# Marine Biodiversity Conservation Strategy

# Attachment

1. Chronology of Laws and Regulations Relating to the Conservation of Marine Biodiversity
2. Existing Systems in Japan that may correspond with Marine Protected Areas
3. Glossary for the Marine Biodiversity Conservation Strategy
4. Background of the Development of the Marine Biodiversity Conservation Strategy

# 1. Chronology of Laws and Regulations Relating to the Conservation of Marine Biodiversity

## Chronology of laws and regulations relevant to the conservation of marine biodiversity

| | | International systems relating to marine biodiversity | Domestic systems relating to marine biodiversity | | Social background |
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| | | | Concerning the Environment | Concerning general marine matters, fisheries, and others | |
| **19th century** | | Establishment of The Traditional Law of the Sea (Open Sea and Territorial Sea) | **73** Establishment of the Wildlife Hunting Rules<br>**92** Establishment of the Hunting Rules (the formulation of the Hunting Area System)<br>**95** Establishment of The Game Law | **86** Establishment of the Fishery Cooperative Rules | Meiji Restoration, Meiji Constitution |
| **1900s** | | | **01** Partial Revision of the Game Law (the formulation of the Game Reserve System and the Gun-hunting Prohibited Area System). | **01** Establishment of the Fishery Act. | |
| **1910s** | | | **18** Complete revision of the Game Law<br>**19** Establishment of the Law for Preservation of Historic Sites, Places of Scenic Beauty, and Natural Monuments (the formulation of the Natural Monument System) | **10** Establishment of the Fishery Act (Meiji Fisheries Act) (the establishment of the Fishery Rights System and the Fishery Cooperative System).<br>**12** Establishment of the Sea Otters and Fur Seals Hunting Control Act | |
| **1920s** | | | | | |
| **1930s** | | | **31** Establishment of the National Park Law (the formulation of the National Park System) | | |
| **1940s** | | **45** Truman's Proclamations on Policy of the United States with Respect to Natural Resources of the Subsoil and the Sea Bed of the Continental Shelf | | **48** Establishment of the **Fishery Cooperative Act** (the Fisheries Cooperative Association System)<br>**49** Establishment of the **Fishery Act** (**current Fishery Act**) (the Fishery Rights System, the Fisheries Adjustment Organization, etc.). | World War II, Constitution of Japan |
| **1950s** | **First half** | | **50** Establishment of the **Act on Protection of Cultural Properties** (the Natural Monument System)<br>**50** Revision on the Game Law (the formulation of the Wildlife Protection Area System). | **50** Establishment of the Port and Harbor Act and the Fishing Port Act<br>**51** Establishment of the **Act on the Protection of Fishery Resources** (the Protected Water Surface System, etc.). | Post-war rehabilitation |
| | **Second half** | **58** First United Nations Conference on the Law of the Sea (The Convention on the Territorial Sea and the Contiguous Zone, the Convention on the High Seas, the Convention on Fishing and Conservation of the Living Resources of the High Seas, and the Convention on the Continental Shelf were adopted.) | **57** Establishment of the **Natural Parks Act** (revisions to the National Park Law and the formulation of the Natural Park System) | **56** Establishment of the Coast Act | |
| **1960s** | **First half** | **60** Second United Nations Conference on the Law of the Sea | **63** Establishment of the **Wildlife Protection and Proper Hunting Act** (the renaming of the Game Law and the formulation of the Special Protection Area System and the Temporary Non-hunting Area System) | **63** Establishment of the Coastal Fisheries Promotion Act | Rapid economic growth |
| | **Second half** | | | | |

| | | International systems relating to marine biodiversity | Domestic systems relating to marine biodiversity | | Social background |
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| | | | Concerning the Environment | Concerning general marine matters, fisheries, and others | |
| **1970s** | **First half** | **70** The launch of the Man and Biosphere Programme<br>**71** Adoption of the **Ramsar Convention** (**Convention on Wetlands of International Importance Especially as Waterfowl Habitat)**<br>**72** Adoption of the London Convention (Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter)<br>**72** Adoption of the **Convention Concerning the Protection of the World Cultural and Natural Heritage**<br>**73** Adoption of the Washington Convention (Convention on International Trade in Endangered Species of Wild Fauna and Flora)<br>**73** Adoption of the **MARPOL73/78 Convention**<br>**73** Third United Nations Conference on the Law of the Sea (until 1982) | **70** Revision of the Natural Parks Act (the formulation of the Marine Park System).<br>**70** Establishment of the **Act on Prevention of Marine Pollution and Maritime Disaster**<br>**70** Establishment of the **Water Pollution Control Act**<br>**72** Establishment of the **Nature Conservation Law** (the formulation of the Natural Environment Conservation Area System, etc.)<br>**73** Establishment of the **Interim Law for Conservation of the Environment of the Seto Inland Sea**<br>**73** Establishment of the **Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.** | **71** Establishment of the **Marine Resources Development Promotion Act** (the formulation of the Coastal Marine Resource Development Area System, etc.) | Pollution problem, oil crisis |
| | **Second half** | **77** Establishment of the exclusive fishing zones by the U.S. and the Soviet Union<br>**78** Adoption of the 1978 MARPOL Protocol | **78** Establishment of the Act on Special Measures Concerning Conservation of the Environment of the Seto Inland Sea (revisions to the Interim Law). | **77** Establishment of the Act on Territorial Waters and Contiguous Water Area<br>**77** Establishment of the Act on Temporary Measures Concerning Fishery Waters | |
| **1980s** | **First half** | **82** Adoption of the **United Nations Convention on the Law of the Sea** (the formulation of the Exclusive Economic Zone System, etc.). | **80** Conclusion of the Ramsar Convention<br>**80** Conclusion of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)<br>**83** Taking into effect of MARPOL 73/78 and Annex I<br>**84** Determination of the "Implementation of environmental impact assessments" by the Cabinet | | Bubble economy |
| | **Second half** | | | | |
| **1990s** | **First half** | **90** Adoption of **OPRC Convention**<br>**90** Adoption of the **Convention for the North Pacific Marine Science Organization (PICES)**<br>**92 The United Nations Conference on Environment and Development** (the Earth Summit) (the adoption of **Agenda 21**), the adoption of **Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change**<br>**93 The Convention on Biological Diversity came into effect.**<br>**94 The United Nations Convention on the Law of the Sea came into effect.**<br>**94** Adoption of the **North-West Pacific Action Plan (NOWPAP)** | **92** Conclusion of the Convention for the North Pacific Marine Science Organization (PICES)<br>**92** Establishment of the **Act on Conservation of Endangered Species of Wild Fauna and Flora** (the System for the National Endangered Species of Wild Fauna and Flora, the System for Natural Habitat Conservation Areas, etc.).<br>**92** Conclusion of the Convention Concerning the Protection of the World Cultural and Natural Heritage.<br>**93 Conclusion of the Convention on Biological Diversity**<br>**93** Conclusion of the **United Nations Framework Convention on Climate Change.**<br>**93** Establishment of the Basic Environment Act | **93** Revision of the Fishery Cooperative Act (the formulation of the Resource Management Regulations System) | Globalization<br>Economic slump after collapse of bubble economy |

| | | International systems relating to marine biodiversity | Domestic systems relating to marine biodiversity | | Social background |
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| | | | Concerning the Environment | Concerning general marine matters, fisheries, and others | |
| **1990s** | **Second half** | **95** Adoption of the United Nations Fish Stocks Agreement<br>**95** Adoption of the FAO Code of Conduct for Responsible Fisheries<br>**95** CBD-COP2 (Adoption of the **Jakarta Mandate**)<br>**96** Adoption of the **London Convention Protocol** | **95** Conclusion of the **International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC)**<br>**95** Determination of the National Strategy for the Conservation and Sustainable Use of Biological Diversity<br>**97** Establishment of the **Environmental Impact Assessment Act** | **96** Establishment of the Act on Exclusive Economic Zone and Continental Shelf<br>**96** Establishment of the Act on The Exercise of the Sovereign Right for Fishery, etc., in the Exclusive Economic Zone (Repeal of the Act on Temporary Measures Concerning Fishery Waters).<br>**96** Establishment of the **Act on Preservation and Control of Living Marine Resources** (the formulation of the Total Allowable Catch System)<br>**96** **Conclusion of the United Nations Convention on the Law of the Sea**<br>**99** Revision of the **Coast Act** | |
| **2000s** | **First half** | **00** Adoption of the OPRC-HNS Protocol<br>**01** Adoption of the **AFS Convention**<br>**01** The United Nations Fish Stocks Agreement came into effect.<br>**02** World Summit on Sustainable Development (Johannesburg Summit) (the **construction of a representative MPA network**, etc.)<br>**04** CBD-COP7 (the adoption of targets for 2012 relating to the MPA network, etc.)<br>**04** Adoption of the **Ballast Water Management Convention** | **02** Determination of The New National Strategy for the Conservation and Sustainable Use of Biological Diversity<br>**02** Revision of the Wildlife Protection and Proper Hunting Act ( the purpose of biodiversity was set)<br>**02** Establishment of the Act on the Promotion of Nature Restoration<br>**03** Conclusion on AFS Convention<br>**04** Revision of the Act on Prevention of Marine Pollution and Maritime Disaster<br>**04** Establishment of the **Invasive Alien Species Act** | **00** Revision of the **Port and Harbor Act**<br>**01** Establishment of the Act on Development of Fishing Ports and Grounds (revisions to the Fishing Port Act)<br>**01** Establishment of the **Fisheries Basic Act**<br>**01** Revision on the Act on Preservation and Control of Living Marine Resources (the formulation of the Total Allowable Effort System)<br>**01** Introduction of The Resources Recovery Plan System<br>**02** Establishment of the Act on Special Measures Concerning Rejuvenation of Ariake Sea and Yatsushiro Sea | Depopulation<br>Aging of population<br>Structural reform<br>Change in administration |
| | **Second half** | **06** CBD-COP8 (incorporated into targets for 2010, etc.)<br>**08** CBD-COP9 (**Scientific Criteria for Identifying Ecologically or Biologically Significant Marine Areas in Need of Protection in Open-Ocean Waters and Deep-Sea Habitats**, etc.) | **April 2007** Establishment of the **Basic Act on Ocean Policy**<br>**07** Conclusion of the OPRC-HNS Protocol<br>**07** Conclusion of the London Convention Protocol<br>**07** Determination of the Third National Biodiversity Strategy of Japan<br>**07** Determination of the **Multiple Use Integrated Marine Management Plan for Shiretoko World Natural Heritage Site**<br>**March 2008** Determination of the **Basic Act on Ocean Policy**<br>**June 2008** Establishment of the **Basic Act on Biodiversity**<br>**09** **Revision of the Natural Parks Act and the Nature Conservation Law** (the setting of the purpose of biodiversity, the strengthening of coastal area conservation, etc.)<br>**09** **Establishment of the Act for the Promotion of the Clearing of Coastal Drifting Debris** | **06** Conclusion of The United Nations Fish Stocks Agreement | |

