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Selected Papers

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OPRI OCEAN POLICY RESEARCH INSTITUTE
SASAKAWA PEACE FOUNDATION

President's Message

As mankind moves through the 21st century, integrated policies of ocean governance are increasingly necessary for the sustainable development and use of our oceans and their resources and for the protection of the marine environment.

Towards this end, Ocean Policy Research Institute (OPRI) of the Sasakawa Peace Foundation orients its research on ocean issues in line with the mission statement "Living in Harmony with the Oceans."

OPRI aims to conduct cross-sectoral research in ocean related issues in order to initiate debate on marine topics and to formulate both domestic and international policy proposals.

We publish a Japanese-language newsletter titled the "Ocean Newsletter" (previously known as "Ship & Ocean Newsletter") twice a month. "Ocean Newsletter Selected Papers No.26" contains English-language versions of papers from the Japanese Newsletter edition, published from No.471 (2020.3.20) to No.490 (2021.1.5). The Ocean Newsletter seeks to provide people of diverse viewpoints and backgrounds with a forum for discussion and to contribute to the formulation of maritime policies conducive to coexistence between mankind and the ocean.

Our Institute believes that the Newsletter can expand effective communication on these issues by introducing timely research abroad to an informed readership. It also welcomes responses from readers, some of which appear in the Newsletter.

It is our sincere hope that these Selected Papers will provide useful insights on policy debate in Japan and help to foster global policy dialogue on various ocean issues.

Atsushi SUNAMI
President, the Sasakawa Peace Foundation

■Publisher

SUNAMI Atsushi
President, the Sasakawa Peace Foundation

Ocean Policy Research Institute of the Sasakawa Peace Foundation
The Sasakawa Peace Foundation Bldg., 1-15-16 Toranomon, Minato-ku, Tokyo, JAPAN 105-8524
Tel. 81-3-5157-5210 / Fax. 81-3-5157-5230 E-mail. oceannewsletter@spf.or.jp
URL. https://www.spf.org/opri/

Contents

Ocean Newsletter
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The Reopening of Japanese Commercial Whaling as Seen in Foreign Media

[KEYWORDS] Japanese whaling / Press / Explanations to anti-whaling nations

SASAKI Megumi
Film director
(Ocean Newsletter No. 472, 5 April 2020)

Prompted by Japan's 2019 reopening of commercial whaling within its EEZ, discussions on the whaling issue have been revived both domestically and abroad. The responses from overseas have for the most part been critical, though some have evaluated positively the reduction in number of whales taken and Japan's withdrawal from the Antarctic Ocean. Characterizing whaling as a Japanese tradition generated misunderstanding and criticism. A more thorough explanation of how whaling constitutes part of the Japanese identity is now needed.

Changes in Reactions from Foreign Media

On July 1, 2019, Japan resumed commercial whaling within its exclusive economic zone (EEZ) for the first time in 31 years, reigniting debate at home and abroad. Reaction overseas was generally critical, but there was some appreciation of the reduced number of captures and the withdrawal from the Antarctic Ocean. There have also been signs of change; some major U.S. newspapers have begun to publish articles that give consideration to fairness instead of being one-sided criticism.

Anti-whaling countries have criticized whaling for two primary reasons. The first is that Japan has caught over 300 whales in the Antarctic Ocean, a protected area of the Southern Ocean. The second is that, up until now, Japan's research whaling has been seen as commercial whaling that uses science as a cover. With the resumption of commercial whaling, research whaling and hunting in the Antarctic Ocean have ceased, leaving no grounds for criticism. Norway and Iceland have been engaged in commercial whaling in their territorial waters for many years, making it difficult to criticize Japan alone.

It should be noted that the Washington Post, a major U.S. newspaper, published a feature article that, although not pro-whaling, shows an understanding of Japan's activities. The first article, "In Japan's 'city of whales,' an uncertain future after last Antarctic hunt," was published when the whaling ship Nisshin Maru returned to Shimonoseki from its last research whaling trip to the Southern Ocean in April (see below). Simon Denyer, chief of the newspaper's Tokyo Bureau, personally visited Shimonoseki to talk to the ship's crew and their families, visit whale restaurants, and carefully investigate local disappointment and anxiety over the end of whaling in the Southern Ocean. He also visited the Nagato Whale Museum to learn more about Japan's whaling history. What surprised me further was that a seventeenth-century scroll depicting whaling in Nagato was used as the article's main image.

In the past, articles on whaling have typically used images and videos of the sea stained red with blood or captured whales lying on the deck with their bellies split open. These manipulated images resulted in the idea that whaling is cruel, a widespread assumption in anti-whaling countries. The Washington Post article, however, did not use any evocative photos other than the scroll. It incorporates many new perspectives that haven't been seen in western media.


In Japan's 'city of whales,' an uncertain future after last Antarctic hunt

Japan plans to resume commercial whaling in its territorial waters. It's an act of defiance but also has hints of desperation.

From The Washington Post (April 5, 2019)

In September 2019, Denyer visited Taiji in Wakayama Prefecture to cover the dolphin hunting season after the ban there was lifted. The article "At Japan's dolphin hunt, a struggle between local traditions and global anger" (October 14, 2019) is critical of the export of live dolphins for aquariums. However, it notes that the town is supported by the significant income earned from this activity and explains that whaling has been a part of local life for 400 years. Denyer should be commended for traveling to Taiji, a town located far from Tokyo on the southern tip of the Kii Peninsula, to cover this story. Particularly since, up until now, major Western media outlets have produced one-sided articles focused on critics' opinions. The report does not include any images of the blood-red cove associated with dolphin fishing in Taiji.

Species Endangerment and Whales

The anti-whaling movement began around 1970, centered

primarily in Europe and the United States, using the slogan "Save The Whales" to assist in its spread. Placing the article "The" in front of "Whale" created the impression that there are only one whale species and that it is in danger of extinction. This misconception ignores the basic fact that there are more than 80 species of cetaceans, both large and small, some of which are endangered, such as the blue whale, and others, such as the Antarctic minke whale, which have more than 500,000 individuals. Even though Japan was not catching endangered species, the word "endangered" was always snuck into articles in English-speaking countries.

However, the number of articles using the word endangered in their coverage of the resumption of commercial whaling, including the aforementioned Washington Post articles, has decreased. The news that many large whale species are increasing in numbers has been frequently reported in the United States over the past few years. This increase makes it difficult to say that the whales that Japan catches are endangered species, as pointed out by Charles H. Greene, a professor of ocean resources and ecosystems at Cornell University. *Scientific American*, founded in the mid-nineteenth century and the oldest scientific journal aimed at the general public, published an opinion article by Greene entitled "Japanese Whaling Is Not the Greatest Threat to Whale Conservation" (August 13, 2019). His argument is as follows:(Summarized)

"Although I would personally prefer that no nation engages in commercial whaling, I find it hypocritical that many Americans and Canadians criticize the Japanese while turning a blind eye to the more pernicious practices of their own countries. Global outrage should focus on North American fishing and shipping industries as well. Japan takes only those species with sufficient populations, and commercial whaling conducted under proper management has little impact on whale conservation. In contrast, despite their endangered status, 80% of North Atlantic right whales are in danger of becoming entangled in fishing nets during their migration north along the east coast of North America. Collisions with ships are also a major risk."

Boats used for hunting small cetaceans in Taiji Town (2015) © Okujirasama Project Team

The article reveals the voice of a calm scientist wanting to determine where the real dangers to whale conservation lie, based on facts, rather than emotionally targeting only Japan.

The Danger of the Expression "Japanese Tradition"

Controlling readers' impressions has played a more critical role than science and facts when reporting on whaling. I believe that the Japanese explanation of whaling being a "Japanese tradition" has become a basis for misunderstanding and criticism. This is because the meaning of the word tradition differs in Japan and the West. For the Japanese, traditions are something that should be preserved and handed down to future generations. However, Westerners examine long-lasting traditions to see if they are appropriate for the current era and eliminate outdated concepts. So, when I argue that whaling is a tradition, I get the reply that it is outdated and barbaric and should be stopped, just like slavery and seppuku.

The Inuit living in the far North of the United States and Russia have a history of whaling that goes back thousands of years. However, no one would say that whaling is an American or Russian tradition. Since increasing numbers of young people have never eaten whale, whale meat can't even be considered part of Japanese food culture.

Whale meat on sale at a supermarket in Taiji (2015) © Okujirasama Project Team

Some coastal areas of Japan, such as Taiji, are still engaged in whaling and are trying to preserve their unique culture. We need to carefully explain that whaling is not only for food, employment, and the economy in these communities but is also a spiritual practice that expresses gratitude for living creatures through festivals, memorial services, songs, and dances. In other words, whaling is part of the pride and identity of local people. ■

Reference: For more information about the author's film, *Okujirasama Futatsu no Seigi no Monogatari* (Whaling: A Tale of Two Forms of Justice) (2017), please visit http://okujirasama.com/ and https://www.cinemo.info/67m.

Initiatives and Prospects for Barrier-Free Maritime Transport Facilities

[KEYWORDS] passenger ships / passenger terminals / barrier-free

YOSHIDA Tetsuro
Executive Director and Promotion Division Barrierfree Transportation Head, Foundation for Promoting Personal Mobility and Ecological Transportation
TAKAHASHI Toru
Assistant Manager, Promotion Division Barrierfree Transportation, Foundation for Promoting Personal Mobility and Ecological Transportation
(Ocean Newsletter No. 473, 20 April 2020)

The movement for barrier-free passenger ships, the mainstay of maritime transport, is supported by a broad spectrum of passengers, from residents on remote islands who use ferries as their primary means of transportation to hospitals, schools and shopping, to those who prefer ships for long distance travel, to those who enjoy sightseeing and restaurant cruises. However, compared to conditions in other means of transport, progress has lagged. In response, and for the purpose of facilitating easier transportation for elderly and handicapped passengers, we are providing financial support to barrier free projects undertaken by the maritime transport industry as part of their passenger vessel improvement plans.

The Promotion of Barrier-Free Facilities for Maritime Transportation

The Foundation for Promoting Personal Mobility and Ecological Transportation (Eco-Mo Foundation) was established in 1994 with support from the Nippon Foundation, transportation companies, and other organizations. We provide grants, publicity, and research to develop barrier-free facilities and equipment, such as elevators and escalators, at railroad stations, airports, bus terminals, passenger ships, and passenger ship terminals. These improvements help the elderly and those with disabilities to use public transportation safely and comfortably.

While activities in equipping railway stations with barrier-free facilities have concluded, since 2002 our focus has been on the Promotion of Barrier-Free Facilities for Maritime Transportation project subsidized by the Nippon Foundation, which aims to develop barrier-free facilities and equipment for passenger ships and passenger ship terminals (hereinafter “passenger ship facilities”).

The program subsidizes the construction of barrier-free facilities and installation of equipment on passenger ships and other vessels used for general passenger liner services and tramp services under the Marine Transportation Act, thereby promoting barrier-free access. Priority is given to 1. Passenger ships (especially small ships) operating on remote island routes, 2. Passenger ships that have been damaged by natural disasters, and 3. Passenger ships meeting recommended standards such as barrier-free guidelines.

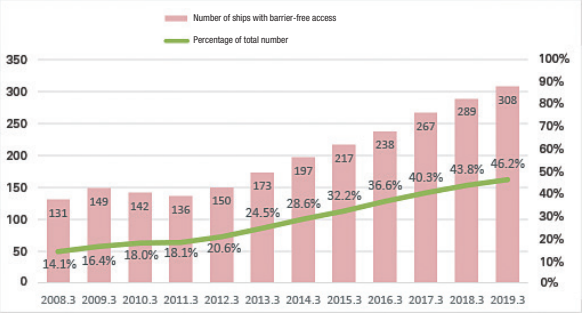
Subsidies also cover the installation of facilities and equipment that are safer and easier for the elderly and disabled to use, such as elevators, barrier-free lavatories (that are wheelchair accessible), barrier-free seating, and devices for showing route information[1].

