to being able to check information on scheduled maintenance for infrastructure listed on the website using maps, it is possible to overlay various information using the 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

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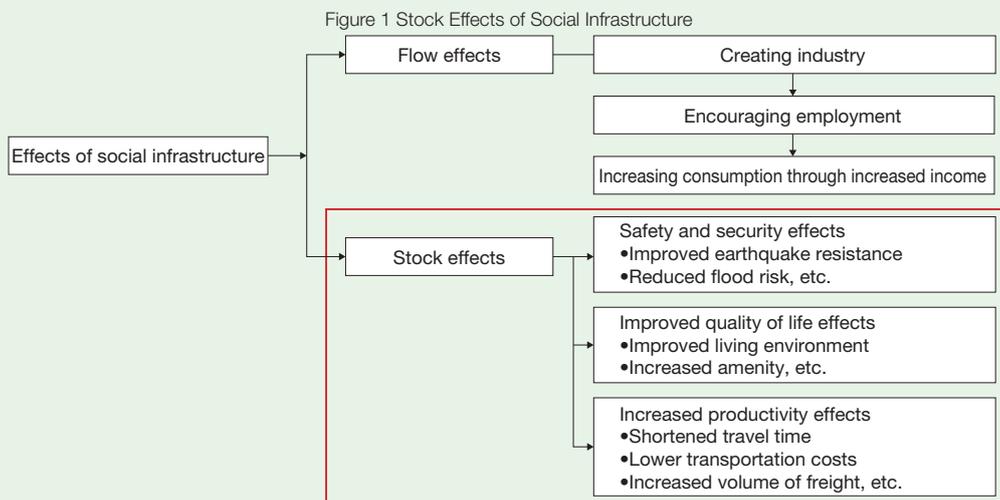
Management of social infrastructure has flow effects and stock effects. Flow effects involve creation of employment and other economic activities, invigorating the economy for a short period through public investment in the projects. On the other hand, stock effects are ongoing effects that are seen 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 “increased productivity effects” of society by shortening travel time, etc. (Figure 1).

An example of stock effects includes a reduction of travel time from Kuki Shiraoka JCT to Narita Airport (a hub for the flow of goods and people), through the creation of the Ken-O Expressway by up to approximately 30 minutes. This resulted in an increased number of large-scale logistics facilities established along the route from 7 locations in 2013 to 30 locations in 2018 (Figure 2), which helped improve logistics efficiency.

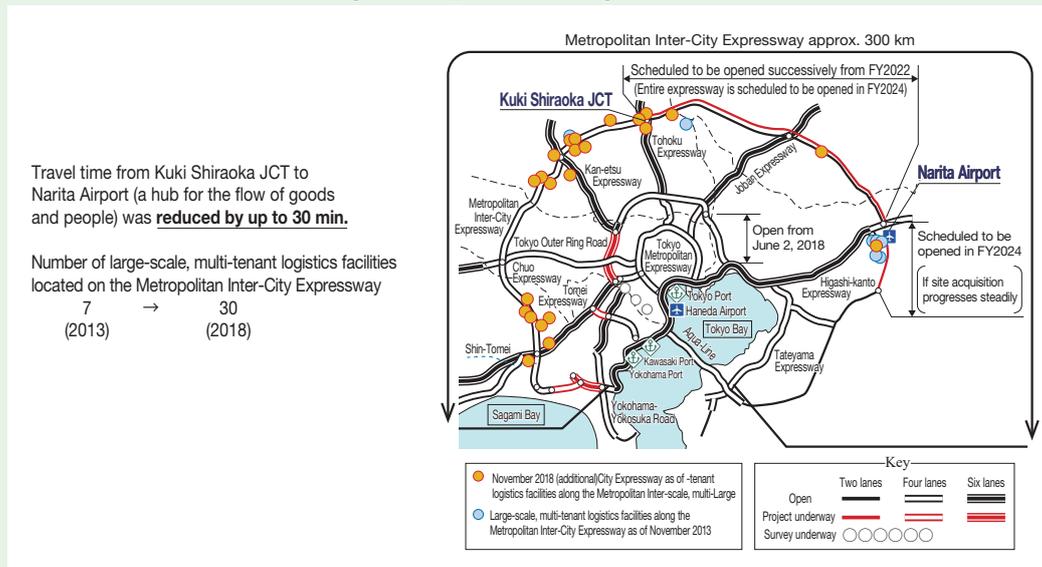
Even though Japan’s population is shrinking, the creation of social infrastructure that maximizes stock effects is needed, in order to ensure economic growth, safety, and security and achieve sustainable improvements in the quality of life of citizens.

For this reason, the 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 both infrastructural and non-infrastructural improvements to prevent and mitigate disasters.



Source) MLIT

Figure 2 Examples Demonstrating Stock Effects



Section 4 Promoting the Implementation of Transport Policy

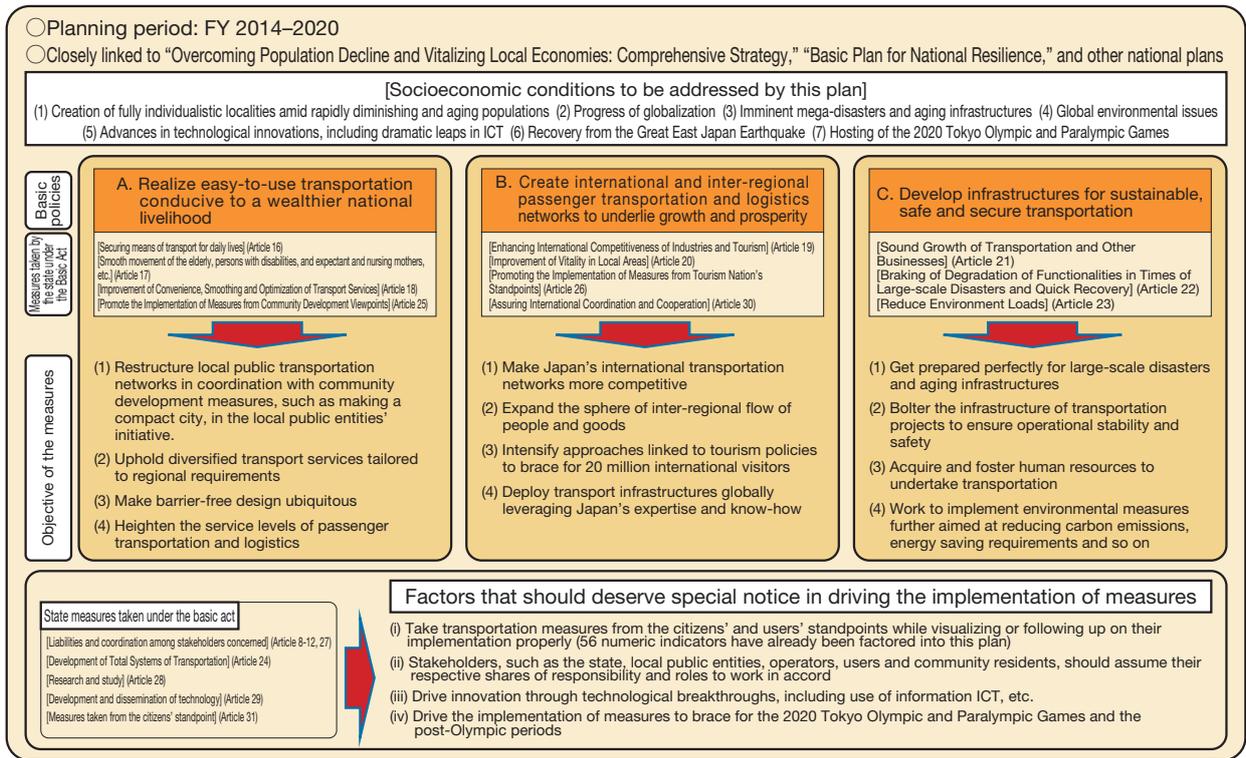
1 Developing Policies Based on the Basic Act on Transport Policy

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 June 2018, the 2018 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 reports 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.

