

**Regional Report on marine biodiversity conservation and sustainable use of
marine ecosystem services in the NOWPAP region
(Draft as of June 28)**

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1. Introduction

Northwest Pacific region, where the NOWPAP region is located, is one of the biologically diverse marine areas in the world. The area includes various marine environments (e.g. the tropical region with coral reefs in the south and the subarctic zone covered with ice in winter in the north) and their associated ecosystems. These rich environments can allow a large number of marine species to inhabit there. It is reported that there are 22,629 species in Chinese waters (J.Y. Liu, 2013), 33,629 species in Japanese waters (Fujikura et al., 2010), and 9,534 species in Korean waters (Republic of Korea, 2009). According to Fujikura et al., it is possible that there may be 155,524 species along the Japanese archipelago, and it is estimated that the number of marine species found in the NOWPAP region will increase along with the development of observation techniques.

Such diverse ecosystem in the NOWPAP region can nurture rich fishery resources. Figure 1 shows the world's fishery catch. The average catch in the northwest Pacific is 20 million tones, accounting for one-fourth of the world's total. The target fish includes various biota from low trophic level species, such as sardine which graze phytoplankton, to high level predacious species, such as tuna and bonito.

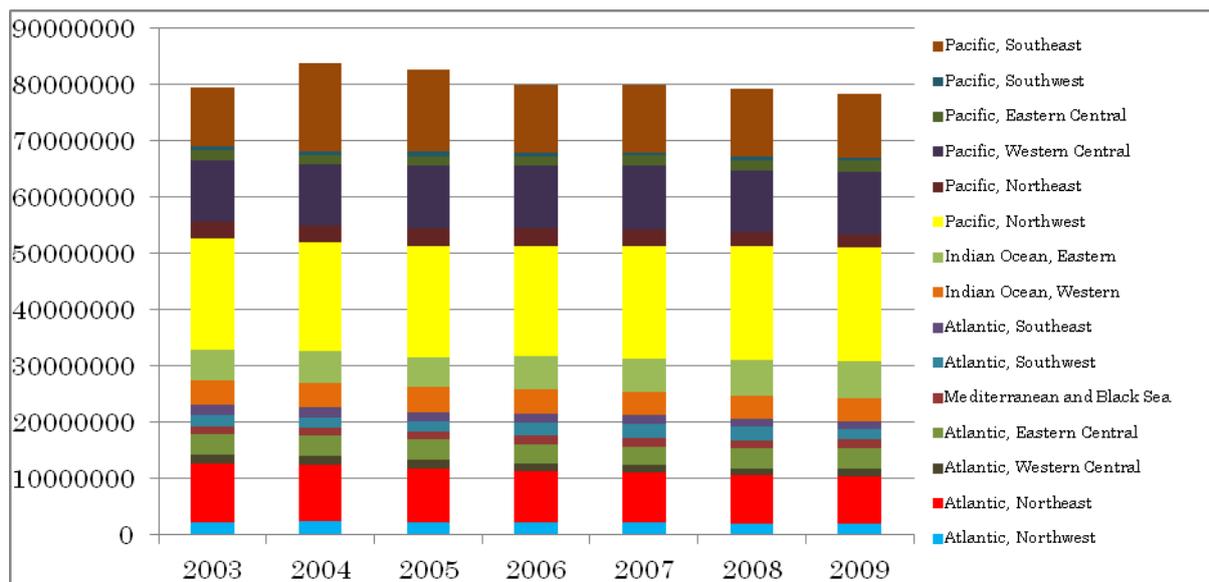


Figure 1. Fishery catch in the world.

Figure 2 shows the trend of the marine trophic level in this region. From the 1980s to 90s, the trophic level lowered temporarily due to the increased catch of sardine; however, the overall average is approximately 3.5, indicating successful transfer of energy.

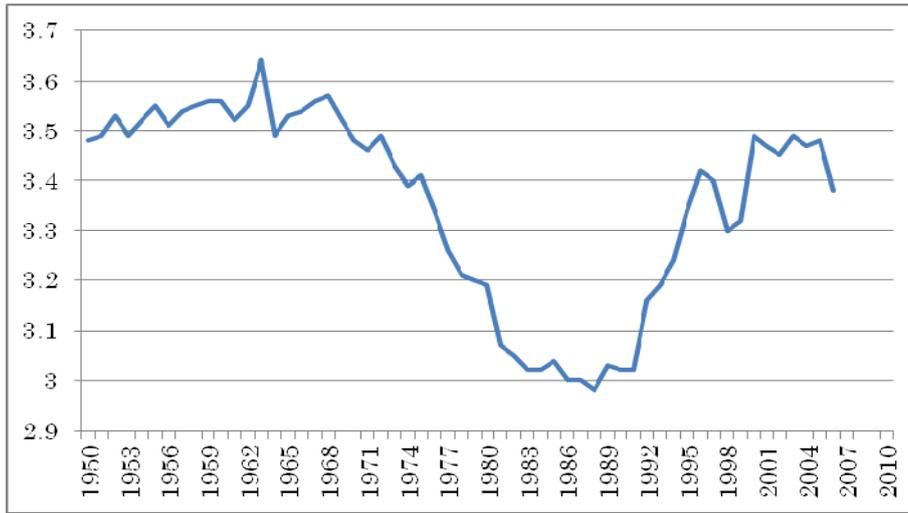


Figure 2. Marine Trophic Index in the northwest Pacific (source: Sea around us project)

Both figures are the evidences of the high biological diversity with rich marine organisms and resources in the NOWPAP region. However, on the other hand, this is one of the most populated in the world (Figure 3) and the economic growth in the surrounded countries is quite fast.

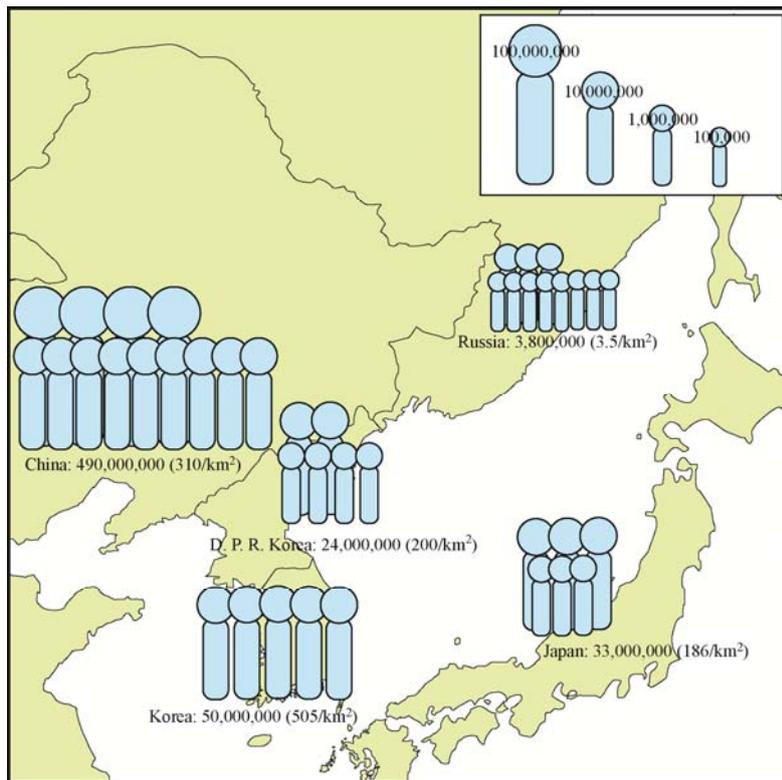


Figure 3. Population of the coastal areas in the NOWPAP region.

As a result, negative events such as eutrophication by excessive nutrient from land, harmful algal blooms and hypoxia have been observed and multiple anthropogenic pressures (e.g. overfishing to support 6 billion people in the NOWPAP region) is

threatening the health of the marine environment. Climate change is also affecting the one of the impacts which affects ecosystem services and benefits which the marine area can provide. Figure 4 shows the rate of change in the sea surface water temperature in the past 100 years in the NOWPAP region. It is reported that the temperature in this region has increased at a faster pace than other marine areas. Warming of the seawater may change the distribution of marine organisms and lead to structural change in the ecosystem. It has been concerned that biological diversity of the marine environment may be lowered by warming.

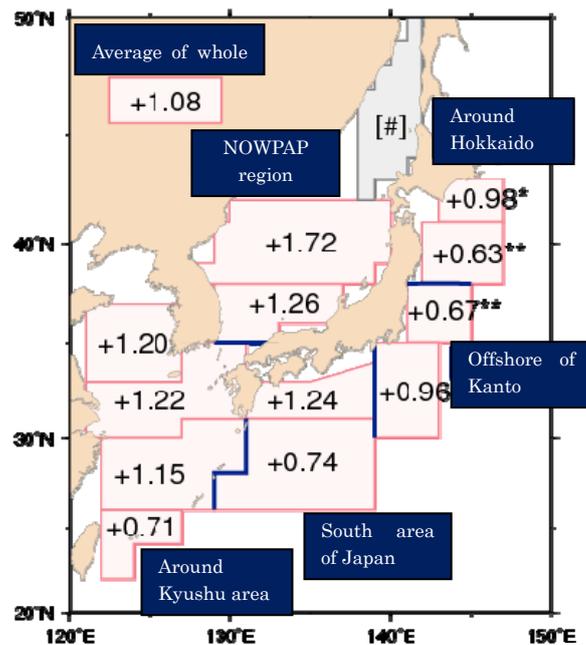


Figure 4. Change of the sea surface water temperature in the past 100 years in the NOWPAP region. (source: Japan Meteorological Agency)

While the NOWPAP region has high biological diversity in the marine environment, it has been threatened by multiple stressors. In order to conserve the rich ecosystem and its services and benefits for the future, it is urgent to develop and implement appropriate management. In particular, minimizing the environmental modification induced by anthropogenic causes and sustaining the optimum conditions of the environment for inhabiting organisms are essential.

2. Regional Overview on Existing MPAs in the NOWPAP Region

The 10th meeting of the Conference of the Parties (COP 10) to the Convention on Biological Diversity (CBD) was held in Nagoya, Aichi, Japan, and the Aichi Targets were adopted, which set post-2010 targets on biodiversity conservation. One of the Aichi Targets are on coastal and marine areas: By 2020, at least 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are

conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes (See <http://www.cbd.int/sp/targets/>). As IUCN defines marine protected areas (MPA) as “a protected area is a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values”, it be one of the effective tools to conserve marine biodiversity and sustain its providing services and benefits. Following the adoption of Aichi Targets, it is expected to expand the number and area of MPAs around the world.

In 2010, the total area of MPAs in the NOWPAP region is only 4,117,544 hectares (NOWPAP 2010), the rate of MPAs in the NOWPAP region is much less than 10 per cent of the area and this is one of the priorities to be addressed. NOWPAP DINRAC established the database on MPAs in the NOWPAP region and updated the database in 2012. In the database, total 277 MPAs were listed up, China has 84 MPAs, Japan has 99 MPAs, Korea has 29 MPAs and Russia has 65 MPAs.