| | | International systems relating to marine biodiversity | Domestic systems relating to marine biodiversity | | Social background |
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| | | | Concerning the Environment | Concerning general marine matters, fisheries, and others | |
| 2010s | First half | October 2010 CBD-COP10 (the adoption of goals set at CBD-COP 10 held in Aichi Prefecture, Japan) | March 2010 Determination of The 2010 National Biodiversity Strategy of Japan<br>10 Establishment of the Act for the Promotion of Biodiversity Conservation Activities<br>March 2011 Determination of the Act for the Promotion of Biodiversity Conservation Activities | | |

## International movements concerning marine environment conservation

<Marine environment in general>

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| United Nations Convention on the Law of the Sea (Convention No. 6 of July 12, 1996) | The United Nations Convention on the Law of the Sea, which is a comprehensive convention relating to the international order of the seas, was developed in the Third United Nations Conference on the Law of the Sea during 1973-1982, adopted by the United Nations General Assembly in 1982, and came into force in 1994. The Convention was established by reformulating the four Geneva conventions on the Law of the Sea of 1958 (the Convention on the Territorial Sea and the Contiguous Zone, the Convention on the High Seas, the Convention on Fishing and Conservation of the Living Resources of the High Seas, and the Convention on the Continental Shelf). Against the backdrop of international conflict about marine minerals and energy resources, and living resources, the Convention provided the coastal states with broader jurisdiction than the previous system of the law of the sea as a result of correcting the dualistic marine order established by the territorial seas and the high seas and thereby setting an exclusive economic zone system.<br><br>Parts II to XI define the categories of sea areas, including territorial sea, exclusive economic zone, continental shelf, high sea, and deep seabed, whereas Parts XII to XV set provisions concerning the protection and preservation of the marine environment, marine scientific research, etc. Parts XII "Protection and Preservation of the Marine Environment" covers detailed provisions relating to the marine environment: for example, "States have the obligation to protect and preserve the marine environment" (Article 192) and "States have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment" (Article 193). Part V "Exclusive Economic Zone" prescribes that in the exclusive economic zone, the coastal state has sovereign rights for developing and exploiting natural resources, as well as jurisdiction in connection with the protection and preservation of the marine environment (Article 56).<br><br>In 1996, Japan concluded the Convention and established domestic laws, including the Act on Territorial Waters and Contiguous Water Area and the Act on the Exclusive Economic Zone and Continental Shelf. In 2007, the Basic Act on Ocean Policy was established. |
| Agenda 21 | Agenda 21 is a document that was adopted at the United Nations Conference on Environment and Development (the Earth Summit) held in 1992 as an action plan for implementing the principles of the "Rio de Janeiro Declaration on Environment and Development (Rio Declaration)". With regard to the oceans, Chapter 17 "Protection of the Oceans, All kinds of Seas, Including Enclosed & Semi-enclosed Seas & Coastal Areas & the Protection, Rational Use & Development of Their Living Resources" was included and shows an action plan for seven program areas, including "Integrated management and sustainable development of coastal areas, including exclusive economic zones". Although Agenda 21 is not legally binding, it exerts an influence on basic ocean-related international policies and frameworks. |

<Conservation of biodiversity>

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| Convention on Biological Diversity (Convention No. 9 of December 21, 1993) | To preserve biological diversity, make sustainable use of the components thereof, and achieve the fair, equitable distribution of benefits yielded by the use of genetic resources, the Convention on Biological Diversity (CBD) was adopted on the occasion of the United Nations Conference on Environment and Development held in 1992 and came into effect in 1993. Japan concluded the Convention 1993. It defines biodiversity, including the "aquatic ecosystem of the oceans and other natural environments". The Convention applies to the "areas under the jurisdiction of each state" and discusses the biodiversity of the oceans in light of conservation and sustainable use.<br><br>The Seventh Ordinary Meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD-COP7), which took place in 2004, made the decisions of creating networks of representative marine protected areas managed in an effective manner by the year 2012 (VII/5 and VII/28, CBD-COP7) and preserving at least 10% of the ecological regions as a target for assessing the progress of the goals for 2010 (VII/30). Furthermore, in the Eighth Ordinary Meeting of the Conference of the Parties to the Convention on Biological Diversity held in 2006, the goal "At least 10% of each of the world's marine and coastal ecological regions effectively conserved" was set in connection with marine and coastal biodiversity (VIII/15). The Tenth Meeting of the Conference of the Parties to the Convention on Biological Diversity opened in October 2010 decided for better understanding of application of criteria for identification of ecologically or biologically significant marine areas (EBSAs) and collect scientific and technological information and case examples (X/29, CBD-COP10), and finalized a new strategic plan made up of 20 individual targets, including the "Aichi Target", in place of the targets for 2010. Individual Target 11, in particular, declared that "by 2020, 10% of the coastal and marine areas are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures" (X/2, CBD-COP10). The Convention requires the government of each state to formulate a national strategy for the purpose of conserving and making sustainable use of biodiversity. Japan has set the National Biodiversity Strategy based on the Basic Act on Biodiversity besides the Convention. |

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| Ramsar Convention (Convention on Wetlands of International Importance Especially as Waterfowl Habitat; Convention No. 28 of September 22, 1980) | The Ramsar Convention was adopted in 1971 and came into effect in 1975. Japan concluded the Convention in 1980. Ecologically, botanically, zoologically, limnologically, or hydrologically international important wetlands are listed in a registry, and each contracting state works out and implements a plan for promoting the preservation and proper use of registered wetlands.<br>The type of "wetlands in marine and coastal areas" includes permanent shallow marine waters (less than 6 m deep at low tide), marine sublittoral areas, coral reefs, and coasts of sand, gravel or pebble. In Japan, Yakushima Nagata-hama, the Kushimoto Coral Communities, the Kerama-shoto Coral Reef etc. are registered as the Convention's wetlands. |
| CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora; Convention No. 25 of August 23, 1980) | CITES was adopted in 1973 and came into effect in 1975. Japan concluded the Convention in 1980. Its purpose is to protect endangered species of wild fauna and flora by controlling international trade in wild animals and plants. The species of animals and plants under trade control are listed in Appendices I to III. Listed in Appendix I (species that are threatened with extinction and affected by trade) are about 900 species of animals and plants, including seven species of whales and all species of marine turtles in Cheloniidae. The transfer of the species registered in Appendix I in Japan is regulated based on the Act on Conservation of Endangered Species of Wild Fauna and Flora. |
| Convention Concerning the Protection of the World Cultural and Natural Heritage (Convention No. 7 of September 28, 1992) | The Convention Concerning the Protection of the World Cultural and Natural Heritage was adopted in 1972 and came into effect in 1975. Japan concluded the Convention in 1992. The Convention certifies cultural and natural heritage having an outstanding universal value and imposes on the contracting states a basic obligation to protect, preserve, maintain, and hand it down to future generations. To inscribe a site on the World Heritage List as natural heritage, the site concerned is required to take legally protective action and implement a proper management system. In Japan, the Shiretoko World Natural Heritage Site is the only natural heritage site including marine component. The sea area is managed through a multiple use integrated marine management plan, including voluntary management by fishery operators of the sea area concerned. |
| Bilateral conventions and agreement for the protection of migratory birds, etc. | With the aim of controlling the catching of migratory birds and the protection of birds threatened to extinguish (excluding Japan-China protection) and their habitats, Japan entered into the Convention between the Government of Japan and the Government of the United States of America for the Protection of Migratory Birds and Birds in Danger of Extinction and Their Environment (1974), the Convention between the Government of Japan and the Government of Soviet Socialist Republics for the Protection of Migratory Birds and Birds in Danger of Extinction and Their Environment (1988), the Agreement between the Government of Japan and the Government of Australia for the Protection of Migratory Birds and Birds in danger of Extinction and Their Environment (1981), and the Agreement between the Government of Japan and the Government of the People's Republic of China for the Protection of Migratory Birds and Birds in Danger of Extinction and Their Environment (1981). Japan also cooperates with South Korea to protect migratory birds based on the Agreement between the Government of Japan and Government of the Republic of Korea on Cooperation in the field of Environmental Protection, and the two countries are making arrangements for negotiations for the conclusion of a bilateral convention or agreement for the protection of migratory birds. |
| Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals) | The Bonn Convention was adopted in 1979 and came into effect in 1983. The purpose of the Convention is to protect migratory species of land animals, marine animals, and birds, including migratory birds, reindeer, whales, sea turtles, and insects, and their habitats. Japan will study the necessity to sign the Convention with the trend in international movements toward it taken into account. |
| MAB: Man and the Biosphere Programme | Launched as determined by the Sixteenth General Assembly of the United Nations Educational, Scientific and Cultural Organization (UNESCO) held in 1970, MAB is a survey, research, and training programme for the purpose of developing the bases of natural and social science to promote the preservation and sustainable use of living resources and improve the relationship between human beings and the environment. Based on the Programme, states are working to register biosphere reserves as sites for the preservation and sustainable use of living resources and related substantiation activities, environmental education and training, and surveys and research. Registered biosphere reserves include areas including sea areas, such as coral reefs and tidal flats. In Japan, there are no registered areas including sea areas. |