Leveraging the Transport Policy White Paper, which is prepared annually, we will appropriately follow up on the Plan to ensure its steady progress.

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



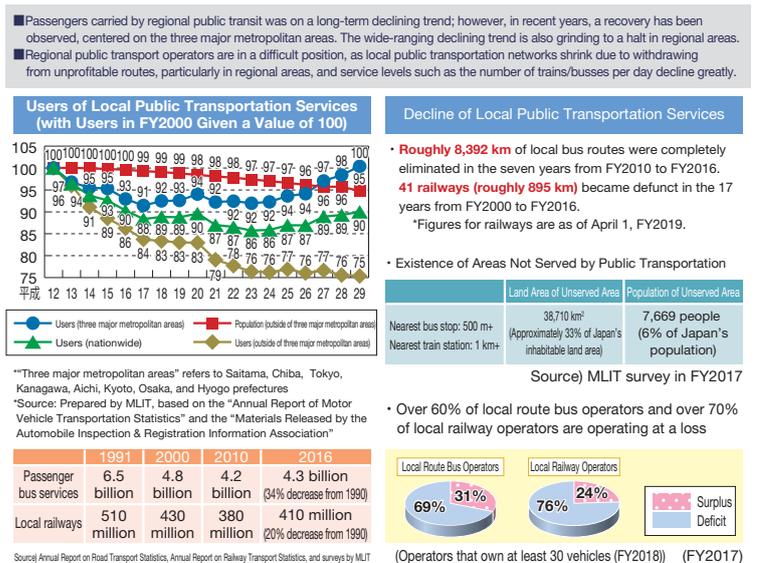
Source) MLIT

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 re-vice 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

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



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

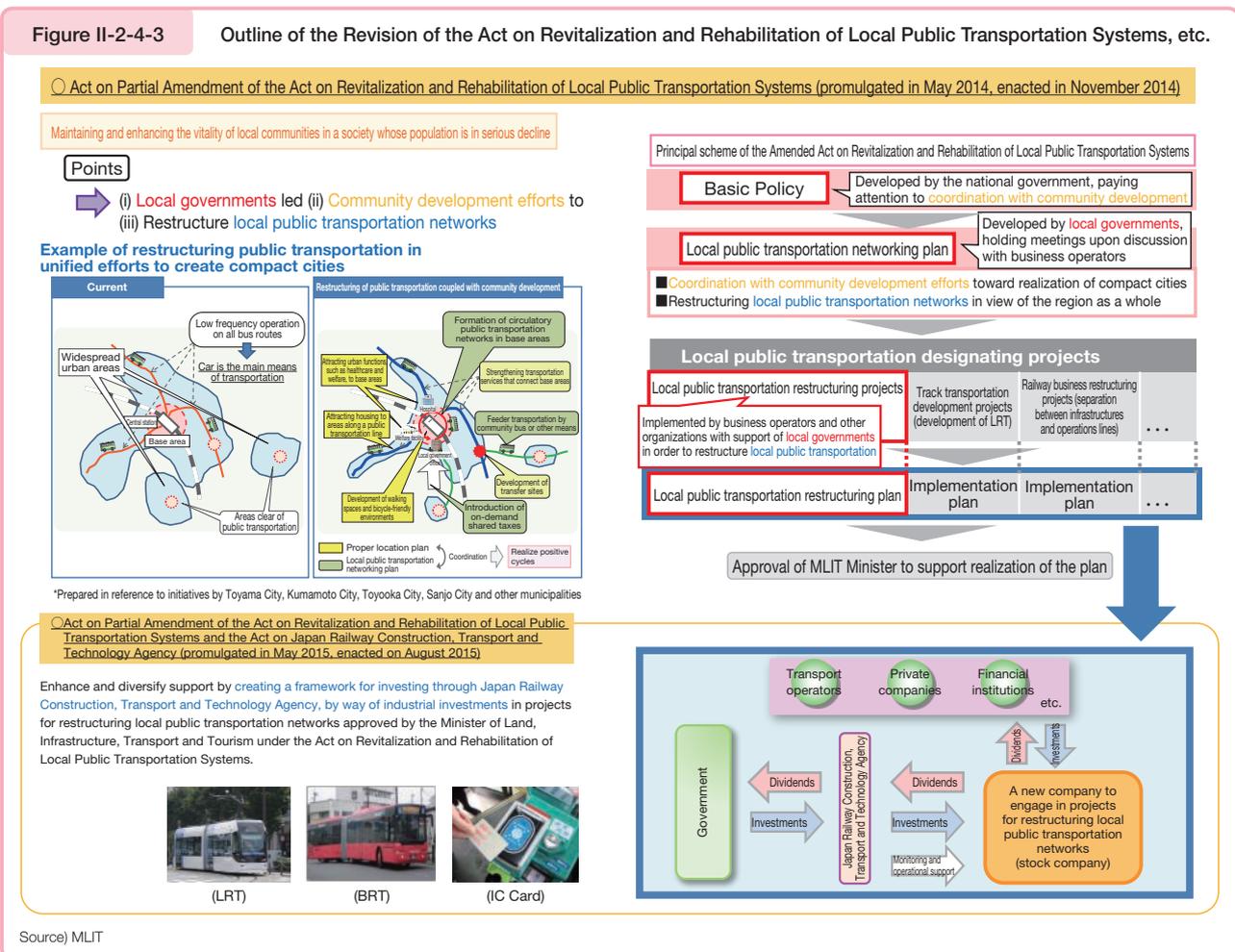
in agreement with relevant personnel, led by local governments in charge of regional administration with appropriate division of roles among relevant parties, and in collaboration with town development, tourism revitalization and other regional strategies.

Under the amended Act, 500 local public transportation networking plans were submitted to the Minister of Land, Infrastructure, Transport and Tourism by the end of FY 2018, and 33 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 diversify and enhance support.