Legal Standing Relating to Barrier-Free Passenger Ships, etc.

In the year 2000, the Act on Promotion of Smooth Transportation, etc. of Elderly Persons, Disabled Persons, etc. (hereinafter the “Barrier-Free Transportation Act”) made it compulsory to provide barrier-free transportation on facilities such as passenger ships. Later, in 2006, this Act was integrated with the Act on Buildings Accessible and Usable by the Elderly and Physically Handicapped (hereinafter the "Heart Building Law") and expanded as the Act on Promotion of Smooth Transportation, etc. of Elderly Persons, Disabled Persons, etc. (hereinafter the "Barrier-Free Act"). These laws were partially amended in May 2018 and are still in effect.

Based on the Barrier-Free Act, "Ministerial ordinances to determine criteria on the structure and equipment of passenger facilities and vehicles necessary for smooth accessibility” (hereinafter "accessibility standards") have been enacted, and development standards have been prescribed. Public transportation agencies have published guidelines for barrier-free transportation, enabling public transportation operators to meet the diverse needs of the elderly, disabled, and other users. These guidelines provide specific details on the development of barrier-free transportation. Details for passenger ships are provided in the "Barrier-Free Guidelines for Passenger Ships" and those for passenger terminals in the "Barrier-Free Development Guidelines (Passenger

■ Table 1: Trends in the Barrier-Free Status of Passenger Ships
(Source: Prepared by the author from the website of the Ministry of Land, Infrastructure, Transport and Tourism)



Facilities)".

Barrier-free access to passenger ships has been gradually increasing, but improvements are slow compared to other public transportation systems. This is due to unfavorable business conditions resulting from decreased passenger traffic caused by declining populations. As of the end of March 2019, only 46.2% of ships (308) were barrier-free. Since almost no government support is provided for barrier-free access on passenger ships, passenger ship operators must bear all the costs.

The Situation Amongst Remote Islands

According to the Ministry of Land, Infrastructure, Transport and Tourism, there are 6,847 remote islands in Japan, of which four hundred and sixteen are inhabited. These islands play an important role in protecting and promoting the interests of Japan and its citizens. They help preserve Japan's territory and exclusive economic zones, enable marine resources to be utilized, preserve diverse cultures, help protect the natural environment, provide places and opportunities for contact with nature, and ensure a stable supply of food.

In recent years, the importance of remote border islands has been reaffirmed with the Act on Preservation of Areas of Remote, Inhabited Islands Establishing Territorial Seas and Maintenance of Local Societies on Areas of Specified Remote, Inhabited Islands Establishing Territorial Seas enacted in April 2017. The act designates "specified inhabited remote border island zones" amongst inhabited

The hull of "Mermaid II," (Ajishima Line Co., Ltd.) a vessel subsidized in fiscal year 2018. The photo on the right shows the ship's barrier-free lavatory (the entrance and exit doors are automatic for easy access by wheelchair users, and the lavatory has space for wheelchairs to turn).

remote border island areas. These are zones for which it is deemed particularly necessary to maintain local communities by improving their environments to enable continuous residence. Measures such as lowering fares for regular service routes for domestic, general passengers are being implemented in response. According to the White Paper on Aging Society, the percentage of elderly in Japan is 28.1% (as of October 2018), but this is over 40% in the remote islands, reaching as high as 80% on some of them.

Past Achievements Relating to Barrier-Free Construction

To date, subsidies for the construction of barrier-free facilities and equipment have been provided to a total of 214 passenger ships and 107 passenger ship terminals by the Promotion of Barrier-Free Facilities for Maritime Transportation project. This means that support has been provided to about 70% of the current barrier-free vessels. Some passenger ship operators were initially reluctant to make their ships barrier-free because of physical restraints and the number of people with disabilities using their ships. However, changes to the social environment, such as the declining birthrate and aging population, have led to these facilities being actively adopted in recent years.

The aging of the population on these remote islands will continue to make business even more difficult for passenger ship operators as it would be problematic for new barrier-free initiatives to proceed without public support. Therefore, the continuation and implementation of this project will contribute significantly to enabling elderly and disabled people living in these remote islands to access transportation. By focusing on not only general passenger liner services but also tramp services, we hope to facilitate the smooth use of passenger ships by all people whatever their mobility difficulties. ■

1) Development of Barrier-Free Facilities for Maritime Transportation http://www.ecomo.or.jp/barrierfree/barifuri-ship/index.html

Opening of the New National Museum of Territory and Sovereignty

[KEYWORDS] sovereignty / island territories / centers of communication

TAKAI Susumu
Special Research Fellow, Ocean Policy Research Institute, The Sasakawa Peace Foundation
(Ocean Newsletter No. 475, 20 May 2020)

The new National Museum of Territory and Sovereignty was opened by the Japanese government in Tokyo's Toranomon district on January 20th 2020 to serve as an information center regarding Japan's position on island territory. Panel displays illustrate clearly the historical facts incorporating the Northern Territories, Takeshima Islands, and the Senkakus as Japanese territory, and are accompanied by verifying documentation. It is expected that such thorough dissemination of historical facts and documents and information, aimed both domestically and abroad, will result in publicizing accurate understanding that the three islands are indisputably inherent parts of the territory of Japan.

Promoting an Accurate Understanding of Japan's Territory

Since ancient times, the oceans have greatly benefited humankind as a navigation channel and as a source of resources. When using the seas and oceans, the existence of islands cannot be ignored. In particular, islands with disputed territorial claims between nations have a significant impact on the stable use of the seas and oceans. Though the 1951 Treaty of Peace with Japan determined the scope of Japan's territory after World War II, neighboring countries have different interpretations of the treaty's provisions and issues continue to this day.

As is widely known, Japan has been trying for many years to find a peaceful solution to the Northern Territories dispute with Russia, the Takeshima dispute with Korea, and the Senkaku Islands dispute with China, but results have been disappointing so far.

About 17,000 islanders from the Northern Territories had repatriated to the Japanese mainland by 1948. The Northern Territories Issue Association has taken the lead in supporting the lives of these former residents. The Cabinet Office's Northern Territories Affairs Administration has also worked in parallel on this issue. Many organizations and groups have also been conducting public relations and awareness campaigns on the Northern Territories issue. However, except for Shimane Prefecture's Takeshima Reference Room, no other organizations or groups have worked to raise awareness and resolve the problems surrounding Takeshima Islands and the Senkaku Islands.

In response, the Cabinet Secretariat's Office of Policy Planning and Coordination on Territory and Sovereignty (hereinafter the Office of Territory and Sovereignty) was established in 2013. The government has taken primary responsibility for communicating issues surrounding Takeshima and the Senkaku Islands both domestically and internationally. Essentially, the Office of Territory and Sovereignty has shouldered the responsibility of informing public opinion and disseminating information to the international community, thereby promoting an accurate understanding of Japan's position both at home and abroad.

On January 25, 2018, the Office of Territory and Sovereignty established the former National Museum of Territory and Sovereignty (hereinafter the former Museum) on

Entrance to the new National Museum of Territory and Sovereignty
https://www.cas.go.jp/jp/ryodo/tenjikan/

the basement floor of the City Hall in Hibiya Park, Tokyo. The museum was created as part of governmental efforts to communicate information about Takeshima and the Senkaku Islands being Japan's island territories. However, the former Museum was small, had no information on the Northern Territories, and had few rebuttals to China and South Korea's claims, leading to constant questions from visitors about these issues. Some visitors also commented that they did not understand the relevance of the materials relating to Takeshima and the Senkaku Islands.

In response to these requests and opinions, the Office of Territory and Sovereignty secured a 700-square-meter space on the first floor of the Toranomon Mitsui Building in Minato, Tokyo, to relocate and expand the museum. On January 20, 2020, the new National Museum of Territory and Sovereignty (hereinafter the new Museum) was opened to serve as a location for the government to communicate

issues about Japan's island territories.

The Significance of Disseminating New Information

Compared to the former Museum, the new Museum is spacious, bright, and overall, more suitable as a facility for communicating information. It has exhibits on the Northern Territories, Takeshima, and the Senkaku Islands and information about how they became Japanese islands. The displays provide clear evidence for these three areas being Japan's island territory both historically and under international law, along with verifying documents that refute territorial claims by South Korea and China. Precise details on Japan's stance on resolving these issues through legal strategies and dialog are also offered.

In the past, many Japanese citizens recognized the issues of the three island territories as Hokkaido's issue over the Northern Territories, Shimane Prefecture's issue over Takeshima Islands, and Okinawa's issue over the Senkaku Islands. There was a lack of awareness about these issues as matters of Japan's territory and sovereignty. To provide a new understanding about these matters, in 2017, the Center for Island Studies at the Ocean Policy Institute compiled a leaflet called "Japan's Island Territories: Senkaku Islands, Takeshima, and The Northern Territories." The booklet is distributed free of charge in Japanese and English.

The new Museum addresses these three island territory issues as one, providing photographs and other visuals of Japanese citizens engaging in various activities on the islands and creating history. This deeply impactful method should be commended as revolutionary for helping Japanese people understand the issue of island territories as the nation's important problem relating to Japan's sovereignty, and starting a new national awareness of territory and sovereignty.

As befits a center for disseminating information on island territorial issues, the first-floor features books, an audio-visual corner, an office space, and a library at the back of the exhibition room. The second floor is a multipurpose space for viewing movies, holding lectures, and planning exhibitions.

One striking feature of the new Museum is a stuffed display of Ryanko Daio (Ryanko the Great), one of the largest Japanese sea lions ever captured on Takeshima. Many of the visitors to the old Museum tended to be middle to older aged men, with few women visitors or young visitors. It's therefore hoped that the new exhibition hall is expected to be used for school excursion trips by elementary and junior high school students and social studies classes paying visits to the Diet. Ryanko the Great, on loan for a limited time from Sanbe Natural History Museum, a facility located deep in the mountains of Shimane, has been a popular topic of conversation.

The new Museum is integrated with its website, allowing visitors access to additional in-depth explanations and information on exhibits of interest. Integrating limited physical museum spaces with a website is expected to produce synergistic effects for professional visitors with specialized knowledge such as researchers and journalists.

A stuffed display of "Ryanko the Great", a 3-meter long sea lion

A bird's eye view from the National Museum of Territory and Sovereignty's second floor

Future Challenges

The new Museum has characteristic wall panels that summarize historical facts about the Northern Territories, Takeshima, and Senkaku Islands, which could not be adequately conveyed at the old Museum. Evidential documents are displayed alongside the panels, drawing visitors to reach the natural conclusion that the islands are really Japanese territory. The only drawback is that there are so many panels that it takes time to read each one thoroughly. This problem is common to many museums. One solution is to visit multiple times and ask the museum staff questions, rather than attempting to understand everything in one visit.

A final issue is that the explanations on the materials and panels are only in Japanese and English. In order for the Museum to be an information center for foreigners, explanations in Korean and Chinese would be necessary. I am told that this will be gradually resolved. Multilingual descriptions will increase the number of foreign visitors to the museum, and, thus, the new Museum will become a center for disseminating information about Japan's island territorial issues both at home and abroad, achieving its original intent. ■

*Note: The museum is temporarily closed to prevent the spread of COVID-19.

