

## Chapter 2

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

### Section 1

#### Driving the Implementation of a National Land Policy Package

The implementation of a comprehensive national land policy package has been driven on the basis of a full package of measures designed to guide the work of national spatial land planning; namely, National Spatial Strategies (national plan) (2008 Cabinet decision), which envisions “the construction of a national land where diverse regional blocks develop autonomously and the creation of a beautiful national land where life is comfortable” as a new vision of national land, Global Regional Plans (2009 Minister decision), which summarize the regional strategies of the individual global blocks and the specific approaches they take to implement the strategies and the Fourth National Land Use Plan (national plan) (2008 Cabinet decision), which is committed to a key principle of sustainable land management. The implementation of these plans is being monitored from year to year to get them consolidated among the stakeholders concerned with National Spatial Strategies.

About seven years since the formulation of National Spatial Strategies (national plan), Japan is confronted with drastic changes, such as intensifying competition between nations and cities in pace with progressive globalization and imminent possible threats from huge natural disasters, such as the Nankai Trough Mega Earthquake and Tokyo Inland Earthquake, as well as a rapidly shrinking population in an aging society with falling birthrates, with the population predicted to halve in about 60% of all the regions in 2050 and elderly people accounting for about 40% of the total population. To address these changes, it is necessary to share the sense of crisis and then put together the wisdom of the public people to conceive national land policies from long-term perspectives.

In July 2014, the “Grand Design of National Spatial Development towards 2050” was compiled and released as a guide to land and community development from mid- to long-term perspectives (generally 2050), which aims to help develop varied regional individualities at a higher level of refinement by “compact” and “networked” to stir inter-regional convection, or develop a “convection-promoting national land”.

A planning subcommittee was then organized under the National Land Council to update the National Spatial Strategies in September of the same year and summarized the key concepts of planning in an interim report in March 2015.

Further reviews will be carried on with a view to finalizing a National Plan by about the summer of 2015 while seeking views from broad quarters, including localities. As for Global Regional Plans, studies have just started to bring them to finalization by the end of FY2015.

### Section 2

#### Measures, etc. against Aging Social Infrastructures

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

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

The MLIT defined the year 2013 as the “First Year of Social Infrastructures Maintenance” and inaugurated the Social Infrastructure Anti-Aging Conference headed by the Minister of Land, Infrastructure, Transport and Tourism in January of the same year in its full commitment to combat aging social infrastructures. After pursuing comprehensive, cross-section debates, the conference finalized a roadmap titled “Interim Measures to be Taken to Maintain, Manage and Renew Social Infrastructure” in March of the same year.

In October of the same year, the “Liaison Conference among Ministries and Agencies Concerned with the Promotion

of Measures to Combat Aging Infrastructures” was inaugurated. In November of the same year, it came up with “the Basic Plan for Life Extension of Infrastructure” to envision future approaches directed at infrastructures of all kinds to be taken by the state, local public entities and so on. The basic plan requires the manager or the like of each individual infrastructure to draw the Action Plans for Life Extension of Infrastructure to encourage steady implementation of measures to combat all aging infrastructures nationwide.

The MLIT responded by working out a MLIT’s the Action Plans for Life Extension of Infrastructure in May 2014 ahead of all other ministers and agencies to finalize and visualize specific approaches based on the basic plan, declaring it as a maintenance guide to present a roadmap to the implementation of maintenance cycles (Figure II-2-2-2).

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

Among all infrastructures that have been built after the rapid-growth period of the nation’s economy, including highway bridges, tunnels, rivers, sewage systems and ports and harbors, the proportion of those facilities that will reach 50 years of age or older in 20 years to come will expand at an accelerating pace.  
 \* The status of aging of facilities is not uniformly determined by when they were initially built, but it varies depending on where they are located, how they have been maintained and managed and so on. For convenience’s sake, an actual age of 50 years after initial construction is used as a measure of aging.

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

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

Note 1) Approximately 300,000 bridges whose year of initial construction is unknown have been excluded from percentage calculations.  
 Note 2) Approximately 250 tunnels whose year of initial construction is unknown have been excluded from percentage calculations.  
 Note 3) State-managed facilities only, including approximately 1,000 facilities whose year of initial construction is unknown. (Since records generally exist of those facilities that have been built within the last 50 years, those facilities whose year of initial construction is unknown have been sorted as being approximately 50 years of age or older.)  
 Note 4) Including approximately 15,000 km of piping whose year of initial construction is unknown. (Since records generally exist of those facilities that have been built within the last 30 years, those facilities whose year of initial construction is unknown have been sorted as being approximately 30 years of age or older and their length proportionally distributed in the ratio of construction by documented number of years elapsed.)  
 Note 5) Approximately 100 quays whose year of initial construction is unknown have been excluded from percentage calculations.

(Source) MLIT

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

- Compile an action plan based on the Basic Plan for Life Extension of Infrastructure on the basis of approaches taken in the First Year of Social Infrastructures Maintenance.
  - Focus on building maintenance cycles, cutting and leveling total costs and supporting local public entities, etc. on the basis of the action plan.
- (relevant mainly to directions of approaches 1, 3) (relevant mainly to directions of approaches 5, 6) (relevant mainly to directions of approaches 1, 2, 7)

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

**1. MLIT’s Roles**

Roles of the “competent authority” to build schemes, systems, etc. relevant to infrastructures       Roles of Infrastructure Managers

**2. Scope of Planning**

Target: All the facilities whose programs or the like are supervised by the MLIT.  
 Period: FY2014 to FY2020

**3. Mid- and Long-Term Cost Prospects**

Need to have more precise estimates of the mid- and long-term prospects of the costs of facility maintenance, management, renewal and so on by probing into the actual status of the facilities and by individual facility life extension programming.

**4. Directions and Descriptions of Approaches**

[Directions of approaches]

<p><b>1 Checkups/Diagnostics/Repairs, Renewals, etc.</b></p> <ul style="list-style-type: none"> <li>- Build maintenance cycles for all facilities</li> <li>- Review the need to have facilities, measures to be taken and so on.</li> <li>- Carry on and enhance support as by subsidization</li> </ul>	<p><b>2. Development of Standards</b></p> <ul style="list-style-type: none"> <li>- Maintain standards in order</li> <li>- Update standards with new technologies and knowledge</li> </ul>	<p><b>3 Development and Utilization of Information Infrastructures</b></p> <ul style="list-style-type: none"> <li>- Gather information through checkups, repairs, etc.</li> <li>- Accumulate information and consolidate information in a unified manner, including that available from local governments</li> </ul>	<p><b>4. Formulate Individual Facility Life Extension Programs</b></p> <ul style="list-style-type: none"> <li>- Promote planning and enhance contents</li> </ul>
<p><b>5. Development and Introduction of New Technologies</b></p> <ul style="list-style-type: none"> <li>- Industry-academia-government collaboration, and matching between needs and seeds</li> <li>- Clarification of field conditions, etc. tailored to new technology usage</li> </ul>	<p><b>6 Budget Management</b></p> <ul style="list-style-type: none"> <li>- Reduction and leveling of total costs</li> <li>- Review of benefits and burdens</li> </ul>	<p><b>7 Constructing of systems</b></p> <ul style="list-style-type: none"> <li>- Enhance qualification systems, and utilize technicians versed in advanced technical capabilities</li> <li>- Build a scheme of partnership between managers</li> </ul>	<p><b>8 Development of legislation, etc.</b></p> <ul style="list-style-type: none"> <li>- Define shares of responsibility and respond to changes in social structure</li> </ul>

[Key approaches]

- Start using new standards and documentation  
Example: Make close-up visual checks on highway bridges, etc. once every 5 years
- Run new databases and enhance futuristic features  
Example: Extend port and harbor databases to port managers, etc.
- Concentrate and remove facilities as needed and so on  
Example: Advise, etc. on the concentration and removal of bridges, etc. to reflect changes in social structure
- Enhance qualification systems  
Example: Specify required capabilities and skills, assess and accredit associated private qualifications and so on
- Build a framework of using technicians with advanced technical capabilities  
Example: Establish a system of providing technical support in the road and other fields, such as dispatching governmental officers
- Build a framework of collaborations among administrators  
Example: Provide technical assistance, etc. to municipalities by way of supporting organizations composed of the state and local public entities

**5. Others**       Follow up plans to enhance and deepen efforts.       Release information positively through websites or else.