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

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



3 Promotion of MaaS, a New Mobility Service

MaaS (Mobility as a Service)^{Note} is a new form of mobility that will solve various issues related to transportation in Japan, including crowding in cities, and maintaining and securing means of transportation in regional areas, through innovation on both the demand side and supply side of movement. In addition, MaaS also has the potential to produce an impact on the form of cities and on the maintenance of infrastructure through regional societies and economies and

Note Maas (Mobility as a Service): An online service providing such functions as search, booking, and settlement for a complete journey, from departure point to destination, all together. It also includes high added value through coordination with non-transport services, such as retail, tourism, and medical services.

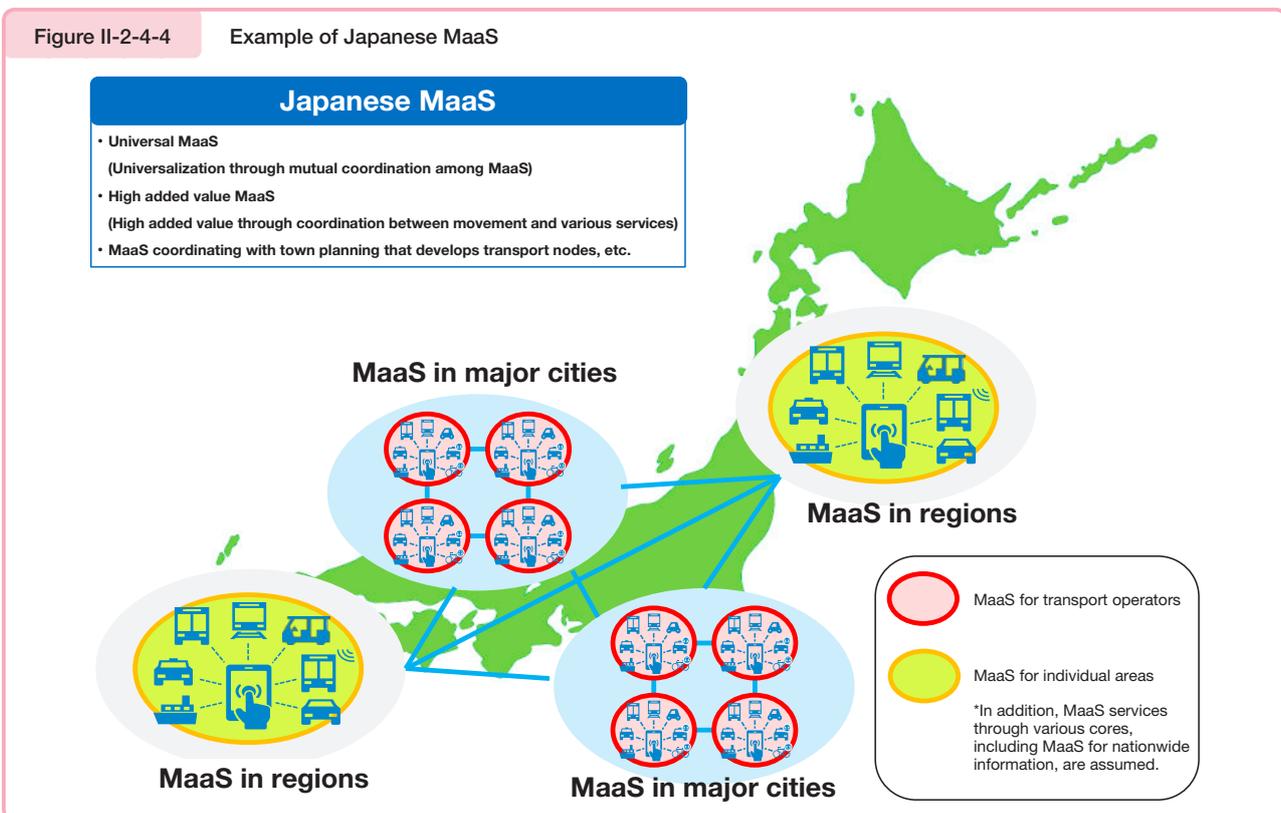
equipment in new cities.

In addition to MaaS, efforts toward the introduction of new mobility services, such as the utilization of AI and autonomous driving technology in buses and taxis, have been taken in recent years, mainly by transportation operators, including private sector businesses.

Under these circumstances, the MLIT set up the Working Group for New Mobility Services in Cities and Regional Areas and released its interim report in March 2019. The interim report sets out such initiatives as data coordination aimed at integrating various services into one-stop services, the achievement of fares and fees that meet the needs of service users in detail, and coordination with community development and infrastructure maintenance that enables seamless movement, toward realizing a Japanese MaaS that features universal services through mutual coordination among MaaS, high added value in movement through coordination among various services, and coordination with town planning that develops transport nodes, etc. The report also sets out directions suited to the individual characteristics of each city and rural area, etc.

Going forward, based on the interim report, we will provide support for the demonstration and verification of MaaS in areas throughout Japan, and promote the construction of models aimed at solving regional transportation issues, through the 2019 budget titled “New Mobility Service Promotion Business.”

Figure II-2-4-4 Example of Japanese MaaS



4 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 truck 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, and 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.

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, the 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 8 trillion yen in tourism consumption by international visitors to Japan in 2020. We have formulated the “Tourism Vision Realization Program 2018” as a government action plan aimed at one year from now, in order to ensure that the goals laid out in the Tourism Vision in June 2018 be achieved. Specifically, it includes policies based on the 3 themes of (1) “increasing the level of protection and utilization of tourism resources” by actively opening attractive public facilities, etc. (2) “achieving world-class travel services” by providing such services as free Wi-Fi on bullet trains (shinkansens), and (3) “boldly reforming JNTO and DMOs” through initiatives such as promoting global campaigns mainly in Europe, USA, and Australia and by strengthening consulting services for DMOs.^{Note} organizations which conduct marketing. In 2018, through initiatives based on the Tourism Vision, etc., we achieved 31.19 million international visitors to Japan, and 4.5189 trillion yen in international visitor consumption, which were the highest figures ever. The number of international visitors has increased 3.7-fold and consumption has increased 4.2-fold over the most recent 6-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 international visitor consumption, etc., as listed in the Tourism Vision, and become a “world-class tourist destination”.