<Prevention of marine pollution>

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| London Convention Protocol (1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972; Convention No. 13 of October 5, 2007) | The Protocol was adopted in 1996 and came into effect in 2006 for the purpose of strengthening the London Convention (1972). Whereas the London Convention controlled listed hazardous substances subjected to dumping control, the Protocol prohibits the dumping of waste and other matters at sea in principle and introduces a scheme that approves dumping based on individual permits.<br>Japan concluded the Protocol in 2007 and makes effort to comply with it by revising the Act on Prevention of Marine Pollution and Maritime Disaster. |

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| MARPOL73/78 Convention (International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978; Convention No. 3 of June 11, 1983; Protocol of 1997 revising the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978: Convention No. 6 of February 18, 2005) | The MARPOL73/78 convention was adopted by the International Maritime Organization (IMO) in 1973 in place of the International Convention for the Prevention of Pollution of the Sea by Oil (OILPOL), 1954, but did not come into effect. The protocol granting the respite of part of the appendix thereto was adopted in 1978 and came into effect in 1983. The purpose of the Convention is to prevent marine pollution resulting from the discharge of hazardous substances from ships in terms of human health, living resources and marine organisms, ocean amenity, and the other use of the oceans, and it controls the discharge, transportation, and disposal of oil (Annex I), noxious liquid substances (Annex II), etc. Japan concluded the Convention in 1983 and is endeavouring to comply with it based on the Act on Prevention of Marine Pollution and Maritime Disaster.<br>Additionally, a revision protocol was adopted in 1997 to add rules concerning the prevention of air pollution by ships (Annex IV) and came into effect in 2005. Japan concluded it in the same year and has been working on it. |
| OPRC Convention (International Convention on Oil Pollution Preparedness, Response and Cooperation, 1990; Convention No. 20 of October 20, 1995) | The OPRC Convention was adopted in 1990 and came into effect in 1995. The Convention defines action to take in preparation for and in response to oil-induced pollution accidents by or relating to ships, which poses a critical threat to the marine environment. The OPRC-HNS Protocol, which was adopted in 2000 and came into effect in 2007, added harmful substances and hazardous substances besides oil to the coverage of the Convention.<br>Japan concluded the OPRC Convention and the OPRC-HNS Protocol in 1995 and in 2007, respectively (which became binding on Japan in 1996 and in 2007 accordingly), to fulfil them by revising the Act on Prevention of Marine Pollution and Maritime Disaster and taking other proper measures. Japan also has the “National Emergency Plan for Preparedness for and Response to Oil Pollution Accidents” formulated on the Convention and the Protocol. |
| Ballast Water Management Convention (International Convention for the Control and Management of Ships’ Ballast Water and Sediments, 2004) | Although the Ballast Water Management Convention was adopted in London in 2004, it has not come into effect to date because the contracting states do not reach the specified number. The Convention controls the concentration and other factors of organisms in ballast water discharged from ships for the purpose of preventing danger to the environment and human health attributable to the transfer of hazardous aquatic organisms and pathogens through the control and management of ballast water from ships.<br>Japan has not signed this Convention but is developing technology intended for it. |
| AFS Convention (International Convention on the Control of Harmful Anti-Fouling System on Ships, 2001; Convention No. 20 of November 30, 2007) | The AFS Convention was adopted in 2001 and came into effect in 2008. Japan concluded the Convention in 2003. The purpose of the Convention is to reduce or eliminate adverse effects resulting from anti-fouling systems on the marine environment and human health. It prohibits the further application of marine paints containing organotin-based compounds; including tributyltin (TBT) applied to the bottom of ships as a biocide and expected to adversely affect marine organisms, and also makes it obligatory to remove such paint already applied. |

<Fishery>

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| United Nations Convention on the Law of the Sea (provisions concerning the preservation of living resources in Part V “Exclusive Economic Zone”) | The United Nations Convention on the Law of the Sea states that the coastal state has sovereign rights for the purpose of exploring, exploiting, conserving, and managing living resources in its exclusive economic zone (Article 56), and obligates the coastal state to determine the allowable catch of living resources in its exclusive economic zone and take proper action to conserve and manage living resources (Article 61). It also prescribes the conservation of highly migratory species (Article 64), the conservation of anadromous stocks (Article 66), etc.<br>Japan enacted the Act on the Exercise of the Sovereign Right for Fishery, etc. in the Exclusive Economic Zone in 1996, defined in the Fisheries Basic Act (established in 2001) the conservation and management of fishery resources in the exclusive economic zone, and implements total allowable catch and other systems based on the Act on Preservation and Control of Living Marine Resources. |
| United Nations High Sea Fishery Agreement (Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks; Convention No. 10 of August 9, 2006) | This Agreement was adopted in 1995 in response to the provisions of the United Nations Convention on the Law of the Sea and came into effect in 2001. The purpose of the Agreement is to conserve fish stocks distributing inside and outside of the exclusive economic zone, such as cods and flatfish, and highly migratory fish stocks, such as tunas and skipjacks, and ensure the sustainable use thereof. It defines general principles and such for the conservation and management of both categories of fish resources on the high seas, and sets provisions for inducing regional fisheries management organizations to participate in the Agreement and obligations imposed on fishing vessels of contracting parties. Japan concluded the Agreement in 2006. |

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| Agreement on Compliance with Measures Concerning Fishing on the High Seas (Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas; Convention No. 2 of May 21, 2003) | This Agreement was adopted by the Food and Agriculture Organization (FAO) of the United Nations in 1993 and came into effect in 2003. It clearly specifies the responsibility of flag states for their fishing vessels operating fisheries on the high seas and prevents flag-of-convenience vessels not to operate fisheries without observing conservation and management measures. Japan concluded the Agreement in 2000. |
| Code of Conduct for Responsible Fisheries | The Code of Conduct for Responsible Fisheries was adopted at the 28th General Assembly of the Food and Agriculture Organization (FAO) of the United Nations held in 1995. It is an international code of conduct setting forth responsible practices for the purpose of ensuring the effective conservation, management, and exploitation of aquatic biological resources with proper consideration given to the ecosystem and biodiversity. Although this Code is voluntary, it covers the whole world, including non-FAO member states. |
| Treaty on the Establishment of Regional Fisheries Management Organizations | Regional fisheries management organizations responsible for tuna are established according to Convention for the Strengthening of the Inter-American Tropical Tuna Commission (IATTC), the International Convention for the Conservation of Atlantic Tunas (ICCAT), the Convention for the Conservation of Southern Bluefin Tuna (CCSBT), the Agreement for the Establishment of the Indian Ocean Tuna Commission (IOTC), and the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC). Japan is a member of all the conventions. Regional fisheries management organizations supervising fisheries of other kinds of fish than tunas have also been founded. |

<Marine scientific research>

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| Convention for a North Pacific Marine Science Organization (PICES) (Convention No. 160 of April 3, 1992) | The Convention for a North Pacific Marine Science Organization (PICES) was adopted in 1990 and came into effect in 1992. Japan concluded the Convention in 1992. Its purpose is to establish inter-governmental organizations for promoting international scientific cooperation in the light of the fact that such cooperation is indispensable for achieving a scientific understanding of the vast North Pacific Ocean. The North Pacific Marine Science Organization (PICES) established based on this Convention aims to promote and coordinate marine scientific research for improving scientific knowledge about the North Pacific Ocean above 30 degrees north latitude and living resources inhabiting the area, and six countries - Canada, China, Japan, South Korea, Russia, and the U.S. – are the members of the Convention at present. |

<Climate change>

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| Framework Convention on Climate Change (United Nations Framework Convention on Climate Change; Convention No. 6 of June 21, 1994) | The Framework Convention on Climate Change was adopted on the occasion of the United Nations Conference on Environment Development that took place in 1992, and came into effect in 1994.Japan concluded the Convention in 1993. The purpose of the Convention is to stabilize the concentration of greenhouse gas in the air to such a level that no dangerous artificial interference occurs to the climate system, and adaptation to the ecosystem, threats to food production, and the sustainability of economic development are taken into consideration. The marine ecosystem is positioned as an absorbing source and storage house of greenhouse gas, and the contracting states are requested to promote the sustainable management thereof and cooperate with one another in conserving it. The Intergovernmental Panel on Climate Change (IPCC) collects and assesses findings and data about sea level rise, marine acidification, the loss of biodiversity and so forth. |

## Domestic movements concerning marine environment conservation

<Marine environment in general>

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| Basic Act on Ocean Policy (Act No. 33 of April 27, 2007) | The Basic Act on Ocean Policy was established in 2007 as a basic act in the field of oceanography against the backdrop the establishment of new international order of the seas and measures based on the United Nations Convention on the Law of the Sea, Agenda 21, and so forth, and aims to promote measures with regard to the oceans comprehensively and systematically (Article 1).<br>The Act defines six basic principles, including "Harmonization of the Development and Use of the Oceans with the Conservation of Marine Environment" and "Comprehensive Governance of the Oceans" (Articles 2 to 7), the responsibilities of respective parties (Articles 8 to 12), and the formulation of a basic plan with regard to the oceans (Article 16), and stipulates 12 basic measures based on them (Articles 17 to 28). It also prescribes the establishment of Headquarters for Ocean Policy as an organization for promoting ocean policy.<br>The "conservation of the marine environment" is considered to be one of the basic measures, and the Act prescribes that necessary measures shall be taken to secure the biodiversity in the oceans, reduce the pollution load, prevent the discharge of waste materials into the oceans, the removal of oil spills in the oceans, and conserve the seascape and the marine environment (Article 18), as well as the integrated management of the coastal zone (Article 25).<br>Based on this Act, the Basic Plan on Ocean Policy was worked out in 2008, which details (1) efforts to secure biodiversity, (2) efforts to reduce environmental loads, and (3) specific approaches including the clarification and identification of Marine Protected Areas in promoting continuous surveys and research, in connection with the conservation of the marine environment (2 of Chapter 2). |
| Basic Environment Act (Act No. 91 of September 19, 1993) | The Basic Environment Act was established in 1993 as a basic act in the field of the environment. The purpose of the Act is to promote measures relating to the conservation of the environment comprehensively and systematically (Article 1). It defines three basic principles (Articles 3 to 5), the responsibilities of respective parties (Articles 6 to 9), and stipulates basic measures with regard to the conservation of the environment based on them (Articles 14 to 40).<br>Although the Act does not contain provisions relating directly to the marine environment, it provides principles, such as "Diverse natural environments shall be conserved systematically while biodiversity is secured", as guidelines for the finalization and implementation of basic measures. |