After the agreement of Aichi Targets, the NOWPAP member states (China, Japan, Korea and Russia) have clarified their own system and/or regulation for marine biodiversity conservation and tried to establish new MPAs and/or enhance management of the existing MPAs under their domestic laws and regulations to protect marine biodiversity and sustain ecosystem services.

2-1 Situation of MPAs in the NOWPAP region

In the NOWPAP region, there were a total 79 MPAs covering an area of 4,117,544 hectares (China: 20, 1,367,206 ha, Japan: 23, 436,235 ha, Korea: 22, 357, 333 ha, Russia: 14, 1,956,770 ha) in 2010 (NOWPAP 2010). After COP10, each member state reviewed their system and/or regulation and clarified the current situation. NOWPAP DINRAC established the database on MPAs in the NOWPAP member states and collected the latest information in each member state. The number of MPAs in the NOWPAP region is dramatically changed; number in China is 84, number in Japan is 99, number in Korea is 29 and number in Russia is 65. The total number of MPAs in the NOWPAP region reached 277 and the covered area is 6,255,000 hectare.

One of the objectives of this regional report is to clarify the system and regulation on MPAs in the NOWPAP member states. Through preparing regional report, the latest situation on MPAs in member states is uploaded. In China, total number of MPAs is 235 and it's covered area is 20,670,000 hectare, in Japan, total number is not clear but the total area is 36,900,000 hectare. In Korea, total number of MPAs is 565 and its' area is 1,000,000 hectare, in Russia total number is 214 and the area occupies 2.7 percent of the total area of the Russian Federation.

To prepare the regional report on marine biodiversity conservation and sustainable use of marine ecosystem services in the NOWPAP region, CEARAC collected the latest information on MPAs in the NOWPAP member states with support by experts of each member state. It clarified that member states promote measures for marine biodiversity conservation in their territorial sea area.

After that, CEARAC researched the current situation of MPAs in the member state under cooperation of expert of each member state. The current situation in the NOWPAP member states is as follows; In China, total number of MPAs is 235 (including MPAs located in the out of NOWPAP region) and covered area is 20.7 million ha. In Japan, total number is not clear but at least 200 MPAs are designated and the area is over 40 million ha. The total number of MPAs in Korea is 565 and it covered one million ha of national territorial sea area. The total number of MPAs in Far Eastern of Russia is 8 and it covered 68,000 ha (total one million ha including land area).

The difference of value between CEARAC's research and DINRAC's database is due to new definition of MPA in the member states. In case of Japan, MPAs which aim to protect aquatic animals and plants were newly added and in Korea MPAs managed by other Ministry were added.

In the next section, the latest situation and definition/system on MPA in the member states are described.

2-2 Criteria and purpose of MPA in the NOWPAP Member States

[China]

China doesn't set the own definition of MPA, refer the definition by IUCN. MPAs in Chinese territorial sea area are designated based on Constitution of the People Republic of China. The related laws and regulations are Law of Environmental Protection, Marine Environmental Protection Law, Regulation of Nature Reserves, Management Regulation of Marine Nature Reserve, Management Regulation of Special Marine Reserve, and Interim Regulation on National Fisheries Genetic Resources Reserve and so on.

MPAs are designated by above mentioned laws and regulations and cover 1.12 percents of Chinese territorial sea. Chinese MPAs are classified into following three categories:

(1) Marine Nature Reserve

Purpose: To protect the natural environment and resources

Act: Management Regulation of Marine Nature Reserve

Authority: State Oceanic Administration

Appropriate sea area:

1. Sea areas where conclude typical ecosystem
2. Sea areas where has high marine biodiversity or sea area where rare and endangered marine species naturally and densely distributed

3. Sea areas where marine natural remains with great scientific and cultural value are located
4. Sea areas, seashores, islands, coastal wetlands, estuaries and bays with special protection values
5. Sea area which call for special protection

Number of Marine Nature Reserve areas: 171

Total area of Marine Nature Reserve: 12.8 million hectare

(2) Special Marine Reserve

Purpose: To protect marine biodiversity and ecosystem service function

Act: Management Regulation of Special Marine Reserve

Authority: Local government

Appropriate sea area:

1. Sea areas where rare and endangered marine species are naturally and densely distributed
2. Sea areas where has representative natural ecosystem
3. Sea areas which is ecological sensitive and fragile area

Number of Special Marine Reserve: 40

Total area of Special Marine Reserve: 0.67 million hectare

Special Marine Geographic Reserve, Oceanic Ecosystem Reserve, Marine Resource Reserve and Ocean Park are included in this system.

(3) Fisheries Genetic Resources Reserve

Purpose: To protect important aquatic genetic resources and their survival circumstances, to promote sustainable development of fishery, to establish the protection network and to alleviate the adverse effect of human activity

Act: Interim Regulation on Fisheries Genetic Resources Reserve

Authority: Ministry of Agriculture

Appropriate sea area:

1. Breeding areas of protected aquatic species
2. Breeding areas where unique aquatic genetic resources mainly distributed
3. Breeding areas where fingerling of important aquatic species is distributed
4. Sea areas where genetic resources with great economic and heritage value mainly distributed

Number of Fisheries Genetic Resources Reserve: 24

Total area of Fisheries Genetic Resources Reserve: 7.2 million hectare

[Japan]

Definition of MPAs in Japan is "A protected area is a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values."

Based on this definition, sea areas are designated by related laws as MPA. The related laws are Natural Park Act, Act on Special Measures Concerning Conservation of the Environment of the Seto Inland Sea, Nature Conservation Law, Wildlife Protection and Proper Hunting Act, Act on Conservation of Endangered Species of Wild Fauna and Flora, Act on Protection of Cultural Properties, Act on the Protection of Fishery Resources, Marine Resources Development Promotion Act, Fishery Act, Act on the Protection of Fishery Resources and Fishery Cooperative Act.

MPAs designated by related laws cover 8.3 percents of Japanese territorial sea. The categories of MPA designed by each related laws are as follows;

(1) Natural Park

Purpose: To protect outstanding natural scenery and promote its use

Act: Natural Park Act.

This Act shall aim at the protection of the places of natural scenic beauty and also, through the promoted utilization thereof, at the contribution to the conservation and sustainable use of biological diversity as well as to the health, recreation and culture of the people.

Authority: Ministry of Environment or local government

Number of National Parks and Quasi National Parks: 86 (36 sites cover the sea area)

Total protected area: 18,600 km²

In this system, National Park and Quasi National Park are included. National Park is designated and managed by Ministry of Environment and Quasi National Park is designated and managed by local government.

(2) Natural Coastal Protected Zone

Purpose: To maintain the state of nature so that seashores and ponds, could be used for bathing, shellfish gathering and so forth in the future

Act: Act on Special Measures Concerning Conservation of the Environment of the Seto Inland Sea

This law aims to promote the conservation of the Seto Inland Sea environment, by stipulating matters necessary for the formulation of effective plans and strategies for environmental conservation. It also provides special measures for restrictions on the installment specified facilities, prevention of damage from eutrophication and conservation of the natural seashore.

Authority: Local government

Number of Natural Coastal Protected Zone: 91 (located only in the Seto Island Sea)

Total area of Natural Coastal Protected Zone: Unknown

(3) Nature Conservation Area

Purpose: To conserve the outstanding natural environment requiring particular conservation

Act: Nature Conservation Law

Along with Natural Park Law and other laws for conserving the natural environment, this law aims that the people enjoy the blessing of the natural environment and sustain it for the future generation by securing biological diversity in the areas where particularly conservation of the natural environment is necessary and promoting other integrated conservation measures. It also aims to the contribution to provision of healthy and cultural lives to the people at present and in the future.

Authority: Ministry of Environment

Number of Nature Conservation Area: 1 (only Sakiyama Bay in Okinawa Prefecture)

Total area of Nature Conservation Area: 1.28 km²

(4) Wildlife Protection Area

Purpose: To protect wildlife

Act: Wildlife Protection and Proper Hunting Act

This Act aims to implement activities for protecting wild life to promote proper hunting through preventing damages by wildlife on living environment, agriculture, forestry and fisheries industry and biological diversity as well as through preventing risks by using hunting equipment. It also aims that the people enjoy the blessing of the natural environment and the local communities make sound development through the contribution to securing biological diversity.

Authority: Ministry of Environment or local government

Number of Wildlife Protection Area: 3,888 (73 sites are designated by MOE and 3,815 sites are designated by Prefectures)

Total area of Wildlife Protection Area: 36,500 km² (Designated area in sea area is 2,950 km²)

(5) Natural Habitat Conservation Area

Purpose: To conserve national endangered species of wild fauna and flora

Act: Act on Conservation of Endangered Species of Wild Fauna and Flora

This Act aims to conserve the natural environment in a better way by preserving endangered wild life, while recognizing that wild life is an essential component of

ecosystems as well as for rich life of the people, and thereby to contribute to provision of healthy and cultural lives to the people at present and in the future.

Authority: Ministry of Environment, Ministry of Economy, Trade and Industry or Ministry of Agriculture, Forestry and Fisheries

Number of Natural Habitat Conservation Area: 9 (however, all sites are located in inland)

Total Area of Natural Habitat Conservation Area: Unknown

(6) Natural Monument

Purpose: To protect animals, plants, geographic feature and minerals of high scientific value

Act: Act on Protection of Cultural Properties

The purpose of this Act is the contribution to cultural improvement of the people and advancement of the global culture by preservation of cultural assets and wise utilization of them.

Authority: Agency for Cultural Affairs or local government

Number of Natural Monument: 75 (11 Natural Monument cover the sea area)

Total area of Natural Monument: Unknown

(7) Protected Water Surface

Purpose: To protect and cultivate aquatic animals and plants

Act: Act on the Protection of Fishery Resources

The purpose of this Act is to ensure the protection and culture of fishery resources, to maintain those advantages for the future, and thereby to contribute to the development of fishery.

Authority: Ministry of Agriculture, Forestry and Fisheries

Number of Protected Water Surface: 55

Total area of Protected Water Surface: 29.5 km²

(8) Coastline Marine Resource Development Area and Designated Area

Purpose: To promote the streamlining of the development and use of marine fishery resources through measures to promote the multiplication and aquaculture of aquatic animals and plants systematically

Act: Marine Resources Development Promotion Act

Authority: Ministry of Agriculture, Forestry and Fisheries or Local government

Number of Designated Area: 31

Total area of Designated Area: 309,900 km²

(9) Area designated by prefecture, fishery operator group

Purpose: To protect and cultivate aquatic animals and plants, and to secure their sustainable use

Act: Fishery Act, Act on the Protection of Fishery Resources and Fishery Cooperative Act

The purpose of this Act is to establish a basic fisheries production system in which fisheries adjustment organizations mainly consisting of fishery managers and fishery employees can be operated for systematic utilize of waters, to thereby enhance fisheries productivity and also to democratize the fishing industry.