(Source) MLIT

The plan calls for:

- (1) checking up infrastructures periodically and repairing or renewing them as appropriate and keeping the information in chart form in a database to create maintenance cycles;
- (2) moving ahead with further cost reductions by leveraging maintenance technologies and with lifetime extension strategically based on the concept of preventive maintenance, thereby leveling the burdens of maintenance spending; and
- (3) providing financial support by granting disaster preparedness and safety subsidies and technical support by offering standards and manuals.

The MLIT is committed to a continuing program of approaching measures against aging infrastructures on a prioritized and planned basis so that required infrastructures will be kept sustainable from now on.

## (2) Social Infrastructures Maintenance Strategy Subcommittee and Technicians Qualification Systems Subcommittee

Prioritized measures to be taken by the MLIT and local public entities, etc. and estimates of the future costs of maintenance/management and renewal (Figure II-2-2-3), etc. were examined and debated at the Social Infrastructures Maintenance Strategy Subcommittee instituted on July, 2012 under the Infrastructure Development Council and the Traffic Policy Council. In FY2014, those matters that dictate further discussion to implement what had been set forth in “Recommendations on Maintaining, Managing and Renewing Social Infrastructures” compiled in December 2013 were reviewed and debated to come up with proposals on the future directions of the four review subjects:

1. Establishing a qualification system for checkups and diagnostics
2. Organizational framework for expediting maintenance and management, and support extended to local public entities, etc.
3. Sharing and visualizing information pertaining to maintenance, management and renewal.

Regarding “1. Establishing a qualification system for checkups and diagnostics” among these proposals, “Regulations for Registering Technicians Qualifications to Help Assure Quality for Surveys into Public Works and for Their Design, etc.” were announced in November of the same year to inaugurate a registration system for private qualifications.” The regulations spell out the kinds of knowledge and expertise required for specific kinds of tasks, such as checkups and diagnostics, and seek to foster technicians and encourage their utilization, in response to the “Emergency Recommendations on Establishing Social Infrastructures management: Inauguration of a Registration System for Private Qualifications” compiled in August 2014 at the Technology Task Force of the Technology Group of the Infrastructure Development Council and the Transport Policy Council. Qualifications registered on these regulations have been used for setting ordering requirements for FY2015 projects.

Further, the Technicians Qualification Subcommittee was inaugurated under the Task Force to start probing into qualifications in newly evolving fields of industry, which have a close bearing on the maintenance and management of social infrastructures.

Figure II-2-2-3

### Estimated Costs of Maintenance/management and renewal

○ According to the preliminary calculations by the MLIT on the basis of discussions at the technology task force “Subcommittee on Social Infrastructure Maintenance Strategies” of the Technology Group of the Infrastructure Development Council and the Traffic Policy Council, maintenance, management, and renewal costs were approximately 3.6 trillion yen in FY2013, and estimated to be 4.3 to 5.1 trillion yen 10 years later and 4.6 to 5.5 trillion yen 20 years later.

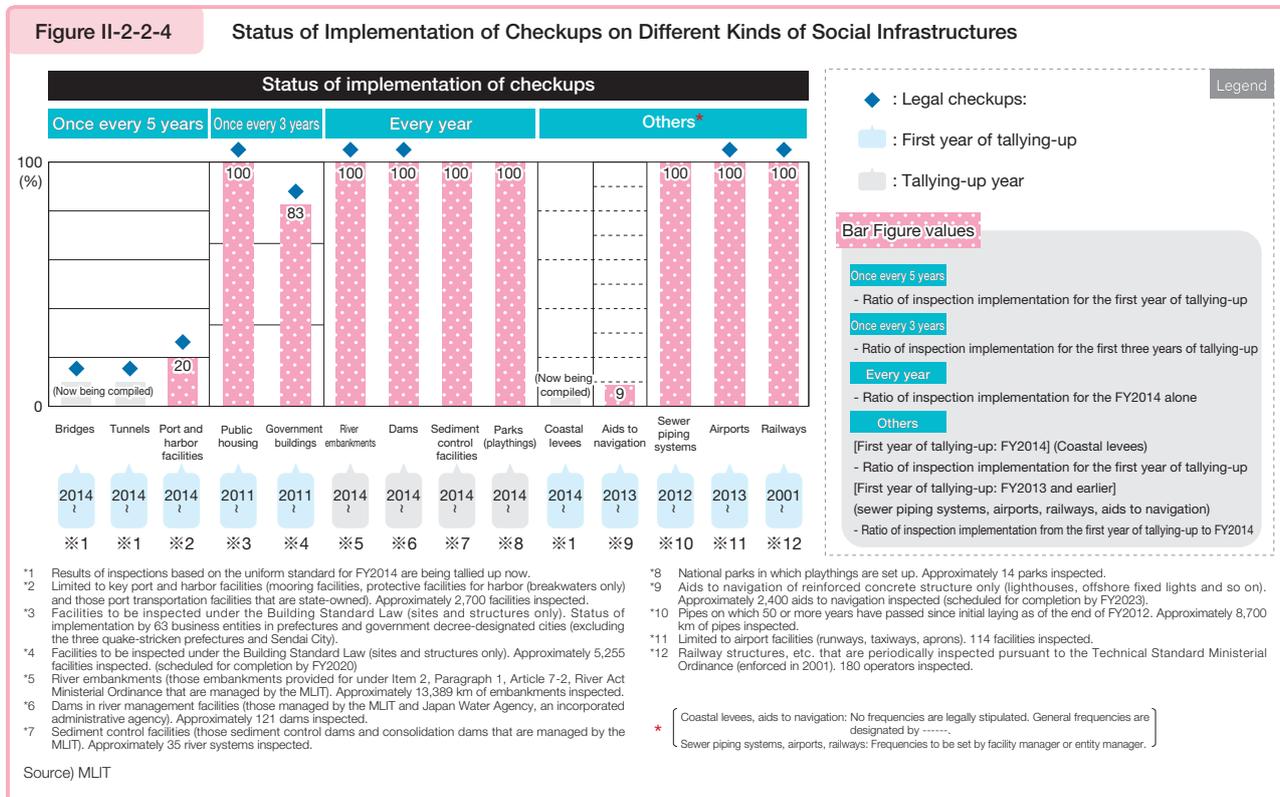
Fiscal year	Estimated result
(FY2013)	Approx. 3.6 trillion yen
FY2023 (10 years later)	Approx. 4.3 to 5.1 trillion yen
FY2033 (20 years later)	Approx. 4.6 to 5.5 trillion yen

\*1 The number of facilities falling in each of the 10 fields of social infrastructures (roads, flood control, sewer systems, ports and harbors, public housing, parks, coasts, airports, aids to navigation, governmental facilities) over which the MLIT has jurisdiction and that are managed by the state, local public entities, Regional Road Public Corporations or Japan Water Agency, an incorporated administrative agency, has been checked by year of initial construction for estimation, with records of their maintenance/management, renewal, etc. taken into account.  
 \*2 No allowance is made for the volumes of new construction and retirement in the future, because they are difficult to estimate.  
 \*3 Functional enhancements occurring to facilities on renewal are to update them with equivalent functionalities (including responses to the current quake-resistance standards).  
 \*4 Land, compensation and natural disaster relief expenses not included.  
 \*5 Individual social infrastructures are given some latitude in their estimates, because their costs of maintenance/management and renewal vary depending on where they are located, or to what extent they have been damaged, and on the constraints that are placed on their maintenance/management and renewal work.