The United Nations Decade of Ocean Science—What Japan Can Do

[KEYWORDS] SDG14 / Sustainable Ocean Development / UN Decade

UEMATSU Mitsuo

President, Center for Environmental Science in Saitama (CESS) / Emeritus Professor, The University of Tokyo / Member, Executive Planning Group, UNESCO International Oceanographic Commission (IOC)

(Ocean Newsletter No. 476, 5 June 2020)

The United Nations Decade of Ocean Science for Sustainable Development will be undertaken from 2021 to 2030. What are the aims of this implementation plan? What are the expected outcomes? And how should Japan participate? The upcoming 10 years represent a once-in-a-lifetime opportunity to deliver the ocean we need for the future we want.

Beginning the Decade with the concept "One Planet, One Ocean."

Protecting our oceans requires international cooperation. Within the international frameworks, Japan must recognize its right and duty to understand the ocean as a maritime nation and, based on ocean science research outcomes, promote sustainable ocean development both domestically and internationally.

The United Nations Sustainable Development Summit, held in 2015, adopted the 2030 Agenda for Sustainable Development. The summit also outlined 17 Sustainable Development Goals (SDGs) to be achieved by 2030. In particular, Goal 14, "Life Below Water," is the central issue that we, the ocean community, must address. Preparations for the UN Decade of Ocean Science for Sustainable Development are now underway, led by the UNESCO Intergovernmental Oceanographic Commission (IOC).

The UN Decade of Ocean Science's implementation plan is already being finalized by the IOC Secretariat and the Executive Planning Group (EPG). The plan has been created with input and suggestions from Regional Planning Workshops (RPW) and the Global Planning Meetings (GPM), first held in 2019. The EPG consists of 19 members elected from member countries. They include marine scientists, policymakers, and NGO representatives. The group had its second meeting in January 2020 at UNESCO Headquarters in Paris and continued the discussions at online meetings during the COVID-19 outbreak.

The IOC's Executive Council will approve the draft implementation plan before it is discussed at the UN General Assembly. The kick-off meeting of the UN Decade of Ocean Science is planned to be held in Berlin, Germany, at the end of May 2021.

Aims of the United Nations Decade of Ocean Science

The UN Decade of Ocean Science is an implementation plan that provides guidelines for developing specific science action plans, capacity building plans, governance, monitoring, reporting, and communication. It also provides opportunities to meet with the private sector, funding agencies, and UN-related organizations to incorporate various stakeholders' opinions and further promote the plan.

Another important theme is the development of Early Career Ocean Professionals (ECOPs). Since the implementation plan was drafted, volunteers aged younger than 35 have been recruited, and an informal working group of 43 individuals has been established. Questionnaires are being used to compile opinions and suggestions from young researchers. Opportunities are also provided for these early professionals to participate in workshops and online meetings regarding the implementation plan and to join the discussions.

One of the implementation plans, the Science Action Plan, has four objectives:

(1) Innovation in science and improvements in educational capacity.

(2) Expand, innovate, and integrate ocean observation and knowledge systems.

(3) Understand and predict the entirety of the ocean's systems.

(4) Develop and enable integrated assessment and decision support systems.

There are six expected societal outcomes of the Sustainable Development Goals:

(1) A clean ocean with dramatically reduced pollution.

(2) A healthy and resilient ocean in which marine ecosystems are mapped and protected, a variety of impacts, including climate change, are studied and mitigated, and in which the provision of ocean ecosystem services is maintained.

(3) A predicted ocean, where society understands current and future conditions and can predict their changes and impacts on people's lives.

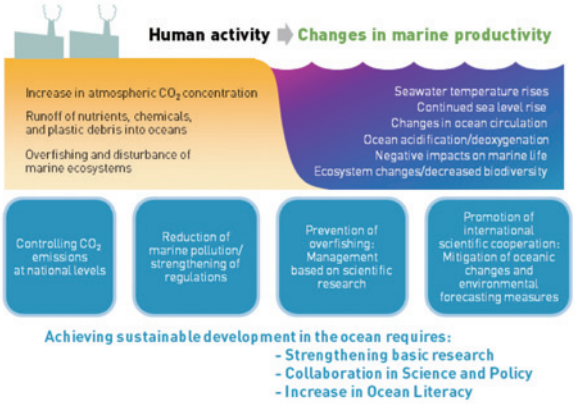
(4) A safe ocean in which human communities are protected from ocean hazards and can safely conduct activities in the sea and along the coast.

(5) A productive ocean in which continuous supplies of food are established for people's future livelihoods.

(6) An accessible ocean, where all countries, stakehold-

ers, and people can access ocean data and information, share related technologies, and be informed of decisions.

■ "Future of the Ocean: Impact of Human Activities on Marine Systems" - A Statement by the G7 Science Academies and an issue at S20



Japan's Initiatives

Amid the preparations for the UN Decade of Ocean Science, Science 20 (S20), chaired by Japan and composed of the national academies of the G20 countries, was held on March 6, 2019. At the conference, Juichi Yamagiwa, President of the Science Council of Japan, provided a proposal entitled: "Threats to Coastal and Marine Ecosystems, and Conservation of the Ocean Environment - with Special Attention to Climate Change and Marine Plastic Waste" [1)] to Prime Minister Shinzo Abe. The following chart summarizes the impacts of human activities on ocean environments and the measures taken to address them, as discussed at the G7 Science Summit in Germany held in 2015 and S20.

The G20 Osaka Summit was held in June 2019. "Osaka Blue Ocean Vision," a plan to reduce new pollution from marine plastic waste to zero by 2050, was first shared at this summit, becoming a significant opportunity for Japanese maritime people to communicate the importance of the ocean to the public.

When implementing the UN Decade of Ocean Science, both scientists and policymakers, including local governments, private companies, NPOs, and citizens, need to work together as a nation to "think globally and act locally." It is hoped that this will enable the planning of concrete large-scale international joint research projects and allow efforts to be strengthened through utilizing Japan's existing knowledge and networks.

Vladimir Ryabinin, Executive Secretary of the IOC, said: "This is the decade to create the science we need for the ocean we want, and the ocean we need for the future we want." I hope that many people will learn about the United Nations Decade of Ocean Science and that at the end of the decade, we will be able to share in its clear achievements, having realized harmony between people and the oceans and created a society that can adapt to the ever-changing global environment.

■

1) http://www.scj.go.jp/ja/info/kohyo/pdf/kohyo-24-s20jp2019-1.pdf

Learning about the Ocean through the Multi-purpose MDA Service "Umi Shiru"

[KEYWORDS] MDA / WebGIS / Marine Cadastre

YOSHIDA Tsuyoshi
Head, Marine Spatial Intelligence Office, Hydrographic and Oceanographic Department, Japan Coast Guard
(Ocean Newsletter No. 476, 5 June 2020)

On April 17, 2019, Japan opened up for public use its WebGIS service, popularly known as “Umi Shiru,” to strengthen its Maritime Domain Awareness (MDA) capabilities. Umi Shiru is a leading edge WebGIS service that compiles maritime data provided by various ocean related organizations; it is operated by the Japan Coast Guard, with overall coordination by the Office of Comprehensive Ocean Policy Promotion within the Cabinet, and is the successor to the Marine Cadastre service. We believe it is an initiative that will continue to contribute to Japan’s various ocean measures.

A Multi-Purpose MDA service "Ocean Status Indication System (nicknamed "Umi Shiru")

MDA Situational Indication Linkages ("Umi Shiru") is the government's multipurpose maritime WebGIS (online geospatial information system) service. The Japan Coast Guard operates this service under the overall coordination of the Cabinet Office's National Ocean Policy Secretariat. Umi Shiru is a part of the data platform for the Ministry of Land, Infrastructure, Transport and Tourism's Productivity Revolution Project. It is also positioned as a core information system based on the capability improvements provided by Maritime Domain Awareness, an initiative promoted by the Japanese government as a whole. Umi Shiru is an advanced WebGIS service that aggregates and serves data from marine-related organizations.

Historical Background of Providing Marine Information

The Japan Coast Guard's Hydrographic and Oceanographic Department took over from the pre-war Naval Hydrographic Department to provide charts and other information related to navigation safety. The Japan Oceanographic Data Center (JODC) was established in 1965 to offer a variety of information. In 1995 the center rapidly adopted internet-based information provision services. Efforts to utilize GIS have included the establishment of the WebGIS-based information provision environment in the 2000s. In 2003, CeisNet, a WebGIS service that collects information on environmental conservation in coastal waters for responding to issues such as oil spills, began operating. The aggregation of oceanographic data by maritime agencies has continued on an as-needed basis.

Coordination of measures related to the ocean is based on the UN Convention on the Law of the Sea, which entered into force in 1994 and was ratified by Japan in 1996. When countries around the world began to implement the Convention in the 2000s, there was an expectation that the Japanese government would promote ocean-related policies. This change led to the Basic Act on Ocean Policy being enacted in 2007. In 2012, the Japan Coast Guard began operating a WebGIS service called Marine Cadastre, based on the act's framework for comprehensive cross-ministry marine information provision services.

Marine Cadastre was an advanced WebGIS service for the time. It allowed users to freely select and display a variety of information overlaid on maps, such as seafloor topography, shipping routes, and ocean currents. The internet changed dramatically in the five years after operations commenced, allowing for larger amounts of real-time information to be handled. In response, a new WebGIS service called Umi Shiru was launched in April 2019. It has been developed to address not only non-real-time information from around Japan, such as with the Marine Cadastre, but real-time information from the entire world. It has 200 available categories, twice the number available on Marine Cadastre.

Outline of Umi Shiru

Umi Shiru is characterized by its ability to provide global information on the world's oceans, alongside real-time information such as weather maps and sea surface temperatures. More than 200 categories of information are

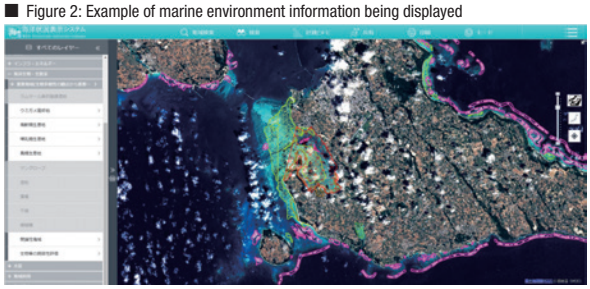
■ Figure 1: Top page of Umi Shiru https://www.msil.go.jp/

provided through collaboration with the Japan Coast Guard and domestic/international government agencies. Data includes satellite images of clouds, weather maps, precipitation information, sea surface temperatures, currents, wave heights, earthquake-related information, maps from the Geospatial Information Authority, and submarine geological maps.

The top page of "Umi Shiru" (Figure 1) has links to the Japanese and English versions of the site and links to thematic maps. Since there are about 200 items of information on the site, thematic maps are available at just a click. These maps display information related to the theme, such as oil removal, offshore wind power generation, and marine leisure. Figure 2 shows an example of information about the oceanic environment. Environmental data such as Ramsar Convention registered wetlands, biological habitat information, seaweed beds, and tidal flats are overlaid on satellite images, allowing users to understand marine environments at a glance.

Umi Shiru allows users to freely select information and create maps by combining the information they require, such as overlaying information in an easy-to-view manner using transparency functions. Information related to the sea is obtained and used in various marine-related fields, such as maritime safety, marine development, marine environmental conservation, fisheries, etc. Registering information that can be shared with other fields in Umi Shiru allows for data to be effectively utilized.