Section 6 Driving the Implementation of Ocean Policy

1 Steadily Driving the Basic Plan on Ocean Policy

Japan, surrounded by oceans on all sides, aims to realize a new oceanic state in harmonization of the peaceful and positive development and use of the oceans with the conservation of the marine environment. The Ministry of Land, Infrastructure, Transport and Tourism, holding jurisdiction over various administrative areas related to the oceans, is

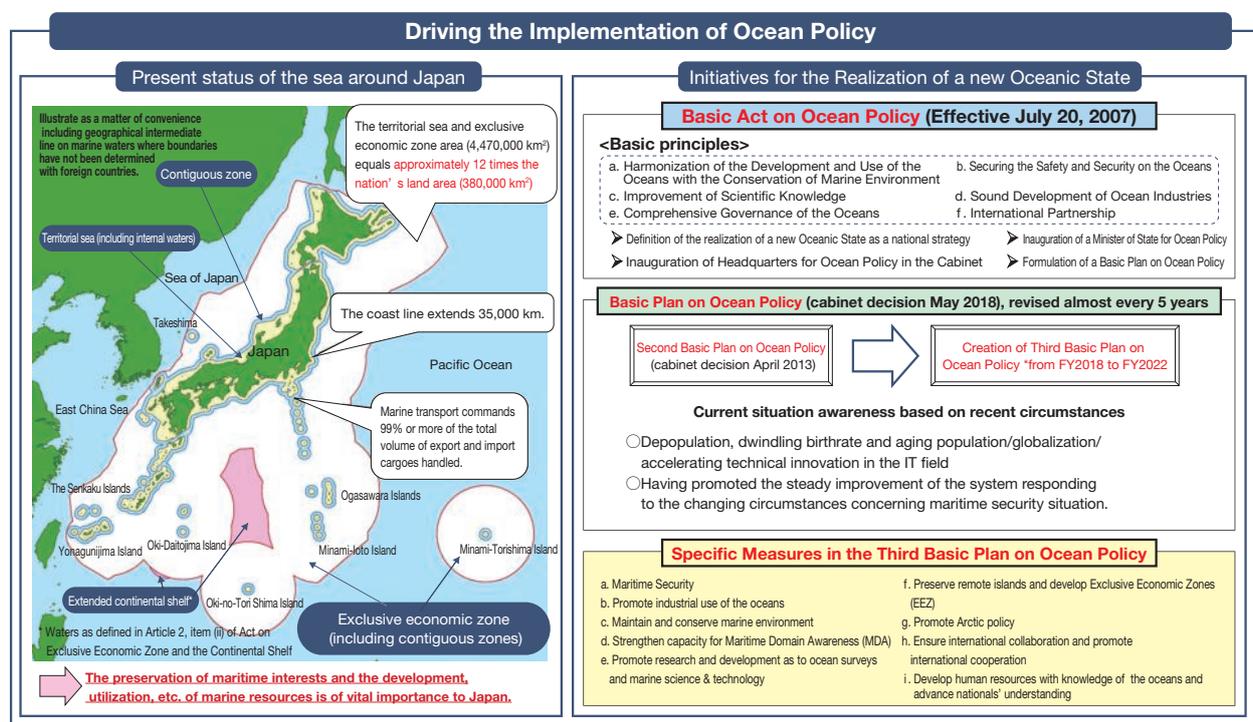
Note DMO: Destination Management/Marketing Organization

driving the implementation of ocean policies by working in collaboration with the relevant ministries and agencies under the “Basic Plan on Ocean Policy,” based on the “Basic Act on Ocean Policy.”

In recent years, our situations concerning the oceans are undergoing major changes, including the changes in the circumstances of marine security, the increase in the expectations for the development of marine resources and energy, the growing interest in conservation of the marine environment, as well as the dwindling birthrate, aging population and depopulation. Considering the changes, the “Third Basic Plan on Ocean Policy” was approved by the meeting of the Headquarters for Ocean Policy, followed by the Cabinet decision in May 2018. The “Challenge toward a New Maritime Nation” is positioned as the policy direction for the new “Basic Plan on Ocean Policy” and the basic policies of measures with regard to the oceans are determined as follows: (1) comprehensive marine security; (2) promotion of industrial use of the oceans; (3) maintenance and conservation of the marine environment; (4) improvement of scientific knowledge; (5) promotion of Arctic policy; (6) international collaboration and cooperation; and (7) development of human resources with knowledge of the oceans and advancement in nationals’ understanding. In a message on the occasion of Marine Day in 2018, Prime Minister Abe announced that Japan’s measures on the ocean are promoted based on the new “Basic Plan on Ocean Policy.”

Based on the new “Basic Plan on Ocean Policy,” the MLIT is promoting various measures such as the use of maritime renewable energy, the development and use of marine resources, the human resource development for marine development, the efficient marine transportation of energy resources, the promotion of marine industries, the development of strategic maritime safety and security systems including strengthening the capacity for Maritime Domain Awareness (MDA), the preparation in natural disasters originating in the ocean, the conservation of Oki-no-Tori Shima Island, the preservation of the low-tide lines and the development and maintenance of the bases of activities on specified remote islands.

Figure II-2-6-1 Driving the Implementation of Ocean Policy



Source) MLIT

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 sea areas lacking adequate survey data and the Japan Coast Guard has been conducting intensive ocean surveys in these sea areas including sea seafloor topography, crustal structure, seafloor sediment, and the low-water lines to strategically and continuously implement the development of basic information that will contribute to the safety of navigation, protecting our country's maritime 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, is 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 created the MDA Situational Indication Linkages (Umishiru) web service, which displays a variety of marine information held by governmental agencies overlaid on maps, and began operating it in April 2019.

(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-km² area exclusive economic zone, which exceeds the area of national land, so the observation and gathering of basic data, checkups of damages, and repairs are carried out. 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.

(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.

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.

<<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

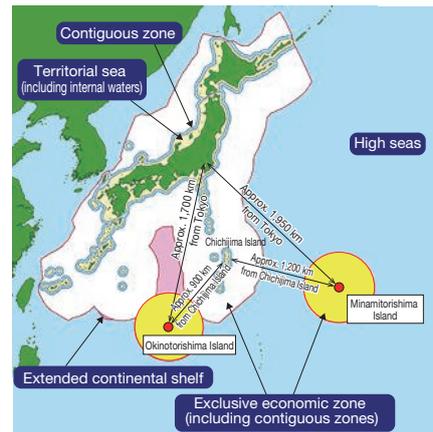
<Okinotorishima Island>



<Minamitorishima Island>



<Patrol and Status Survey>



<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

Column

Launch of MDA Situational Indication Linkages (Umishiru)

In FY2018, the Japan Coast Guard created the MDA Situational Indication Linkages (Umishiru) web service, which displays a variety of marine information held by governmental agencies overlaid on maps, and began operating it in April 2019.

In Japan, countermeasures against tsunami and other natural disasters and marine pollution have posed challenges in recent years. Moreover, regarding the sea, as the revitalization of the marine transportation, ship building, tourism, and fisheries industries, as well as the development of renewable energy, etc., will lead to Japan's growth and prosperity, it is important to promote marine development and use while working toward harmonization with conservation of the marine environment.

We can contribute to marine security that includes ascertaining the occurrence of and damage caused by disasters and accidents by broadly providing information on all areas around the world and real-time information to private sector businesses, governmental agencies, etc., through the MDA Situational Indication Linkages system. In addition, such information provision also enables us to contribute to promoting marine industrial activities, such as developing marine transportation, fisheries industry, and renewable energy, and to improving productivity in a wide range of marine industries.

The Japan Coast Guard will continue enhancing the capabilities of MDA Situational Indication Linkages based on the needs of the service users.