<Conservation of biodiversity>

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| Basic Act on Biodiversity (Act No. 58 of June 6, 2008) | The Basic Act on Biodiversity was established in 2008 as a basic act in the field of biodiversity. The purpose of the Act is to promote policies for the conservation and sustainable use of biodiversity in a comprehensive and planned manner (Article 1). It defines fundamental principles (Article 3), the responsibilities of respective parties (Articles 4 to 6), the formulation of the National Biodiversity Strategy (Article 11), policies of the national government (Articles 14 to 26), and also requires local authorities to conduct policies according to the policies of the national government (Article 27).<br>Based on this Act, the National Biodiversity Strategy of Japan 2010 was formulated in March 2010, in which an action plan is presented for the comprehensive conservation of coastal and marine biodiversity, such as protected areas for the conservation of marine biodiversity, the conservation and recovery of submarine forests and tidal flats, and the conservation and recovery of coral reefs. |
| Natural Parks Act (Act No. 161 of June 1, 1957) | The framework of the current Natural Parks Act, which was originally enacted as the National Park Law in 1931, was finalized by the revision made in 1957. In the 2009 revision, "contribution to the securing of biodiversity" was included in the purpose of the enactment thereof. The purpose of the Act is to maintain the health, recreation, and enlightenment of the people and make a contribution to the securing of biodiversity through the promotion of the protection and use of outstanding natural scenic sites (Article 1). To this end, it defines requirements relating to the designation of three types of protected areas, namely National Park, Quasi-National Park, and Prefectural Natural Park, and stipulates the control of acts by area and by area type.<br>The areas that can be designated as sea areas are Marine Park Zones and Ordinary Zones, and designated areas can be found in sea areas all over Japan. Marine Park Zones comply with the Marine Park Zone System created in the 1970 revision and are designated within National or Quasi-National Parks to maintain the scenery of the sea areas, and acts of development, including the construction of new structures, mineral mining, earth and rock quarrying, landfill, and reclamation, are controlled by a license system (Article 22). The 2009 revision made such changes as the control of the catching of animals and plants within designated areas and the control of the use of power-driven vessels within designated areas for the purpose of protecting not only submarine scenery but also scenery above water. Ordinary Zones are expected to serve as buffer zones in Inland Special Zones and Marine Park Zones, and acts of development, such as the construction of new large-scale structures, are controlled by a notification system (Article 33). |

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| Nature Conservation Law (Act No. 85 of June 22, 1972) | The Nature Conservation Law was established in 1972 in consequence of the destruction of nature that occurred and became a nationwide problem during the high economic growth period, and the "securing of biodiversity" was included in the purpose of the enactment thereof in the 2009 revision. The purpose of the Law is to promote the securing of biodiversity in areas that particularly require the conservation of the natural environment and the sound conservation of the natural environment in a comprehensive manner (Article 1). To this end, it defines requirements relating to the designation of three types of protected areas, namely wildness area, nature conservation area, and prefectural nature conservation area, and stipulates the control of acts by area.<br><br>The areas that can designated as sea areas are Marine Special Zones and Ordinary Zones in Nature Conservation Areas, and there is one designated Marine Special Zone in Japan. An area that is required as the core of the conservation of the ecosystem within a Nature Conservation Area is designated as a Marine Special Zone, and acts of development, including the construction of new structures, mineral mining and earth quarrying, landfill, and reclamation, are controlled by a license system (Article 27). The 2009 revision made the same changes as those made to Marine Park Zones in the Nature Parks Act. Ordinary Zones are expected to serve as buffer zones in Marine Special Zones, and acts of development, such as the construction of new large-scale structures, are controlled by a notification system (Article 28). |
| Wildlife Protection Act (Wildlife Protection and Proper Hunting Act; Act No. 88 of July 12, 2002) | Tracing back to the Hunting Rules of 1892 and the Game Law of 1918, the Act gradually took on the character of a wildlife protection and management system and included in its purpose the "securing of biodiversity" in the 2002 revision. The purpose of the Act is to help secure the life of the people, in which they can enjoy the blessings of the natural environment, through the protection and proper hunting of wildlife and a resultant contribution to the securing of biodiversity, the conservation of the living environment, and the sound growth of agriculture, forestry, and fisheries (Article 1). To this end, it defines the limitation of the catching of wild birds and mammals, the designation of Wildlife Protection Zones and the control of acts, and the control of hunting areas, periods, and methods.<br><br>The limitation of catching (Article 9) covers marine wildlife. The Act did not apply to marine mammals, but seven species, including seals, were added to its scope of application in the 2002 revision.<br><br>In addition, Wildlife Protection Zones (Article 28) can be designated in sea areas. This system was established in 1950, and many designated areas already exist in tidal flats, enclosed bays, and so forth in Japan. In Special Protection Zones, which are designated in areas that are considered to be particularly necessary for the protection of wildlife and their habitats within Wildlife Protection Zones, acts of development, including the installation of structures, landfill, and reclamation, are controlled by a license system (Article 29). |
| Act on the Conservation of Species (Act on Conservation of Endangered Species of Wild Fauna and Flora; Act No. 75 of June 5, 1992) | The Act on the Conservation of Species was established in 1992. The purpose of this Act is to protect species of wild animals and plants threatened for extinction and thereby conserve sound natural environment (Article 1). To this end, the Act defines the limitation of the catching, the designation of their natural habitat conservation areas, and the control of acts, the implementation of programs for the rehabilitation of natural habitats and the maintenance of viable populations, with regard to designated national endangered species of wild fauna and flora. At present, several species of seabirds are designated as national endangered species of wild fauna and flora, but none of the natural habitat conservation areas are designated in sea areas. |
| Act on the Promotion of Nature Restoration (Act No. 148 of December 11, 2002) | The Act on the Promotion of Nature Restoration was established in 2002. The purpose of the Act is to promote measures concerning nature restoration comprehensively (Article 1). Nature restoration refers to the conservation, restoration, creation, maintenance, and management of the natural environment with the participation of various local authorities to recover lost ecosystems and other natural environments. The Act stipulates basic principles for nature restoration, how to implement nature restoration projects, and so forth.<br><br>The natural environment of sea areas can be subjected to nature restoration. In the text of the Act, tidal flats and submarine forests are shown as examples of sea areas that underwent nature restoration. Nature restoration projects are also conducted on coral communities. |
| Invasive Alien Species Act (Act No. 78 of June 2, 2004) | The Invasive Alien Species Act was established in 2004. The purpose of the Act is to prevent damage by specified invasive alien species to the ecosystem (Article 1). To this end, the Act specifies alien species causing damage to the ecosystem as invasive alien species, controls the feeding, cultivation, storage, transportation, import, or transfer of invasive alien specifies, their release into the wild, and defines the prevention and removal of invasive alien species by national and local authorities and other entities. Marine alien species can be specified as invasive alien species as well. |

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| Act for the Promotion of the Clearing of Coastal Floating Debris (Act Concerning the Promotion of the Disposal, etc. of Coastal Floating Debris, etc. with Regard to the Conservation of Beautiful Scenery and Environment on the Shore for the Protection of Beautiful and Bounteous Nature; Act No. 82 of July 15, 2009) | The Act for the Promotion of the Clearing of Coastal Floating Debris was established in 2009 because of the concern that litter and wastes drifting ashore or scattering on the shore seriously affect the beautiful scenery and environment of the coast. The purpose of the Act is to promote measures against coastal floating debris in a comprehensive and effective manner (Article 1). To this end, it defines the formulation of basic policies and local plans, the smooth disposal thereof by coastal administrators and the control of the release of coastal floating debris by national and local authorities with regard to coastal floating debris. |
| Act on Protection of Cultural Properties (Act No. 214 of May 30, 1950) | The Act on Protection of Cultural Properties was established on 1950. Its purpose is to conserve cultural property and achieve the good use thereof. Natural monuments, which are of cultural property, are the system established in 1919 based on the Law for Preservation of Historic Sites, Places of Scenic Beauty, and Natural Monuments. Animals, plants, their habitats and growing areas, which are scientifically important and commemorate the nature of Japan, are designated as natural monuments.<br>Sea areas providing habitats and growing areas for marine species can be designated as natural monuments, and some are actually designated. In a sea area designated as a natural monument, actions that change the current state or adversely affect its conservation, including the capturing of individuals and acts of development, are limited (Article 125). |
| Act for the Promotion of Biodiversity Conservation Activities (Act Concerning the Promotion, etc. of Activities for the Conservation of Biodiversity through Collaboration among Diverse Local Entities; Act No. 72 of December 10, 2010) | The Act for the Promotion of Biodiversity Conservation Activities was established in 2010 for the purpose of promoting activities for the conservation of biodiversity conducted by diverse local entities organically cooperating with one another. It defines special measures of the Natural Parks Act in connection with local joint conservation activities to be performed according to plans prepared by municipalities based on the basic policy formulated by the national government. It also requires local authorities to establish a centre for assisting local joint conservation activities. |