■ Figure 2: Example of marine environment information being displayed



Source: Created from Umi Shiru overlays showing Ramsar Convention registered wetlands, mangroves, wetlands, seaweed beds, tidal flats, and coral reefs.
Information provided by Geospatial Information Authority of Japan, Ministry of the Environment, Japan Coast Guard

Direction of Initiatives Related to Umi Shiru

Umi Shiru is an initiative to promote the reciprocal distribution of ocean data acquired by various ocean-related fields. Registering ocean data on Umi Shiru allows for other fields to learn of its existence. The platform will enable those working in ocean-related fields to contribute to ocean-related policies by promoting solutions to varying problems through coordinating ocean data. New uses of data might also be found, distinct from the original objective, enabling further developments in different fields.

Challenges for Umi Shiru, which began operating in April 2019, include content enhancement, improving functions in line with user needs, and expanding the project's scope through collaborating with local governments and other organizations.

Umi Shiru was launched through collaboration amongst national government agencies, and while information on offshore areas is relatively complete, information on coastal areas is not always sufficient. Many users require detailed information on these areas but acquiring this data will require cooperation from relevant local governments and other organizations.

The use of Umi Shiru as a platform for collecting and sharing detailed information on marine phenomena in coastal areas will enable information to be enhanced in line with users' needs. Therefore, it is essential to deepen cooperation with local governments and other organizations by providing individual briefing sessions and forums, etc., accurately incorporating their requirements, and enabling the appropriate enhancement of information and functions. Efforts will continue to be made to integrate a variety of ocean data, contributing to various ocean-related policies in Japan. ■

Towards a Blue Recovery

[KEYWORDS] Blue Recovery / corona crisis / ocean's health

SUNAMI Atsushi
President of the Sasakawa Peace Foundation and President of Ocean Policy Research Institute (OPRI)
(Ocean Newsletter No. 479, 20 July 2020)

The spread of the novel coronavirus (COVID-19) is having a huge impact on society and the economy, to which oceanic sectors are no exception. Blue recovery is a vision that sees economic recovery and protection of the marine environment not as conflicting goals; rather, it aims to promote sustainable business activities that will help maintain the ocean's health and transform our economy into a sustainable one, an economy robust enough to overcome threats to biodiversity as well as climate change risks. Here I would like to reaffirm the importance of international cooperation and consider how Japan can demonstrate initiative in science and technology innovation for a blue recovery.

Sustainable recovery from the corona crisis — Blue recovery

Amidst the COVID-19 pandemic, our societies and economies are undergoing huge change.

Governments around the globe are faced with difficult challenges as to how to control the pandemic and at the same time revive the economy. Many people seem to be having a premonition that some aspects of our lives are going to change, and are experiencing anxiety about what will become of our society in the post COVID-19 world. Oceanic sectors are no exception. COVID-19 is affecting various marine activities, posing the question to all of us: How do we intend to engage with the ocean in the future?

The Monaco Blue Initiative online meeting held on May 28, 2020, supported by HSH Prince Albert II of Monaco. The author is at the top left. (11th Monaco Blue Initiative 2020 — Digital edition — https://www.monacooceanweek.org/en/11th-monaco-blue-initiative-2020-digital-edition/)

Against this background, before and after the "World Oceans Day" (June 8), a series of online meetings were held on an array of themes, bringing together marine sector leaders of the world to discuss ocean-related issues. In many of these meetings, the recognition was shared that the ocean connects us all and thus international cooperation is essential. At a time when economic recovery is a priority, there is risk that concerns over the marine environment may be set aside, but participants reaffirmed their will to overcome the corona crisis in a sustainable way. The term "blue recovery" was coined to express sustainable recovery of the ocean economy.

In this article, I would like to discuss how Japan can take the initiative in the move towards a blue recovery, a vision to use the crisis as an opportunity to promote sustainable marine business activities that will help maintain the ocean's health and transform our economy into a sustainable one. Rather than seeing economic recovery and protection of the marine environment as conflicting goals in a tradeoff relation, blue recovery aims to build a robust economy that can overcome threats to biodiversity and climate change risks.

The move towards a blue recovery

2020 had been dubbed the "ocean super year" because the triennial UN Ocean Conference and biennial meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD-COP) and many other high-level events were scheduled this year to discuss the future and sustainability of our ocean. Although many of these important meetings have been postponed due to the global spread of COVID-19, we need to maintain momentum towards the restarting of those conferences with a view to a blue recovery and the post COVID-19 world. For example, the postponed CBD-COP15 was expected to agree on a 2030 target (post-Aichi target) to succeed the Aichi target adopted in 2010; this 2030 target to expand protected marine areas by proposing to protect 30 percent of coastal and marine areas by 2030 (the "30 by 30" goal) had been receiving much attention. Some protected marine areas, however, rely on eco-tourism revenue as their funding source for maintaining and managing the environment. This implies that we need to devise new ways to expand protected areas, while at the same time taking measures to prevent the spread of infection in our efforts to revive the economy. The ocean is also an area of focus in the context of climate change, as the 25th Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP25), held last December, referred to the ocean and its role as a climate regulator for the first time in the COP Decision. Further discussions will take place at COP26, to

be held in November 2021. As "net zero" discussions to eliminate GHG emissions by 2050 gain momentum, acceleration of offshore wind power generation and other contributions are expected from the marine sector.

The "Our Ocean" 2020 Conference will be held on December 7- 8 in Palau to spearhead such moves toward sustainable utilization of oceans. John Kerry initiated the "Our Ocean" Conference in 2014, when he was the U.S. Secretary of State. Today, it has grown into a forum that brings together leaders of governments, business, academia, thinktanks and NGOs from around the world to discuss ocean issues and is expected to demonstrate global leadership towards a blue recovery.

Expectations for Japan and efforts made by OPRI

Recently, the world has been witnessing a growing anti-globalization trend, as seen in the power clash between the U.S. and China and in Brexit, the UK's withdrawal from the EU. The corona crisis seems to be accelerating this trend. Indeed, various sectors are starting to strategically review their global supply chains. At a time of such increasing division, the role that Japan can assume in international cooperation is extremely important.

As highlighted by the spread of COVID-19 on board the Diamond Princess cruise ship, it is impossible for a host country alone to resolve quarantine issues associated with foreign-flagged ships. International discussion and cooperation are indispensable and common international rules need to be in place. One of the international organizations designed to discuss such issues is the International Maritime Organization (IMO). As an oceanic country that relies on maritime transport for much of its international distribution needs, Japan has been a member state of the IMO Council since the establishment of the organization, and is thus expected to lead international discussions for maritime safety, including on-board safety measures to prevent the spread of infectious diseases.

Likewise, Japan's leadership is sought towards realizing the "Osaka Blue Ocean Vision" set out in the 2019 G20 Summit Declaration, which aims to reduce additional pollution by marine plastic litter to zero by 2050. Reducing the use of disposable plastic products such as straws and grocery bags has become a symbolic gesture associated with this issue. On the other hand, the benefits and usefulness of plastic products are being re-acknowledged in our fight against COVID-19. In these circumstances, how are we going to eliminate additional pollution by marine plastic litter? In addition to thorough implementation of "reduce, reuse and recycle" (the 3Rs), Japan can lead efforts through technology innovation, including development of new recycling technologies and alternative materials such as biodegradable plastics. In Osaka, where the 2019 G20 Summit was held, the 2025 World Exposition will be held on an artificial island named "Yumeshima." The event will be a good opportunity for Japan to demonstrate the new values of blue recovery to the world.

An example of a special website launched by OPRI as part of our efforts to overcome COVID-19.("The Ocean and Stay Home," a limited-time website set up to offer educational contents for children and adults who want to continue learning while confined to the home due to the COVID-19 quarantine)
https://www.spf.org/opri/sp_issue/opri_covid19_edu.html

OPRI will bridge science and technology and policy by continuing research on how COVID-19 will affect ocean governance inside and outside Japan.

Not only will we continue to issue the OPRI Ocean Newsletter by holding editorial meetings online, we will also hold our Ocean Forums online to continue information dissemination. The first of a three-session webinar series on blue recovery, organized jointly with The Nippon Foundation and The Economist (UK), will be held on July 23rd, 2020. Aiming at a more sustainable use of the oceans, we intend to further enhance the networks we have built with those involved in ocean affairs around the world, promote collaboration with a wide variety of stakeholders, and continue making effective policy proposals and disseminating relevant information to the public. ■

Improving Domestic Fishing Grounds in the EEZ

[KEYWORDS] exclusive economic zone / fishing ground development / fishery resources

ASAKAWA Noritaka
Director, Construction Division, Fisheries Infrastructure Department, Japan Fisheries Agency
(Ocean Newsletter No. 480, 5 August 2020)

The Frontier Fishing Grounds Improvement Project is an initiative unique around the world, taking as its focus the important fishery resources in the EEZ which require protective measures, and, while maintaining coordination with existing fishery resource management initiatives, improving ocean areas' basic production capacity and creating new areas for the protection and cultivation of marine resources. Two types of fishing ground improvements are now being carried out, protection and cultivation reefs and mound reefs, and their effectiveness is being evaluated.

Details/Overview of Establishment of the Frontier Fishing Ground Enhancement and Development Project

Surrounded by the sea, Japan has rich fishing grounds that are said to be one of the three largest in the world. However, Japan's fishery production peaked in 1984, then declined rapidly until around 1995. There was a particularly marked decline in offshore fisheries, which play a central role in supply, and the resource levels of many offshore fish species remain low.

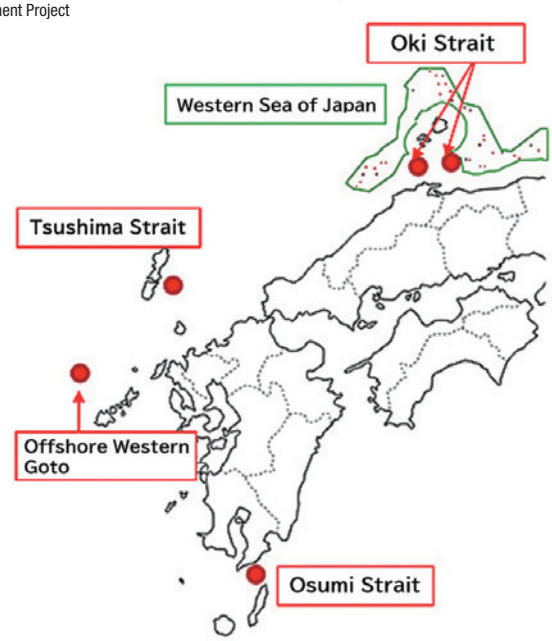
The ratification of the United Nations Convention on the Law of the Sea in 1996 and the advent of a full-fledged 200-nautical-mile era led to the exclusive economic zone being established. The zone is about 12 times the size of Japan and is the sixth-largest in the world, creating a valuable area for the exclusive use of fishery resources. The appropriate conservation, management, and sustainable use of fishery resources in these waters and efforts to increase these resources are urgent issues, leading to the launch of the Frontier Fishing Ground Enhancement and Development Project in 2007. This project, being under the direct control of the government, aims to develop fishing grounds in Japan's EEZ.

Per Article 4 of the Act on Development of Fishing Ports and Grounds, the Frontier Fishing Ground Enhancement and Development Project is a unique initiative targeting significant fishery resources that require protective measures in the EEZ. The project works to improve the basic productivity of marine areas and create places for the protection and cultivation of fishery resources while collaborating with efforts to manage fishery resources.