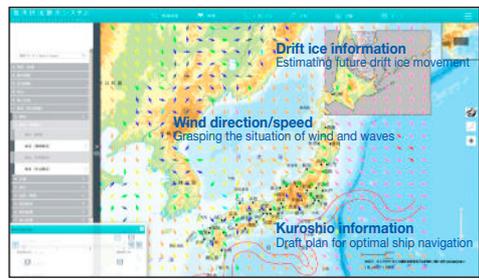
*Anyone can use MDA Situational Indication Linkages freely by visiting the URL below.
(URL <https://www.msil.go.jp/>)

Information with strong wide-area characteristics and real-time characteristics collected by various governmental ministries and agencies concerned

- Satellite images
- Raincloud radar information
- Basic information
- Social information
- Maritime information
- Marine disaster prevention information
- Amount of ships navigating
- Infrastructure information
- Environmental information
- Navigational warnings
- Renewable marine energy information
- Background images, etc.

➔

Launch of MDA Situational Indication Linkages (Umishiru)



The "Umi Shiru" logomark



～海の今を知るために～

Making it possible to effectively grasp the situation of the ocean at this very moment

Utilizing real-time information and information from artificial satellites in various settings.

Results (Example)

Contributing to optimization of marine distribution



(Example) Expectation for optimization of marine distribution by selecting efficient transport routes through overlaying real-time data on amount of ships navigating, marine conditions, etc.

Contributing to marine research, etc.



(Example) Contributing to marine research, etc. by utilizing ship-positional information, real-time wave information, weather information, and other information.

Contributing to natural disaster countermeasures.



(Example) Contributing to swift information provision in times of disaster, early navigation routes opening through utilization of weather and maritime information, information on flotsam, satellite photos, etc.

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 intruded into Japanese territorial waters. 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, and Chinese naval vessels and naval hospital vessels entering Japan's contiguous zone in January and June 2018, respectively. Also, we need to continue keeping a close eye on Chinese movements, as the China Coast Guard was incorporated into the People's Armed Police Force (PAP) in July 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.

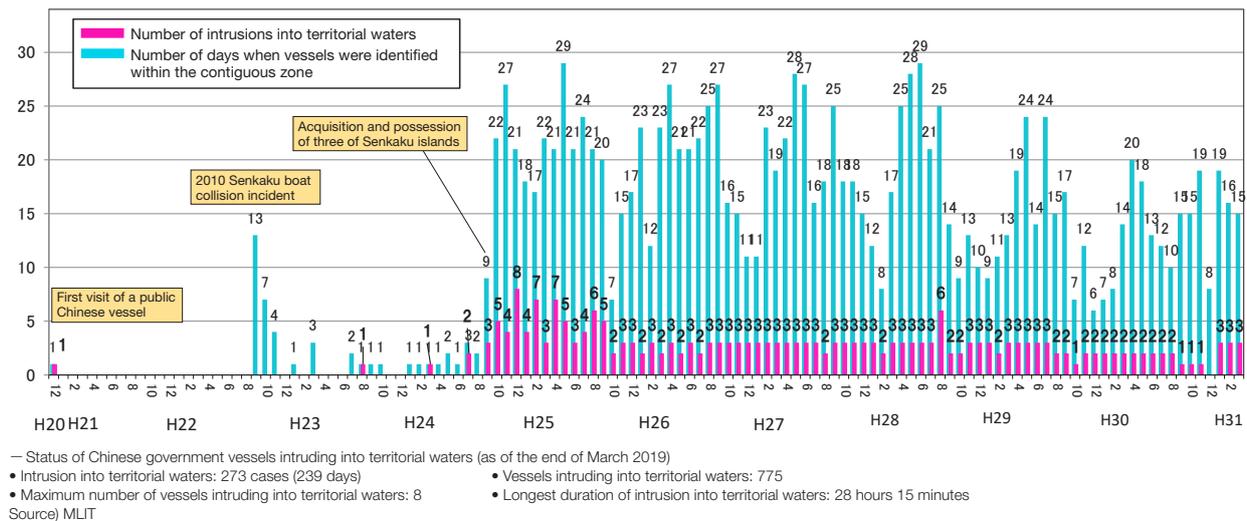
In addition, in Japan's exclusive economic zone around the East China Sea, surveys and other activities of foreign ocean survey vessels without Japan's consent were found. The Japan Coast Guard is taking appropriate measures on a case-by-case basis depending on the situation, such as by conducting surveillance patrols and requesting suspension of such activities by patrol vessels in coordination with relevant organizations. Furthermore, in addition to the operations of the many North Korean fishing vessels in the sea area near Yamato Bank being recognized as illegal, an increasing number of wooden ships that are thought to be from North Korea have drifted ashore on the coast of the Sea of Japan, and this has increased the seriousness of the situation surrounding 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

The third Ministerial Council on the Strengthening of the Coast Guard System was held on December 18, 2018. The Council confirmed progress in the ongoing enhancement of the Coast Guard System, achieved by increasing the number of large patrol vessels for the security of the territorial sea around the Senkaku Islands, new-model jets, and mid-size aircraft for monitoring the sea (survey aircraft), securing necessary personnel, and other initiatives. In addition, it also confirmed the importance of international maintenance and of strengthening the maritime order that is based on the rule of law through international coordination, aimed at the realization of a free and open Indo-Pacific region.

Furthermore, one large survey vessel and three large patrol vessels—including one with a helicopter, the development of which was promoted based on the Policy on Strengthening the Coast Guard System—were launched in March 2019. The large patrol vessels are scheduled to begin operation in FY2019.

Figure II-2-7-3

The Ministerial Council on the Strengthening the Maritime Security System



Source) MLIT

Figure II-2-7-4

A Ship Launching Ceremony



Source) MLIT

Column

Dealing strictly with North Korean fishing boats approaching the sea around Yamato Bank

In recent years, North Korean fishing boats have been operating illegally in Japan's exclusive economic zone around the Yamato Bank, and conditions are becoming threatening for Japanese fishing boats in the area.

In addition to patrol by aircraft, the Japan Coast Guard has deployed several patrol vessels since 2017, including large patrol vessels, in the sea area near the Yamato Bank to ensure the safety of Japanese fishing boats and to deal with North Korean fishing boats operating illegally.

The Japan Coast Guard conducted early deployment of patrol ships in the area from late May 2018, before Japan's squid fishing season (June), and dealt with more than 1,600 North Korean fishing boats in total that year by warning them to leave using steam whistles and loud-volume voice warnings. More than 500 of those boats in total were expelled from Japan's exclusive economic with water cannons and kept away from the sea area near the Yamato Bank.

The Japan Coast Guard will continue to deal with such boats strictly, in close cooperation with the authorities concerned, such as the Fisheries Agency.



Source: Japan Coast Guard



(3) Toward Realization of a Free and Open Indo-Pacific Region

The Japan Coast Guard is promoting initiatives for demonstrating a presence in the Indo-Pacific region and is increasing its support for enhancing the maritime security capacity of coastal states, aiming at realizing a free and open Indo-Pacific Ocean.