<Prevention of water pollution>

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| Water Pollution Control Act (Act No. 138 of December 25, 1970) | The Water Pollution Control Act was established in the so-called “pollution diet” in 1970, when serious pollution became a social problem, in place of two convention water quality-related acts. The purpose of the Act is to protect the health of the people, conserve the living environment, and protect victims of health-affecting damage attributable to effluent discharged from factories by preventing the quality of public water areas and groundwater from being polluted (Article 1). To this end, the Act controls the discharge of effluent from factories and working places into public water areas. More specifically, it stipulates an effluent standard (concentration control, Article 3) targeted at facilities specified as facilities discharging pollutants and the limitation of discharge by total pollutant load reduction in designated water areas (2 of Article 4, etc.).<br>In this Act, public water areas placed under effluent discharge control include “rivers” and “lakes and marshes” flowing down into the sea in addition to “harbors and ports” and “coastal sea areas” (Article 2). Tokyo Bay and Ise Bay are designated as water areas covered by total pollutant load control. |
| Interim Law for Conservation of the Environment of the Seto Inland Sea (Act No. 110 of October 2, 1973) | The Interim Law for Conservation of the Environment of the Seto Inland Sea was established in 1973 as a special law to the Water Pollution Control Act to deal with the rapid worsening of water pollution in the Seto Inland Sea in response to high economic growth. The purpose of the Law is to conserve the environment of the Seto Inland Sea (Article 1). To this end, it defines the formulation of basic and prefectural plans, the control of the construction of specified facilities causing water pollution, guidance for the reduction of specified substances relating to eutrophication, the designation of Natural Coastal Protected Zones, special consideration for landfill, measures against sewage and wastes, oil discharge resulting from marine accidents, red tide and so forth. |
| Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (Act No. 117 of October 16, 1973) | The Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. was established in 1973 as PCB-induced environmental pollution problems became evident. The purpose of the Act is to set an evaluation system relating to chemical substances and implement necessary control in order to prevent environmental pollution resulting from chemical substances (Article 1). To this end, it prescribes an in advance evaluation system for chemical substances to be newly manufactured or imported and the control (license system or notification system) of the manufacture and use of chemical substances that may impair human health or adversely affect the inhabitation or growth of animals and plants. |

<Prevention of marine pollution>

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| Marine Pollution Prevention Act (Act on Prevention of Marine Pollution and Maritime Disaster; Act No. | The Marine Pollution Prevention Act was established in the so-called “pollution diet” in 1970, when serious pollution became a social problem, with a wider control and scope of the conventional Seawater Oil Pollution Prevention Act. It has been revised since then in accordance with the establishment or revision of international conventions relating to marine pollution |

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| 136 of December 25, 1970) | (London Convention, MARPOL Convention, OPRC Convention, etc.). The purpose of the Act is to prevent marine pollution and marine accidents, and at the same time, comply with these international conventions in a proper manner (Article 1). To this end, it defines the control (prohibition or license system) of the discharge of oil, harmful fluid materials, and wastes from vessels and marine facilities in connection with substances and wastes discharged into the sea. |

<Environmental impact assessment>

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| Environmental Impact Assessment Act (Act No. 81 of June 13, 1997) | In consequence of the inclusion of environmental impact assessments in the Basic Environment Act, the Environmental Impact Assessment Act was established in 1997 with a wider range of projects covered based on the 1984 cabinet decision “Implementation of environmental impact assessments”. The purpose of the Act is to define an environmental impact assessment procedure and thereby give proper consideration to the conservation of the environments relating to the projects (Article 1). To this end, it stipulates the determination of target projects, the preparation of manuals, the implementation of environmental impact assessments, and the creation of preparatory documents and assessment sheets, and prompts business operators to voluntarily give consideration to the environment in large-scale projects involving topographic changes and the construction of a new structure. Projects to be performed in sea areas, such as water area landfill and reclamation, are also included in the scope of this Act. |

<Fishery>

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| Fisheries Basic Act (Act No. 89 of June 29, 2001) | The Fisheries Basic Act was established in 2001 as a basic act in the field of fishery in response to the shift to the fishery resource storage and management system based on the United Nations Convention on the Law of the Sea and the worsening state of resources in the surrounding sea areas. The purpose of the Act is to achieve the comprehensive and systematic implementation of policies for fishery (Article 1). To this end, it defines basic principles, basic fishery plans, and the storage and management of fishery resources in the exclusive economic zone. |
| Fishery Act (Act No. 267 of December 15, 1949) | The Fishery Act was established in 1949 with the aim of making comprehensive and advanced use of waters, enhancing fisheries productivity, and democratizing the fishing industry by making reference to previous practices and reconstructing the Meiji Fisheries Act enacted in 1910. The purpose of the Act is to make comprehensive use of waters by establishing a basic fisheries production system and operating a fisheries adjustment organization consisting mainly of fishery administrators and fishery employees (Article 1). To this end, it defines a fishery right system, a designated fishery system, orders relating to fishery adjustment (including limitation of catching), and a fisheries adjustment commission system. Fishery rights are the rights set by licenses issued by the administrative authorities concerned and permitting the receiving parties to exclusively operate specific fisheries on fixed waters for a fixed period of time, and the type of fishery, the sea area, the period of operation, the fishing method are limited by the provisions of the license and the Rules about the Exercise of Fishery Rights. A right to petition based on real rights, a right to claim compensation or damages, and, at the same time, a charge of the infringement on fishery rights will apply to infringement by any third party. |
| Act on the Protection of Fishery Resources (Act No. 313 of December 17, 1951) | Legal measures for the maintenance and culture of fishery resources were comprehensively stipulated by the Meiji Fisheries Act and the current Fishery Act in the early days of its establishment. However, the depletion of fishery resources became a problem after World War II, and the Act for Preventing Depletion of Fishery Resources was enacted in 1950 accordingly. Then, the Act on the Protection of Fishery resources was enacted, with a system of active measures to protect resources added, as legislation introduced by a Diet member in 1951. The purpose of the Act is to ensure the protection and culture of fishery resources and maintain their advantages for the future to contribute to the development of fishery (Article 1). To this end, it prescribes orders concerning restrictions on the harvest of aquatic animals and plants, quarantine on fish, and a Protected Water Surface System. Protected Water Surfaces are designated water surfaces suitable for aquatic animals to lay eggs, for juvenile fish to grow, and for juvenile aquatic animals and plants to generate, and harvest is limited according to a management plan and such work as landfill and dredging is restricted in the areas of Protected Water Surfaces (Article 14, etc.). |
| Prefectural Rules about Fishery Adjustment | The Prefectural Rules about Fishery Adjustment stipulate restrictions or prohibitions to be imposed by the governors of prefectures for the purpose of protecting and culturing fishery resources, supervising fisheries, or otherwise adjusting fisheries based on the Fishery Act and the Act for Preventing Depletion of Fishery Resources. A fishery license system and restrictions on and prohibitions of the capturing of fishery resources for a specific period or in a specific sea area are defined. |
| Fishery Cooperative Act (Act No. 242 of December 15, 1948) | The Fishery Cooperative was established in 1948, taking over the fishery cooperative system defined by the Fishery Cooperative Rules of 1886 and the Meiji Fisheries Act of 1910. The purpose of the Act is to promote the development of cooperative organizations for fishery operators and marine product processors (Article 1). To this end, it defines details of the operations of fishery cooperatives, qualifications for fishery cooperative members, and the management, establishment, and dissolution of fishery cooperatives, and prescribes other provisions concerning fishery cooperatives. Fishery cooperatives are authorized to determine target sea areas and a method for managing fishery resources according to the resource management regulations (2 of Article 11). |

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| Marine Resources Development Promotion Act (Act No. 60 of May 17, 1971) | The Marine Resources Development Promotion Act was established in 1971 in need of multiplication and aquaculture of aquatic animals and plants in coastal sea areas and adjustment with other industries in important fishing grounds as water pollution and development of sea bottom progressed. The purpose of the Act is to promote the streamlining of the development and use of marine and fishery resources (Article 1). To this end, it defines the formulation of basic policies, the designation of coastline marine resource development areas by prefectures, and the designation of sea areas by Cabinet Orders. |
| Act on Preservation and Control of Living Marine Resources (Act No. 77 of June 14, 1996) | The Act on Preservation and Control of Living Marine Resources was established in 1996 because the United Nations Convention on the Law of the Sea was concluded and obligated coastal states to determine total allowable catch and take measures to store and control living resources. The purpose of the Act is to preserve and control living marine resources in the exclusive economic zone and, at the same time, ensure the appropriate implementation of the United Nations Convention on the Law of the Sea (Article 1). To this end, it provides the preservation and control of living marine resources based on total allowable catch (TAC) or total allowable effort (TAE) by specified living marine resources. |

<Public property management>

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| Port and Harbor Act (Act No. 218 of May 31, 1950) | The Port and Harbor Act was established in 1950. The purpose of the Act is to provide for the orderly development and appropriate management of ports and harbors and develop and maintain waterways (Article 1). To this end, it defines port and harbor planning, port management bodies, and port areas. In the 2000 revision, the words “while considering environmental conservation” were added to objective. |
| Act on Development of Fishing Ports and Grounds (Act No. 137 of May 2, 1950) | The Act on Development of Fishing Ports and Grounds was established in 1950. The purpose of the Act is to promote fishing ports and ground development projects in a comprehensive and systematic manner and properly maintain and manage fishing ports while considering harmony with the environment in order to ensure the sound growth of the fishing industry and thereby stabilize the supply of marine products (Article 1). To this end, it stipulates the formulation of basic policies and long-term plans with regard to the promotion of the development of fishing ports and grounds. It states that for basic policies, the matters that should be considered in connection with harmony with the environment in promoting fishing port and ground development projects must be set, and that long-term plans must be worked out with consideration given to the trend in the multiplication and aquaculture of aquatic animals and plants. In the 2001 revision, the words “while considering harmony with the environment” were added to the objective. |
| Coast Act (Act No. 101 of May 12, 1956) | The Coast Act was established in 1956. The purpose of the Act is to protect coasts from damage by tsunami, high tide, ocean waves, seawater, or ground transformation, achieve the development and conservation of the coastal environment and the appropriate use of public coasts, and thereby preserve the land of the country (Article 1). To this end, it prescribes the formulation of basic policies and basic plans, the designation and management of Coastal Protected Areas, the management of General Public Coastal Areas and so forth. The words “development and conservation of the coastal environment” and “appropriate use of public coasts” were added to the objective in the 1999 revision. |