Authority: Local government or fishery operator group

Number of areas: Unknown

Total area: Unknown

(10) Common Fishery Right Area

Purpose: To enhance fisheries productivity (protecting and cultivating aquatic animals and plants, and ensuring their sustainable use)

Act: Fishery Act

Authority: Local government or fishery operator group

Number of Common Fishery Right Area: Unknown

Total Area of Common Fishery Right Area: 89,587 km²

[Korea]

***Following categories are based on the categories presented by Dr. Jae-Young Lee at the last marine biodiversity workshop. Some terms are different from your national report. So, please check them and add information (purpose of each category etc.), if possible.**

There is no own definition on MPA in Korea, however MPAs are designated based on related Korean laws and regulations. Total Number of MPAs in Korea is 565 and cover 10,004 km² in Korean territorial sea. It is 14.1 percent of whole of national territorial sea area.

(1) Protected Marine Area (Marine Ecosystem Protected Area)

Act: Conservation and Management of Marine Ecosystem Act (Marine Ecosystem Conservation Management Law)

Purpose:

Authority: Ministry of Land, Transport and Maritime Affairs (Ministry of Ocean and Fisheries, Korea Marine Environment Management Cooperation)

Number of Protected Marine Area: 6

Total area of Protected Marine Area: 219 km²

(2) Wetland Protection (Coastal Wetland Protected Area)

Act: Wetland Conservation Act

Purpose:

Authority: Ministry of Land, Transport and Maritime Affairs (Ministry of Ocean and Fisheries, Korea Marine Environment Management Cooperation)

Number of Wetland Protection: 12

Total area of Wetland Protection: 141.4 km²

(3) Marine Environment Conservation

Act: Marine Environment Management Act

Purpose:

Authority: Ministry of Land, Transport and Maritime Affairs

Number of Marine Environment Conservation: 4

Total area of Marine Environment Conservation: 1,882 km²

(4) Fisheries Resource Protection (Fisheries Resources Protected Area)

Act: National Land Planning and Utilization Act (Fisheries Resources Protection Law)

Purpose:

Authority: Ministry of Land, Transport and Maritime Affairs and Ministry of Food, Agriculture, Forestry and Fisheries (Ministry of Ocean and Fisheries, Korea Fisheries Resources Agency)

Number of Fisheries Resource Protection: 10

Total area of Fisheries Resource Protection: 3,034 km²

(5) Special Island

Act: Special Act on Islands

Purpose:

Authority: Ministry of Environment

Number of Special Island: 167

Total area of Special Island: 10.5 km²

(6) National Park

Act: Natural Park Act

Purpose:

Authority: Ministry of Environment, Korea National Park Service

Number of National Park: 4

Total area of National Park: 3,348 km²

(7) Ecosystem/Landscape Conservation

Act: Natural Environment Conservation Act

Purpose:

Authority: Ministry of Environment

Number of Ecosystem/Landscape Conservation: 3

Total area of Ecosystem/Landscape Conservation: 34.6 km²

(8) Wildlife Protection

Act: Wildlife Act

Purpose:

Authority: Ministry of Environment

Number of Wildlife Protection: 166

Total area of Wildlife Protection: 207.8 km²

(9) Natural Heritage

Act: Cultural Heritage Protection Act

Purpose:

Authority: Cultural Heritage Protection Administration

Number of Natural Heritage: 193

Total area of Natural Heritage: 1,126 km²

[Russia]

In 2012, Centre of International Projects of Ministry of Nature Resources prepared the draft of concept of development of marine protected areas.

Draft concept: Specially marine protected areas (water areas) can be marine reserves planned for biodiversity protection and designed to be used in other aims, but not contradicting biodiversity protection, or sites where definite activities (for example, fishery or navigation) is limited or forbidden as it widely accepted that an ecosystem is especially vulnerable to these kinds of economic activities.

This concept of MPA development (draft) defines the following functions of marine and coastal MPA:

- Conservation of biological diversity on level of specific populations and their habitats, ecosystems with their natural dynamics;
- Maintenance of genetic diversity and efficiency of populations of sea organisms;
- Reception of the information on parameters of both coastal and marine ecosystems and their time dynamics – organization and implementation of scientific researches (fundamental, applied and engineering-ecological), ecological monitoring within the limits of nation-wide system of environmental monitoring supply with information on long-term planning of wildlife management and forecast of conditions of implementation of other economic activities;
- Preservation of natural, historical and cultural heritage;

- Maintenance of traditional ways of wildlife management;
- Preservation of valuable territories with more potential of ecological functions (for example, recreational potential);
- Ecological education and participation in preparation of scientific personnel and experts in the field of the environmental protection;
- Participation in national environmental certification of projects and plans of territorial placement of economic and other objects

To define the functional importance of MPA condition the following criteria are offered:

- Value of biodiversity indicators, number and condition of taxons in the Red Book, representation of flora and fauna (local, regional, global), index for maintenance of steady populations of marine biota species, assessment of spatial effect of the protection, defined by presence in biota structure of distant and near migrants and the species of seasonal and other regular migration in and out of the MPA borders;
- The area, territorial structure, character of SPNA borders;
- Presence of the list of performed and potential ecological functions, including ecological services at the local and regional levels;
- Estimation of ecological risk and its forecast, dynamics of number of the factors limiting performance of those or other MPA functions, including estimation of degree of hazards from various types of wildlife managements;
- Estimation of position and value of MPA in the structure of SPNA network;
- Estimation of size of anthropogenic load on protected SPNA ecosystems, including quantity of alien and synanthropic species, degree of their introduction in natural coastal and sea ecosystem;
- Estimation of economic infrastructure development degree (road network, settlements, industrial objects, etc.) and population density in the borders of SPNA and in adjacent territory;
- Degree of MPA staffing, educational level and qualifications of the employees;
- Competence assessment of the MPA personnel in decision-making concerning environmental conservation, wildlife management and ecological education on the regional level;
- Participation in scientific programs of the Russian Academy of Science, Federal and regional target programs, nature protection programs on national and international NGOs.

***Following categories are based on the categories finalized at the last marine biodiversity workshop. However, explanation of each category isn't shown in your national report. So, please check them and add information.**

(1) State Natural Reserve including biosphere

Purpose:

Authority:

Number of State Natural Reserve including biosphere

Total area of State Natural Reserve including biosphere

(2) State Natural Park

(3) Natural Park

(4) National Monument

(5) Refuges of various significance

(6) Refuges of local significance

(7) Dendrological Park

(8) Botanic Garden

(9) Health Improvement Localities and Resort

Comparison of systems of

The relationship between categories of MPA defined by IUCN and categories of MPAs in the NOWPAP member states is shown in following Table.

2-3 Measures by the NOWPAP Member States on MPAs

China : Nothing

Japan : - Establishment and/or expansion of marine parks in national parks
- Assessment of marine biodiversity including Ecologically or biologically significant sea area

“Integrated study on observation, evaluation and prediction of biological diversity in Asia” by Environment Research and Technology Development Fund of the Ministry of the Environment, Japan

1) Global quantitative evaluation and prediction of spatiotemporal trends on coastal biological diversity

2) Quantitative evaluation and prediction of spatiotemporal trends on biological diversity of seaweed

3) Quantitative evaluation and prediction of spatiotemporal trends on biological diversity of seagrass beds

4) Quantitative evaluation and prediction of spatiotemporal trends on biological diversity of coral reefs

5) Quantitative evaluation and prediction of trends on biological diversity of

planktons in the surrounding sea area of Japan

6) Quantitative evaluation and prediction of spatiotemporal trends on loss of biological diversity of benthos

Korea: Addition of new marine protected areas and expansion of the existing areas

Russia: Addition of new marine protected areas. Potential marine areas have been selected by experts at present. The draft concept of development of MPAs in Russia was prepared in 2012 and Russian MPA systems for the future are mentioned in it.

The purpose of the Concept 2020 is the development of SPNA system through increase of efficiency of the governmental control in organization and functioning of SPNA system in the interests of sustainable development of the Russian Federation, environmental safety, protection of biological and landscape diversity, conservation and sustainable use of natural and cultural heritage. The concept of MPA development defines the following main tasks of its organization and functioning:

- Maintenance of natural processes of marine ecosystem self-restoration,
- Adaptation to global changes, including climatic,
- Prevention and softening of negative influences of new anthropogenic impacts,
- Studying of the condition and features of its functioning,
- Monitoring and forecast of natural regenerative processes and reaction to the nature and intensity of external impacts, including anthropogenic impacts

One of the goal of this concept is to 2020, 10 % of the coastal and marine areas especially valuable for biodiversity conservation and providing of ecosystem services should be protected through efficient management and systems of environmentally representative and interconnected marine protected areas.

This MPA development concept is based on the following positions:

- The ecological doctrine of the Russian Federation (approved by the order of the Government of the Russian Federation of 31.08.2002)
- Concepts of long-term social and economic development of the Russian Federation before 2020 (approved by the order of the Government of the Russian Federation of 17.11.2008)
- The Climatic Doctrine (2009)
- The Maritime Doctrine of the Russian Federation before 2020 (approved in 2001)
- Water Strategy of the Russian Federation before 2020 (2009)
- The Water Code of the Russian Federation (edition of 27.12.2009)
- The Federal Law on Conservation of the Environment (edition of 27.12.2009)
- The Federal Law on Specially Protected Natural Areas (edition of 27.12.2009)
- The Federal Law on Domestic Sea Waters, Territorial Sea and Adjoining Zone of the Russian Federation (edition of 27.12.2009)

【Categories on MPAs in the NOWPAP member states and relationship with IUCN MPA categories】

Category of MPA by IUCN	China	Japan	Korea	Russia
Strict Nature Reserve (Ia): Strictly Protected Area	Nature Reserve	Nature Conservation Area	None	State Natural Reserve including biosphere State Natural Park
Wildness Area (Ib): Large unmodified or slightly modified area	Nature Reserve	None	Marine Ecosystem Protected Area	State Natural Reserve including biosphere State Natural Park
National Park (II): Large natural or near natural area	Marine Special Reserve	Natural Park	National Park	State Natural Park
Natural Monument of feature (III): Protected area aim to protect specific natural monument	Nature Reserve	Natural Monument	Marine Ecosystem Protected Area	Natural Park National Monument
Habitat and Species Management Area (IV): Protected areas aim to protect particular species or habitats	Nature Reserve	Natural Habitat Conservation Area Wildlife Protection Area Protected Water	Marine Ecosystem Protected Area Coastal Wetland Protected Area	Refuges of various significance
Protected Landscape and Seascape (V): Protected area where the interaction of people and nature	Nature Reserve Marine Special Reserve (Ocean Park)	Natural Park Natural Seashore Conservation Area	Marine Ecosystem Protected Area	Refuges of local significance
Protected Area with Sustainable use of Natural Resources (VI): Protected areas conserve ecosystem and habitats	Fisheries Genetic Resources Reserve	Coastal Fishery Resources Enhancement Area Designated Marine Area Common Fishery Right Area Protected Water Various Areas designated by Prefecture Government, Fishery Cooperative Groups of local fishers	Fishery Resources Conservation Area	Refuge of various significance (with limited activities) Dendrological Parks Botanic Gardens Health improvement localities and resorts