Currently, two types of fishing grounds with different reefs are being developed. The first involves protective and nursery reefs, aiming to protect the spawning and nurturing of snow crab and flathead flounder and increasing their population by installing blocks in their habitats. The second involves mound reefs to increase the seas' productivity by inducing vertical mixing of seawater in the upper and bottom layers of the ocean, helping to increase horse mackerel, chub mackerel, and Japanese sardine populations. The former has been developed in the West Japan Sea, and the latter type in areas of offshore western Goto, the Oki Strait, Tsushima Strait, and Osumi Strait (Fig. 1).

When implementing these projects, a preliminary survey was conducted, and a quantitative evaluation was made through cost-benefit analysis (B/C (cost-benefit ratio) for the five projects was 1.6 to 3.7, higher than 1) to select the project areas. In addition, a cost-benefit analysis was conducted during the mid and post-term evaluations to assess the quantitative effects.

■ Figure 1: Areas of Implementation of Frontier Fishing Ground Enhancement and Development Project



Mechanism and Effects of Protective and Nursery Reefs and Mound Reefs

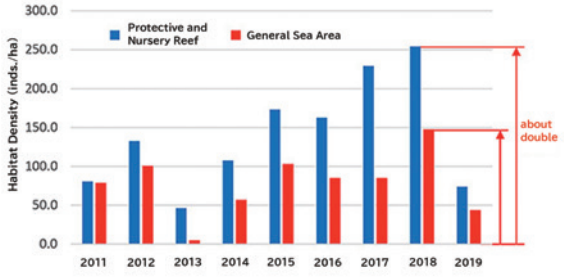
A protective and nursery reef consists of units measuring 2 km squares with concrete or steel fish reefs arranged in a grid pattern at intervals of 100 m around the periphery and 200 m inside. Thirty-two units will eventually be installed offshore of Hyogo, Tottori, and Shimane prefectures. They provide areas of protection for target fish species (snow crab and flathead flounder) in order to protect them as

resources and improve their habitats. The water depth at the sites is about 200 to 500 meters, and the installation area is subject to severe conditions due to high waves. These conditions require advanced construction techniques.

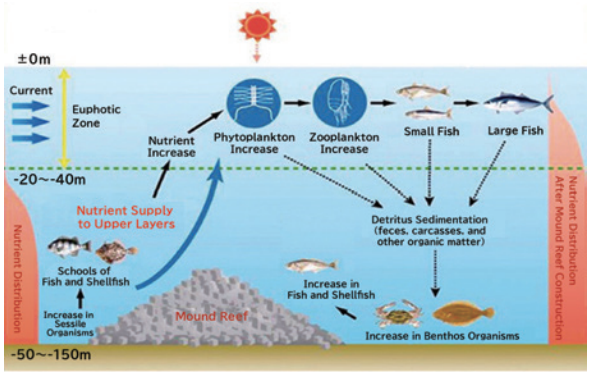
Surveys have verified the effectiveness of the reefs. The density of snow crabs inside the reefs is about twice that of areas outside (Fig. 2), and surveys of snow crab catches per trawling operation reveal that although general sea areas are seeing decreasing trends, the areas around the reefs are seeing increases. These results verify the effectiveness of the protective and nursery reefs.

A mound reef is a structure made of stone or concrete

■ Figure 2: Change in density of snow crab populations over time



blocks built on the seabed at a depth of about 100 to 150 m. The height of the mound is approximately 1/5 of the water depth. Ocean currents impacting the mounds causes vertical mixing, supplying nutrients from the bottom layers to the upper layer, increasing phytoplankton and zooplankton, and improving the seas' basic productivity (Fig. 3).

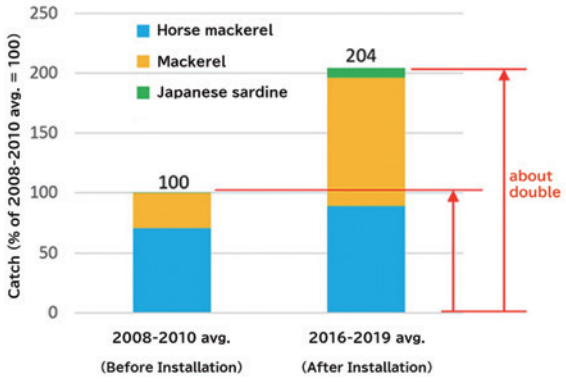


■ Figure 3: Mechanism of Mound Reef Effects

The mound reefs developed in the area off the west coast of Goto are about 350,000 m^3 in volume, about 1/3 of the size of Tokyo Dome. Advanced technology is required for offshore construction. A narrow multibeam sonar system monitors the construction in three dimensions and guides ships to the next release position.

Benefits here are based on a survey of the offshore area west of Goto, where installation was completed in 2015. Results of the simulation showed that the area of effect extended over several tens of kilometers and that the weight of year-old horse mackerel caught around the mound reef was about 1.4 times that of those in the general sea. A comparison of the catches of horse mackerels, mackerels, and Japanese sardines in the vicinity of the mound reefs before and after installation revealed that yields almost doubled (Fig. 4). Additional measures have been taken to protect resources by prohibiting the harvest of targeted fish species within approximately 1.6 km radius of the reef. Mound reefs have thus been verified to be effective at increasing fish weight and resources by improving the sea's basic productivity.

■ Figure 4: Comparison of Catches Before and After Mound Reef Installation



Future Developments of the Frontier Fishing Ground Enhancement and Development Project

Per capita, the world's consumption of edible marine products has nearly doubled in the past half-century, and this pace has not slowed in recent years. The world's population will continue to grow, reaching approximately 10 billion by 2050, and demand for marine products is expected to continue to increase. It is essential to protect and expand these resources to ensure a stable supply of marine products that meet demand. This is why the development of fishing grounds in EEZs, with their high potential, is such an important measure. It is likely that expectations will increase regarding the development of fishing grounds through the Frontier Fishing Ground Enhancement and Development Project as a way to stimulate border and remote island industries. ■

How the International Shipping Industry Is Coping with the COVID-19 Virus

[KEYWORDS] Global logistics / Preventing COVID-19 infections / Crew rotations

MIYASHITA Kunio
Professor, College of Foreign Studies, Kansai Gaidai University
(Ocean Newsletter No. 482, 5 September 2020)

In dealing with the COVID-19 Virus, the international shipping industry faces the two challenges of creating measures to prevent infection and an appropriate system for seafarer rotation. Regarding infection prevention measures, the Japanese Shipowners' Association released a guidance on such measures mainly to international shipping companies, based on the Guideline issued by the Safety Policy Division in the Maritime Bureau of Ministry of Land, Infrastructure, Transport and Tourism (MLIT) in May. Regarding the issue of seafarer rotation, the International Maritime Organization (IMO) continues to issue recommendations to Member State governments, but restrictions put in place by many countries hinder their implementation, leaving the situation unresolved.

Protecting Global Logistics

The international shipping industry is suffering impacts from the economic self-restraint and significant stagnation seen in many countries due to the rapid and large-scale spread of COVID-19. The fragmentation of the global supply chain has forced shipping companies to make temporary, drastic reductions in routes and change schedules. Many of the world's shipping companies, especially container shipping companies, will weather this crisis thanks to strong management bases formed through alliance consolidation and large mergers. In other words, the impact on business performance will be severe, but it is unlikely to affect these businesses' survival.

There are two immediate issues the maritime shipping industry must tackle to protect global logistics in light of COVID-19. One is preventing infection amongst crew members, and the other is establishing crew rotation systems.

To date, national and international organizations—along with industry associations—have responded to these issues instead of individual companies. Therefore, this article will focus on domestic trends in the guidance provided by national and international organizations and industry associations on COVID-19 measures. It will also examine global trends in crew rotation.

Domestic Trends in Infection Prevention Guidance

The Safety Policy Division in the Maritime Bureau of Ministry of Land, Infrastructure, Transport and Tourism (MLIT) issued a press release on May 11, 2020, titled "Infection Prevention Measures and Responses to Sus-pected Cases of COVID-19 Among Crew and Passengers on Ships" [1] to notify industry organizations. The document provides basic guidelines on preventing infection and man-aging the health of maritime workers required to continue working during the crisis. Specifically, it includes consid-erations for when arriving at port, at anchor, and during the voyage. It also provides information on actions to take if a crew member or passenger is suspected of having contracted COVID-19 at sea or when at anchor.

The document also requires that shipping companies take necessary preparations by considering the following measures in advance to maintain operations as much as possible if a crew member is infected;

(1) Specifying individuals responsible for COVID-19 countermeasures on board.

(2) Securing and arranging masks, disinfectant solution, vinyl gloves, etc., preparing disinfection procedures, selecting personnel to conduct disinfection.

(3) Considering crew rotation systems, etc.

In response, on May 15, the JSA issued a document titled "Guidance on COVID-19" [2]. This guidance was primarily for international shipping companies and emphasized each shipping company's need to take all possible measures to prevent infection. It notes that countermeasures should be prompt, appropriate, feasible, effective, and suit individual workplaces or sites and risk levels.

The guidelines also emphasize the importance of countermeasures that match the actual level of infection risk by actively incorporating good practices from inside and outside the industry, including those not mentioned in the guidance and providing creative solutions. Of note, this guidance was not developed independently of the knowledge possessed by individual shipping companies as noted below.

The JSA's guidance proposes that, as a general rule, quarantine notification be made to, and instructions be sought from, the port of entry following quarantine laws. In Japan's case, however, there are no grounds under the Quarantine Act or the Immigration Control Law to deny entry to a port, and the flag state cannot assist in port entry. Therefore, it is noteworthy that the JSA recommends consulting with the P&I Club (shipowners' liability mutual insurance association) in the case of emergency disembarkations due to COVID-19.

International Confusion Over Crew Rotations

The International Maritime Organization (IMO), in its Circular Letter No. 4204/Add.6 dated March 27, 2020, has already recommended to the governments of its member states that measures should be taken to facilitate crew rotations, particularly in ports, including in the case of crewmembers becoming ill. The key recommendations are as follows:

(1) After designating crewmembers within the state's jurisdiction, regardless of nationality, as "key workers" that provide essential services—

(2) If an official crewmember's identity card, discharge letter, STCW certificate, employment contract, and letter of appointment from the maritime employer are submitted for crew rotations—

(3) Allow crewmembers to perform actions such as disembarking and transiting through the territory (airport) for rotation and repatriation—

(4) And implement appropriate approvals for crew members who wish to disembark for crew rotations and repatriation.

In response, the European Commission (EC) issued guidelines on April 8 calling on EU member states to designate ports for fast-tracking crew rotations. It also urged member states to promote the introduction of green lanes for crew rotations. The Secretary-General of the International Chamber of Shipping (ICS)—an international organization of national shipowners' associations in Asia, the Americas, and Europe, which operates more than 80 percent of the world's merchant ships—welcomed the EC's leadership in calling on EU member states to promote basic mobility for crew members.

The IMO, in Circular Letter No. 4204/Add.14 dated May 5, 2020, provided detailed explanations of procedures for crew rotations. It also strongly encouraged member governments to take urgent action to address this issue. However, this has not improved the situation, evidenced by the release of version 2.1[3)] of the ICS guidance on infection prevention on May 29.

The section on port entry restrictions, which also relates to crew rotations, is of particular note. According to the guidance, many countries introduced national or regional restrictions after the outbreak of COVID-19. These actions violated the WHO's International Health Regulations (IHR) and other international regulations. Examples of violations include delaying permission to enter service, preventing

A container ship carrying international cargo (Port of Oakland, Canada, May 2020)

crew members from embarking and disembarking (including shore leave and crew rotations), unloading and loading cargo, preventing ships from bringing in essentials like fuel, water, food, enforcing quarantine on ships, or in extreme cases, denying entry of the port.

