

Ship & Ocean Newsletter

Selected Papers

No. **17**
November 2013

Ocean Policy Research Foundation

Director's Message

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

Towards this end, the Ocean Policy Research Foundation (formerly: Ship & Ocean Foundation) orients its research on ocean issues in line with the mission statement "Living in Harmony with the Oceans".

The Ocean Policy Research Foundation 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 called the "Ship & Ocean Newsletter" twice a month. "Ship & Ocean Newsletter Selected Papers No.17" contains English-language versions of papers from the Japanese Newsletter edition, published from No.291 (2012.9.20) to No.310 (2013.7.5). From issue No. 311 of 2013.7.20 we have changed the title of the newsletter to "Ocean Newsletter," though we will continue to include articles on shipping topics as we work to make the newsletter more comprehensive and make ocean policy proposals in harmony with a global perspective.

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 Foundation 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.

Hiroshi TERASHIMA
Executive Director

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The Senkaku Islands: Post-nationalization Issues

[KEYWORDS] Senkaku Islands / nationalization / “policy of calm”

Shigeki SAKAMOTO

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(Ship & Ocean Newsletter No.292, October 5, 2012)

As the Japanese government has maintained the position regarding the Senkaku islands that “they are an inherent part of Japanese territory and an issue doesn’t exist as to their territorial rights,” conditions have arisen in international society in which Japan’s assertion of its territorial rights is not sufficiently understood. While the government has made the decision to nationalize the Senkakus, their maintenance and management will require a shift to a different strategy from heretofore.

China successfully destabilizes the issue

On August 15, 2012, 14 activists from Hong Kong landed on Uotsuri-shima in the Senkaku Islands, and several of them went ashore to claim Chinese sovereignty over the islands. In the interest of avoiding a prolonged uproar, the Japanese government deported these activists on August 17 after a brief arrest. It was decided that their actions, which included throwing chunks of brick at a Japan Coast Guard vessel, would not be deemed obstruction of performance of official duties. Despite such arrangements by the Japanese government, China was furious, and anti-Japanese demonstrations were organized throughout the country. In the eyes of the world, the whole situation must have appeared to be a territorial dispute between Japan and China over the Senkaku Islands.

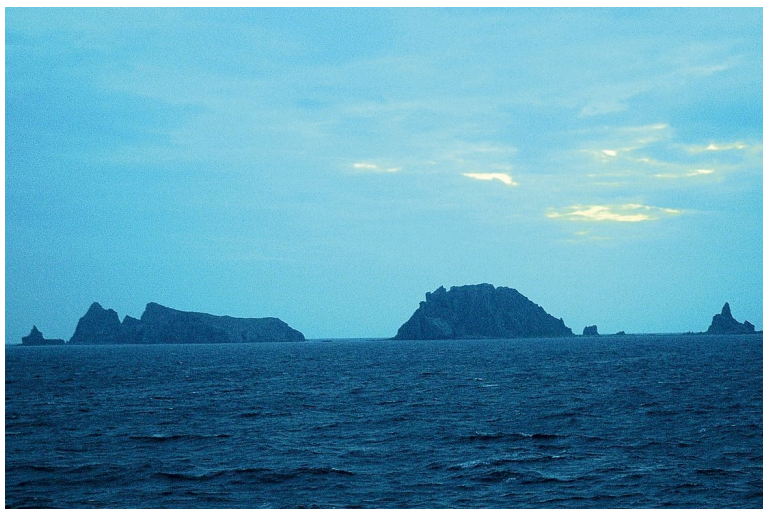
The Japanese government has consistently maintained that the Senkaku Islands “are an inherent part of the territory of Japan and there is no issue of territorial sovereignty to be resolved.” The first person to bring about a turning point was then-Vice Premier Deng Xiaoping, who proposed shelving the issue of the Senkaku Islands. Japan accepted that proposal, but did not agree with the Chinese stance that there was an issue of territorial sovereignty. From the

perspective of the “bigger picture” to improve ties between the two countries, the top priority in Japanese policy toward China has been not to provoke China over this issue.