3. Monitoring and management status in the selected MPAs in the NOWPAP region

In the MPAs designated based on law and system of each member state, management and monitoring are conducted in order to protect landscape/seascape and marine biodiversity. To understand the monitoring and management status in MPAs of each member state, information was collected in the targeted MPAs. The target MPAs were selected by CEARAC FPs from each category of MPAs in member states in order to understand the difference of management status in each category. Selected target MPAs in the NOWPAP member states are as follows;

Country	Selected MPAs	
China	Marine Nature Reserve	Haiyang Qianliyan Island Marine Ecosystem Provincial Nature Reserve Yalujiang River Estuary Wetland National Nature Reserve Kongdong Islands Provincial Nature Reserve Changdao National Nature Reserve
	Special Marine Reserve	Zhifu Archipelago National Special Marine Reserve Jiaozhou Bay Wetland Provincial Special Marine Reserve Haizhou Bay National Ocean Park
	Fishery Genetic Resource Reserve	Rongcheng Bay National Fisheries Genetic Resource Reserve Rizhao Sea Area <i>Coelomactra Antiquata</i> National Fisheries Genetic Resource Reserve Rushan National Fisheries Genetic Resources Reserve
Japan	Natural Monument	Danjo Guntou Islands Breeding Habitat of Streaked Shearwater and Japanese Cormorant in Awashima Island
	Natural Park	Daisen-Oki National Park San'in Kaigan National Park Niseko-Shakotan-Otaru Kaigan Quasi National Park Genkai Quasi National Park
	Wildlife Protection Area	Kanmurijima-Kutsujima National Wildlife Protection Area Kosado-toubu National Wildlife Protection Area
	Nature Conservation Area	Sakiyama Bay
	Coastal Marine Resource Development Area	Toyama Bay
Korea	Marine Protected Ecosystem Area	Sindu-ri Sand Dune Mun-Sum Oryuk-do
	Coastal Wetland Protected Area	Muan Suncheon Bosung Bulgyo Buan Julpo Bay Gochang Seocheon Jeung-do
Russia		Far Eastern Marine Nature Biosphere Reserve Kuril Lazovsky

		Sikhote-Alin Land of the Leopard Tumninsky Vostok Bay Moneron Island
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3-1 Outline and oceanic condition around the selected MPAs

The Outline (location and oceanic/climate condition) of each target MPAs is shown in following table.

China

MPAs		Characteristic and Oceanic condition
Haiyang Island Ecosystem Nature Reserve	Qianliyan Marine Provincial	Qianliyan Island located in the southern Yellow Sea. The area of this reserve is 1,823 hectares, with core area 52 hectares, buffer area 207 hectares, experimental area 1,564 hectares. This island is abundant in bird resources and many kinds of rare birds and plants is found there, Among them, there are rare plants Japanese Camellia and medical plants honeysuckle, Chinese wolfberry and Radix bupleuri etc. With 20 marvelous peaks and fair stones, this island has a reputation for its scenic beauty. This sea area is abundant in rare seafood resources like Abalon, Holothurioidea etc. The annual mean temperature is 11.4°C, range of seawater temperature from 5.2°C to 29.1°C, range of salinity from 30.17 to 38.8psu.
Yalujiang Estuary National Reserve	River Wetland Nature	Yalujiang River is border between China and North Korea. In this MPA, 311 km ² of land area, 60 km ² of reed marsh, 242km ² of tidal flat and 466km ² of sea area are conserved. The annual mean temperature is 8.9°C. This area has high tide range and the mean tide range is 4.6m.
Kongdong Provincial Reserve	Islands Nature	Kongdong Island is located offshore of Yantai City. The annual mean temperature is 12.5°C. The mean sea surface temperature is 12.6°C, and the mean salinity is 29.98psu.
Changdao Nature Reserve	National	Changdao Island locates between Bohai Sea and Yellow Sea and consists of 32 islands. The annual mean temperature is 11.9°C. The annual mean SST is 11.5°C, and the mean salinity is 31.33psu.
Zhifu National Marine Reserve	Archipelago Special	Zhifu Archipelago locates offshore of Yantai City. The annual mean temperature is 12.5°C. The annual mean SST is 12.6°C, and the annual mean salinity is 29.98psu.
Jiaozhou Bay Provincial Marine Reserve	Wetland Special	Jiaozhou Bay locates in the southern Yellow Sea near Qingdao. The annual mean temperature is 12.5°C. The transparency in the bay is between 0.5m to 6.0m.
Haizhou Bay Ocean Park	National	Haizhou Bay locates to the south of Yellow Sea. The annual mean temperature is 14.3°C. SST in summer is 27.7°C and in winter is 3.1°C. The annual mean salinity is 30.69psu.
Rongcheng National Genetic Reserve	Bay Fisheries Resource	Rongcheng Bay is located at the tip of the Shandong Peninsula. The annual mean temperature is 11.1°C. The annual mean SST is 13.3°C, and the annual mean salinity is 31.75psu.
Rizhao National Fisheries	Sea Area <i>Coelomactra Antiquata</i>	Rizhao Sea area is located between Jiaozhou Bay and Haizhou Bay. This area is habitat of <i>Coelomactra Antiquata</i> (Antiquw Mactra). The annual mean temperature is 12.7°C, and the maximum current

Genetic Reserve	Resource	velocity is 1.2m/s.
Rushan Fisheries Resources Reserve	National Genetic	Rushan is located in the mouth of Jiaozhou Bay. The annual mean temperature is 11.7°C.

Japan

MPA		Oceanic condition
Danjyo Guntou Islands		Danjyo Guntou Islands is located in Nagasaki Prefecture and consists of five islands. Around the islands Kuroshio and Tsushima Current are flowed, climate is temperate. Therefore, some kinds of southern plant are founded and northern limit of habitat of <i>Cinnamomum daphnoides</i> . This area is good fishery ground.
Breeding and Cormorant in Awashima Island	Habitat of Streaked Shearwater and Japanese	This island is located offshore of Niigata Prefecture. Most of island is rocky place and Streaked Shearwater and Japanese Cormorant use as their breeding area.
Daisen-Oki Park	National	This National Park is located in Shimane Prefecture. Tsushima Current flows around this National Park, various kinds of biota of the southern temperate zone make their habitat. In the shallow area, seagrass bed is formed. In the Daisen-Oki National Park, there are five marine park areas; Shimane Peninsula Marine Park Area (7 ha), Jyoudogaura Marine Park Area (2 sites, 20.8 ha), Shiro Marine Park Area (14.8 ha), Kuniga Marine Park Area (7.3 ha) and Ama Marine Park Area (7.6 ha).
San'in Kaigan National Park	National	This National Park covers the coastline of Kyoto, Hyogo and Tottori Prefecture. Tottori dune is characteristic place in this National Park. In the San'in Kaigan National Park, there are five marine park areas; Goshiki-hama Marine Park Area (20.7 ha), Toyooka Marine Park Area (7.6 ha), Takeno Marine Park Area (9.9 ha), Hamasaka Marine Park Area (2 sites, 19.2 ha), and Uratomi Marine Park Area (9.8 ha).
Niseko-Shakotan-Otaru Kaigan Quasi National Park	Quasi National	This Quasi National Park is located in the western side of Hokkaido Prefecture. Its oceanic condition is subarctic environment. However, Soya Warm Current flows offshore of Quasi National Park, temperate and subarctic biota are found. In the Niseko-Shakotan-Otaru Kaigan Quasi National Park, there are two marine park areas; Shakotan Peninsula Marine Park Area (3 sites, 28.9 ha) and Otaru Coast Marine Park Area (3 sites, 14.7 ha).
Genkai Quasi National Park	Quasi National	Genkai Quasi National Park is located northern part of Kyushu Island. Tsushima Current flow offshore of the park, therefore ocean condition is temperate environment. Around the park, Finless Porpoise and Common Dolphin are found. In Genkai Quasi National Park, there is one marine park area; Genkai Marine Park Area (5 sites, 45.5 ha).
Kanmurijima-Kutsujima National Wildlife Protection Area	Wildlife	This MPA is located offshore of Kyoto Prefecture. These Islands are biggest habitat of Streaked Shearwater in Japan. In addition, many birds, such as Swinhoe's Storm-petrel listed up to the Red List of Japan form their habitat. These islands belong to temperate zone.
Kosado-toubu Wildlife Protection Area	National	Sado Island is located offshore of Niigata Prefecture. The climate of this area is temperate zone.

Sakiyama Bay	This MPA is located in Iriomote Island of Okinawa Prefecture and belongs to subtropical zone. Coral reef is formed in the Bay.
Toyama Bay	Toyama Bay is located in the middle of Japan and one of the deep bays in Japan. Surface water is influenced by Tsushima Current. In the other hand, under 300m depth, deep water which water temperature is under 2°C is occupied.

Korea

MPA	Oceanic Condition
Sindu-ri Sand Dune	This MPA is located in the west coast of Korea (Taeon, Chungchoengnam) and faced to Yellow Sea. This MPA is the largest coastal sand dune of Korea and famous for its unique landscapes and colony of sand dune plant. It has approximately 4km in length and 1 km width of sand. It's surface sediment dominated by well-sorted sand and muddy sand.
Mun-Sum	This MPA is located in Jeju Island (Seoguipo, Jeju). Munsum MPA is famous for its unique coral community and endemic marine organisms such as sea cockscombs and sea weeds in Korea. This MPA consists of Munsum Island, Bamsun Island and Supsum Island. This area is rocky shore habitat and sand bottom.
Ohryuk-do	This MPA is located in the southeast coast of Korea near Busan. Ohryuk-do MPA is famous for pristine landscape including cliffs, rocks and organisms. It consists of Bangpae Island, Songkot Island, Suri Island and Deungdae Island, etc.
Muan	This MPA is located in the southwest coast of Korea (Muan, Jeollanam). Muan tidal flat is parts of Hamhae Bay. This area has been designated as the first Coastal Wetland Protected Area in Korea because of the geological primitiveness, biodiversity. This MPA was designated Ramsar Site in Jan. 2008.
Suncheon	This MPA is located in Suncheon Bay in south coast of Korea. Suncheon Bay tidal flats are inner parts of Yeoja Bay located in south-central part of Korea. This area has been designated for habitat conservation of migratory birds such as hooded-crane <i>Grus monacha</i> and huge colony of reed.
Bosung Bulgyo	This MPA is located in the south coast of Korea (Boseong, Jeollanam). This MPA is distinct for its mud dominated sediment composition and provides huge habitats for blue spotted mud hoper <i>Boleophthalmus pectinirostris</i> and Malaysia clam <i>Tegillarca granosa</i> .
Buan Julpo Bay	This MPA is located in the west coast of Korea (Buan, Jeollabuk). It has a primitive ecosystem and variety of halophyte such as <i>Phragmites communis</i> , <i>Suaeda japonica</i> , <i>Suaeda asparagoides</i> .
Gochang	This MPA is located in the west coast of Korea (Gochang, Jeollabuk). This MPA is designated by its natural primitiveness, high biodiversity, high abundance of macrobenthos and habitats for birds. Gochang tidal flat is a main producing place of Manila clam <i>Ruditapes phillipinarum</i> .
Seocheon	This MPA is located in the west coast of Korea (Seocheon, Chungnam). Various macrobenthic organisms and commercial species live in this area due to its primitive habitat and high heterogeneity of sediment composition. This MPA is comprised of two part; one is designate along the coastal line and the other is

	designate adjacent Yoobu Island.
Jeung-do	This MPA is located in the offshore islands in the southwest of Korea (Shinan). This MPA is comprised of two are; one is the area around Jeungdo Island, the other is around Byeongpungdo Island. Before designation as a MPA, some parts of Jeungdo has been designated to UNESCO-MAB Biosphere reserve in May 2009.