The ICS has warned that these measures may violate the IHR, the IMO Conventions, and other maritime principles relating to crew members' rights and treatment through disrupting maritime traffic. In reality, however, it emphasizes also that shipping companies have no choice but to comply with these national and regional restrictions.

The above ICS report reveals a lack of leadership by international organizations such as the IMO and ILO in confronting the emergency surrounding COVID-19. At a press conference on June 12, the UN Secretary-General pointed out the seriousness of the situation, saying several hundred thousand of the world's two million seafarers had been stranded at sea for months with nowhere to land.

In Circular Letter No. 4204/Add.24 dated July 13, the 32nd Extraordinary Session of the IMO Council on the facilitation of maritime transport under the COVID-19 pandemic, announced in a joint statement that it would designate ship crewmembers to be key workers who provide basic services and would consider legal options for protecting their status.

However, it remains to be seen whether the global trend of fragmentation seen in the international shipping industry will continue. ■

1) Safety Policy Division, Maritime Bureau, Ministry of Land, Infrastructure, Transport and Tourism, "Infection Prevention Measures and Responses to Suspected Cases of COVID-19 Among Crew and Passengers on Ships."https://www.mlit.go.jp/kikikanri/content/001344236.pdf
2) Japanese Shipowners' Association, "Guidance on COVID-19" (3rd Edition) https://www.jsanet.or.jp/covid-19/pdf/guidance.pdf
3) ICS, Coronavirus (COVID-19) Guidance for Ship Operators for the Protection of the Health of Seafarers.
https://www.ics-shipping.org/docs/default-source/resources/covid-19-guidance-for-ship-operators-for-the-protection-of-the-health- of-seafarers-v2.pdf?sfvrsn=4

The Significance of Handing Down Folk Tales about the Ocean

[KEYWORDS] folktales/Sea Folktale Town Project/local development

NUMATA Shin-nosuke
President, Nippon Mukashi Banashi Kyokai (Japanese Folktales Association)
(Ocean Newsletter No. 484, 5 October 2020)

Folktales about the ocean tell us many things about how we have lived alongside it, of customs for learning about it, making preparations, and avoiding risks, but also ideas of morality, including gratitude for its bounties and making it an object of religious belief. At the same time, folktales also play a role in fostering a sense of belonging for the places that appear in the stories told. Through the Ocean Folktale Town Project, we hope to provide tourism resources, work with interested companies, and expand our activities on a national scale.

The Role of Folktales

Folktales have various aspects. Originally, they were a form of entertainment where village elders would gather children around to tell stories, but these tales also contained lessons, taboos, common village rules, and ways of life. In a sense, they served as a guide to the community's shared practices and were part of its identity.

Assuming that folktales were devices for building psychological consensus, I believe that with the spread of television and the Internet, folktales are becoming pop-ularized and losing their regional characteristics, and are disappearing as a result. As I mentioned, folktales contain many elements. I don't believe it is an exaggeration to say that by losing folktales, we are also losing our culture and civilization. Folktales need to be told repeatedly in a way similar to Buddhist sutras—their daily repetition is essential for emphasizing awareness and learning.

I was involved in producing the *Nippon no Mukashi Banashi* (Japanese Folktales) series (aired by TV Tokyo) for about eight years[1] from the first episode. I also served as the project's director from 2017 onwards, though the series unfortunately ended in 2019. Although this is a lost opportunity, I believe that the Nippon Foundation's Sea Folktale Town Project[2] carries on the role of passing on folktales.

What is the Sea Folktale Town Project?

The Sea Folktale Town Project is part of the *Umi-to-Nippon* Project (The Ocean and Japan Project) promoted by the Nippon Foundation. As Japan is a country with deep con-nections with the ocean, we launched the project in fiscal year 2018 to communicate about Japan's relationship with the sea and pass down community teachings to children. I am the animation director and certification committee chair for this project.

The project involves uncovering sea-related folktales throughout Japan, and passing on their stories as well as the ideas, warnings, and lessons contained within using a friendly animation style. We hope this will ensure they are passed down through the generations.

By having towns selected to be Sea Folktale Towns, we aim to have our animations be catalysts for community building, creating momentum among townspeople, and producing ongoing positive effects and nationwide development.


From the animation *Otarugashita* by the Sea Folktale Town Project

In fiscal year 2018, we selected five tales, including *Onabe Iwa* and *Umi no Kami to Riku no Kami*. We chose five more in fiscal year 2019, including *Jinsuke no Itago* and *Ichirijima* . In fiscal year 2020, we selected seven new regions as Sea Folktale towns as well as seven new tales from Iwate, Kanagawa, Niigata, Toyama, Ehime, Wakayama, and Shimane to be animated and shown on our official website.

Sea folktales include customs, taboos, blessings, and beliefs related to the sea, and many of them have strong regional characteristics. For an island nation such as Japan, these stories are both familiar and real.

In villages damaged by tsunami, folktales about these disasters have been passed down from generation to gen-eration. A folktale from the 2019 selection that left a deep impression on me was *Otarugashita* from Matsuyama City, Ehime Prefecture, which is also about a tsunami. At the beginning of the project, I visited the area that was formerly called Otarugashita, which now comprises of a port, houses, and tangerine fields. Seeing just how far the tsunami had reached left me with a strange sensation that is hard to describe in words.

The synopsis of the *Otarugashita* tale is as follows: One day, the whole island shook, there was rumbling from the earth, and a tsunami hit, causing the villagers to run up a

mountain together. The villagers survive, but their houses and fields are washed away. Afterwards, unsure of what to do, they find a large tub lying on the ground that looks too big to have been human-made. The village children say it must have been left behind by a dopey giant. Upon hearing this, one of the villagers begins to laugh, leading to all the villagers laughing so hard they begin to cry. Strangely enough, laughing provides the villagers with courage and strength, and they start building a new village, eventually recovering.

It is a simple story at first glance, and it's difficult to perceive it as one containing a lesson. However, I feel that this story is the very essence of the Japanese beliefs in nature and reconstruction. When we worked on the *Nippon no Mukashi Banashi* series, this story came up as a candidate, but we didn't produce it because the lesson was thought to be too vague. However, when it came up as a candidate for the Sea Folktale Town Project, I recommended it, saying that I would love to produce it.

The story includes coping measures for tsunamis such as the importance of quick evacuation in an earthquake and how to recover after a disaster. Although the fields are gone, the sea is blessed with seaweed for fertilizer and marine resources for food. The tale allows children to learn about living with the ocean.

An actual tub was prepared for a local screening after we completed the animation, and a workshop was held where children were could write their wishes and thoughts on it, allowing them to learn about the ocean while having fun.

Having *Otarugashita* selected as a part of the Sea Folktale Town Project led to it being performed as a play by local volunteers. The locals planned the play independently from our project. Our goal is to create more opportunities like this and make it a nationwide phenomenon.

Workshop at the screening of *Otarugashita* (Matsuyama City, Ehime Prefecture)

Realizing a World Where Kindness is Repaid

The Sea Folktale Town Project provided us with a new recognition toward regional attractions such as natural beauty and local products. We were also moved by the earnest way in which children watched and learned from the animations that we produced. These were the motivations behind the establishment of the *Nippon Mukashi Banashi Kyokai* (Japanese Folktales Association) in December 2019 as the executive organization for this project.

We are witnessing the disappearance of folktales due to the consolidation of villages as regional populations decrease. Our association plans to build local development projects that contribute to these regions not only through the production of animation but also through folktales themselves. ■

1) "Hebel Haus Theater: Furusato Saisei: Japanese Folktales" (2012-2017) and the subsequent "Hebel Haus Theater: Furusato Meguri: Japanese Folktales" (2017-2019) series, sponsored by Asahi Kasei Homes Corporation as a form of reconstruction after the 2011 Great East Japan Earthquake.
2) The Nippon Foundation's "Sea Folktale Town Project" https://minwa.uminohi.jp/

The Center for Ecological Sustainability on the Forest-Satoyama-Sea Mosaic of Sado Island

[KEYWORDS] biodiversity / international marine education / Sado Model

ANDO Hironori
Professor, Niigata University / Director, Marine Biological Station, Sado Island Center for Ecological Sustainability, Niigata University
(Ocean Newsletter No. 485, 20 October 2020)

On Sado Island, blessed with a rich natural environment where people's lives are closely intertwined with nature, the Sado Island Center for Ecological Sustainability, Niigata University, was established to serve as a scientific focal point for local revitalization and coexistence with nature. Concentrating on the three fields of forests, satoyama, and the sea, the Center hopes to develop research and educational programs for a comprehensive understanding and conservation of these ecosystems, aiming at the creation of a Sado Model which could contribute to the realization of societies in which man and nature can coexist.

Establishment of the Sado Island Center for Ecological Sustainability, Niigata University: Ecosystems that Link Forest, Satoyama, and Marine Environments

Sado Island is a biodiverse, satoyama island that features unspoiled, protected nature, and a diverse coastal environment. In recent years, species indigenous to Sado Island, such as the *Sado-gaeru* frog and *Sado nadeshiko-namako* sea cucumber, have been noted and many rare and endangered species also live on the island. The island's compact forest-satoyama-ocean ecosystem, connected by rivers and streams within a single geographical area, provides a unique opportunity for comprehensive education and research on the ecosystem's structure and function.

There were originally three field education and research facilities associated with Niigata University on Sado Island: Sado Station of the Faculty of Agriculture's Field Science Education and Research Center (the University Forest), the Center for Toki & Ecological Restoration, and the Marine Biological Station of the Faculty of Science. In 2019, they merged to form the Sado Island Center for Ecological Sustainability, a scientific facility that contributes to community building. The new center consists of three areas: forest, satoyama, and sea. These areas collaborate based on their past achievements, developing education and research to understand and conserve Sado Island's three ecosystems comprehensively.

In the University Forest, research is focused on forest and island ecology. In the Satoyama area, which is used as a feeding ground for crested ibis (Toki), research is conducted on understanding satoyama biodiversity and management methods for restoring its ecosystem. Practical research is also being performed on regional social systems that allow for nature and humans to coexist.

At the Marine Division/Marine Biological Station, research is conducted on the diversity of marine organisms and their origins. Sado Island features a variety of coastal environments such as reefs, beaches, and beautiful waters with a transparency of 20 meters throughout the year. The Station's four faculty members research adaptive physiological ecology, marine ecology, evolutionary embryology, and taxonomy. Research performed there focuses on fish, echinoderms, and marine invertebrates.


Sado Island Marine Biological Station

Personnel Development: Collaborative Forest, Satoyama, and Sea Studies and International Marine Biology Education

Through utilizing the island's rich natural environment, the Sado Island Center for Ecological Sustainability promotes education, research, community contributions, and international collaboration. From an educational perspective, the University Forest and the Marine Biological Station are certified as Joint-Use Educational Centers by the Ministry of Education, Culture, Sports, Science and Technology. Besides students from Niigata University, students and faculty from domestic and foreign universities also conduct training related to marine and forest ecology at these respective facilities.

The total number of outside users is approximately 800 individuals for the Forest and 1,600 for the Biological Station per year. Both facilities conduct about 30 practical training sessions each year, including several collaborative studies of forest, satoyama, and sea, which involves cooperation between faculty members from the center's three facilities.

The "Forest, Satoyama, and Sea Outdoor Practical Course," one of four open courses conducted at the Marine

Biological Station, has participants who visit the island's three facilities during a five-night camp-style training session. Students observe natural cedar forests and cattle grazing in the forest, conduct ecological surveys at sites that utilize former terraced rice paddies for natural regeneration, and collect organisms from rivers and seashores. The course also includes observations of crested ibis and *Sado-gaeru* frogs. It is a comprehensive in-the-field practical education program that could only be held at Sado Island due to its linked forests, satoyama, rivers, and sea.