Japan fails to communicate the basis of its sovereignty over the Senkaku Islands

In response, the Japanese policy regarding the Senkaku Islands, as presented in the Ministry of Foreign Affairs’ (MOFA) “External Response Manual,” has shifted to a two-step approach: (1) to engage in no discussion over the issue as there is no argument and (2) to repeat the “Basic View” of MOFA in response to any further questions¹⁾. Therefore, this very stance has obscured the Japanese claim of sovereignty in the international community. In contrast, China has missed no opportunity to voice the basis for its claim to territorial sovereignty to the world via the Internet in various languages. Consequently, a journalist from the New York Times opined in a report on the September 2010 incident, which led to the arrest of a Chinese shipping boat captain, that “the islands seem to belong to China.”

The basis given by this journalist, however, was the fact that the Senkaku Islands had long been used by Chinese ships as navigational markers. Indeed, the islands were



Uotsuri-shima

Senkaku Islands
(Both photos by Mr. Masahiro Akiyama, 2007)

described as *Diaoyu Yu*, *Huangwei Yu*, or *Chiwei Yu* in the records of Chinese envoys to neighboring kingdoms during the Ming and Qing dynasties and in other records. However, the fact that these islands had been known as seamarks for imperial Chinese missions obviously does not constitute valid grounds for Chinese sovereignty. Following such logic, Okinawa (which was mapped as Ryukyu) would be regarded as Chinese territory.

It is important to note, however, that in contrast to popular sentiment in Japan that the Chinese territorial claim is far-fetched and aggressive, the rest of the world does not necessarily view the situation in the same way. Many countries regard the Chinese behavior in the South China Sea based upon the nine-dotted line as aggression, but this is not necessarily the case with the East China Sea. The Japanese government must make the international community realize that a situation identical to the one in the South China Sea is unfolding in the East China Sea.

Is Japan successfully foiling China's intentions?

It is necessary for Japan to effectively control the area around the Senkaku Islands in order to foil China's territorial ambitions. However, it seems Japan is failing to do so. On September 24, 2010, the Japanese government arrested a Chinese boat captain in the East China Sea off the coast of the Senkaku Islands for alleged obstruction of performance of official duties, but then released him without indictment. The charge was dropped in 2011. It appears that Japan has fallen victim to the logic of "refraining from unilaterally applying Japanese law in an area with territorial disputes to prevent an escalation of the conflict," regardless of China's hard-line countermeasures. The deportation of the activists from Hong Kong, as mentioned above, was also insufficient in terms of expressing Japanese sovereignty. Those activists declared their intent to try and land on the islands again in October 2012. Clearly the measures taken by Japan in response to these incidents did not offer a fundamental solution. At the very least, it is clear that these measures will not help to prevent a recurrence of similar incidents.

The policy that Japan should pursue

As I previously mentioned, a Chinese political leader once advocated "shelving the issue of the Senkaku Islands." But it is China itself that is overtly and repeatedly challenging Japan's sovereignty. Some Japanese favor "shelving the issue" on behalf of perceived national interest. However,

they should be aware that "shelving the issue" has become virtually impossible when dealing with such an assertive party.

The Japanese government adopted a policy to nationalize the Senkaku Islands in an attempt to block the planned purchase of the islands by then-Governor of Tokyo Shintaro Ishihara, who wanted to strengthen Japan's effective control over the islands. In the name of "peaceful, stable maintenance and control," the Japanese government expresses its intent to keep the islands vacant without so much as the construction of a port of refuge or any other facilities, and to let no one other than government officials set foot there.

Nevertheless, a strategic shift is necessary in order to continue to maintain and control the Senkaku Islands as Japanese territory. Then-Prime Minister Yoshihiko Noda stressed the importance of "seeing the bigger picture." Yet it is necessary to realize that the issue of territorial sovereignty is on a completely different level than that of a "bigger picture" that assumes the issue will have no negative impact on Sino-Japanese relations. What Japan needs to do now is to be prepared to protect its territory. To quote Professor Naoya Okuwaki, Japan must "continuously signal its unwavering resolve to exert its capabilities to defend its territorial integrity"²⁾.