Russia

MPA	Oceanic Condition
Far Eastern Marine	Purpose of establishment is environmental conservation of the structurally richest marine and island fauna and flora of the Peter the Great Bay, and first of all gene pool of sea organisms.
Kuril	
Lazovsky	
Sikhote-Alin	401,428 hectares, including 2,900 hectares in sea area. In UNESCO classification it is shown as an object including the most important or considerable habitat for conservation of biological variety, including endangered species of exclusive world value from the point of view of science and protection.
Land of the Leopard	
Tumninsky	
Vostok Bay	
Moneron Island	<p>Biodiversity hotspot, high diversity of benthic communities. Intact marine ecosystem. Sponges and bryozoans aggregations, red hydrocorals. North boundary of abalone (<i>Haliotis</i>) range. Density of abalone has bid amplitude between years which is caused by natural factors. The only rookery of Steller's sea lion in the southern part of Sea of Okhotsk (boundary water mass between Sea of Okhotsk and the Sea of Japan).The highest density of zooplankton.</p> <p>A branch of the Kuroshio Current causes high biodiversity of the area. High density of marine flora and zooplankton is a result of local upwelling. High diversity of fish species and benthic organisms. Moneron island and smaller island contain large seabird colonies. Nesting area for many species of birds connected with the marine realm.</p> <p>There is no human activity in the area now, except for occasional tourism. If this situation remains unchanged, the Moneron shelf will not degrade.</p> <p>The area is currently protected under Russian national law for its biodiversity values.</p>

3-2 Monitoring status of the marine environment and marine species in the selected MPAs

Monitoring status of the marine environment and marine species in each target MPA are summarized in following tables.

China

Target MPAs	Monitoring parameters
Haiyang Island Ecosystem Nature Reserve Qianliyan Marine Provincial Reserve	Monitoring parameters on marine environment Water temperature? Salinity? Monitoring parameters on marine species ?
Yalujiang Estuary National Reserve River Wetland Nature Reserve	Monitoring parameters on marine environment COD Phosphate Inorganic nitrogen Oil and grease Monitoring parameters on marine species Phytoplankton Zooplankton Benthic animal
Kongdong Provincial Reserve Islands Nature Reserve	Monitoring parameters on marine environment Water temperature? Salinity? Monitoring parameters on marine species ?
Changdao National Nature Reserve	Monitoring parameters on marine environment Water temperature? Salinity? Monitoring parameters on marine species ?
Zhifu National Marine Reserve Archipelago Special Reserve	Monitoring parameters on marine environment pH DO COD Oil and Grease concentration phosphate concentration Monitoring parameters on marine species Phytoplankton
Jiaozhou Bay Provincial Marine Reserve Wetland Special Reserve	Monitoring parameters on marine environment pH DO COD Inorganic nitrogen Monitoring parameters on marine species

	Phytoplankton Zooplankton Benthic animal
Haizhou Bay National Ocean Park	Monitoring parameters on marine environment Water temperature? Salinity? Monitoring parameters on marine species ?
Rongcheng Bay National Fisheries Genetic Resource Reserve	Monitoring parameters on marine environment ? Monitoring parameters on marine species Phytoplankton Zooplankton Benthic animals
Rizhao Sea Area <i>Coelomactra Antiquata</i> National Fisheries Genetic Resource Reserve	Monitoring parameters on marine environment pH Salinity Monitoring parameters on marine species Phytoplankton Zooplankton Fish
Rushan National Fisheries Genetic Resources Reserve	Monitoring parameters on marine environment Salinity pH DO COD Phosphorus Ammonium Nitrate Nitrite Monitoring parameters on marine species Phytoplankton Zooplankton Benthic animals

Japan

In addition to the monitoring survey in MPAs, regular monitoring in coastal area is implemented by each local government. In this monitoring survey, water quality (nutrient, COD etc.)

Target MPAs	Monitoring parameters
Danjo Guntou Islands	Monitoring parameters on marine environment None Monitoring parameters on marine species None (Plant community at protected forest was monitored in 2009 and

	2010)
Breeding Habitat of Streaked Shearwater and Japanese Cormorant in Awashima Island	Monitoring parameters on marine environment None Monitoring parameters on marine species Monitoring with video camera Annual monitoring of Streaked Shearwater by Nagaoka University of Technology
Daisen-Oki National Park	Monitoring parameters on marine environment Unknown Investigation of the marine area in Daisen-Oki National park by Shimane Prefecture (2012) Monitoring parameters on marine species Seaweed/seagrass
San'in Kaigan National Park	Monitoring parameters on marine environment None? Monitoring parameters on marine species Seaweed/seagrass Implementing seagrass beds monitoring at Monitoring Site 1000 The manual for this monitoring does not specify collection of environmental information.
Niseko-Shakotan-Otaru Kaigan Quasi National Park	Monitoring parameters on marine environment None? Monitoring parameters on marine species None? *If trouble is happen, monitoring will be conducted.
Genkai Quasi National Park	Monitoring parameters on marine environment None Monitoring parameters on marine species None
Kanmuriyima-Kutsujima National Wildlife Protection Area	Monitoring parameters on marine environment None Monitoring parameters on marine species Birds (Bird banding)
Kosado-toubu National Wildlife Protection Area	Monitoring parameters on marine environment None Monitoring parameters on marine species None Regular Patrol
Sakiyama Bay	Monitoring parameters on marine environment Unknown Monitoring parameters on marine species Unknown Monitoring Site 1000 (coral reefs)
Toyama Bay	Monitoring parameters on marine environment Water quality: Water temperature, Salinity, Water color, Transparency, pH Turbidity, DO, COD, Nitrate, Ammonia nitrogen, Phosphate Silicate, Chlorophyll a Bottom quality: Temperature in sediment, Color of sediment, Grain size, Ignition loss, Sulfide, COD Monitoring parameters on marine species Phytoplankton

	Zooplankton Macrobenthos Seaweed/seagrass
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Korea

In Korea, Baseline Monitoring for Marine Ecosystem is established which has two kinds of monitoring survey, namely National Investigation on Marine Ecosystem and National Monitoring on Coastal Wet-lands. In the National Investigation on Marine Ecosystem, general environmental condition of sea bottom and pelagic ocean are monitored. In addition to oceanic condition, biological condition such as benthos, seaweed/algae/ plants, phytoplankton, zooplankton and fish is monitored. The first phase of National Investigation on Marine Ecosystem is started from 2006.

In the National Monitoring on Coastal Wetland, taxonomy/distribution, sediment quality, biomass and diversity are monitored. The 2nd phase is started from 2008.

Target MPAs	Monitoring parameters
Sindu-ri Sand Dune	?
Mun-Sum	?
Ohryuk-do	?
Muan	?
Suncheon	?
Bosung Bulgyo	?
Buan Julpo Bay	?
Gochang	?
Seocheon	?
Jeung-do	?

Russia

Selected MPAs	Monitoring parameters
Far Eastern Marine	?
Kuril	?

Lazovsky	?
Sikhote-Alin	?
Land of the Leopard	?
Tumninsky	?
Vostok Bay	?
Moneron Island	?

3-3 Management status of the marine environment and marine species in the selected MPAs

China

Management status in MPAs is depended on the categories of MPAs.

Categories of MPA	Authorities	Management
Marine Nature Reserve	Marine management department in coastal provinces, autonomous regions and municipalities	<ul style="list-style-type: none"> - Implementation of polices, regulations and laws that are related to marine nature protection - Enacting of detail regulations and rules, and centralization of the administration of all activities - Drafting of overall construction planning of nature reserve - Installation of landmarks, markers and relevant protection facilities - Organization and implementation of the works of basic investigation, monitoring and surveillance - Organization and implementation of scientific researches and ecosystem restoration - Public awareness on marine nature protection
Special Marine Reserve	Local people's government	<ul style="list-style-type: none"> - Working out and implementing the management regulation - Organizing the facility construction of supervision, scientific research, tourism, propaganda, management and the protection - Organizing and conducting the routine patrol management - Organizing and enacting the ecological compensation project as well as ecological restoration and protection plan, practicing the measures of restoration and ecological compensation and protection - Organizing and managing the ecological tourism activities - According to relevant technological index, the management institution of Special Marine Reserve should conduct the status investigation regularly including the extents of socio-economic conditions, exploration of resources and ecological environment work of monitoring, surveillance and assessment
Fishery Genetic Resources Reserve	Ministry of Agriculture Departments of fishery administration of central government or local government	<ul style="list-style-type: none"> - Setting special protection period to crucial growth and breeding stages including breeding and larval growth period of major protected objects

Regulation in each MPA category

MPA categories	Regulations	Approval system
Marine Nature Reserve	<ul style="list-style-type: none"> - Moving, relocating or damaging landmarks, marker and relevant protection facilities - Illegal collecting and fishing marine organisms - Illegal quarrying, sand excavation and exploring mine - Other behavior damaging protected objectives and nature environment and resources - Illegal construction 	<ul style="list-style-type: none"> - To build facilities with the permission of authorities - Inspection, scientific tourism and teaching practice
	<ul style="list-style-type: none"> - During relative protection period, activities can be implemented except hunting or injuring protected objects 	-
Special Marine Reserve	<ul style="list-style-type: none"> - Hunting and collecting bird egg - Cutting the mangrove, excavating coral and damaging coral reef - Use of explosives, poison and electricity to fishing - Directly discharging pollutant to the sea - Collecting, Processing and selling the products of mineral, wild flora and fauna illegally - Moving, staining and damaging the protection facilities 	
Fisheries Genetic Resources Reserve	<ul style="list-style-type: none"> - Fishing, blasting operation and other activities damaging ecological resources and environment during special protection period - Reclaim land from lakes and sea or undertake sea reclamation - To build new outlet 	<ul style="list-style-type: none"> - Survey on aquatic resources, scientific research, tourism, teaching practices and film shooting

In Marine Nature reserve, there are three classes of area, core area, buffer area and experimental area, which decided based on objectives for protection and protective period. In each area, following activities are forbidden.

Area	Regulations
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Core area	Activities that are harmful or adverse to reserve are forbidden except investigation, observation and scientific researches approved by management authorities.
Buffer area	Activities such as fishery production, tourism, scientific research and teaching practice are permitted in limited time and sphere after being approved by management authorities.
Experimental area	Proper explorations can be executed under the unified planning and conduction of the reserve management authorities.

Japan

Management status in MPAs is depended on the categories of MPAs.