## 2. Existing Systems in Japan that may correspond with Marine Protected Areas

(1) Protection of natural scenery

| Area (System) | Purpose of designation | Description of major regulations |
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| Natural Park (Natural Parks Act) | Protection of outstanding natural scenery and promotion of its use | Mainly regulation on developments, such as landfills (Ordinary Zone: notification system; Marine Park Zone: license system or harvest control in some zones). A Special Area (license system) may be set in brackish water zones. |
| Natural Coastal Protected Zone (Act on Special Measures Concerning Conservation of the Environment of the Seto Inland Sea) | To maintain the state of nature so that seashores and ponds, could be used for bathing, shellfish gathering and so forth in the future. | Regulation on developments, such as the construction of new structures, the transformation of land properties, the mining of minerals, and earth and rock quarrying (the prefecture concerned must be notified). |

(2) Protection of natural environment or habitats and growing areas for organisms

| Area (System) | Purpose of designation | Description of major regulations |
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| Nature Conservation Area (Nature Conservation Law) | Conservation of the outstanding natural environment requiring particular conservation. | Developments, such as land transformation, are mainly controlled (Ordinary Zone: notification system; Marine Special Zone: license system or harvest control is adopted in some zones). |
| Wildlife Protection Area (Wildlife Protection and Proper Hunting Act) | Protection of wildlife. | Hunting is controlled. Developments, such as the construction of structures, are also controlled in Special Protection Zones, and the use of power-driven vessels is additionally controlled in Special Protection Designated Zones. |
| Natural Habitat Conservation Area, etc. (Act on Conservation of Endangered Species of Wild Fauna and Flora) | Conservation of national endangered species of wild fauna and flora. | Development is controlled in Monitored Zones (by notification system). In Controlled Zones, the harvest of designated species and the use of power-driven vessels are regulated in addition to development control (license system). Additionally, access is restricted for Restricted Entry Zones. |
| Natural Monument (Act on Protection of Cultural Properties) | Protection of animals, plants, geographic features and minerals of high scientific value. | License systems on acts that change the current state or adversely affect its conservation. |

(3) Protection, cultivation etc. of aquatic animals and plants

| Area (System) | Purpose of designation | Description of major regulations |
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| Protected Water Surface (Act on the Protection of Fishery Resources) | Protection and cultivation of aquatic animals and plants. | Development, such as landfill and dredging (license system), and the harvest of designated aquatic animals and plants are controlled for water surfaces suitable for egg laying and the growth of juvenile fish |
| Coastline Marine Resource Development Area, designated sea area (Marine Resources Development Promotion Act) | 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. | Development, such as sea bed transformation and digging, is controlled (it must be notified to the governor or the Minister of Agriculture, Forestry and Fisheries). Prefectures must formulate a "Coastline Marine Resource Development Plan". |
| Area designated by prefecture, fishery operator group, etc. | To protect and cultivate aquatic animals and plants, and to secure their sustainable use. | Control over harvest of specified aquatic animals and plants, etc. |
| (Underlying systems)<br>Harvest Control Zone (Fishery Act and Act on the Protection of Fishery Resources), water surfaces covered by the Resource Management Regulations and voluntary efforts by fishery cooperatives (Fishery Cooperative Act) | | |
| Common fishery right area (Fishery Act) | To enhance fisheries productivity (protecting and cultivating aquatic animals and plants, and ensuring their sustainable use), etc. | The harvest of aquatic animals and plants (area, period, fishing method, number of vessels, etc.) is controlled by the Rules about the Exercise of Fishery Rights (approved by the governor). A right to petition based on real rights, a right to claim compensation or damages, and, at the same time, a charge of the infringement on fishery rights will apply to infringement by any third party. |

## 3. Glossary for the Marine Biodiversity Conservation Strategy

*Below is a glossary of terms in the Marine Biodiversity Conservation Strategy. Their descriptions do not represent only definitions of these terms, and other definitions may be allowed.

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| Additional Extensive Requirements | Additional Extensive Requirements is the expanding of the scope of control with ordinances for substances, items, and so forth that are not controlled by law. |
| Additional Stringent Requirement | Additional Stringent Requirements under ordinances are to attain the same objectives with laws, but they set stricter standards on the same subject. |
| Anoxic Water | Anoxic water is a mass of water with an extremely low level of dissolved oxygen concentration. On the bottom layer of a marine area, dissolved oxygen concentration drastically drops because microbes decompose carcasses of plankton that multiplied due to eutrophication or organic substances flowing into marine areas. Anoxic water may cause damage. For example, aquatic organisms may be exterminated if they are subjected to anoxic water for a long period of time. |

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| Ballast Water | Ballast water is seawater loaded onto an unloaded vessel so as to stabilise the vessel. It is loaded onto a vessel when cargo is unloaded. Ballast water is generally discharged at port when cargo is loaded. |
| Bycatch | Bycatch means catching fish or marine organisms not targeted to be caught together with species that were targeted to be caught. |

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| Certification System (concerning marine products) | A certification system is intended to promote sustainable fisheries by attaching labels to marine products caught by sustainable fisheries and having them selected by consumers. Among certification systems are the system established by Marine Eco-Label Japan and the system formulated by the Marine Stewardship Council (MSC), which is accepted as an international certification system. |
| Clearing House (Mechanism) | A clearing house is a scheme designed to collectively search for data saved in various databases scattered on a network. A clearing house enables the user to easily locate intended data as there is no need to access and search individual databases again and again. |
| Cold Seep | A cold seep exists on the edges of continental shelves at depths of 400 to 7,000 meters. Cold water seeps out of ooze-coated sea bottoms from which oil or gas flows out. In cold seep areas, high-concentration methane and sulphides contribute to the high productivity of chemotroph communities and support the high biomass of *Calyptogena okutanii*, *Mytilus coruscus*, and Lamellibrachia tube worms that coexist with these bacteria. In addition, more diverse species exist in cold seep areas than surrounding sediments. Several species of fish have also been found in cold seep ecosystems. |
| Cold Water Coral Communities | A cold water coral community is a community of cold water coral, including madrepore, soft coral, and black coral. Cold water coral communities can be widely observed in the Atlantic Ocean, the Mediterranean Sea, the Indian Ocean, the Pacific Ocean, and the Antarctic Ocean. In general, cold water coral communities inhabit at depths of 50 to 1,200 meters at high latitude and at depths of up to 4,000 meters at low latitude. Their growth rate is slow, which is only 1/10 of coral growing in tropical regions. Many of cold water coral communities inhabit edges of continental shelves and seamounts and feed on organic matter and zooplankton carried by ocean currents. They form calcium carbonate structures and provide animal communities with habitats. The species of coral reefs in these areas are far more diverse than those inhabiting the surrounding sea bottom. Many endemic species also exist. |
| Continental Shelf | A continental shelf is a gently sloped sea bottom area extending to the continental slope. The depth to a continental shelf is said to be about 130 meters on average. However, it is often discussed that the term continental shelf should be applied to areas not deeper than 200 meters because the definition “to depth of 200 meters or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas” set in the 1958 the Convention on the Continental Shelf is still accepted widely. In general, continental shelves are good fishing grounds and considered to be blessed with great reserves of submarine resources. Note that the definition of continental shelves based on the United Nations Convention on the Law of the Sea is different from the abovementioned definition set in terms of submarine topography. |

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| Coral Bleaching | Coral bleaching is the phenomenon observed with hermatypic coral in which its white structure is visible through the transparent coral tissue and appears white as a result of the loss of endosymbionts (zooxanthellae). The presumed cause of coral bleaching is the subjection of coral to such stress as high-temperature water, low-temperature water, intense light, ultraviolet rays, and low salinity. If a bleached state continues for a long period of time, coral will die as it cannot receive photosynthetic products from endosymbionts (zooxanthellae). |

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| Deepwater Bryozoan Communities | This is a biocenosis of bryozoans formed in the deep sea. Bryozoans are invertebrates belonging to Phylum Ectoprocta, and have tentacles with cilia around the mouth, a structure referred to as the lophophore. With this, it preys on microorganisms. Bryozoans are organisms of 1 mm or less in diameter and form colonies made up of outer walls of calcium carbonate, providing deep-sea organisms with a habitat. |
| Deepwater Sponge Communities | This is a community of sponges forming mainly in fast-flowing areas rich in nutrients, such as seamounts, continental slopes, and submarine valleys. The growth rate of sponge communities is as slow as 2 to 7 cm/year, but they live for up to 6,000 years. The complicated structures of sponge communities offer habitats to many species of fish, invertebrates, etc. Large amounts of silicate spicules of dead sponges are deposited on the seabed and transform sediment, which, in turn, affect the distribution, configuration, and density of nearby faunae. |
| Dissolved Oxygen | Dissolved oxygen is also referred to as DO for short. It is oxygen dissolved in water and is an index for the measurement of water quality contamination levels. |