The Japanese government's "peace" policy is a double-edged sword. Official policy arguably reflects the desire to prevent the Chinese navy from advancing into the East China Sea and to provide no pretext for doing so. However, this could inadvertently reveal Japan as unguarded. We must remember that it is impossible to control the Chinese government on this issue, no matter how the Japanese government conducts itself. The advance of the Chinese navy has only been checked because the United States has stated that the Senkaku Islands fall within the scope of the security treaty between Japan and the U.S. China will desperately try to separate the Senkaku Islands from the Japan-U.S. security treaty in the future. To prevent this, the Japanese government must augment the function of the U.S.-Japan alliance and seek to expand and strengthen the function of the Japan Coast Guard and Japan Self-Defense Forces to maintain and control the islands. ■

1) Tomohiko Taniguchi, "Japan's Case for the Senkaku Islands." *The Journal of Islands Studies* 1 (2012), p. 24–25. Print.

2) "Our Maritime Interest—Can We Protect It? The Haste to Establish an Asian Framework." *The Nikkei*, June 14, 2012, morning edition.

Rio+20 and the Oceans

[KEYWORDS] Rio+20 / Rio Ocean Declaration / The Future We Want

Hiroshi TERASHIMA

Executive Director, Ocean Policy Research Foundation
(Ship & Ocean Newsletter No.293, October 20, 2012)

At the Rio+20 conference held this June, the outcome document “The Future We Want” was adopted in recognition of the importance of the green economy in achieving sustainable development. The outcome document included recommendations from the Oceans Day Rio Ocean Declaration, and treated oceans and seas as an independent thematic area and cross-sectoral issue, resulting in the addition of twenty paragraphs into the plan of action.

Introduction

The United Nations Conference on Sustainable Development (Rio+20) was held in Rio de Janeiro from June 20–22, 2012. This high-profile conference hosted 79 heads of state among representatives from 191 countries, as well as over 44,000 officially registered participants from governments, international organizations, NGOs, and businesses. Discussion towards the next action plan centered on two main themes: (1) the transition to a green economy in the context of sustainable development and poverty eradication and (2) institutional frameworks for sustainable development. These deliberations were reflected in the outcome document adopted at the conference, “The Future We Want.” This paper examines the significance of Rio+20 for the world’s oceans.

Rio+20 and Oceans Day

The final round of negotiations at Rio+20 began on site on June 13, and a high-level side event by and for ocean experts from around the world entitled Oceans Day was held on June 16. Oceans Day was primarily organized by the Global Ocean Forum (GOF)¹⁾, but the Ocean Policy Research Foundation also helped host the event as a principle organizer, along with China’s State Oceanic Administration, the Global Environment Facility (GEF), the United Nations Development Programme (UNDP), and the University of Delaware. The event was attended by 375 participants from governments, international organizations, NPOs,

business, and academia, and discussion took place on seven topics, including scaling up integrated ocean governance, enhancing fisheries for social and economic benefits, and climate change and ocean acidification.

The author made a presentation at the event on Japan’s Basic Act on Ocean Policy and the initiatives undertaken in East Asia by the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), and stressed the importance of efforts at both the national and regional levels. After spirited discussions, the outcome of the side event was presented as the Rio Ocean Declaration and immediately submitted by Co-Chair Dr. Biliana Cicin-Sain, President of the GOF, to Ms. Elizabeth Thompson, Executive Coordinator for the Rio+20 Conference, with the request that the contents of the declaration (see Table 1) be incorporated into the outcome document.

Outcome Document “The Future We Want”

Negotiations at Rio+20 stalled due to conflicts between developing and developed countries over issues such as how to handle Common But Differentiated Responsibility (CBDR). Ultimately, however, all parties renewed their political commitment to sustainable development, reached a consensus that a green economy is an important tool for achieving that goal, and concluded the conference by adopting the outcome document, consisting of 283 paragraphs, entitled “The Future We Want.”

As requested by ocean experts, oceans were selected as



The author making a presentation on Oceans Day



A scene from Oceans Day, held on June 16, 2012

one of the outcome document's independent thematic areas and a cross-sectoral issue, with a 20-paragraph action plan related to oceans being written into the document. In the first three paragraphs it was recognized that oceans and coastal areas form an integrated and essential component of the Earth's ecosystem and that necessary action for their conservation and sustainable use be taken; that the duties be fulfilled as set forth in the United Nations Convention on the Law of the Sea (UNCLOS), which provides the legal framework for the conservation and the sustainable use of the oceans and their resources; and that it is important to build the capacity of developing countries and to cooperate in this regard. Subsequently, a wide-reaching action plan was adopted, as illustrated in Table 2.