Categories of MPA	Authorities	Management
Natural Park	National Park: Ministry of Environment	<ul style="list-style-type: none"> - Formulating park plans concerning the regulation or works for the protection or utilization of the National Parks or Quasi-national Parks - Deciding and executing the works based on the Park Plan - Maintaining the cleanliness of facilities such as the roads, picnic grounds, camping grounds, ski slopes, swimming areas, and other public use sites located in National and Quasi-national Parks - Planning and executing measures to ensure the diversity in the ecosystem and creature in the natural parks for conserving the scenic beauty of the parks
	Quasi National Park: Local government	
	Park Management Organizations	<ul style="list-style-type: none"> - Managing and preserving natural scenic beauty - Maintaining and managing the facilities within the National or Quasi-national Park including repairs. - Collecting and providing information/materials concerning the protection of the National or Quasi-national Park and promotion their proper use. - Offering appropriate advice/guidance concerning the protection of the National or Quasi-national Park and promotion their proper use - Studying and researching the protection of the National or Quasi-national Park and promotion of their proper use.
Natural Coastal Protected Zone	Ministry of Environment, Local government	<ul style="list-style-type: none"> - Formulating basic plans and strategies on conservation of water quality and natural scenery to promote the conservation of the Seto Inland Sea environment - Formulating prefectural plans and strategies for conservation of the Seto Inland Sea environment

		<p>based on the basic plans</p> <ul style="list-style-type: none"> - Reducing discharges of phosphorus and other designated substances to the public water areas for preventing damage by eutrophication - Designating areas for conservation of natural beaches - Promoting establishment/improvement of facilities for conservation of water quality in the Seto Inland Sea such as sewages, treatment facilities of wastes, dredging of sludge, monitoring and measurement of water quality
Nature Conservation Area	Ministry of Environment	<ul style="list-style-type: none"> - Conducting baseline surveys on landscape, geographical conditions, vegetation and wild life every 5 years, which is necessary to formulate measures on conservation of the natural environment - Formulating basic policies on conservation of the natural environment - Formulating conservation plans for Nature Conservation Areas - Formulating and Implementing plans on preservation and recovery of ecosystem based on the Conservation Plan
Wildlife Protection Area	Ministry of Environment or local government	<ul style="list-style-type: none"> - Formulating management plans on specific wildlife - Implementing Conservation of wildlife in Wildlife Protection Areas - Designating closed season of hunting in Special Protection Areas
Natural Habitat Conservation Area	Ministry of Environment	<ul style="list-style-type: none"> - Designating National Endangered Species of Wild Fauna and Flora - Understanding the situations/conditions of wild fauna and flora - Formulating integrated measures to conserve endangered species of wild fauna and flora - Implementing integrated measures to conserve endangered species of wild fauna and flora
Natural Monument	Agency of Cultural Affairs	<ul style="list-style-type: none"> - Installing equipment for management such as signs, markers and boundary fences - Restoring natural monuments - Conserving the Environment - Conducting researches for preservation
Protected Water Surface	Ministry of Agriculture, Forestry and Fisheries, and Local government	<p>Formulating management plans</p> <ul style="list-style-type: none"> - Summary of marine fauna and flora to be increased, increasing methods and its facilities - List of marine fauna and flora of which hunting is restricted or prohibited, and details of the restriction or prohibition - List of fishing gear and/or fishing boats by which hunting is restricted or prohibited, and details of the restriction or prohibition

Coastline Marine Resource Development Area, and Designated Area	Ministry of Agriculture, Forestry and Fisheries, and Local government	<p>Formulating development plans of coastal marine resources</p> <ul style="list-style-type: none"> - List of marine fauna and flora to be increased and/or cultured and goals - Matters of breeders, stock and seedling of marine fauna and flora - Matters on development and improvement of fishery production and relevant facilities - Matters on conservation of growing environments of marine fauna and flora - Matters to promote increase and culture of marine fauna and flora <p>Monitoring of water contamination</p> <p>Concluding an agreement on resource management</p> <ul style="list-style-type: none"> - Lists of marine areas to be targeted in the agreement, marine resources and types of fishing - Managing methods of marine resources - Duration of the agreement - Measures/Punishment for violation of the agreement - Other matters stipulated in the Ordinance of the Ministry of Agriculture, Forestry and Fisheries
Area designated by prefecture, fishery operator group	Local government and Fishery association	<p>Fishery management by a fixed gear fishery right, a demarcated fishery right or a common fishery right</p> <p>Resource management by setting closed areas and seasons by local government and fishery associations</p>
Common Fishery Right Area		

Subarea in National Parks and Quasi National Parks

Natural Park	Special Zone	Zones to preserve scenic beauty of natural parks. There are three categories.	
		Class I	Priority Zones which possess important scenery next to Special Protection Zones. Preserving scenic beauty of the zones is necessary.
		Class II	Zones where special coordination with agriculture, fishery, and forestry activities is necessary
		Class III	Zones where ordinary agriculture, fishery, and forestry activities do not give impact on preservation of their scenic beauty
	Special Protection Zone	Special Protection Zones in Special Zones	
	Marine Park Zone	Marine Zones to preserve seascapes	
	Use Coordination Zone	Zones to promote preservation and appropriate use of scenic beauty of natural parks	
Ordinary Zone	Other areas in natural parks		

Regulation of each MPA category

MPA categories	Actions which need permission
Natural Park (National Park and Quasi National Park)	Special Zone 1. Constructing and/or renovating structures and/or building extensions 2. Felling trees 3. Damaging trees in the designated areas by Minister of the Environment 4. Mining minerals and/or quarrying 5. Influencing the change and/or volume of water in rivers, and/or lakes 6. Discharging wastewater by installing facilities to lakes and/or wetlands and/or waterways to them in the designated lakes and wetlands by the Minister of the Environment and their surrounding areas (1kilometers) 7. Installing advertising materials 8. Collecting and keeping stones and rocks and others in open areas, which are designated by the Minister of the Environment 9. Land filling and/or diking marine areas 10. Developing land and changing its landscape 11. Collecting and/or damaging designated alpine flora by the Minister of the Environment 12. Planting and/or sowing seeds of non-indigenous plants which are designated by the Minister of the Environment as potential harm to preservation of the scenic beauty in the designated areas by the Minister 13. Hunting, killing and/or damaging designated alpine fauna by the Minister of the Environment, and/or collecting and/or damaging their eggs 14. Releasing non-indigenous fauna which are designated by the Minister of the Environment as potential harm to preservation of scenic beauty in the designated areas by the Minister 15. Changing colors of roofs, walls, fences, bridges, steel towers, water lines and/or others 16. Entering designated areas by the Minister of the Environment in wetlands and relevant areas during the permitted season 17. Using vehicles, horse-drawn carriages and/or motor boats, and/or landing aircrafts in the designated areas by the Minister of the Environment, except for roads, fields, rice and vegetable fields, farms and/or residential areas 18. Besides the abovementioned actions, taking any action which is potential harm to preservation of scenic beauty of Special Zones and which is designated by the Ordinance

	<p>Special Protection Zone (In addition to 1, 2, 4, 5, 6, 7, 9, 10, 15, and 16 in Special Zone)</p> <ol style="list-style-type: none"> 1. Damaging trees 2. Planting trees 3. Releasing fauna 4. Collecting and keeping materials in open areas 5. Having a bonfire 6. Collecting and/or damaging plants other than trees, and/or collecting fallen leaves and branches 7. Planting plants other than trees and/or sowing seeds 8. Hunting and/or damaging/killing fauna, and/or collecting/damaging their eggs 9. Using vehicles, horse-drawn carriages and/or motor boats, and/or landing aircrafts in the areas expect for roads and fields 10. Besides the abovementioned actions, taking any action which is potential harm to preservation of scenic beauty of Special Zones and which is designated by the Ordinance <p>Marine Park Zone (In addition to 1, 4, and 7 in Special Zone)</p> <ol style="list-style-type: none"> 1. Hunting, damaging/killing and/or collecting tropical fish, coral, seaweed and/or other fauna and flora under permission by the Minister of the Environment or the Agriculture, Forestry and Fisheries in the designated areas by the Minister of the Environment 2. Land filling and/or diking marine areas 3. Changing the form s of sea bottom 4. Mooring things 5. Discharging wastewater by installing facilities 6. Using motor boats during the designated seasons in the designated areas by the Minister of the Environment 7. Besides the abovementioned actions, taking any action which is potential harm to preservation of scenic beauty of Marine Park Zones and which is designated by the Ordinance
Natural Coastal Protected Zone	
Nature Conservation Area	<ol style="list-style-type: none"> 1. Constructing and/or renovating structures and/or building extensions 2. Changing landscape by residential development and/or reclamation 3. Mining minerals and/or quarrying 4. Land filling and/or diking water areas 5. Influencing the water level and volume of water in rivers and/or lakes 6. Felling and/or damaging trees 7. Collecting and/or damaging plants other than trees, and/or collecting fallen leaves and branches 8. Planting trees 9. Hunting and/or damaging/killing fauna, and collecting and/or damaging their eggs 10. Releasing fauna 11. Having a bonfire 12. Disposing and/or leaving wastes 13. Collecting and/or keeping things in open areas 14. Using vehicles and/or horse-drawn carriages, and/or landing

	<p>aircrafts</p> <p>15. Besides the abovementioned actions, taking any action which is potential harm to preservation of the natural environment in the Wild Life Conservation Areas and which is designated by the Ordinance</p>
	<p>Special Zone (In addition to 1-5 above)</p> <ol style="list-style-type: none"> 1. Felling trees 2. Damaging trees in the designated areas by the Minister of the Environment 3. Planting and/or sowing seeds of non-indigenous plants which are designated by the Minister of the Environment as potential harm to preservation of the natural environment in the designated areas by the Minister 4. Releasing non-indigenous fauna which are designated by the Minister of the Environment as potential harm to preservation of the natural environment in the designated areas by the Minister 5. Discharging wastewater by installing facilities to lakes and/or wetlands and/or waterways to them in the designated lakes and wetlands by the Minister of the Environment and their surrounding areas (1kilometers) 6. Using vehicles, horse-drawn carriages and/or motor boats, and/or landing aircrafts in the designated areas by the Minister of the Environment, except for roads, fields, rice and vegetable fields, farms and/or residential areas 7. Besides the abovementioned actions, taking any action which is potential harm to preservation of the natural environment in Special Zones and which is designated by the Ordinance
	<p>Special Marine Zone</p> <ol style="list-style-type: none"> 1. Constructing and/or renovating structures, and/or making extensions 2. Changing forms of the sea bottom 3. Mining minerals and collecting stones and rocks 4. Land filling and/or diking marine areas 5. Hunting, damaging/killing and/or collecting tropical fish, coral, seaweed and/or other fauna and flora under permission by the Minister of the Environment or the Agriculture, Forestry and Fisheries in the designated areas by the Minister of the Environment 6. Using motor boats during the designated seasons in the designated areas by the Minister of the Environment 7. Besides the abovementioned actions, taking any action which is potential harm to preservation of the natural environment in Special Marine Zones and which is designated by the Ordinance
	<p>Ordinary Zone</p> <ol style="list-style-type: none"> 1. Constructing and/or renovating structures and/or making extensions, and the scale of which exceeds the standard stipulated by the Ordinance of the Ministry of the Environment 2. Changing the landscape by residential development and/or reclamation 3. Mining minerals and/or collecting stone and rocks