(Source) MLIT

### (3) Enforcement of compulsory periodic checkups

From 2013 to 2014, compulsory periodic checkups have been enforced by cabinet orders, ministerial ordinances, etc. with regard to certain kinds of facilities, such as roads, rivers and ports and harbors, among all social infrastructures falling under the MLIT's jurisdiction. Checkups based on new criteria have just begun. Periodic checkups are underway on other kinds of facilities as well (Figure II-2-2-4).



### (4) 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 organized in October 2013. Monitoring technology hopefuls have been sought from the general public since September 2014, and their field verifications, etc. are now underway.

### (5) 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.”

The MLIT has been proceeding with the development of social infrastructures at a steady tempo in accordance with the Third Social Infrastructures Development Priority Plan (FY2012 to FY2016) approved at a cabinet meeting in August 2012. It is to review the plan to respond to imminent risks, such as aging infrastructures, megaquakes, devastating climatic hazards, ailing localities with diminishing populations and stiffening global competition amid changing conditions of social infrastructures development following the formulation of the current plan.

It would be essential that the review focus on the effective and efficient development of social infrastructures that could maximize the social infrastructures stock effects, such as getting prepared for and mitigating the aftermath of natural disasters, in order to respond properly to the risks that threaten their development.

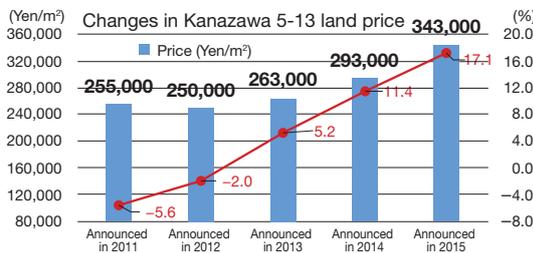
Figure II-2-3-1 Example of Social Infrastructures Development Focusing on Stock Effects

**[Hokuriku Shinkansen]**

The completion of the Hokuriku Shinkansen has shortened the time required for traveling between Tokyo and Kanazawa from 3 hours 47 minutes to 2 hours 28 minutes, with the result of an expanding visiting population.



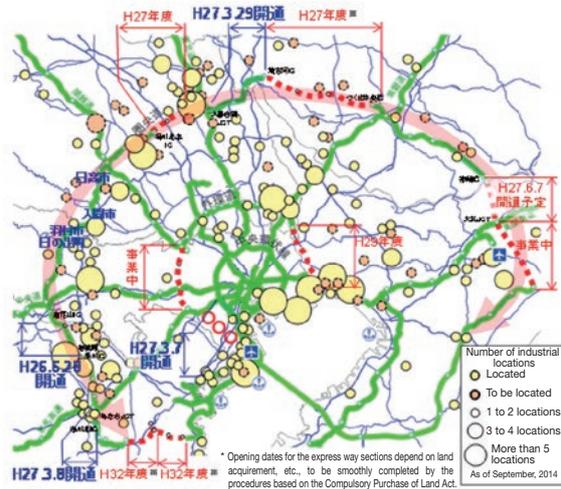
Land on the west exit area of Kanazawa station registered the highest rate of land price increase among all commercial areas nationwide (17%).



Source) MLIT

**[Ken-O Expressway]**

Many logistic facilities and the like have come to be located along Ken-O Expressway as its construction progresses.



Section 4 Promoting the Implementation of Transport Policy

1 Developing Policies Based on the Basic Act on Transport Policy

The Basic Act on Transport Policy promulgated and enforced in December 2013 dictates the formulation of a Basic Plan on Transport Policy to propel the comprehensive and planned implementation of transport measures. Pursuant to this act, the MLIT started deliberations on the formulation of a Basic Plan on Transport Policy at its Transport Policy Council and the Infrastructure development Council in April 2014. The Basic Plan on Transport Policy was approved at a cabinet meeting in February 2015 after the release of final recommendations following a public comment session, etc.

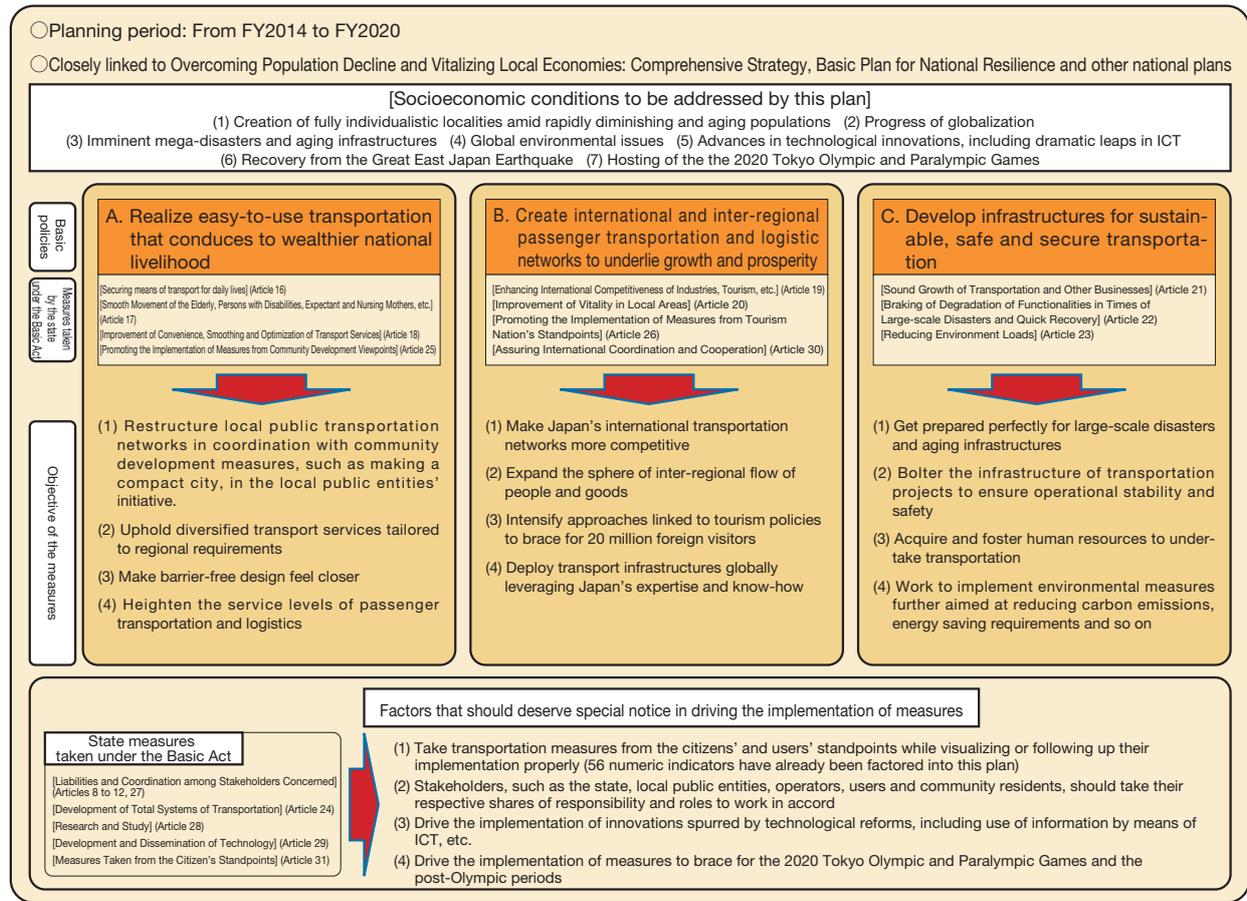
The Basic Plan on Transport Policy defines the period from FY2014 to FY2020 as a planning period and provides for basic policies, measure goals, measures, etc. to be taken by the state on a comprehensive and planned basis. More specifically, three basic policies have been set forth as follows:

- (A) Realize easy-to-use transportation that conduces to wealthier national livelihood;
- (B) Create international and inter-regional passenger transportation and logistic networks to underlie growth and prosperity; and
- (C) Develop infrastructures for sustainable, safe and secure transportation.

For each of these basic policies, four measure goals have been presented along with specific measures to approach them. Numeric indicators have also been defined to verify the progress of approaches in following up the plan, and factors for consideration in implementing measures in accordance with the three basic policies above.