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| Ecotone (Transition Zone) | An ecotone is a boundary area between two different environments. Generally, a biota changes successively within a boundary area, in response to environmental variations, to allow occurrences of a wide variety of organisms there. Across the boundary between terrestrial and marine parts, environment factors, such as the particle size composition or wetness of mud and sand, change successively, and organisms adapted to each environment occur and grow there. |
| EEZ: Exclusive Economic Zone | An exclusive economic zone is a water area connected to a territorial sea and extending to a distance of not more than 200 nautical miles from the baseline of the territorial sea, as defined in Part V of the United Nations Convention on the Law of the Sea. Coastal states have sovereign rights for the purpose of exploring, and exploiting, conserving and managing the natural resources (whether living or non-living) within their exclusive economic zones and jurisdiction with regard to the establishment and use of artificial islands, installations and structures, marine scientific research, and the protection and preservation of the marine environment. |
| Effluent Standard | An effluent standard is a set of permissible limits of toxic substances and the like contained in effluent discharged from factories and business establishments where specified facilities are installed, as defined in the Water Pollution Control Act. An effluent standard covers health items concerning the possibility of damage to human health and living environment items addressing the possibility of damage to the living environment. |
| El Niño, La Niña | El Niño is a phenomenon of higher-than-usual temperature of sea surface for about a year in extensive water from the date line in the equatorial zone of the Pacific to the coastal zone of Peru in South America. Opposite phenomenon, or prolonged lower-than-usual temperature of sea surface in the same water is referred to as La Niña. It is believed that El Niño or La Niña causes unusual weather all over the world, including in Japan. |

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| Fishery Rights | Fishery rights are rights set by a license granted by a governmental agency and permit the granted party to exclusively operate a specified fishery in specified waters for a specified period of time. Fishery rights are defined in the Fishery Act and are considered to be property rights and, at the same time, real rights. There are three types of fishery rights: the right to operate a fishery using fixed fishery equipment (fixed gear fishery right); the right to carry out fish cultivation within the specified sea area (demarcated fishery right); and the right to operate a fishery using specified waters that are shared (common fishery right). Each license specifies the permitted fishing gear and method, species of fish to catch, and period of fishing. With regard to common fishery rights, such permitted items are restricted in more detail according to the rules set by the Fisheries Cooperative Association. It is said that the order with respect to the use of fishing grounds and the rights from which the current fishery rights originated were formulated in the Edo era. The fishery rights were stipulated in fishery legislation in the Meiji era. |

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| FAO: Food and Agriculture Organization of the United Nations | FAO is a UN specialized agency established in 1945 in order to relieve human beings from starvation by improving the nutrition level and standard of living of the people of each country. The activities of FAO include the provision of opportunities to discuss international agriculture, forestry, and fishery, the execution of international treaties, surveys and analyses relating to agriculture, forestry, and fisheries, the collection and distribution of information, and the provision of technical advice and assistance to developing countries. |
| Front | A front is a line of discontinuity forming in the boundary between different masses of water and synonymous with a current rip or boundary of water masses. A marine area with a front is referred to as a front area. |

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| Grazing Food Chain | The grazing food chain is a linear predation-prey linkage that starts from plants, goes to herbivorous animals that eat the plants, and then to animals that eat herbivorous animals. It is also referred to as the grazing chain. Contrary to it, a food chain originating from the remains of organisms, such as detritus, is referred to as the detritus food chain. |

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| Hydrothermal Vent | A hydrothermal vent is a chimney-like sea bottom structure formed by seawater heated by magma, containing minerals, sulphides, hydrogen, methane, magnesium, and metals and blown out of the Earth's crust. It is known that hydrothermal vents exist in mid-ocean ridges and the centre of back-arc expansion. Seawater blown out of hydrothermal vents is rich in sulphides and supports primary production in chemosynthetic bacteria. Areas around hydrothermal vents are inhabited by Lamellibrachia tube worms, *Mytilus coruscus*, and *Calyptogena okutanii* that have a symbiotic relationship with these bacteria, and biological communities that feed on such bacteria such as shrimps. |

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| Integrated Management of Coastal Zones | The integrated management of a coastal zone refers to the proper management of terrestrial and marine parts of a coastal zone that requires comprehensive approaches on natural and social components, through integrated measures such as regulations. The integrated management of a coastal zone is specified in the Basic Act on Ocean Policy and the Basic Plan on Ocean Policy. This is due to the fact that problems in the marine part of a coastal zone may be attributable to activities within its terrestrial part, and in such cases, measures only within the marine part are not effective enough to solve the problems. |
| ICRI: International Coral Reef Initiative | ICRI is an international framework launched in 1994 by eight countries, including Japan, the U.S., Australia, and France, for the purpose of preserving coral reefs. Member countries serve in turn as the secretariat. Japan assumed the responsibility of the secretariat together with the Republic of Palau for two years, from July 2005 through June 2007. |
| ICRI East Asia Regional Strategy on MPA Network | This strategy is a document of regional strategy of the International Coral Reef Initiative (ICRI) adopted at the 6th ICRI East Asia Regional Workshop held in Phuket (Thailand) in June 2010. It shows the continuous formation of a collaborative system in the East Asian region for the conservation of coral reefs and related ecosystems and how the coral reef protection area network in the East Asian region should work. |
| IMO: International Maritime Organization | IMO is a UN specialized agency established in 1958 with the aim of promoting international cooperation with respect to maritime issues. The purpose of IMO is to deal with matters relating to maritime safety as well as administrative and legal matters concerning the prevention and control of marine pollution. |
| IODE: International Oceanographic Data and Information Exchange | IODE is the program promoted by the Intergovernmental Oceanographic Commission (IOC) founded by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1961. The IODE Program aims to promote ocean surveys and data exchanges. With four World Data Centers for Oceanography (located in the U.S., Russia, Germany, and China) as the core, the IODE Program manages a system made up of national oceanographic data centres placed within respective member countries. |
| IUCN: International Union for Conservation of Nature and Natural Resources | IUCN is an international organization founded in 1948 as a union of national, governmental, and nongovernmental agencies involved in the preservation of nature and natural resources. IUCN conducts expert-directing surveys and research in the fields of wildlife protection and conservation of the natural environment and natural resources on a global scale. It advances recommendations and advice to related parties. It also provides assistance to developing regions. |

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| Kuroshio Current | The Kuroshio Current is an ocean current that flows north in the East China Sea into the Pacific through the Tokara Channel between Kyushu and Amami Oshima island and flows along the south coasts of Japan and eastward off the Boso Peninsula. Since the Kuroshio Current is oligotrophic, much plankton does not inhabit this area and the water of the current is highly transparent. The Kuroshio Current is one of the world's largest ocean currents along with the Antarctic Circumpolar Current and the Gulf Stream.<br>The Kuroshio Current that streams along the south coasts of Japan and flows away to the east is referred to as the Kuroshio Extension, whereas the weak current flowing on the offshore side of the Kuroshio Current to the west or south, which is the opposite direction of the Kuroshio Current, is referred to as the Kuroshio Countercurrent. In addition, the inside (coastal side) of the Kuroshio Current is referred to as the inside area of the Kuroshio Current. |

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| Meiobenthos | Organisms inhabiting the sea bottom are collectively referred to as benthos (benthic organisms). Meiobenthos refers to benthic organisms that pass through a 1-mm-mesh sieve but are caught on a fine sieve of about 32 μm. Meiobenthos includes micro-algae, foraminifera, and nematoda. |
| Microbe Food Chain | The microbe food chain is a food chain relationship between microbes, which originates from dissolved organic matters and spreads to bacterial communities and protista. It is assumed that microbe food chains play an important role in the natural ecosystems in the oceans and lakes together with traditional food chains. |
| Monitoring-site 1000 (Project for Promoting Monitoring of Important Ecosystem Monitored Areas) | Monitoring-site 1000 is a program that has been conducted by the Ministry of the Environment since 2003 to monitor and survey about 1,000 sites all over the country. With the cooperation of universities, museums, NGOs, citizen volunteers, etc., this program is conducting a continuous survey of various ecosystems including coastal areas (surf zones, tide land, eelgrass beds, and seaweed beds), coral reefs, forests, and grassland. |
| Multiple Use Integrated Marine Management Plan | The Multiple Use Integrated Marine Management Plan was formulated jointly by the Ministry of the Environment and Hokkaido in 2007 in order to step up the conservation of the marine areas within the Shiretoko World Natural Heritage Site. Based on controls by laws concerning the conservation of the marine environment and fisheries and autonomous management by fishery operators and tourist agents, this plan aims to achieve both the conservation of the marine ecosystem and stable fisheries through the sustainable use of fishery resources within the heritage site. |

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| National Survey on the Natural Environment | The National Survey on the Natural Environment has been conducted by the Ministry of the Environment about every five years since 1973 based on the provisions of Article 4 of the Nature Conservation Law for the purpose of preparing basic materials and data to keep track of the current condition and changes of the natural environment of Japan from a national standpoint and to promote measures to conserve the natural environment. Generally referred to as the "Green Census", this survey investigates nationwide conditions according to survey items classified for each of the land, inland water, and marine areas. Survey results are compiled into reports and maps and released to the public. These reports are available as basic materials and data on the natural environment for nature conservation campaigns, such as the designation and planning of Natural Parks, for environmental impact assessments, and for other fields. |
| Nekton | Nekton is a collective term for aquatic organisms, which are highly capable of migrating, and are able to swim and inhabit water independently of water currents. They are also referred to as natant organisms. Nekton includes fish and whales, as well as sea turtles, squids and octopuses, and some birds including penguins. |
| NOWPAP: Northwest Pacific Action Plan | NOWPAP is one of the regional sea plans set forth by the United Nations Environment Programme (UNEP) for the purpose of the ocean pollution control of enclosed sea and the resource management of oceans and coastal areas. In this framework, Japan, China, South Korea, and Russia collaborate with one another to protect the ocean environment of the Japan Sea and the Yellow Sea. NOWPAP has been stepping up measures against floating debris since 2007. |