In September 2017, it held the first Coast Guard Global Summit in Tokyo, the first such summit in the world, with heads of coast guards, etc., of 38 countries and regions, and three international organizations participating. The Chairperson's summary mentioned efforts to strengthen coordination and expand dialog. As a follow-up meeting, the first Coast Guard Global Summit - Working Level Meeting was held jointly with the Nippon Foundation in Tokyo in November 2018, to enable various countries' coast guard agencies to concentrate efforts transcending regional frameworks and tackle global-scale environmental changes and the challenges such changes cause. Working-level delegates from coast guard agencies from 58 countries and eight international agencies gathered for the meeting. Discussions were held at the meeting under themes including "Coast Guard Global Human Resources Development," and understanding among working-level delegates was reached by beginning a detailed study on opportunities for education and research that connects the world and the development of information sharing. It was also decided at the meeting to hold a second Coast Guard Global Summit in Japan in 2019, in order to have the results of the Working Level Meeting recognized at a higher level and to put them into practice. Also in November 2018, one of the Japan Coast Guard's patrol vessels called into port in Darwin, Australia, while on patrol. In the same month, the Japan Coast Guard and the Australian Border Force signed a statement expressing their intention to cooperate in the field of marine security, and Prime Minister Abe had a meeting with Australian Prime Minister Scott Morrison, at which they exchanged a cooperation document.

Through these efforts, the Japan Coast Guard will continue working to maintain and strengthen free and open maritime order based on the rule of law.

Figure II-2-7-5

Signing of Statement Expressing Intention to Cooperate with the Australian Border Force



Source) MLIT

Figure II-2-7-6

Coast Guard Global Summit - Working Level Meeting



Source) MLIT

Section 8

Promoting Water Cycle Policy

1 Developing Policies Based on the Basic Act on Water - Cycle Policy

The Basic Plan on Water Cycle was adopted through a Cabinet decision on July 10, 2015, based on the Basic Act on Water - Cycle Policy, which was promulgated in April 2014 and enacted in July of the same year. The Basic Plan on Water Cycle sets out nine measures, including the 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 the water cycle. Relevant ministries and agencies are engaged in efforts based on this plan.

The White Paper on the Water Cycle stipulates measures to be undertaken by the government and is reported to the Diet each year with regard to the water cycle. This year, the White Paper contains a special section titled “Thinking about Effective Utilization of Water based on Lessons from the Water Shortage” and introduces examples of ways to use water intelligently and for a long time into the future. Part 1 contains simple explanations, including examples, such as the relationship between people and the water cycle, as well as the background to policies related to the water cycle and the status of related developments, 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 or 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.

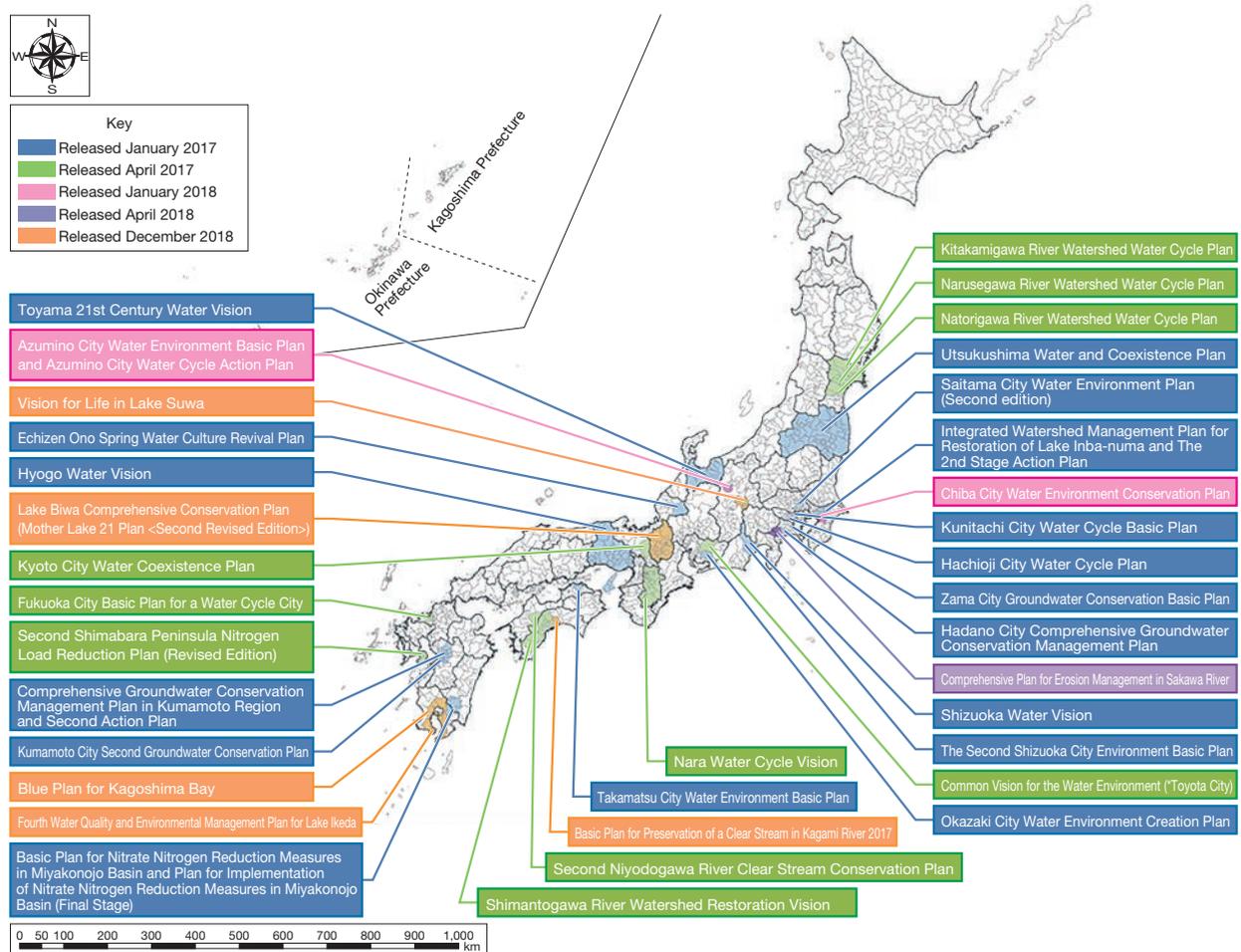
In FY2018, we implemented the “Model Study Regarding Visionary River Basin Management,” which comprised activity support and fact-finding surveys in collaboration with three groups, and released one plan in April 2018 and five plans in December 2018 (creating a total of 35 plans as of March 2019) as River Basin Water Cycle Plans for various regions to work toward maintenance or recovery of the sound water cycles.

Furthermore, in July 2018, we released Guideline on River Basin Management, which showcases knowhow from the establishment of the River Basin Water Cycle Councils and formulation of River Basin Water Cycle Plans, and Examples of River Basin Management Initiatives, which showcases key points of river basin management initiatives using specific examples.

Moreover, with the allocation of the General Grant for Social Infrastructure Maintenance from FY2018 as financial support, we are giving a certain amount of consideration to whether maintenance plans should include projects based on a River Basin Water Cycle Plan.

In addition, with regard to public awareness, following on from 2017, the Cabinet Office of Water Cycle Policy held a Water Cycle Symposium 2018 on December 10, 2018, to further spread initiatives related to water cycles throughout Japan, and we strove to create a water network that goes beyond individual regions and situations.