As part of its international marine education activities, the Marine Biological Station also holds the International Marine Biology Course (IMBC), accepting students and faculty from overseas universities (primarily in Asia). "IMBC 2019: Asian Students Learning about Marine Biodiversity on Sado Island in the Scenic Sea of Japan", held in 2019, saw thirty-seven participants including students and faculty members from nine overseas universities and eight domestic universities. This training was supported by the Japan Science and Technology Agency's Sakura Science Plan, which subsidized all travel and accommodation expenses for participants from Asian countries.

IMBC 2019 brought together people from countries and regions with differing natural and marine environments, and deepened their understanding of marine life diversity and the marine environment. The program also enabled exchange among different cultures and lifestyles. The total number of overseas participants in training conducted at the Marine Biological Station has increased every year: with 15 in 2015, 41 in 2016, 170 in 2017, 162 in 2018, and 202 in 2019. Unfortunately, training in 2020 had to be canceled due to the spread of COVID-19.

Biological survey held in rice fields and *Sado-gaeru* frogs (with their distinctive yellow lower abdomens)

Realizing a Society that Coexists with Nature: Disseminating the Sado Model

Global pollution and degradation of the natural environment is a major issue. It is, therefore, increasingly important to understand the connections between forests, satoyama, and oceans and use this knowledge to ensure high-quality biodiversity and sustainably maintain rich biological resources. The realization of a world in harmony with nature is a major international goal. Sado Island not only has a rich natural environment, but also various problems faced by provincial cities, such as depopulation, a low birthrate and aging population, and a shortage of workers for primary industries.

Snorkeling to collect shoreline specimens

Despite this, Sado Island has also been recognized as a Globally Important Agricultural Heritage Systems site and a Japan Geopark. Residents have a high level of environmental conservation awareness and promote island-wide activities to have Sado Gold and Silver Mine registered as a World Heritage site. The natural environment and social situation on Sado Island allow for the promotion of multifaceted research (involving cooperation with locals) on the relationship between nature and humans through integrating the humanities and sciences.

This research is now being used to propose a "Sado Model" which addresses the issue of how these residents, and ultimately human beings, should live their lives in the future. The plan is to verify that this model is useful in Japan and, moreover, the world and disseminate it. ■

● Niigata University Sado Island Center for Ecological Sustainability https://www.sices.niigata-u.ac.jp/

Kitasato University's School of Marine Biosciences Moving forward in the Reiwa Era—developments since the Great East Japan Earthquake

[KEYWORDS] Kitasato Aquarium Lab Mini Aquarium/Sanriku Education and Research Center for Marine Biosciences/marine invertebrates of Sanriku

TAKAHASHI Akiyoshi
Professor, School of Marine Biosciences, Kitasato University
(Ocean Newsletter No. 487, 20 November 2020)

While formerly the campus of Kitasato University's School of Marine Biosciences faced the Pacific Ocean, the Great East Japan Earthquake forced it to relocate to Sagamihara. After a period spent in a temporary evacuation shelter, it resumed its education and research activities the following year in the newly built facilities at Sagamihara. The mini-aquarium, Kitasato Aquarium Lab, is operated by the students there, and is key to the distinctive education being provided. We also enjoy active research-based regional exchanges, as we make use of local materials in the Sanriku area through our new joint research and educational facilities.

Kitasato Aquarium Lab: A Mini Aquarium

By March 2011, the School of Marine Biosciences had nearly finished preparations for a new project to develop new forms of education and research at its Sanriku campus in Ofunato, Iwate Prefecture. The Ministry of Education, Culture, Sports, Science and Technology adopted the project to improve university students' employment prospects. It aimed to develop professionals who would excel in the harmonious use of marine life and was meant to commence from April of that year.

One part of the project was a mini aquarium called the Kitasato Aquarium Lab (referred to as "The Lab")[1]. The preparations, which had been proceeding well, came to a halt when the Great East Japan Earthquake struck on March 11, 2011.

The school building was destroyed and many student apartments were also damaged, making it impossible to continue activities at the campus. In early summer 2011, it was decided to create a new building at the Sagamihara campus in Kanagawa Prefecture. However, this new building wouldn't be available until September 2012. Until then, the school borrowed the vacant three-story cafeteria building at the Sagamihara campus. All of our students, faculty, and staff were temporarily housed in this small space, going about their daily activities. Before they knew it, they had an aquarium full of fish set up.

The lab, which opened in July 2011, was independently planned and established by our students and is now run by them. The first floor of the old cafeteria building contained student exhibitions, while the second and third floors had exhibits of deep-sea creatures, jellyfish, barnacles, and other creatures the department was researching. The three-meter tank purchased through the project was luckily undamaged by the earthquake and arrived safely in Sagamihara from Ofunato. It is now the star exhibit in the new school building's mini aquarium.

The project ended in March 2013, but the lab is still running. Naturally, the school puts a lot of effort in, but we also receive grants from the president on occasion. The lab is a rare facility, providing students with practical work experience that transcends the hands-on training provided through our department's curatorial course (which started in 1996). Between 12 to 45 students complete the course each year.

While there have been years before the earthquake where none of our students succeeded in finding employment at facilities such as aquariums, employment has been steady every year since. These results are proof that we have overcome the earthquake.

Universities should be open to society as a place of education, and our lab contributes to this philosophy. It is also a destination for off-campus visitors and is a crucial point of interaction with the local community, with elementary school students studying there during summer vacation.

Ongoing Research and Regional Collaboration at Sanriku

The Sanriku campus had seven main buildings at the time of the earthquake. Three buildings severely damaged by the quake were demolished by 2015. The Marine Hall and the Student Training Building, which sustained little damage, have been renovated and are now used for education and research.

The Sanriku Education and Research Center for Marine Biosciences (SERC) [2] was established at the campus in April 2014 as a joint research and education facility affiliated with our faculty. SERC complements the Sagamihara faculty's functions. The staff at the university's Kamaishi Institute, Research Organization for Infection Control Science—involved in researching the functions and components of microorganisms—also participated in the project. They provided research assets following the closure of their facilities due to the earthquake, expanding the department's comprehensive research resources.

The local fishing industry also has high expectations for SERC. The center is a member of the Iwate Ocean Research Consortium[3], which itself consists of 26 organizations, including government agencies. The following are

four significant studies conducted at the center.

The first involved developing biomass feed using processing residue from marine products and agricultural crops to raise fish and shellfish. The second involved basic and applied research on aquatic microorganisms. This study examined the relationship between microorganisms and the production of oil and fat, as well as the development of technologies for their use, and the production of salmon and trout eggs and fry. The third involved using dark sleeper goby (vernacular name, donko), for which demand declines in the summer, to make paste products out of unused and underutilized fish. Test sales of *Donko-Age Kamaboko* (Donko Deep-Fried Fish Paste) commenced in August of 2019. The final study involved developing land-based cultivation technologies for Matsumo, one of Sanriku's representative seaweeds, intending to raise its profile. All of these studies were community-based.

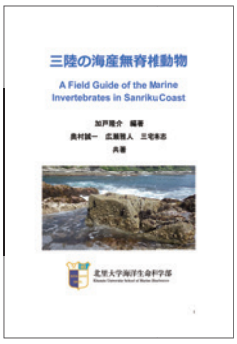
As seen through these research activities, regional collaboration activities constitute a significant pillar of SERC. It also has a regional collaboration department to promote collaboration. In 2019, the department held a research-based lecture titled "Let's Make Fish Paste from Sanriku Donko!" for nearby junior high school students, to which the entire school arrived by school bus.

SERC also hosts events from other organizations, such as the Iwate Fisheries Academy, which Iwate Prefecture sponsors. Demand for the center is expected to increase in the future.

Sampling at rocky shores near Sanriku Campus

Education in Sanriku

Field Studies in Marine Biology, held during summer, is aimed at second-year students and is a distinctive feature of our school's education. This popular training sees more than



Cover of "A Field Guide of the Marine Invertebrates in Sanriku Coast" https://www.kitasato-u.ac.jp/mb/serc/download/annual_report_2018_02.pdf

100 students staying in rotation in SERC building 1, which also features accommodation facilities. It includes a tour of scallop cultivation facilities, an opportunity to observe scallop cultivation ropes, plankton collection, fishing practice, and sampling at rocky shores. These practical training programs are supported by locals living near the Sanriku campus and are an essential form of community exchange. The program sees students actively working with these local people.

After the sampling at rocky shores, students conduct observations on living organisms. However, an illustrated reference to the biota of the area is needed for this. In response, our school's faculty have worked together to compile "A Field Guide of the Marine Invertebrates in Sanriku Coast," a handy resource with 201 pages that covers all invertebrates living in the Sanriku region. The guide is not for sale, but it is a highly desired reference to have at hand and has been so well received that plans are being made to publish it.

Many of the teaching staff at Sagamihara are "native to the Sanriku coast" and have continued to conduct fieldwork and other activities since the earthquake. In addition to educational activities such as practical training, they travel back and forth between Sagamihara and Sanriku with students to get samples and to provide guidance for graduate school classes and graduation theses.

The Kitasato Aquarium Lab and the Sanriku Education and Research Center for Marine Biosciences can easily be found on the web, as well as aerial views of SERC as it looks today. In addition, SERC's activities can be seen in the Sanriku Education and Research Center for Marine Biosciences' annual report. I encourage taking a look at the center's unique activities that couldn't be introduced in this article. ■

1) Kitasato Aquarium Lab - Kitasato University School of Marine Biosciences' Mini Aquarium https://www.kitasato-u.ac.jp/mb/Aquarium/index.html
2) Sanriku Education and Research Center for Marine Biosciences https://www.kitasato-u.ac.jp/mb/serc/index.html
3) See also: Yutaka Michida, "Iwate Ocean Research Consortium," Ocean Newsletter No. 232 (2010.04.05) https://www.spf.org/opri/newsletter/232_2.html

The Case of the Diamond Princess Cruise Ship and the Role of Japan

[KEYWORDS] COVID-19 / International health regulations / port state

SAKAMOTO Shigeki
Professor, Doshisha University
(Ocean Newsletter No. 490, 5 January 2021)

The February 2020 outbreaks of COVID-19 on the Diamond Princess cruise ship revealed the conflict between the national legal interests of coastal states in preventing the spread of infections and international legal interests in maintaining the stability of maritime traffic. As there are many issues that cannot be resolved alone by the port state where a ship has called, and as international cooperation between a vessel's flag state and its operators' country is crucial, new international rules need to be established.

Flaw Revealed in Laws

The World Health Organization (WHO) declared COVID-19 to be a "Public Health Emergency of International Concern" (PHEIC) on January 30, 2020. Shortly after, on February 3, the Ministry of Health, Labor and Welfare ordered the Yokohama Quarantine Station to quarantine the Diamond Princess, a large cruise ship, after discovering that a passenger who disembarked in Hong Kong was infected with COVID-19. PCR tests for COVID-19 were conducted on all passengers and crew. Positive test results were then discovered one after another, bringing the total cases to 712 (13 of whom died).

The Diamond Princess's flag state was the United Kingdom, but its operating company was a U.S. corporation, and its country of operation was the United States. The ship called at the port of Yokohama, making Japan a port state. The incident revealed a lack of clarity under international law regarding which country, the flag state, the operating country, or the port state, has primary responsibility for preventing the spread of infectious diseases. It also raised questions regarding what level of coercive measures a port state can take. Specifically, whether a port state country can compel medicine to be transported to patients without the consent of the vessel's captain.