The status of progress of measures taken accordance with the Basic Plan on Transport Policy is to be followed up as appropriate. The plan is also open for further improvement.

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. Keeping up and even consolidating local vitalities also calls for enhancing local public transportation in coordination with a compact community development endeavor.

As the management climate continues to grow harder on the undertakers of local public transportation than ever, the traditional framework dependent on private operators would no longer be fit to fill the social needs for local public transportation. Under the cirmstances, the Act for Making Amendments to the Act on Revitalization and Rehabilitation of Local Public Transportation Systems has opened a way for supporting local public entities responsible for general regional administration in their effort to realize transportation networks and traffic services optimized for

Figure II-2-4-2

### Present Status and Problems of Local Public Transportation

- Drastically declining number of passengers carried

	Year 1990	Year 2000	Year 2010	Year 2013
Passenger bus service	6.5 billion passengers	4.8 billion passengers	4.2 billion passengers	4.2 billion passengers (down 35% from 1990)
Local railways	5.1 hundred million passengers	4.3 hundred million passengers	3.8 hundred million passengers	4.0 hundred million passengers (down 22% from 1990)

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

- Passenger bus routes covering about 10,206km have been totally abolished since FY2007.

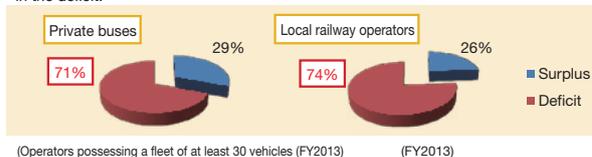
Railway routes covering about 186km have been abolished since FY2007.

- Increasingly serious regions empty of public transportation

	Empty region	Empty area population
Bus service 500 m apart Railway service 1 km apart	36,477 km <sup>2</sup> (approx. 30% of Japan's inhabitable area)	7,351 thousand (5.8% of Japan's population)

Source) FY2011 MLIT Survey

- About 70% of the private bus operators and about 80% local railway operators are in the deficit.



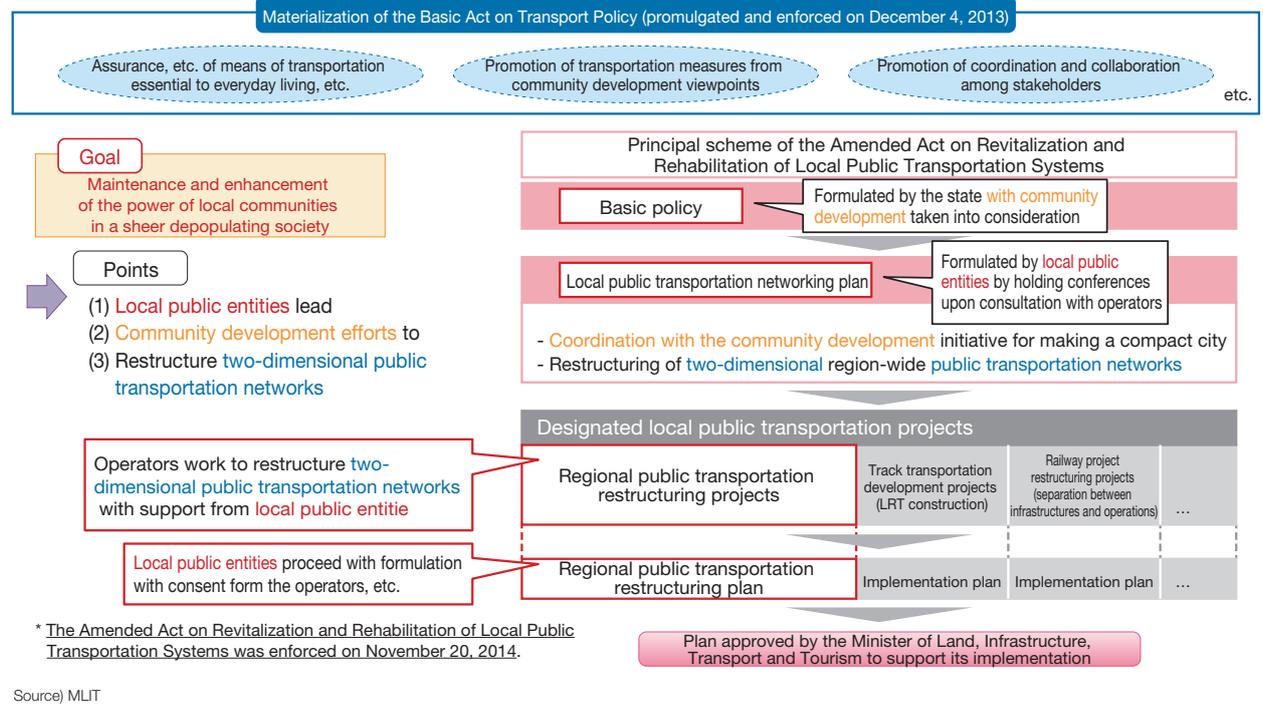
Source) MLIT

their localities under agreed-upon terms at their initiatives while keeping proper shares of responsibility with the stakeholders concerned, from viewpoints of community development, tourism promotion and more.

The MLIT will extend necessary support to local public entities at work while keeping in mind the directions set forth in the “New Institutional Framework for Enhancing Local Public Transportation Systems and Key Concepts of Their Utilization” compiled in August 2014.

Figure II-2-4-3

Summary of the Amended Act on Revitalization and Rehabilitation of Local Public Transportation Systems (enforced in May 2014)



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

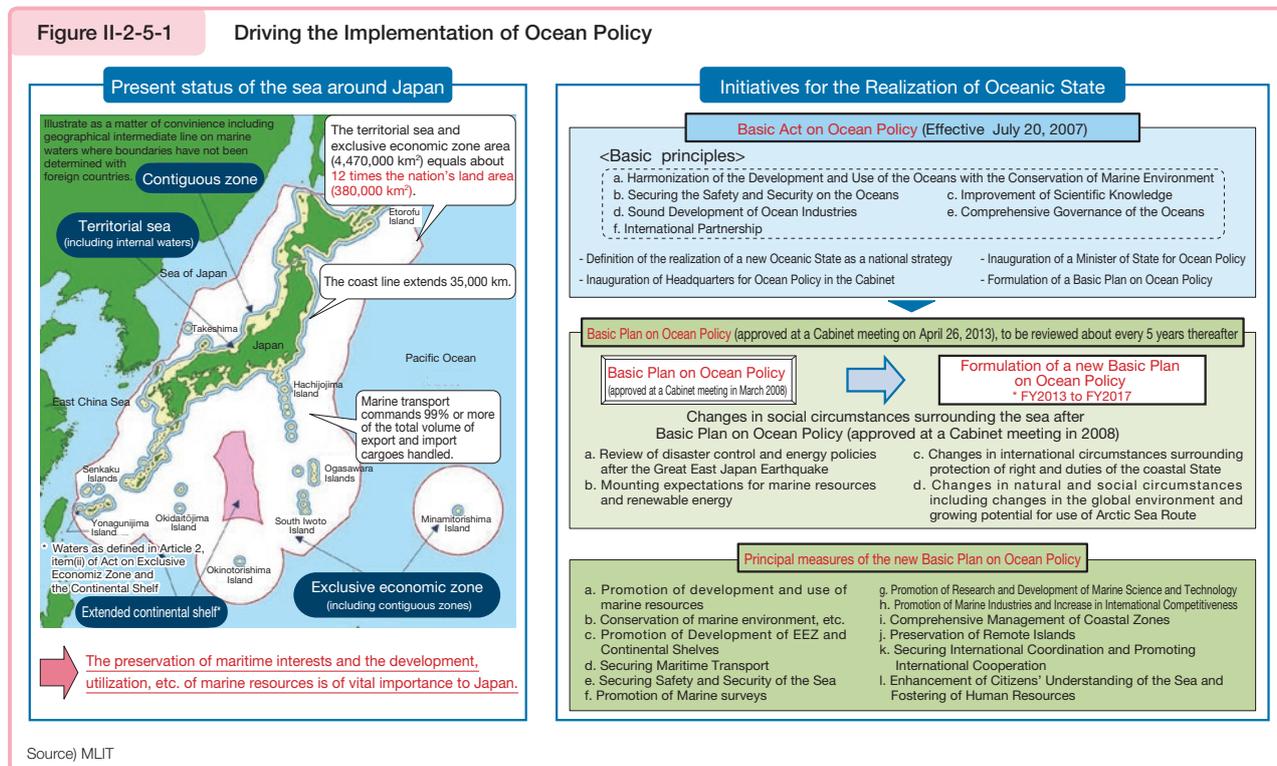
### 1 Driving the Basic Plan on Ocean Policy Steadily

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

The first version of the Basic Plan on Ocean Policy came as a Cabinet decision in March 2008 with the understanding that it would be reviewed about every five years. In April 26, 2013, a new Basic Plan on Ocean Policy was approved at the Cabinet meeting.