Figure II-2-8-1 Formulation and Release of the River Basin Water Cycle Plans



Source) MLIT

Section 9 Promotion of Policies to Increase Bicycle Use

1 Development of the Bicycle Use Promotion Plan Based on the Bicycle Use Promotion Act

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 Bicycle Use Promotion Act (Act No. 113 of 2016) was enacted on May 1, 2017, and based thereon, the Bicycle Use Promotion Plan was adopted through a Cabinet decision on June 8, 2018, as the foundation for promotion of bicycle use in Japan.

Based on the Plan, we are encouraging local governments to develop their own plans to promote the use of bicycles in order to form pleasant urban environments through expansion of the role that bicycles play in transportation. We are also engaged in efforts to promote the systematic construction of bicycle lanes that appropriately keep pedestrians, bicycles, and motor vehicles apart.

Figure II-2-9-1 Outline of Plan to Promote the Use of Bicycles (adopted through a Cabinet decision on June 8, 2018)

1. General Comments

(1) Positioning of Plan to Promote the Use of Bicycles
It is a basic plan for promoting the use of bicycles in Japan, formulated based on the Act on Promotion of Use of Bicycles.*

(2) Period of the Plan
Until FY2020, from a long-term perspective

(3) Current situation of bicycles and related challenges

*Act on Promotion of Use of Bicycles (introduced by a Diet member)
Established December 9, 2016
(Unanimous agreement by both houses of the Diet)
Came into force on May 1, 2017

2. Targets for Promotion of Bicycle Use and Measures that Should be Taken**Target 1 Forming pleasant urban environments by expanding the role of bicycles**

- Promoting the systematic construction of bicycle lanes
[Indicator] Number of local governments that have decided on a plan to promote the use of bicycles
[0 in FY2017 → target of 200 in FY2020]
[Indicator] Number of municipalities that have completed a bicycle network keeping pedestrians and bicycles apart in urban areas
[1 in FY2016 → target of 10 in FY2020]
- Securing bicycle lanes by promoting construction of cycle parking spaces off the street and control of illegal cycle parking
- Accelerating the spread of cycle sharing
[Indicator] Number of cycle ports installed [852 in FY2016] → target of 1,700 in FY2020
- Promoting construction of cycle parking spaces in response to areas' cycle parking needs
- Accelerating adoption of IoT for bicycles
- Constructing bicycle lanes in conjunction with restriction of through traffic on local roads and electric power pole removal

Target 2 Realizing a vigorous society of health and long life expectancy by promoting cycle sports

- Accelerating construction of cycle race facilities meeting international standards
- Creating an environment for safe cycling by utilizing public roads, parks, etc.
- Promoting public relations and awareness raising on health promotion using bicycles
- Accelerating commuting by bicycle
[Indicator] Share of bicycles used for commuting
[15.2% in FY2015 → target of 16.4% in FY2020]

Target 3 Becoming a tourism nation by promoting cycle tourism

- Attracting international conferences, international cycling tournaments, etc. to Japan
- Creating a world-class cycling environment by creating an environment for cycling, acceptance of cyclists, etc.
[Indicator] Number of model routes aimed at creation of an advanced cycling environment
[0 in FY2017 → target of 40 in FY2020]

Target 4 Realizing a safe and secure society with no bicycle accidents

- Accelerating the spread of very safe bicycles
[Indicator] Diffusion rate of bicycle safety-standards mark
[29.2% in FY2016 → target of 40% in FY2020]
[Indicator] Number of fatalities in cycling accidents*
[480 in FY2017 → target of a proportion of reduction in the number of cycling fatalities greater than the proportion of reduction in the total number of road accident fatalities in FY2020, during the implementation period of the 10th Traffic Safety Basic Plan]
*related to items 13.–17.
- Promoting public relations and awareness raising to accelerate bicycle inspections and maintenances
[Indicator] Number of qualified bicycle engineers*
[80,185 in FY2017 → target of 84,500 in FY2020]
*related to items 13. and 14.
- Focused implementation of public relations and awareness raising contributing to increased awareness of traffic safety, and of guidance and control
- Promoting holding of traffic safety classes at schools
[Indicator] Rate of schools providing guidance on traffic safety
[99.6% in FY2015 → target of 100% in FY2019]
- Accelerating systematic construction of bicycle lanes (reprint)
- Promoting use of bicycles during a disaster

3. Measures to be taken for promoting the use of bicycles

Sorting into a list measures to be taken by the national government during the implementation period of the Plan, for steadily implementation of measures

4. Matters necessary for comprehensive and systematic promotion of measures for promoting use of bicycles

- Coordination and cooperation with parties concerned
- Follow up and revision of the Plan
- Survey, research, public relations activities, etc.
- Measures concerning financial affairs
- Policies on future efforts for supplementary provisions
 - Giving consideration when necessary for dealing with violations of the Road Traffic Act, in light of the status of operation of the system for cyclist training courses
 - With regard to liability for bicycle accidents, increasing subscriptions to insurance through ordinances and regulations, and consideration of the need for a new liability security system.

Source) MLIT

2 Creation of a Safe and Comfortable Environment for Bicycle Use

While the total number of traffic accidents involving bicycles has halved over the last 10 years, the number of accidents involving both bicycles and pedestrians 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 the creation of bicycle network plans, establishing 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 have set model routes aimed at the development of an advanced cycling environment. In addition, through councils consisting of parties concerned, we are promoting cycle tourism by developing the cycling environment, establishing an environment for receiving cyclists, making cycling more appealing, and disseminating information.

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.

ICT has been introduced to earthworks since FY2016, and to paving and dredging since FY2017, and we have confirmed that this has reduced earthworks hours, for example, by more than 30%. Furthermore, since FY2018 we have been promoting the expansion of ICT introduction to the field of maintenance, including river dredging and inspections, and to the field of construction, including government building projects. In addition, we developed an environment that makes it easier to introduce ICT to municipalities and SMEs, such as by revising quantity surveying standards and dispatching experts to assist with construction ordered by municipalities.

Moreover, we are working toward leveling construction time through the optimization of concrete construction and the application of acts incurring treasury liability, etc. With regard to the leveling of construction time, we confirmed that projects in the off-season, from April to June FY2018, were up by approximately 5% year on year. Regarding optimization of concrete construction, we confirmed such effects as a 20% increase in the rate of concrete poured into frameworks per amount of time, and a 20% reduction in the number of workers required, through revising slump values, for example.

We have introduced three-dimensional Building Information Modeling and Civil Information Modeling (BIM/CIM) to bridge and dam, etc., construction since FY2012, and the number of cases of adoption is increasing steadily. In 2018, we decided to introduce the use of BIM/CIM to detailed designing of large-scale structures, in principle, and BIM/CIM was used for a total of 132 construction and design projects.