	<ol style="list-style-type: none"> 4. Land filling and/or diking sea areas 5. Influencing the water level and/or the volume of water in rivers and/or lakes
Wildlife Protection Area	<ol style="list-style-type: none"> 1. Hunting of fauna and/or collections of bird eggs 2. Feeding fauna and selling them 3. Hunting fauna by the methods using explosive materials, poisons and others, which are stipulated by the Ordinance of the Ministry of the Environment <p>Special Protection Zone</p> <ol style="list-style-type: none"> 1. Constructing and/or renovating structures and/or making extensions 2. Land filling and/or diking water areas 3. Felling trees 4. Taking any action which is potential harm to the protection of fauna in the designated areas: national designated protection areas by the Minister of the Environment and prefectural designated protection areas by the respective governors
Natural Habitat Conservation Area	<p>Managing Zone</p> <ol style="list-style-type: none"> 1. Constructing and/or renovating structures and/or making extensions 2. Changing landscape by residential development and/or reclamation 3. Mining minerals and/or collecting stone and rocks 4. Land filling and diking water areas 5. Influencing the water level and the volume of water in rivers and/or lakes 6. Felling trees 7. Hunting wild fauna and flora which are designated by the Minister of the Environment as necessary for inhabitation and growth of endangered national wild life 8. Discharging wastewater by installing facilities to lakes and/or wetlands and/or waterways to them in the designated lakes and wetlands by the Minister of the Environment 9. Using vehicles, horse-drawn carriages and/or motor boats, and/or landing aircrafts in the designated areas by the Minister of the Environment, except for roads, fields, rice and vegetable fields, farms and/or residential areas 10. Hunting wild fauna and flora, which are designated by the Minister of the Environment, and others 11. Releasing fauna and flora and/or planting and/or sowing seeds of flora, which are designated by the Minister of the Environment as potential harm to inhabitation and growth of endangered national wild life 12. Dispersing materials which are designated by the Minister of the Environment as potential harm to inhabitation and growth of endangered national wild life 13. Having a bonfire 14. Observing wild life by the methods which are designated by the Minister of the Environment as potential harm to inhabitation and growth of endangered national wild life
Natural Monument	When recognized its necessity for preservation of natural monuments, certain actions are restricted and/or prohibited and/or necessary facilities are installed in designated areas.

Protected Water Surface	High-level land-filling and/or dredging, and any constructing actions in waterways and/r rivers, which may influence the water level and the volume of water
Coastline Marine Resource Development Area, and Designated Area	Developing area 1. Changing forms of sea bottom by excavation and/or other actions 2. Any action which is potential harm to increase of fisheries production by promoting increase/culture of marine fauna and flora, and which is stipulated by the Ordinance Designated marine area 1. Excavation of sea bottom, installment of any structure and/or any other action which may reduce/terminate benefits of fishing grounds, and which is stipulated by the Ordinance
Area designated by prefecture, fishery operator group	
Common Fishery Right Area	

Korea

(1) Protected Marine Area (Marine Ecosystem Protected Area)

Management:

Regulation:

(2) Wetland Protection (Coastal Wetland Protected Area)

Management:

Regulation:

(3) Marine Environment Conservation

Management:

Regulation:

(4) Fisheries Resource Protection (Fisheries Resources Protected Area)

Management:

Regulation:

(5) Special Island

Management:

Regulation:

(6) National Park

Management:

Regulation:

(7) Ecosystem/Landscape Conservation

Management:

Regulation:

(8) Wildlife Protection

Management:

Regulation:

(9) Natural Heritage

Management:

Regulation:

Russia

(1) State Natural Reserve including biosphere

Management:

Regulation:

(2) State Natural Park

Management:

Regulation:

(3) Natural Park

Management:

Regulation:

(4) National Monument

Management:

Regulation:

(5) Refuges of various significance

Management:

Regulation:

(6) Refuges of local significance

Management:

Regulation:

(7) Dendrological Park

Management:

Regulation:

(8) Botanic Garden

Management:

Regulation:

(9) Health Improvement Localities and Resort

Management:

Regulation:

3-4 Situation of protected species in the selected MPAs

China

MPA	Protected species
Haiyang Qianliyan Island Marine Ecosystem Provincial Nature Reserve	Japanese camellia Japanese honeysuckle (<i>Lonicera japonica thumb</i>) Barbary wolfberry (<i>Lycium barbarum L</i>) Chinese thorowax (<i>Bupearum scorzonerifolium willd</i>)
Zhifu Archipelago National Special Marine Reserve	
Rongcheng Bay National Fisheries Genetic Resources Reserve	<i>Chlamys farreri, Anthocardaris crassispina</i>
Rushan National Fisheries Genetic Resources Reserve	<i>Tegillarca granosa</i>
Jiaozhou Bay Wetland Provincial Special Marine Reserve	<i>Grus japonensis, Grus grus, Cygnus cygus, Aquila chrysaetos</i>
Yalujiang River Estuary Wetland National Nature Reserve	<i>Glycine soja</i> (wild soybean) First-class protected animals <i>Ciconia ciconia, Ciconia nigra, Aquila chrysaetos, Aquila heliacal, Grus japonensis, Grus leucogeranus</i> Second-class protected animals (30) <i>Cygnus Cygnus, Platalea leucorodia</i> Endangered animal <i>Larus saundersi</i>
Haizhou Bay National Ocean Park	
Kongdong Islands Provincial Nature Reserve	<i>Saxidomus purpurarurs</i> <i>Apostichopus japonicas</i> <i>Haliotis discus hannai</i>
Changdao National Nature Reserve	<i>Grus japonensis, Grus leucogeranus, Cygnus Cygnus, Aquila heliacal</i> <i>Aquila chrysaetos, Aegypius monachus</i> 11 species of birds are protected and 39 species are first-class and second-class protected wild animals
Rizhao Sea Area Coelomactra Antiquata National Fisheries Genetic Resources Reserve	<i>Coelomactra antiquata</i>

Japan

MPA	Protected species
Danjyo Guntou Islands	Streaked Shearwater (<i>Calonectris leucomelas</i>) Japanese murrelet (<i>Synthliboramphus wumizusume</i>)

Breeding Habitat of Streaked Shearwater and Japanese Cormorant in Awashima Island	All species in MPAs
Daisen-Oki National Park	<p>Animal:</p> <p><i>Spirastrrella insignis</i>, <i>Haliclona (Reniera) cinerea</i>, <i>Callyspongia elegans</i>, <i>Halocordyle disticha</i>, <i>Plumularia setacea</i>, <i>Solanderia secunda</i>, <i>Dendronephthya</i> Kukenthal, Melithaeidae Gray, Acanthogorgia Gray, <i>Ellisella rubra</i>, <i>Euplexaura</i> Verrill, Actiniidae Rafinesque, <i>Stichodactyla tapetum</i>, <i>Oulastrea crispata</i>, <i>Tubastraea faulkneri</i> Wells, <i>Dendrophyllia arbuscula</i>, <i>Alveopora japonica</i>, <i>Psammocora profundacella</i> Gardiner, <i>Palythoa tuberculosa</i> Esper, <i>Myriopathes japonica</i>, <i>Lodictyum axillare</i>, <i>Lepidozonia coreanica</i>, <i>Acanthopleura japonica</i>, <i>Acanthochitona defilippii</i>, <i>Cellana grata</i>, Trochidae, <i>Lottia dorsuosa</i>, <i>Astraliu haematragum</i>, <i>Lunella coronatus coreensis</i>, <i>Hipponix conica</i>, <i>Cypraea (Purpuradusta) gracilis</i> Gaskoin, <i>Echinolittorina (Granulilittorina) radiata</i>, <i>Murex troscheli</i>, <i>Pyrene punctata</i>, <i>Epitonium japonicum</i>, Aplysiidae Lamarck, <i>Chromodoris orientalis</i> Rudman, <i>Arca navicularis</i> Bruguière, <i>Lithophaga curta</i>, <i>Septifer virgatus</i>, <i>Sporochnus radiceformis</i>, Balanidae Leach, <i>Capitulum mitella</i>, <i>Pachygrapsus crassipes</i> Randall, <i>Oedignathus inermis</i>, <i>Oxycomanthus japonicus</i>, <i>Lamprometra palmata</i>, <i>Certonardoa semiregularis</i>, <i>Gorgonocephalus eucnemis</i>, Ophiurida, <i>Styela clava</i> Herdman, <i>Chromis notata</i>, <i>Goniistius zonatus</i>, <i>Pterogobius elapoides</i>, <i>Pterogobius zonoleucus</i>, <i>Cirrhilabrus temminckii</i> Bleeker, <i>Thalassoma cupido</i>, <i>Rudarius ercodes</i>, <i>Takifugu niphobles</i></p> <p>Plant</p> <p><i>Ulva pertusa</i> Kjellman, <i>Ulva intestinalis</i> Linnaeus, <i>Ulva conglobata</i> Kjellman, <i>Microdictyon japonicum</i> Setchell, <i>Cladophora</i> Kützing, <i>Chaetomorpha</i> Kützing, <i>Caulerpa okamurae</i>, <i>Codium</i> Stackhouse, Bryopsidaceae Bory de Saint-Vincent, <i>Sphacelaria yamadae</i> Segawa, <i>Dictyota dichotoma</i> Lamouroux, <i>Zonaria diesingiana</i> J. Agardh, <i>Anthogorgia</i> Verrill, <i>Dictyopteris</i> J. V. Lamouroux, <i>Sphaerotrichia divaricata</i> (C. Agardh) Kylin, <i>Ishige okamurae</i> Yendo, <i>Leathesia</i> S. F. Gray, <i>Myelophycus simplex</i> (Harvey) Papenfuss, <i>Scytosiphon lomentaria</i> (Lyngbye) Link, <i>Colpomenia</i> (Endlicher) Derbès & Solier, <i>Carpomitra costata</i> (Stackhouse) Batters, <i>Chorda asiatica</i> Sasaki & Kawai, <i>Sargassum horneri</i> (Turner) C. Agardh, <i>Sargassum hemiphyllum</i> (Tuener) C. Agardh, <i>Sargassum thunbergii</i> (Mertens ex Roth) Kuntze, <i>Sargassum yendoi</i>, <i>Sargassum ringgoldianum</i>, <i>Myagropsis myagroides</i>, <i>Sargassum nigrifolium</i>, <i>Sargassum macrocarpum</i>, <i>Sargassum piluliferum</i>, <i>Sargassum patens</i>, <i>Sargassum siliquastrum</i>, <i>Dichotomaria falcata</i>, Corallinaceae Lamouroux, <i>Delisea japonica</i>, <i>Caulacanthus ustulatus</i>, <i>Hypnea charoides</i>, <i>Peyssonnelia caulifera</i>, <i>Ahnfeltiopsis flabelliformis</i>, <i>Chondracanthus</i> Kützing, <i>Portieria hornemannii</i>, <i>Schizymenia dubyi</i>, <i>Polyopes affinis</i>, <i>Grateloupia</i> C. Agardh, <i>Plocamiaceae</i> Kützing, <i>Gracilaria</i> Greville, <i>Chrysomenia wrightii</i>, Champiaceae Kützing, Ceramiaceae Dumortier, Delesseriaceae Bory, <i>Dasya sessilis</i>, <i>Leveillea jungermannioides</i>, <i>Chondria crassicaulis</i>, Symphyocladia Falkenberg, <i>Laurencia</i> J. V. Lamouroux</p>
San'in Kaigan National Park	<p>Animal:</p> <p><i>Callyspongia confoederata</i>, <i>Aglaophenia whiteleggei</i>, <i>Solanderia</i></p>