In the current context of disaster preparedness and energy policies having been refurbished in the wake of Great East Japan Earthquake, soaring hopes for oceanic energies and mineral resources, such as methane hydrates, and changing social conditions, including international climates concerning the preservation of maritime interests, the new Basic Plan on Ocean Policy is organized of four approaches and directions designed to let Japan grow into an oceanic state: a. International collaboration and contribution to the international community, b. Wealth and prosperity derived from oceanic development and usage, c. Transition from a sea-guarded state to a sea-protecting nation and d. Challenging an untrodden frontier. The Ministry of Land, Infrastructure, Transport and Tourism is also geared at driving the implementation of the ocean policies at a steady pace according to the guidelines stipulated in the new Basic Plan on Ocean Policy. Specifically, it will be working to toughen the structure of the Japan Coast Guard to protect Japan’s sovereignty and territorial land and seas while seeking to use renewable marine energies, develop and use marine resources, etc., foster

marine development human resource, transport energies, etc. by sea efficiently, and promote ocean industries. Further, it will be actively promoting the creation of an environment that supports marine frontiers, such as promoting oceanographic surveys to make for ocean interest preservation, preserving Low-Tide Lines <sup>Note</sup>, which is a basis for exclusive economic zones and building action bases on Minamitorishima Island and Okinotorishima Island. Measures related to events held on the Marine Day will also be promoted in conjunction with the ministries and agencies concerned to win added understanding and interest from the general public.



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

### (1) Promoting Maritime Surveys in Territorial Waters and the Exclusive Economic Zone and Consolidating Maritime Information

In our country's territorial waters and the exclusive economic zone there are waters lacking adequate survey data and the Japan Coast Guard is conducting intensive maritime surveys in these waters including submarine topography, crustal structure, and the baselines of territorial waters to strategically and continuously implement the development of basic information that will contribute to the safety of ship traffic, protecting our country's maritime rights, and maritime development. In June 2014, the Japan Coast Guard's autonomous underwater vehicle (AUV), Gondo, working in a submarine topographic survey off the Kumejima Island, Okinawa Prefecture spotted the largest cluster of chimneys (columns of hydrothermal eruptions composed mainly of heavy metals) ever known around Japan. A subsequent resource survey conducted by Japan Oil, Gas and Metals National Corporation (JOGMEC), an incorporated administrative agency, confirmed them to be a promising sea-floor hydrothermal deposit rich in high-grade copper, zinc and so on.

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

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

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

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

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

### a. Conservation of Okinotorishima Island

Okinotorishima island is Japan’s southernmost territory and is a very important island that forms the foundation of the 400,000 km<sup>2</sup> area exclusive economic zone which exceeds the area of national land, so the observation and gathering of basic data, checkups of damages, and repairs are carried out. In addition to the two islands, the state is taking direct control to ensure adequate measures to preserve the entire atoll.

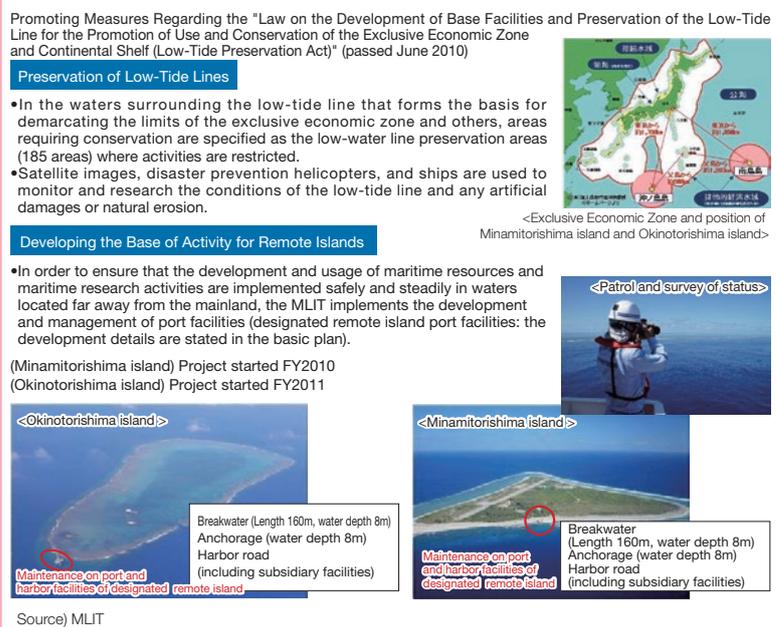
### b. Preservation of Low-Tide Lines

In accordance with the “Law on the Development of Base Facilities and Preservation of the Low-Tide Line for the Promotion of Use and Conservation of the Exclusive Economic Zone and Continental Shelf (Low-Tide Preservation Act)”, 185 domestic locations are designated by government decree as the low-tide lines preservation areas to implement restrictions on activity in the area. Also, sight patrols by disaster prevention helicopters and ships as well as satellite images are used to survey low-tide lines and its surrounding conditions and by confirming the existence of restricted activities in the area or topographical changes due to natural erosion, strive to protect the low-tide line which forms the basis of the Exclusive Economic Zone and continental shelf as well as appropriate management of related information for the implementation of sure and efficient preservation of low-tide lines.

### c. Developing Bases of Activity in Remote Islands (Okinotorishima island and Minamitorishima island)

In accordance with the “Low-Tide Preservation Act”, etc., Minamitorishima island and Okinotorishima island which are areas remote from the mainland, port facilities are being developed as a base of activities for the conservation and usage of the exclusive economic zone and continental shelf to enable the mooring and berthing of vessels, cargo handling, etc.