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| Ocean Acidification | Ocean acidification is the process where the ocean absorbs increased atmospheric carbon dioxide and consequently becomes acidified. The ocean absorbs carbon dioxide from the air and mitigates the increase in atmospheric concentration. As the amount of carbon dioxide released into the air increases, the concentration of carbon dioxide in seawater rises as well. When carbon dioxide dissolves in water, water becomes weakly acidic (carbonic water), causing the acidification of seawater. At the present, seawater is a weak alkali with a pH of approximately 8.1 but will approach neutral if acidification progress. Many organisms with shells made of calcium carbonate inhabit the ocean and thus it is said that their shells may begin to dissolve if acidification advances. |
| OBIS: Ocean Biogeographic Information System | OBIS is a system established by the Census of Marine Life Program with the aim of collecting and integrating data on marine organisms and environment. Data is collected and integrated through various databases and nodes (bases) placed in various countries and regions. |
| OECD: Organization for Economic Co-operation and Development | The OECD is an international organization that superseded the Organization for European Economic Co-operation and was established in 1961 based on the Convention on the Organization of Economic Co-operation and Development. The OECD is organized by advanced nations which have a market economy as a principle. It promotes activities focusing on contribution to the growth of the world economy, assistance to developing countries, and the expansion of multilateral free trade. |
| Oyashio Current | The Oyashio Current is a cold ocean current flowing to the south along the Kurile Islands down to the eastern shore of Japan. The Oyashio and Kuroshio Currents are the major ocean currents in water around Japan. Cold water with low salinity, rich in dissolved oxygen and nutrients, and observed off the eastern shore of Hokkaido, Kushiro or Sanriku are sometimes also referred to as the Oyashio Current. |

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| Partnership for the East Asian-Australasian Flyway | The Partnership for the East Asian-Australasian Flyway is an international partnership that was launched in 2006 under the initiative of the Japanese and Australian governments to strengthen international cooperation in the protection of migratory birds and their habitats in the East Asian and Oceanian regions. An international network covering important habitats for all species of migratory birds inhabiting the regions along the routes of migration is established, with the entire network focusing on the strengthening of the protection of migratory birds. |
| PEMSEA: Partnerships in Environmental Management for the Seas of East Asia | PEMSEA is a partnership that was founded by the United Nations Development Program (UNDP) in 1994 with the aim of tightening collaboration among governments, local governments, nongovernmental organizations, and research institutions in order to conserve the environment and promote harmonized development in the East and Southeast Asian marine areas. Japan has been participating in PEMSEA since 2002. At the present, model business programs relating to sustainable development are underway in nine countries, including in Xiamen (China) and in Danang (Vietnam). |
| PICES: North Pacific Marine Science Organization | PICES is an intergovernmental scientific organization established in 1992. The purpose of this organization is to promote and coordinate marine research in the North Pacific above a latitude of 30 degrees and adjacent seas, to accelerate the accumulation of scientific knowledge about the ocean environment, global weather, climate change, biomass and ecosystem, and the effects of human activities, and to promote the collection and prompt exchange of scientific information with respect to such items. |
| Piscary | A piscary is a right of operating the whole or a part of the fishery covered by another person's common fishery right based on the act of establishment (agreement on setting a piscary). Piscaries are defined in the Fishery Act and restricted by the rules set by the Fisheries Cooperative Association. |

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| Red Tide | Red tide is seawater surface discoloration resulting from unusual proliferations of phytoplankton. Although rarely observed, bacteria and zooplankton also cause red tide. Color of seawater surface turns brown or green depending on the species or abundance of organisms. Red tide sometimes causes mass mortality of fish and shellfish. It is common knowledge that red tide occurs when nutrients and other substances responsible for the proliferation of plankton, are supplied under proper conditions. Red tide occurs more frequently as eutrophication of the sea becomes serious. |
| Regional Fisheries Management Organization | The Regional Fisheries Management Organization is an international organization established based on fishery management treaties in a water area with a specific expanse. The participating countries determine actions to conserve and manage intended resources within the water area concerned. |

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| Regime Shift | A regime shift is the shift of the basic structure (regime) of the Earth system (consisting of ocean ecosystems, including air-sea ecosystems) over several years to several decades. It also refers to the phenomenon in which ocean ecosystems, such as the composition of plankton communities or fish, vary greatly and rapidly at some point in connection with a regime shift. It is assumed that the stock of fishery resources, such as Japanese sardines, show a great natural variation as a result of regime shift. A cold period during this regime is referred to as a cold regime period. A warm period is referred to as a warm regime period. |

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| Sand Drift System | A sand drift system is a transfer and dispersion system of soil and sand on the seashore or sea bottom caused by movements of seawater (waves, tidal currents, alongshore currents, etc.). Much of sand drift occurs in breaker zones, and the movement of sand drift is divided into long-shore sediment transport in the horizontal direction and cross-shore (offshore) sediment transport in the vertical direction. Sand drift systems depend on the installation of structures or changes in waves and currents and may affect the surrounding environment. |
| Sato-umi | Sato-umi is a marine area in Japan's coastal zones where a high level of productivity and biodiversity is maintained by taking artificial measures while harmonizing with the natural ecosystem. In Japan, the coastal zones have been involved deeply in human activities and have offered opportunities to collect shellfish, algae, etc. since ancient times. |
| Scientific Criteria for Identifying Ecologically or Biologically Significant Marine Areas in Need of Protection in Open-Ocean Waters and Deep-Sea Habitats | This is a set of criteria for identifying ocean and deep-sea habitats that are important in terms of ecology or biology and require protection. The criteria were included in Appendix I to CBD-COP9 Decision IX/20 (Marine and coastal biodiversity) following a proposal from a workshop of experts in ecological criteria and biogeographic classification systems for marine areas in need of protection. Seven scientific criteria are set forth. |
| Stock Assessment of Individual Fish Species and Subpopulation | A stock assessment is the analysis of the characteristics and volumes of resources in connection with species of fish or subpopulations (the minimum structural group of resources of the same genetic structure, the same distribution area, etc.) to be assessed based on data obtained through fish catch surveys and biological surveys and evaluations of the levels and trends of resources and the effect of fish catches on such resources. The Fisheries Research Agency (FRA) conducts a stock assessment on major species of fish (52 species and 84 subpopulations) in the marine areas around Japan every year. The allowable biological catch (ABC) is calculated for each species of fish and subpopulation and is used for the setting of the total allowable catch (TAC) as a scientific foundation. |
| Stock Recovery Plan | A stock recovery plan is a comprehensive framework for promoting actions in connection with fish species that require urgent stock recovery, such as: (1) reducing total fishing effort, including the reduction of fishing boats, the suspension of fishing, improvements in fishing gear, and the establishment of protected zones, (2) the active cultivation of stocks by releasing juvenile fish etc., and (3) the preservation of the fishing ground environment. The national government or prefectural governments work out a stock recovery plan based on views from fishery operators concerned. |

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| TAC: Total Allowable Catch | TAC is a maximum annual catch limit as defined in the Act on Preservation and Control of Living Marine Resources and is set for each kind of living marine resource that can be caught within the exclusive economic zone. TACs are set on seven species of fish, including Pacific Saury and Alaska Pollock, and are assigned to fishery operators by the type of fishery and by prefecture. |
| Total Pollutant Load Reduction | Total pollutant load reduction is a system tailored for enclosed water (designated areas), in which compliance with water quality and environment standards is difficult to achieve only through effluent controls (effluent concentration controls) against effluent discharged from factories and business establishments, to reduce the volume of incoming pollutant loads and thereby prevent water quality contamination. This system is based on the Water Pollution Control Law and implemented to reduce three factors– COD, nitrogen, and phosphorous – in Tokyo Bay, Ise Bay, and the Seto Inland Sea. In this system, the prefectures concerned formulate a total pollutant load reduction plan (which defines reduction goals and measures to reduce pollutant loads) based on the basic total pollutant load reduction policies set by the Minister of the Environment. Specific measures include the application of a total pollutant load control standard to plants and business establishments and the construction and maintenance of sewerage systems and septic tanks. |
| Transition Region | Transition region is constituted by water with transitional characteristics between subtropical and subarctic waters. It also serves as a dynamic boundary between subtropical and subarctic circulations. A transition region has great north-south variations in water temperature and salinity, or factors to determine water density. However, compensational effects among these two factors limit the north-south variations in water density to create a characteristic structure. |

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| UNCED: United Nations Conference on Environment and Development<br>(the Earth Summit) | UNCED is an international conference held in Rio de Janeiro, Brazil, in 1992 under the auspices of the United Nations. This was due to the global-scale calls for prompt measures to global environmental problems that were becoming increasingly serious. At the conference, the "Rio Declaration on Environment and Development" was adopted, which proclaims principles concerning sustainable development. Also adopted was "Agenda 21", a program for specific action to realize sustainable development. The United Nations Convention on Biological Diversity and the United Nations Framework Convention on Climate Change were also released during this conference to be signed. |

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| Water Mass (Water Column) | Water mass is a body of seawater that has distinct properties including temperature, salinity, dissolved oxygen, and nutrients. |
| WSSD: World Summit on Sustainable Development (Johannesburg Summit) | WSSD is an international conference held in Johannesburg, South Africa, in 2002 for the purpose of accelerating the execution of Agenda 21 ten years after the United Nations Conference on Environment and Development (Earth Summit), in which the Agenda was adopted, and discussing new issues. At the WSSD, the "Johannesburg Declaration on Sustainable Development", in which the top leaders of countries promise sustainable development and the "Johannesburg Plan of Implementation" for leading Agenda 21 to specific actions, were adopted. |

## 4. Background of the Development of the Marine Biodiversity Conservation Strategy in Japan

For potential formulation of the “Marine Biodiversity Conservation Strategy”, the Expert Working Group on Marine Biodiversity Conservation Strategy was organized.

Previous meetings

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| 2010 | July 9: | First Experts Meeting (framework of strategy, identification of issues) |
| | August 27: | Second Experts Meeting (review of the draft strategy) |
| | October 1: | Third Experts Meeting (interim report) |
| | December 24: | Fourth Experts Meeting (incorporation of outcomes of CBD-COP10) |
| 2011 | January 20 to February 10: | Public comment period (Number of comments submitted: 38 (20 individuals, 18 groups), total number of comments: 274) |
| | March 1: | Fifth Experts Meeting (sum-up of strategy) |

Members of the Expert Working Group on the Marine Biodiversity Conservation Strategy in Japan (titles omitted)

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Satoko Seino: Associate Professor, Department of Urban and Environmental Engineering, Faculty of Engineering, Graduate School of Engineering, Kyushu University

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