Conflicts Between the Interests of Coastal States and the Interests of International Law

The spread of COVID-19 aboard the Diamond Princess highlights the conflict between coastal states' legal interests in preventing the spread of infectious diseases and international legal interests in maintaining the stability of maritime traffic. To begin with, must coastal states allow ships to dock with large numbers of patients with contagious diseases? After all, these states also have a legal interest in preventing the entry of infectious diseases.

On February 7, 2020, Japan refused to allow the Westerdam (flag state: Netherlands), a large cruise ship carrying passengers infected with COVID-19, to make a scheduled call at Naha port. Coastal states have sovereignty over their ports, and foreign vessels do not have freedom of entry. Thus, coastal states have no legal obligation to allow foreign ships to enter their ports. The exceptions are emergencies and cases of force majeure, such as when a vessel is in distress or during rough weather.

Suppose a coastal state has concluded a commerce and navigation treaty with another state and is obligated to open its ports to the state. In that case, it is obligated to allow foreign vessels to enter its ports. The question then becomes, what about ships with infectious disease patients on board?

In the 14th century, the merchant fleets and coastal city-states involved in maritime transportation around the Mediterranean and Adriatic seas learned first-hand that infectious pathogens can accompany the movement of ships, people, and goods. Quarantine measures were created to prevent the spread of the feared Black Death plague.

After the plague epidemic of 1347, Venice adopted the practice of quarantining potentially contaminated ships, crews, and cargo in its ports, only allowing them to enter if there was no outbreak of plague during that time. In 1377, the quarantine period was 30 days, but this was extended to 40 days in 1448. The Italian word for "40" became the origin of the word quarantine.

In the 21st century, the International Health Regulations adopted by the WHO govern this issue. However, the COVID-19 pandemic saw no end to the number of countries preventing crew members from boarding or disembarking for replacement and refusing entry to ports. As the UN Secretary-General stated at a press conference on June 17, 2020, this meant several hundred thousand of the world's two million seafarers were stranded at sea for months with nowhere to land, a serious situation that impacted the stability of ocean traffic and the human rights of seafarers.

International Health Regulations and Japan's Quarantine Act and Infectious Disease Law

PHEICs are certified under the International Health Regulations, with COVID-19 being the sixth PHEIC declared. The International Health Regulations require Member States to notify WHO within 24 hours of becoming aware of any event, regardless of cause, that poses an international

public health threat (Article 6).

In response to a notification, the WHO will recommend that Member States can restrict the entry and exit of persons infected or suspected of being infected with the disease and deny entry under certain conditions. As a result, although quarantine can be implemented as "Actions at designated airports, seaports, and land border crossing points," as in Appendix 1-1 (b) of these regulations, Article 2 of the International Health Regulations states that the purpose of quarantine is to avoid impediments to international traffic and to prevent the global spread of diseases.

In Japan, the Quarantine Act and the Infectious Disease Law provide a domestic implementation of the International Health Regulations. Japan established the Quarantine Act to prevent infectious diseases from entering the country. Its purpose is to "prevent pathogens of infectious diseases that are not endemic in Japan from entering the country via vessels or aircrafts, as well as to take other necessary measures concerning vessels or aircrafts to prevent infectious diseases" (Article 1). It specifies 11 diseases as either Class I (e.g., Ebola virus infection and plague), Class II (H1N1 influenza and avian influenza), or Class IV (dengue fever and malaria).

Article 34 of the Quarantine Act stipulates that if there is an outbreak of an infectious disease other than a Quarantinable Infectious Disease overseas, and there is a risk of pathogens thereof entering Japan or significant harm to the lives and health of the people unless it is quarantined, all or some of the provisions may apply mutatis mutandis to the infectious disease by specifying a type of infectious disease by Cabinet Order, for a period not exceeding one year.

On January 28, 2020, Japan established the term "novel coronavirus infection," classifying it as a Class II infectious disease based on the "Cabinet Order to Designate the Novel Coronavirus Infection as an Infectious Disease." Quarantine is carried out at 89 quarantine ports throughout Japan, as listed in Appendix 1 of the Quarantine Act Enforcement Order. All vessels from foreign countries entering Japanese ports are subject to quarantine, and entry, landing, and unloading of cargo are only allowed after quarantine (Article 4, Paragraph 1).

It should be noted that Article 25 of the International Health Regulations stipulates that contracting states shall not take public health measures against ships passing through their jurisdictional waters without calling at a port.

Japan's Role

The Diamond Princess case revealed a deficiency in the law governing the relationship between the rights and obligations of the flag state, the operating state, and the port state to prevent the spread of infectious diseases. Many of the problems faced by Japan during this incident cannot be solved by port states alone. International cooperation with related countries, such as flag states and operating countries, is therefore essential. However, new international rules are required for this purpose.

The Diamond Princess, a major cruise ship (Vladivostok port, 2019)

In forming these new rules, Japan, which was a port state in this incident, seems to be in a position to suggest what new rules are needed, especially in the area of the Law of the Sea. This is because Japan acted not only to protect its legal interests as a coastal state in preventing the entry of infectious diseases; as a maritime nation, it also has a legal interest in maintaining ocean traffic stability, in other words, ensuring freedom of navigation. Japan is in the best position to create new, balanced rules for order on the seas. I hope that it will take advantage of its strengths to play a leading role in this process. ■

Promoting Sustainable Ocean Economies and International Partnership –An International Webinar Video Message–

[KEYWORDS] High Level Panel / offshore wind power generation / marine plastic litter

SUGA Yoshihide
Prime Minister of Japan.
(Ocean Newsletter No. 490, 5 January 2021)

The "High Level Panel for a Sustainable Ocean Economy," comprised of world leaders from 14 countries, including Japan, and 15 Special Envoys of the Secretary-General of the United Nations, was established in 2018 to stimulate the economy through the conservation and sustainable use of the ocean. The "Ocean Panel's Policy Recommendations: Promoting Sustainable Ocean Economies and International Partnership" international webinar was hosted to widely publicize the summit report released as a product of the Panel's work. This article is the video message delivered by Prime Minister Suga Yoshihide for the international webinar.

We, the leaders of the 14-member ocean states of the High-Level Panel for a Sustainable Ocean Economy, have released a leaders' document entitled "Transformations for a Sustainable Ocean Economy." It is the first attempt to formulate a leaders' statement by the High-Level Panel that comprehensively addresses the issues of conservation and sustainable use of the ocean.

We would like to express our profound respect to Prime Minister Erna Solberg of Norway and President Tommy Remengesau Jr. of the Republic of Palau for their leadership. Japan has now adopted its 4th Basic Plan on Ocean Policy, which is aligned with the leaders' statement, and is making efforts towards building a sustainable ocean economy.

Under this plan, Japan is committed to sustainably managing the ocean areas under its jurisdiction in order to ensure that future generations can benefit from flourishing ocean resources. We plan to further advance these efforts. To realize a sustainable ocean economy, we must take ambitious actions toward mitigating climate change, such as through leveraging ocean-based renewable energy. My administration has declared that by 2050 Japan will aim to reduce greenhouse gas emissions to net-zero and realize a carbon-neutral society. By accelerating a virtuous cycle of the economy and the environment through innovation, and capitalizing upon the potential of the ocean, such as through offshore wind power generation, Japan will lead international efforts to achieve the decarbonized world aimed at by the Paris Agreement.

In our view, collaborating with the international community on the issue of marine plastic litter is also indispensable toward facilitating ocean conservation. Japan launched the "Osaka Blue Ocean Vision" at the G20 Osaka Summit last year. The Vision aims to reduce additional pollution by marine plastic litter to zero by 2050. To realize this Vision, Japan will actively tackle this problem with relevant partner organizations, such as the International Environmental Technology Centre of the United Nations Environment Programme (UNEP-IETC) headquartered in Osaka and facilitate technical assistance to developing countries.

It is my hope that this leaders' document will serve as a compass toward building a sustainable ocean economy and lead to concrete actions in passing on our flourishing ocean resources to future generations. ■

***Explanatory Note:**

The High-Level Panel for a Sustainable Ocean Economy (Figure 1) was established in 2018 under the leadership of the Norwegian government to tackle a variety of ocean issues verging on crisis, such as depleting fishery resources, rising ocean temperatures, and increasing marine plastic litter, as well as to stimulate the economy through the conservation and sustainable use of the ocean. The Panel is comprised of world leaders from 14 countries and United Nations Secretary-General's Special Envoy for the Ocean, including: Prime Minister Suga Yoshihide who replaces former Prime Minister Abe Shinzo. Prime Minister Suga Yoshihide joined the High-Level Panel as a member in the autumn of 2020. The outcome of the 3 years of activities was synthesized as a policy recommendation document and released as a leaders' statement on December 2, 2020 (https://www.oceanpanel.org/ocean-action/transformations.html).

In order to widely disseminate the leaders' statement, on December 3, 2020, the international webinar "Ocean Panel's Policy Recommendations: Promoting Sustainable Ocean Economies and International Partnership" was co-organized by the Ministry of Foreign Affairs of Japan and The Ocean Policy Research Institute, The Sasakawa Peace Foundation in cooperation with the Embassy of the Republic of Palau and the Embassy of Norway in Japan (for a summary of the event, see https://www.spf.org/opri-intl/blogs/event-report/20201215.html).

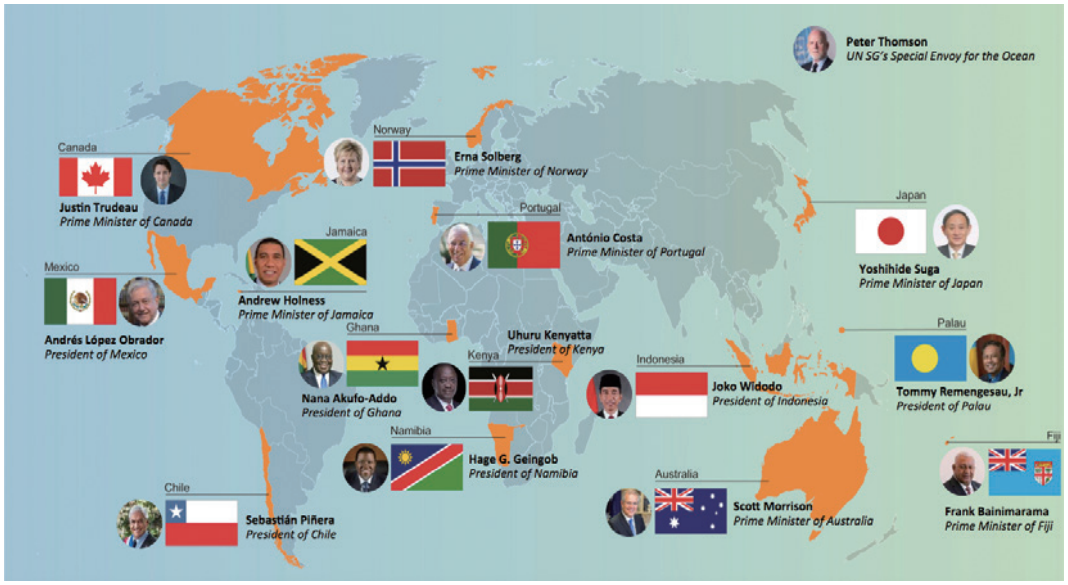


Figure 1: Members of the High-Level Panel for a Sustainable Ocean Economy
(Excerpt from the document of the Secretariat for the High-Level Panel)

The above text is based on the video message delivered by Prime Minister Suga Yoshihide for the international webinar, with editorial adjustments by OPRI-SPF.