Figure II-2-5-2 Preservation of the Low-Tide Area



## Section 6 Protecting Territorial Land and Territorial Waters Firmly

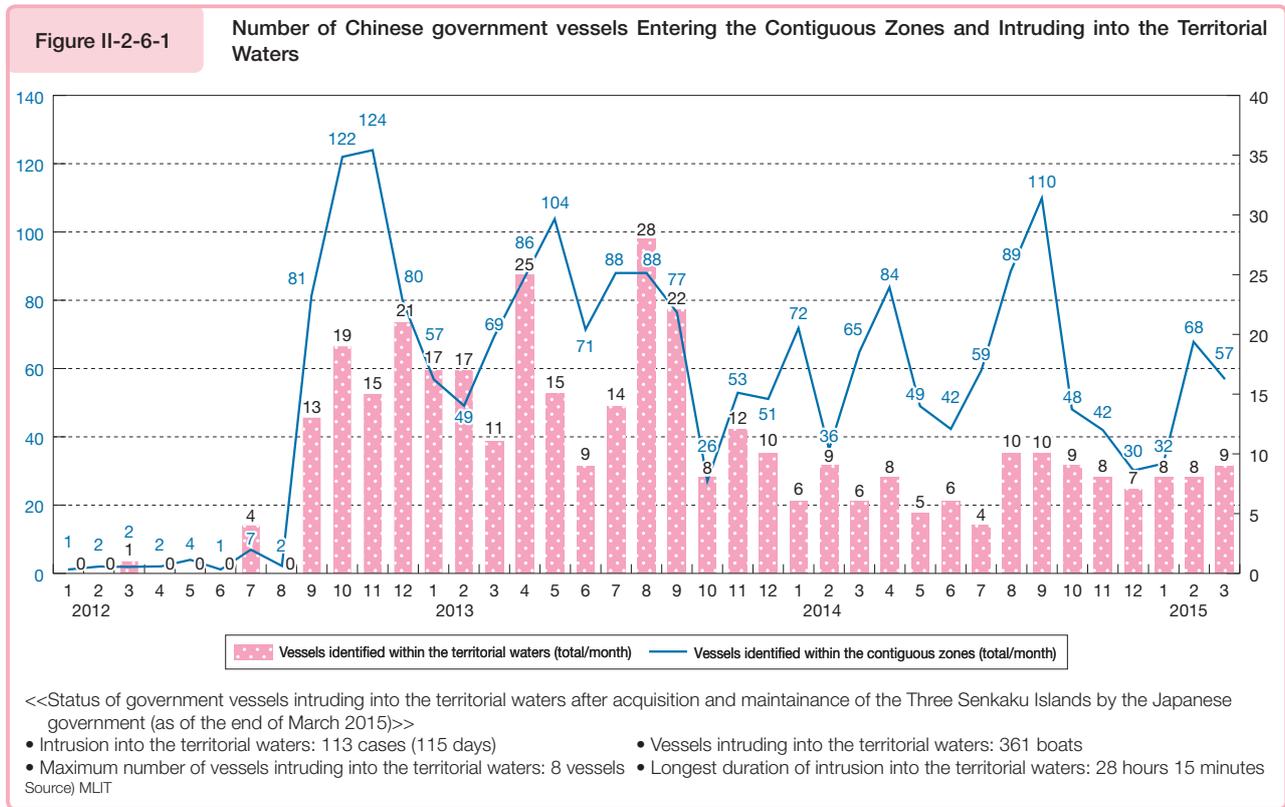
Intrusions into Japan’s territorial waters around the Senkaku Islands by Chinese government vessels, etc. and sovereignty claims by activists of Chinese, Taiwanese and others have taken place in recent years. Particularly since the acquisition and maintenance of the three of the Senkaku Islands (Uotsuri Island, Kitakojima Island, Minamikojima Island) in September 2012 in particular, intrusion into Japan’s territorial waters by Chinese government vessels have been increasing.

While the number of cases of intrusions into Japan’s territorial waters by Chinese government vessels in 2014 decreased from its year earlier level, their status of navigation through the contiguous zones remains unchanged. In addition, activities by foreign fishing boats in the seas have intensified. Resolved to protect Japan’s territorial land and waters by all means, the Japan Coast Guard deals with the matters calmly and firmly.

Many Chinese coral fishing vessels have been noticed in the waters around the Ogasawara Islands and elsewhere since September 2014. The Japan Coast Guard has mobilized patrol vessels and aircraft intensively by partnering with the Fisheries Agency and other agencies concerned to enforce strict regulations, arresting 10 Chinese coral fishing boats. It will stay vigilant.

In the Japan’s exclusive economic zone in the East China Sea, and other waters, foreign oceanographic research vessels have been found to conduct surveys without Japan’s consent. The situation of the seas around Japan continues to grow increasing more severe than before.

Under the circumstances, the Japan Coast Guard seeks to consolidate its full-time commitment to guarding the territorial waters around the Senkaku Islands and to hasten the implementation of a system of support dispatching from across the nation to respond to further changing situations and a system of tight maritime safety in Japan’s surrounding waters, including those around the Senkaku Islands and Ogasawara Islands to ensure a perfect solution to guarding territorial waters in Japan’s sea areas.



Patrol vessels in the seas around the Senkaku Islands.



Source) MLIT

Patrol vessels and compact boat keep track of Chinese coral fishing boats in the waters around the Ogasawara Islands.



## Column

### Eruptions on Nishinoshima Island Stretch Borders of Territorial Waters

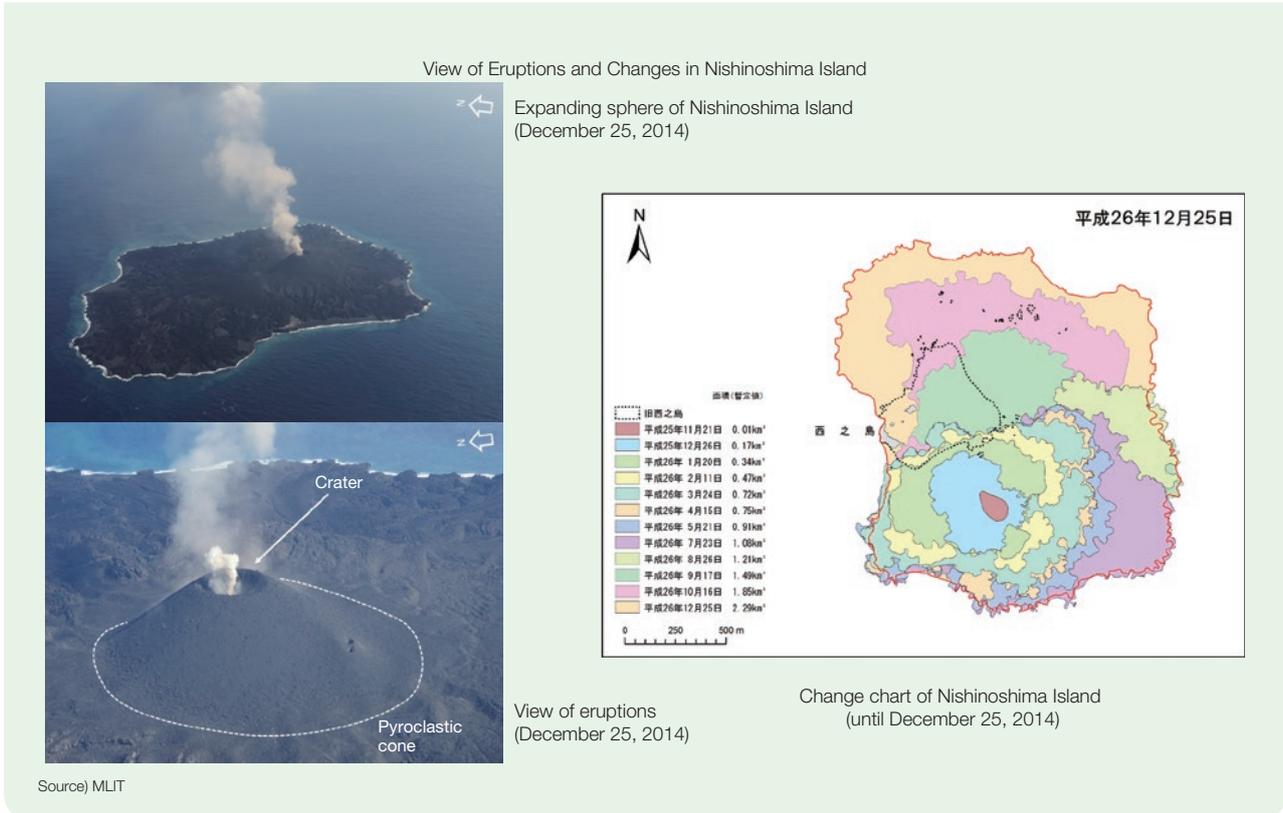
On November 20, 2013, the Nishinoshima volcano 500 m southeast off the coast of Nishinoshima Island in the Ogasawara Islands erupted for the first time in 39 years, forming a new land. More than one year on, active volcanic activities still continue.

The Japan Coast Guard has issued navigation alarms right after the eruption to warn vessels navigating nearby. Further, it conducts aircraft-aided observations periodically and publicizes the observation results and report them to the Coordinating Committee for Prediction of Volcanic Eruptions in its bid to prevent volcanic hazards.