Issues regarding Small Island Developing States (SIDS) were incorporated as an item separate from oceans, and it was decided that the Third International Conference on Small Island Developing States would be held in 2014, following those in Barbados and Mauritius.

In addition, regional, national, and local authorities were encouraged to develop and implement sustainable development strategies at their respective levels. The leaders also committed themselves in the document to strengthening the role of the Economic and Social Council (ECOSOC) as the principal organ for integrating and coordinating follow-up of the outcomes of all major UN Conferences and summits, to establishing a high-level intergovernmental political forum to replace the Commission on Sustainable Development, to strengthening the role of the United Nations Environment Programme (UNEP), and to strengthening other UN frameworks that support sustainable development.

Evaluation of Rio+20 and the steps ahead

Rio+20 did not result in a bold action plan due to conflicting interests between developing and developed countries, as well as among developed countries over issues such as the treatment of CBDR and the development of international conventions for the conservation of marine biodiversity in areas beyond national jurisdiction. Some quietly give a harsh assessment of the conference as "Rio minus 20," but such an evaluation is somewhat one-sided, especially considering that Rio+20 was designed as a forum to promote further concrete measures to achieve sustainable development. The outcome document, "The Future We Want," deserves credit for extensively outlining future tasks to achieve sustainable development while integrating the three components of the economy, society, and environment, as well as for identifying necessary future initiatives, including the direction and methods to be adopted by the UN toward this end. For example, its acknowledgement of the

importance of institutional efforts at the national, regional, and other levels for the steady implementation of sustainable development, and the encouragement of such efforts, deserves more recognition. As far as oceans are concerned, it is gratifying that efforts made by ocean experts, such as at Oceans Day, produced an effect and that the recommendations made in the Rio Ocean Declaration were incorporated (see Tables 1 and 2). It is to be regretted, however, that concrete examples of the integrated ocean and coastal management that the Rio Ocean Declaration stressed, particularly

■ **Table 1 Rio Ocean Declaration**

1. Scaling up successful Ecosystem-Based Management/Integrated Ocean and Coastal Management (EBM/IOCM) efforts at national and regional levels and in marine areas beyond national jurisdiction
2. Developing an integrated approach to addressing the interlinked issues of oceans, climate change, and security (mitigation, adaptation, capacity development, scientific monitoring, and public education)
3. Undertake ecosystem-based approaches for ensuring the conservation and sustainable use of marine biodiversity in the context of integrated ocean governance (marine spatial planning and networks of marine protected areas)
4. Prevent, deter, and eliminate IUU fishing, eliminate environmentally and socially harmful fishing subsidies that contribute to overcapacity, overfishing and IUU fishing, and enhance the capacity of developing coastal countries and Small Island Developing States (SIDS) to make optimal use of their fishery resources through enhanced fisheries management
5. Enhance the capability of SIDS and developing coastal countries to benefit from, and sustainably manage, their marine resources
6. Mitigate marine pollution, including marine debris, persistent organic pollutants, heavy metals, and nitrogen-based compounds, etc., from land-based and marine sources
7. Move toward the Blue Economy (marine resources, reduced pollution and waste, social equity and inclusiveness, food and nutritional security, and poverty reduction)

■ **Table 2 Excerpt from the outcome document entitled "The Future We Want"**

- Regular reports and assessments from the UN regarding the state of the marine environment
- Discussion about the conservation and sustainable use of biodiversity in areas beyond national jurisdiction, including possible development of a new convention
- Significant reduction of marine pollution, particularly marine debris, by 2025
- Respond to the threat from alien invasive species
- Enhanced efforts by the international community to address rising sea levels and coastal erosion
- Support initiatives that address ocean acidification
- Address ocean fertilization
- Restore fishery stocks to levels that can produce the maximum sustainable yield
- Implementation of the Fish Stocks Agreement and FAO Code of Conduct for Responsible Fisheries
- Eliminate Illegal, Unreported, and Unregulated (IUU) fishing
- Expedite procedures for the ratification of the FAO Agreement on Port State Measures
- Promote transparency and accountability in fisheries management by Regional Fisheries Management Organizations (RFMOs)
- Eliminate fishery subsidies that contribute to overcapacity and overfishing
- Assist developing countries in developing their national capacity to realize the benefits of sustainable fisheries by 2014
- Ensure access to fisheries and markets by small-scale fisherfolk and women fish workers
- Support international cooperation with a view to conserving coral reefs and mangrove ecosystems
- Reaffirm the importance of marine protected areas and note the target from the CBD-COP10 (10% of coastal and marine areas conserved by 2020)