	<p><i>secunda</i>, <i>Aurelia aurita</i>, Melithaeidae Gray, Euplexaura Verrill, Actiniidae Rafinesque, <i>Acanthopleura japonica</i>, <i>Aplysia kurodai</i>, Dorididae Rafinesque, <i>Sporochnus radiciformis</i>, <i>Tropiometra afra macrodiscus</i>, <i>Oxycomanthus japonicus</i>, Astropectinidae Gray, Ophidiasteridae Verrill, Asterias Linnaeus, <i>Plotosus japonicus</i>, Pomacentridae, <i>Pterogobius elapoides</i>, <i>Pterogobius zonoleucus</i>, <i>Enneapterygius theostomus</i></p> <p>Plants:</p> <p>Cladophora Kützing, Chaetomorpha Kützing, <i>Caulerpa okamurae</i>, Codium Stackhouse, Dictyota J. V. Lamouroux, Dictyopteris J. V. Lamouroux, Ishige Yendo, Colpomenia (Endlicher) Derbès & Solier, <i>Chorda asiatica</i>, Myagropsis Kützing, Scinaia Bivona-Bernardi, Corallinaceae Lamouroux, Delisea J. V. Lamouroux, <i>Ahnfeltiopsis flabelliformis</i>, Chondracanthus Kützing, <i>Schizymania dubyi</i>, Plocamium J. V. Lamouroux, Chrysomenia, Martensia K. Hering, Acrosorium Zanardini ex Kützing, Symphyocladia Falkenberg, <i>Phyllospadix iwatensis</i></p>
Niseko-Shakotan-Otaru Kaigan Quasi National Park	<p>Animal:</p> <p><i>Halichondria</i>, <i>Aglaophenia whiteleggei</i>, <i>Plumularia setacea</i>, <i>Moerisia horii</i>, <i>Solanderia misakinensis</i>, Actiniidae Rafinesque, <i>Haliplanella lineata</i>, <i>Metridium senile</i>, <i>Rhizopsammia minuta mutsuensis</i>, <i>Beroe cucumis</i> Fabricius, Ischnochitonidae Dall, <i>Cryptoplax japonica</i>, Mopaliidae Dall, Trochidae, Littorinidae Children, Aplysiidae Lamarck, <i>Septifer virgatus</i>, <i>Hydroides ezoensis</i>, <i>Chthamalus challengerii</i>, <i>Diodon holocanthus</i>, Diogenidae Ortmann, <i>Botryllus primigenus</i>, <i>Botryllus tuberatus</i>, <i>Aulichthys japonicus</i>, Syngnathidae, Pholidae, Liparidae, <i>Aptocyclus ventricosus</i>, Agonidae</p> <p>Plant:</p> <p><i>Ulothrix flacca</i>, Monostroma Thuret, Cladophora Kützing, Chaetomorpha Kützing, <i>Urospora penicilliformis</i>, <i>Codium fragile</i>, Bryopsis, Ectocarpus Lyngbye, <i>Ralfsia fungiformis</i>, <i>Dictyota dichotoma</i>, <i>Dictyopteris divaricata</i>, <i>Sphaerotrichia divaricata</i>, Leathesia, <i>Dictyosiphon foeniculaceus</i>, <i>Coilodesme japonica</i>, <i>Punctaria latifolia</i>, <i>Scytosiphon lomentaria</i>, Colpomenia, Desmarestiaceae, <i>Chorda asiatica</i>, <i>Cystoseira hakodatensis</i>, Sargassum C. Agardh, Palmaria Stackhouse, Corallinaceae Lamouroux, <i>Bonnemaisonia hamifera</i>, <i>Trailliella introcata</i> Batters, Gloiosiphoniaceae, <i>Ahnfeltiopsis flabelliformis</i>, <i>Tichocarpus crinitus</i>, Chondracanthus Kützing, Chondrus Stackhouse, <i>Schizymania dubyi</i>, Prionitis J. Agardh, Grateloupia C. Agardh, <i>Neodilsea yendoana</i>, <i>Hyalosiphonia caespitosa</i>, Dumontia J. V. Lamouroux, Gracilaria Greville, <i>Chrysomenia wrightii</i>, <i>Champia parvula</i>, Lomentaria Lyngbye, <i>Antithamnion nipponicum</i>, Ceramium Roth, Psilothallia F. Schmitz, Delesseriaceae Bory, Heterosiphonia Montagne, <i>Neorhodomela aculeate</i>, <i>Enelittosiphonia stimpsonii</i>, <i>Chondrai crassicaulis</i>, Laurencia J. V. Lamouroux, <i>Phyllospadix iwatensis</i></p>
Genkai Quasi National Park	<p>Animal:</p> <p><i>Lytocarpia Kirchenpauer</i>, <i>Aglaophenia whiteleggei</i>, <i>Solanderia secunda</i>, <i>Melithaea flabellifera</i>, <i>Menella rigida</i>, <i>Euplexaura erecta</i>, <i>Anthoplexaura dimorpha</i>, <i>Tubastraea faulkneri</i>, <i>Dendrophyllia coarctata</i>, <i>Balanophyllia ponderosa</i>, <i>Hydnophora pilosa</i>, Acropora Oken, <i>Sabellastarte japonica</i>, Comatulida, <i>Linckia laevigata</i>, <i>Certonardoia semiregularis</i>, <i>Patiria pectinifera</i>, <i>Kyphosus vaigiensis</i>, <i>Petroscirtes breviceps</i>, <i>Ditrema temminckii</i>, Pomacentridae,</p>

	<i>Hypoatherina valenciennei</i> , Plant: <i>Halimeda discoidea</i> , <i>Codium</i> , <i>Dictyota dichotoma</i> , <i>Anthogorgia bocki</i> , <i>Dictyopteris pacifica</i> , <i>Ishige sinicola</i> , <i>Corallina</i> , <i>Plocamium telfairiae</i> , <i>Champia parvula</i>
Kanmurijima-Kutsujima National Wildlife Protection Area	<i>Calonectris leucomelas</i> , <i>Oceanodroma monorthis</i> , <i>Synthliboramphus wumizusume</i> , <i>Falco peregrines</i> , <i>Columba janthina</i>
Kosado-toubu National Wildlife Protection Area	
Sakiyama Bay	Animal: Milleporidae, Xeniidae, Alcyoniidae, <i>Heliopora coerulea</i> , Melithaeidae, Pocilloporidae, Acropora, Montipora, Fungiidae, Poritidae, Faviidae, Oculinidae, Plant: <i>Cymodocea rotundata</i> , <i>Thalassia hemprichii</i> , <i>Enhalus acoroides</i> , <i>Tricleocarpa cylindrical</i> , <i>Amansia rhodantha</i>
Toyama Bay	Sea cucumber (May 1 – October 31) Gelidium (September 1 – October 31) Ayu (December 1 – June 15) Chionoecetes japonicus (June 1 – August 31: male, All year: female)

Korea

MPA	Protected species
Sindu-ri Sand Dune	?
Mun-Sum	<i>Dendronephthya suenoni</i> , <i>Dendronephthya castanea</i> , <i>Dendronephthya molli</i> , <i>Dendronephthya putteri</i> , <i>Dendronephthya alba</i> , <i>Dendrophyllia cribrosa</i> , <i>Dendrophyllia micrantsus</i> , <i>Plumarella spuinosa</i> , <i>Euplexaura crassa</i> , <i>Plexauroidea reticulate</i> , <i>Verrucella stellata</i> , <i>Tubastraea coccinea</i> , <i>Plumarella adhaerans</i> , <i>Plexauroidea complexa</i> , <i>Antipathes japonica</i>
Ohryuk-do	?
Muan	Endangered species: Chinese Egret, Spoon-billed Sandpiper, Eastern Curlew and Buzzard
Suncheon	Huge colony of Reed (<i>Phragmites communis</i>), Habitat of Hooded Crane (<i>Grus monacha</i>) Endangered species: March Crab (<i>Sesarma intermedium</i>), Eurasian Spoonbill (<i>Platalea leucorodia</i>), Black-faced Spoonbill (<i>Platalea minor</i>), Bean goose (<i>Anser fabalis</i>), Wooper swan (<i>Cygnus cygnus</i>), Hooded crane (<i>Grus monacha</i>), Baikal teal (<i>Anas formosa</i>), Eurasian oyster catcher (<i>Haematopus ostralegus</i>), Far eastern curlew (<i>Numenius madagascariensis</i>), Saunders' gull (<i>Larus saunders</i>)
Bosung Bulgyo	Endangered species: Black-faced spoonbill (<i>Platalea minor</i>), Bean goose (<i>Anser fabalis</i>), Wooper swan (<i>Cygnus cygnus</i>), Hooded crane (<i>Grus monach</i>), Baikal teal (<i>Anas formosa</i>), Eurasian oyster catcher

	<i>(Haematopus ostralegus)</i> , Far eastern curlew (<i>Numenius madagascariensis</i>), Saunders' gull (<i>Larus saunders</i>)
Buan Julpo Bay	?
Gochang	?
Seocheon	Endangered species: Eurasian oyster catcher (<i>Haematopus ostralegus</i>), Whooper swan (<i>Cygnus cygnus</i>), Mongolian plover (<i>Charadrius mongolus</i>), Asian dowitcher (<i>Limnodromus semipalmatus</i>), Eurasian curlew (<i>Numenius arquata</i>), Far eastern curlew (<i>Numenius madagascariensis</i>), Spotted greenshank (<i>Tringa guttifer</i>), Terek sandpiper (<i>Xenus cinereus</i>), Dulin (<i>Calidris alpina</i>)
Jeung-do	?

Russia

MPA	Protected species
Far Eastern Marine	Far Eastern trepang, Japanese scallop, Pacific needlefish, Giant octopus, King crab, Large-scaled rudd, Japanese sandfish, Eastern rockfish, Sea calf, Chinese egret, Spoon-bill, Island cricket, Japanese yew, omatsu, Boston ivy, Tiger and nodding lilies, Schlippenbach's rosebay, Caltrop goral
Kuril	?
Lazovsky	?
Sikhote-Alin	Wild dappled deer, Amur tiger, Amur wood cat, goral, Manchuria hare, raccoon dog, paleheaded chiffchaff, rock thrush, grosbeak
Land of the Leopard	
Tumninsky	Hunting animals, rare species
Vostok Bay	
Moneron Island	