Since November 20, 2013, the new land continued to expand as lava flowed out until it merged with former Nishinoshima Island on December 26. Active volcanic activities kept the land expanding thereafter such that Nishinoshima Island grew into an area of approximately 2.5 km<sup>2</sup> (including former Nishinoshima Island) by March 25, 2015. Volcanic experts watch the progress of the volcanic activities as the eruptive activities of a sea volcano lasting for 1 year or longer are a globally rare phenomenon.

The expanding sphere of Nishinoshima Island could stretch the borders of Japan's territorial waters and exclusive economic zones. Territorial waters extend from the low-tide line shown in the marine chart published by the Japan Coast Guard up to 12 nautical miles (up to 200 nautical miles for exclusive economic zones). As soon as volcanic activities settle down and safety is confirmed, a precise water channel survey will be conducted to finalize a new low-tide line. The new extents of territorial waters, etc. will be fixed when the expanded sphere of Nishinoshima Island is listed in a nautical chart on the basis of the survey findings.

The Japan Coast Guard will carry on its observation of volcanic activities in Nishinoshima Island.



## Section 7 Driving the Implementation of Water Cycle

The Basic Act on Water Cycle was resolved in March 2014 and came into effect in July. The act sets fifth guiding principles of water cycle, such as actively promoting approaches to maintaining or restoring sound water cycle, measures designed to implement these principles and which stipulates the state and local public entities' liabilities, etc. in the light of the fact that water nourishes life on earth in its process of cycle, playing a significant role in the national livelihood and industrial activities. At the same time, the Headquarters for Water Cycle Policy was inaugurated in the Cabinet, when a framework for the state working in accord to tackle a host of tasks, including the preparation of a basic plan for water cycle aimed at driving the implementation of water cycle, in a comprehensive, integrated manner was in place. The Minister of Land, Infrastructure, Transport and Tourism, Akihiro Ohta<sup>Note</sup>, was appointed the first minister in charge of Water Cycle Policy in May of the same year.

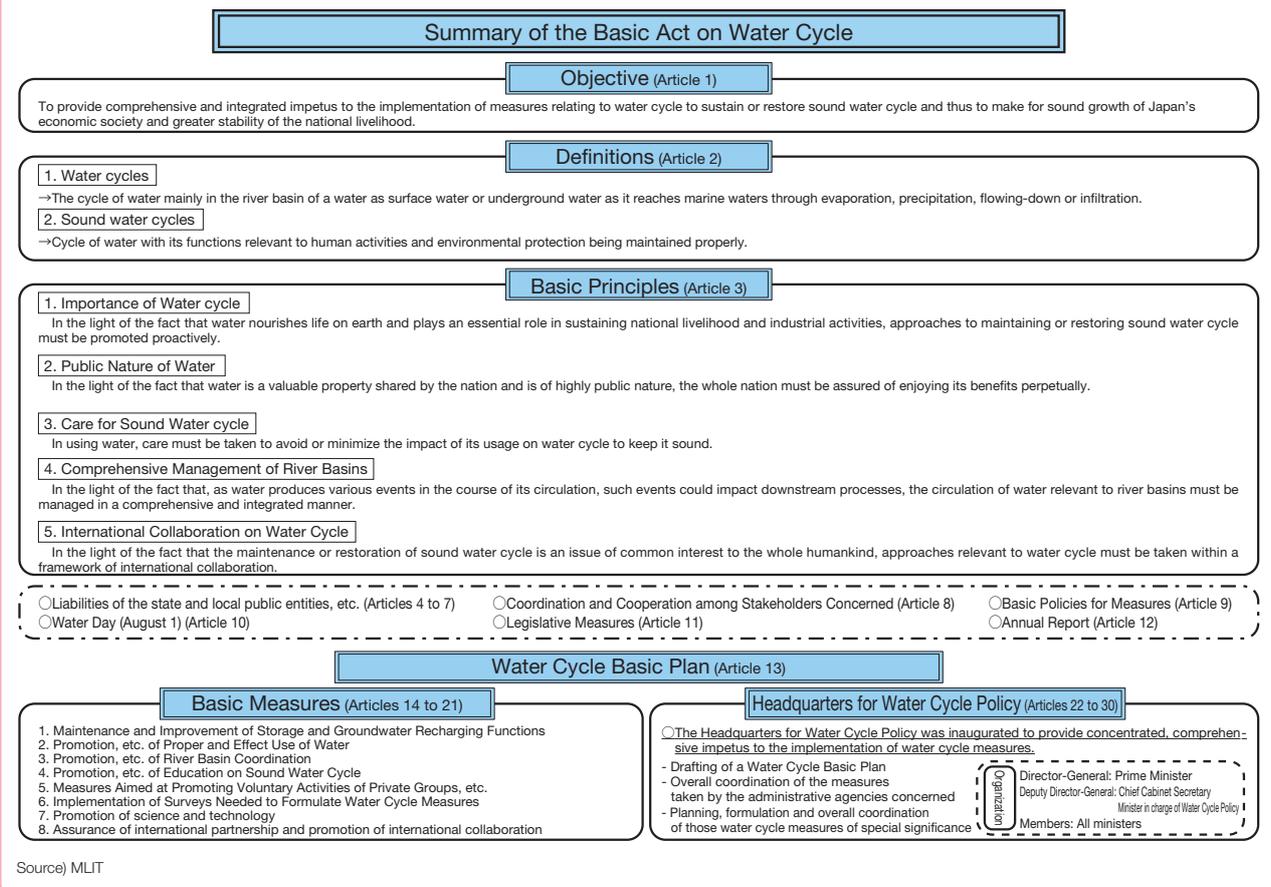
In July, the Headquarters for Water Cycle Policy had its first meeting, at which Director-General Shinzo Abe, the PM, spoke to the effect: "Since ancient times, water has nourished fields and sustained social and cultural prosperity and is still offering "great blessings" to us, but at times, water could bring out "disaster," such as landslides and drought. In order for us to enjoy the "blessings" of water eternally, it would be of vital importance to maintain sound water cycle with the impact of human activities upon water taken into consideration. It is my hope that the government will approach this goal in a unified fashion with the Headquarters for Water Cycle Policy acting as a command center."

Since a basic plan for water cycle is schedule to win a cabinet council decision at the earliest timing before the summer of 2015, the MLIT is committed to promoting the steady implementation of the water cycle policy.

**Note** Deputy Director-General, Headquarters for Water Cycle Policy

Figure II-2-7-1

## Summary of the Basic Act on Water Cycle



## Section 8

## Efficient, Prioritized Deployment of Measures

## 1

## Automating, Streamlining and Upgrading Construction Production System Workflow

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

## 2

## Assuring Public Works Quality and Fostering and Maintaining Bearers

## (1) Amendments to the Three Public Work Bearers Acts

The 186th session of the Diet in 2014 approved amendments to the “Act for Promoting the Assurance of Quality of Public Works (Quality Assurance Act)”, the “Act for Promoting Proper Tendering and Contracting for Public works (Tendering and Contracting Act)” and the “Construction Business Act (the so-called Three Public Work Bearers Acts)” with a view to assuring the present and future quality of public works and fostering and maintaining bearers of public works from medium- to long-term perspectives.

In September of the same year, amendments to the basic policies based on the Quality Assurance Act and to the rationalization guidelines based on the Tendering and Contracting Act were decided at a cabinet meeting. The basic

policies define a broad package of measures to be taken to assure the quality of public works constructed and maintain public works bearers, such as establishing qualification systems for setting and surveying proper unit prices for construction design work and assuring design quality, formulating national operational guidelines and extending support to local public entities, as well as the issues to be approached by purchasers, such as setting fair predetermined prices, leveling construction timings by setting fair construction periods and marginal periods and introducing and using varied tendering and contracting options. The rationalization guidelines call for thorough utilization of low bid price survey programs, etc. by declaring that the act of deduction from the designed amounts calculated by fair costing is a breach of the Quality Assurance Act and also specifying what actions should be taken by purchasers to rationalize the bidding and tendering process, such as eliminating contractors that do not subscribe to a social insurance or any other appropriate program.