institutional efforts at national and regional levels promoting ocean governance, were not included in the document.

This was, in fact, already anticipated to occur during the final round of preliminary negotiations. Therefore, the last section of the Rio Ocean Declaration, entitled “Looking Beyond Rio+20,” declared, “We note that the institutional framework for sustainable development in the context of oceans and coasts has not been fully addressed in the Rio+20 process and that this is a major area in need of further attention and concrete action.” It goes a step further by recommending issues to be addressed following Rio+20, stating, “In the next phase, there is an urgent need to take steps to: (1) re-assess the institutional framework for oceans and coasts at national and regional levels, as well as in marine areas beyond national jurisdiction; (2) elevate oceans to the highest levels of the UN system; and (3) develop appropriate legal and policy frameworks based, inter alia, on the ecosystem and precautionary approaches for new and emerging issues, including carbon capture and storage, offshore aquaculture, deepwater offshore oil development, and bioprospecting for marine genetic resources.”

In Japan, as those currently involved in revising Japan’s Basic Plan on Ocean Policy proceed with their in-depth discussions on what concrete measures should be included, they should give due consideration to international initiatives such as those above in formulating Japan’s ocean policy.

I would also like to add that in East Asia a ministerial level meeting was held in July, soon after Rio+20, at the East Asian Seas Congress 2012 in Changwon, Korea, where Japan and 10 other East Asian States adopted the Sustainable Development Strategy for the Seas of East Asia Implementation Plan (2012–2016) in order to implement the action plan of the Rio outcome document, *The Future We Want*. ■

Terashima’s blog

<http://blog.canpan.info/terashima/daily/201206/20>

<http://blog.canpan.info/terashima/daily/201206/24>

MOFA Official Website on United Nations Conference on Sustainable Development (Rio+20)

http://www.mofa.go.jp/mofaj/gaiko/kankyo/rio_p20/gaiyo.html

1) The Global Ocean Forum (GOF) was first mobilized in 2001 to bring together ocean leaders from around the world to help governments place issues related to oceans on the agenda of the World Summit on Sustainable Development (WSSD), which took place in Johannesburg in 2002.

The Role of the Reconstruction Agency and Ocean Initiatives

[KEYWORDS] Great East Japan Earthquake / Reconstruction Agency / legislation

Ryo TSUZUKIHASHI

Leader, Legislative Group, Reconstruction Agency

(Ship & Ocean Newsletter No.295, November 20, 2012)

A year and a half has passed since the Great East Japan Earthquake. The Reconstruction Agency is being called on not only for strong leadership within the government, but to provide firm support for disaster victims in the affected areas and to effect the earliest possible recovery. Many policy tools have been set up for the restoration and recovery of the coastal areas that suffered such great damage, as well as for the fishing industry, the primary industry in the affected areas. The Reconstruction Agency will use these tools to promote continuous progress in reconstruction of the areas affected by the Great East Japan Earthquake.

Introduction

First, we offer our deepest sympathies to those who lost loved ones and for those who were affected by the disasters triggered by the Great East Japan Earthquake on March 11, 2011.

The Great East Japan Earthquake and Tsunami inflicted severe damage on a wide range of coastal areas, primarily those along the Sanriku coast, as well as devastating the fishing industry, which was the pillar of the local economy. Adding to the misfortune, radioactive materials released as a result of the accident at TEPCO's Fukushima Dai-ichi Nuclear Power Plant have not only contaminated the land but the ocean as well. The contamination has limited fishing operations off the coast of Fukushima Prefecture to test-fishing of particular types of fish, leaving many challenges before operations can resume completely.