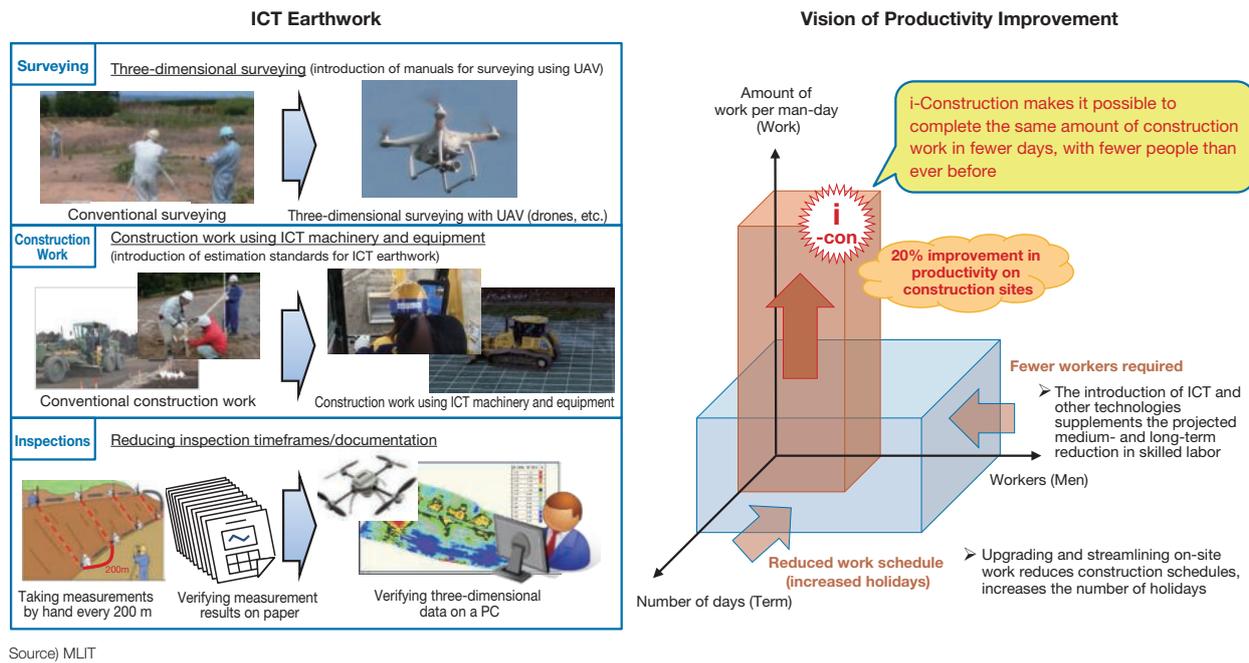
Expenses for surveys to promote introduction of new technology were included for the first time in the MLIT's initial FY2018 budget. The MLIT is utilizing the expenses in efforts for onsite verification of technology seeds and elemental technology not yet ready for practical application, testing and inspection of technology seeds, and onsite implementation of new technology. In addition, we promoted further productivity improvement at construction sites utilizing revolutionary technology, such as by launching 33 model projects introducing and utilizing revolutionary technology, including obtaining and using construction site data in real time by utilizing the budget for Public/Private R&D Investment Strategic Expansion Program (PRISM), under the Cabinet Office's jurisdiction.

Additionally, the i-Construction Promotion Consortium, which was established in January 2017 through a collaboration between industry, academia and government and has over 1,000 members, is working to accelerate the development and introduction of technology by expanding initiatives to match on-site needs with technological seeds to each branch of the Regional Development Bureau and other organizations.

In addition, regarding the i-Construction Award, which was created in FY2017 to recognize initiatives that have led to improved productivity at construction sites, we have been taking measures to further spread and promote i-Construction, such as by making construction ordered by local governments, initiatives taken by members of the i-Construction Promotion Consortium, and other projects eligible for awards.

Going forward, considering 2019 as the year for generating a productivity revolution when it comes to road works, for example, we will continue expanding the introduction of ICT to ground-improvement works and incidental structure works, not just some construction works such as earthworks and paving works, and develop standards to enable consistent utilization of new technology, including three-dimensional data on whole construction projects and ICT. We will also continue accomplishing the initiatives we have taken so far to connect construction sites with three-dimensional data, such as by setting up model offices to lead i-Construction initiatives utilizing three-dimensional data, and accelerating the advanced use of three-dimensional data in every stage of construction, from design to maintenance, and the introduction of ICT and other new technology.

Figure II-2-10-1 i-Construction



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.

(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 have not yet introduced these systems has decreased from 126 as of March 2017 to 109 as of August 2018.

(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 developed the Guidelines on Design Changes to facilitate design change work, and is requesting local governments to also develop such guidelines.

(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 May 2018.

(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 increasing understanding of the role of orderers through such efforts as encouraging local government offices and the like to uptake 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 revised in October 2018 based on the “responsibilities of orderers” set out in the Quality Assurance Act.

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"> ➢ The Guidelines were put together in a systematic manner as common guidelines for orderers so that they can operate order administration appropriately and efficiently. ➢ 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. | |
| Mandatory action items | Action items to work on |
| <p>Appropriate setting of predetermined prices</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>Selection and use of tendering and contracting methods according to the characteristics and other factors of works</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>Elimination of <i>Bugiri</i> practice</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>Leveling of order and construction periods</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>Ensuring setting up and use of survey standards on low bid prices or the lowest price limits</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>Use of quotations</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>Appropriate design changes</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>Expediting information sharing and discussions with contractors</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>Establishment of a system for support among orderers</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>Confirm and evaluate construction status after elapse of specified periods after completion</p> <p>Implement confirmation and evaluation of construction status as necessary after elapse of specified periods after completion.</p> |

Source) MLIT

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), the MLIT provides support to local governments, etc., and facilitates the formation of forums for industry-academia-finance-government discussions (regional platforms).

In FY2018, we adopted 27 pioneering public-private partnership projects, which included feasibility research for the introduction of PPP/PFI concession schemes to toll roads, sewage lines, and airports projects. We also began providing support for local governments that are considering comprehensive, cross-field entrustment to the private sector, in order to form model PPP/PFI at local governments in areas with a low population. In addition, within regional platforms established in each of the nine blocks throughout Japan, we provided practical training, etc., for sounding out specific projects and acquiring knowhow through public private dialogue, and we supported 27 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 analyses 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 FY2018, (i) 141 performance indicators were monitored, and (ii) 5 themes and (iii) 21 new measures were evaluated, by the respective systems^{Note}. 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.

3 Promoting Administrative Management Open to the Public, and Interactive Administration**(1) MLIT Hotline Station**

Promoting the land, infrastructure, transport, and tourism administration that has a very close bearing on national living, it would be essential to gain a broad insight into people's comments, requests and so on and deploy administrative actions directly related to the people. Therefore, the MLIT has established 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.

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

Section 13

Approaches to Hosting Tokyo 2020 Olympic and Paralympic Games

The Act on Special Measures for the 2020 Tokyo Olympics and Paralympics was enacted on June 25, 2015, and the government has established a promotion headquarters to contribute to smooth preparations 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 international visitors into every little locality of Japan to create vibrant regional areas.

Specifically, the 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.