### (2) Approaches to fulfilling purchasers' liabilities

To abide by the principles of the Quality Assurance Act, it is essential for all purchasers of public works, including prefectural and municipal authorities, to practice their ordering paperwork properly to fulfill their liabilities. The state worked out “Guidelines for the Practice of Ordering Paperwork (Operational Guidelines) in January 2015 pursuant to the Quality Assurance Act, Article 22 to this end. The Operational Guidelines serve as a common manual for all purchasers of public works to follow and summarize an organized plan of activity for the issues to be tackled in the sequential stages of ordering paperwork, i.e., survey and design, preparation for ordering construction projects, tendering and contracting, construction and completion, and varied tendering and contracting options available. Individual purchasers are supposed to proceed with their specific approaches pursuant to these guidelines.

To bolster the practical usefulness of the Operational Guidelines, the MLIT will provide relevant support and collaboration to local public entities, etc. by way of Regional Purchasers Conferences, Regional Public-Works Project Liaison Conferences and so on and also promote responses to the issues of common concern to purchasers in a more intensified alliance of purchasers. The MLIT also plans to periodically examine to see if the purchasers conduct ordering paperwork properly in compliance with these guidelines and compile and release findings of such examinations.

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

New additions to the Quality Assurance Act include the selection and utilization of varied tendering and contracting options (Article 14), phased screening (Article 16), technical proposal and bargaining methods (Article 18) and methods that make for maintenance and management of regional social infrastructures (multi-year contracting, packaged contracting, joint order-taking (Article 20). The MLIT has worked to explore recommended sequences of processes, from planning of the development of social infrastructures to their engineering, construction and management, from purchasers' viewpoints and responses to various issues occurring since November 2013 at the “Conference on How Future Construction Production and Management Systems Should Be to Fulfill Purchasers' Liabilities” and compiled the ways purchasers should choose tendering and contracting methods to suit specific project characteristics as “Guidelines for Applying Tendering and Contracting Methods to the Implementation of Public-Works Projects.”

### (4) Approaches to assuring quality in the construction stage

Other ongoing efforts include the promotion of information sharing between contractor and contractee to assure the quality of work objects, and the trial practice of “in-process checkups,” which verify the status, etc. of construction works across the flow of construction processes, and “quality certifications by third parties under contract from the builders.”

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

### 1 New Phase of Relationships between the Central and Local Governments

The MLIT is working on the decentralization of power from the state to local public entities, including relaxing regulations that are imposed on localities and transferring paperwork and authorities to local public entities, by taking into consideration the proper shares of responsibility between the state and local public entities for approaching key issues that are directly linked to national livelihood, such as forming dynamic economic societies and regions and assuring safety and security.

With the enactment of the Act on Legislation Designed to Promote Reforms for Enhancing Local Autonomy and Independence (Fourth Package)<sup>1)</sup> regarding the transfer, etc. of paperwork and authorities in FY2014, the MLIT is ready to transfer paperwork, authorities, etc., such as registering onerous passenger transporters, to local public entities starting from FY2015.

A suggestion collection program has also been commenced to invite individual local public entities, etc. to submit their own proposals and explore ways to implement them, to promote new approaches taken at the initiative of localities. A policy for responding to such proposals was approved at a cabinet meeting in January 2015, on the basis of which a fifth package bill was submitted to the Diet in March 2015, calling for delegation of the terms of members of the Architectural Review Board to locals as an approach to local deregulation.

### 2 Driving Public-Private Partnerships, etc.

The formation of new schemes of PPP (Public-Private Partnership)/PFI and concrete proposals has been promoted to develop, maintain and manage social infrastructures of real need by expanding the utilization of private funds under stringent financial conditions. More specifically, the MLIT not only conducts surveys and reviews on its own but also extends subsidies, etc. to local public entities or the like.

For example, the MLIT adopted 28 public-private partnership support projects of pioneering nature to receive subsidies for FY2014 and extended aid to the implementation of feasibility studies, etc. for the integrated area development of urban parks and a large-scale commercial facility in a public-private partnership in Machida City, Tokyo. Further, it adopted 11 public-private partnership earthquake recovery support projects to receive subsidies for FY2014 and extended aid to the implementation of feasibility studies, etc. for the development and supply of public housing for disaster victims using a regional system of housing production in Otsuchi-town, Iwate Prefecture.

## Section 10 Policy Evaluations, Project Evaluations and Interactive Administration

### 1 Driving Policy Evaluations

Pursuant to the “Ministry of Land, Infrastructure, Transport and Tourism Basic Plan for Policy Evaluations,” the three key schemes of evaluating policies, namely, policy assessments (Project Evaluation Method), policy checkups (Performance Evaluation Method) and policy reviews (Comprehensive Evaluation Method) have been defined to achieve the following three goals: realization of efficient and high-quality nation-oriented administration; promotion of performance-centric administration; and thorough perfection of accountability to the nation. At the same time, individual public-works projects, individual research and development issues, regulations and special taxation measures have been subjected to policy evaluations to suit specific policy characteristics. Further, a framework for assessing the performance results of incorporated administrative agencies has been laid down in accordance with the provisions of the Act on General Rules for Incorporated Administrative Agencies. Within the key schemes, 36 new measures projected in the FY2015 budgetary requests were subjected to a policy assessment in August 2014 and four subjects to a policy review in March 2015. In addition, the performance results of 19 incorporated administrative agencies under control were assessed <sup>Note</sup>.

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

## 2 Implementation of Project Evaluations

A fully integrated scheme of evaluating individual public-works projects is built in place to enhance the efficiency and transparency of their implementation. Under this scheme, new public-works projects are evaluated upon initial adoption and then reevaluated and post-evaluated upon completion. Project appraisal charts organized to present a background of the evaluations of public-works projects, including supporting data relevant to their cost effective analyses upon initial adoption, reevaluation and post-evaluation upon completion and posted on the Internet and elsewhere <sup>Note</sup>.

Further, the MLIT conducts planning-phase evaluations on public-works projects implemented under its direct control as its own approach in the preliminary phase of new project evaluation upon initial adoption.

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

### (1) MLIT Hotline Station

In driving 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, etc. on the monthly average.

### (2) Keeping consumers, etc. informed

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

### (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, etc. The MLIT is working to make the planning process more transparent by using guidelines that stipulate present key conceptual approaches to formulating plans efficiently with socioeconomic, environmental and all other relevant perspectives taken into consideration while encouraging the participation of various entities, including local residents, in the process.

## Section 11 Approaches to Hosting Tokyo 2020 Olympic and Paralympic Games

At the September 7, 2013 plenary meeting of the International Olympic Committee (IOC), Tokyo was chosen to host the 2020 32nd Olympic Games and 16th Paralympic Games. The state inaugurated a ministerial conference on the Tokyo 2020 Olympic and Paralympic Games on April 22, 2014 to help expedite the preparatory process for the Games.

The MLIT launched the MLIT Preparatory Headquarters for the 2020 Olympic and Paralympic Games headed by the MLIT Minister on April 18, 2014 to render all-out assistance. It will take whatsoever responses necessary to get the Games running smoothly, including assuring safety and keeping lodgings and transportation comfortable. It will also move ahead with necessary approaches to realize the future visions of a Tokyo and Japan defined for "Grand Design of National Spatial Development towards 2050" and after by taking the year 2020 as a milestone, instead of viewing it as a goal. Further, the MLIT is keen to lure foreign visitors into every little locality of the land of Japan to help make for its buoyancy as we conduct the Games not only in Tokyo but nationwide.

More specifically, the MLIT will partner with the Tokyo Organising Committee for the Olympic and Paralympic Games, Tokyo and other stakeholders concerned to condition the environment to host foreign visitors, by developing access roads to the Games sites and Olympic Village, filling the demand for transportation perfectly at the Tokyo

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

metropolitan airport, a gateway to Japan, facilitating the ease of access, making barrier-free towns, providing multilingual versions of guidance signs and maps, installing free public LAN, delivering special license plates to commemorate the Games and so on.



## Chapter 2

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