In addition to the restoration of everyday life in coastal areas through the restoration of infrastructure and the rebuilding of living accommodations, it is essential to restore the fishing industry as a source of employment and to recover from the nuclear disasters in order to achieve reconstruction after the Great East Japan Earthquake.

The roles of the Reconstruction Agency

Initially, Reconstruction Headquarters was established in the cabinet under the Basic Act on Reconstruction to lead the reconstruction effort. However, discussions in the Diet concluded that the challenges posed to Japan by the unprecedented disasters would require a Reconstruction Agency that could exercise strong leadership and swiftly implement and promote reconstruction measures while eliminating sectionalism among different ministries and agencies. The Reconstruction Agency was formed on February 10, 2012 following passage of the Act on Establishment of Reconstruction Agency in December 2011 (Fig. 1).

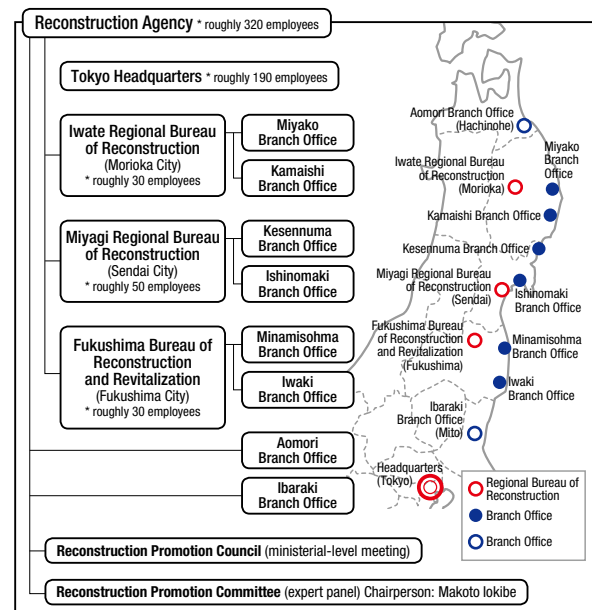
The roles of the agency include working with the cabinet secretariat to assist in the cabinet's administrative tasks related to reconstruction efforts after the Great East Japan Earthquake. More specifically, the tasks include: (1) drafting and planning basic policies for reconstruction; (2)

coordination and supervision of reconstruction projects undertaken by relevant offices and ministries, by virtue of its elevated status over other governmental offices and ministries; and (3) collective budgeting for reconstruction projects undertaken by relevant offices and ministries and allocation and distribution of necessary funds.

The agency is led by the Prime Minister, who is assisted by the Minister for Reconstruction, or more precisely the Minister of State for Disaster Management, who manages the Reconstruction Agency's administrative work. The Minister for Reconstruction has the right to issue recommendations to heads of relevant administrative agencies. The heads of these administrative agencies are obliged to duly respect said recommendations.

The Reconstruction Agency has three Regional Bureaus of Reconstruction in Iwate, Miyagi, and Fukushima prefectures. Each regional bureau oversees two branch offices on the coast, away from the prefectural capital. Branch offices have also been established in Aomori and Ibaraki prefectures, which sustained significant damage. The Regional

■ Fig. 1: Structure of Reconstruction Agency



Bureaus of Reconstruction are to swiftly promote local reconstruction efforts under the leadership of the senior vice ministers and parliamentary secretaries in charge. In this manner, the Reconstruction Agency is expected to exercise strong leadership to promote reconstruction by virtue of its elevated status over other governmental offices and ministries, and to implement comprehensive, detailed, and easily accessible measures in affected areas.

Key measures for reconstruction

Reconstruction efforts need to be driven primarily by the local communities, and in order to strongly support such community based reconstruction, the Law for Special Zones for Reconstruction was developed. This system breaks with traditional ideas, using inventive approaches that are tailor-made for each area to provide support in the form of bold preferential measures, tax breaks, and fiscal assistance. More specifically, the available means for prefectures and municipalities to take preferential measures are: (1) reconstruction projects (individual regulations in areas such as housing, industry, community development as well as projects for gaining preferential treatment in terms of administrative procedures and tax breaks); (2) reconstruction and development projects (projects for preferential measures to facilitate the reorganization of land use by relaxing the relevant regulations and procedures); and (3) grants for reconstruction projects (reconstruction projects for seriously affected areas). Plans for these projects must be submitted to and approved by the Prime Minister to be brought into effect.

This system provides for unprecedented preferential measures to relax regulations. For example, to aid the fishing industry, the system allows the prefectural governor to directly grant licenses to entitles primarily comprised of local fishery operators in areas where aquaculture cannot be resumed solely through their own resources. The reconstruction grants collectively cover necessary infrastructure projects spanning the purviews of different ministries, allowing the reconstruction of affected communities by rebuilding roads, housing, and fishing ports, as well as facilitating the collective relocation of disaster victims. A total of 1.5612 trillion yen was allocated in the third supplementary budget for fiscal year 2011 and 286.8 billion yen in fiscal year 2012.

Another special consideration was made for Fukushima Prefecture, which suffered immense damage from the nuclear disasters, by the enactment of the Act on Special Measures for the Rebirth of Fukushima. It was enacted because measures set forth by the Law for Special Zones for Reconstruction were thought insufficient to achieve reconstruction in areas where evacuation orders had been

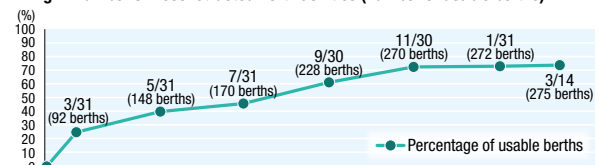
issued. Preferential measures with respect to various regulations are being implemented so that the government can directly engage in reconstruction projects for seaports, fishing ports, roads, and other types of infrastructure at the prefectural and municipal levels. The law will also allow the government to offer tax breaks to encourage the rebuilding of industries throughout Fukushima Prefecture and relax requirements for operating designated terminals to enhance international competitiveness of seaports in the area.

Some of the Reconstruction Agency's other duties, in addition to the planning of institutional frameworks and project planning and the implementation mentioned above, include coordinating the restoration and reconstruction of infrastructure by creating a roadmap, encouraging cooperation among various parties such as businesses and NPOs, and addressing the problem of overlapping loans, etc. Although local communities are to spearhead the reconstruction efforts, the government is cooperating with hard-hit local municipalities, located mainly in Fukushima Prefecture, where the national government's leadership is necessary to develop and carry out reconstruction plans.

Toward an early recovery

Almost a year and a half has passed since the Great East Japan Earthquake and its ensuing disasters occurred. A certain amount of progress has been made in the reconstruction efforts. For example, almost 70 percent of the port facilities were usable as of March 14, 2012. As of December 2011, the amount of container cargo handled at the ports in affected areas had recovered to about 70 percent of the level from a year earlier (Fig. 2). At the same time, however, the progress report by the Reconstruction Promotion Committee in September 2012 pointed out that a system must be devised to better exercise the government's capacity in an integrated manner. Thus, the Reconstruction Agency must play an even greater role. Finally, while the Reconstruction Agency will only exist for 10 years, there are challenges that require long-term efforts, such as marine pollution from radioactive materials. The Reconstruction Agency intends to accelerate its efforts to bring about an early recovery from the disasters by exercising strong political leadership while working hand-in-hand with the victims in the affected areas. ■

■ Fig. 2 Number of Reconstructed Port Facilities (number of usable berths)



* Provisional usable berths have limitations in terms of draft and weight load. The figure was compiled by the editorial office based upon data from the Reconstruction Agency (figures provided by Ports and Harbours Bureau of the Ministry of Land, Infrastructure, Transport and Tourism)

Fisheries Depend on Productivity of the Oceans

[KEYWORDS] fishing-aquaculture / hunting and gathering / natural change

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(Ship & Ocean Newsletter No.296, December 5, 2012)

Fisheries depend on the natural cycle of matter and biological productivity in the ocean. This includes not only the capture productions of wild animals and plants, but also the aquaculture productions of seaweeds that depend on natural nutrient cycles, bivalves depending on phytoplankton and particulate organic matter, and finfishes depending on captured fish stocks. Conservation of coastal and offshore ecosystems and maximization of their biological productivity have fundamental importance for the capture and aquaculture productions to get rid of the stagnation of the last two decades.

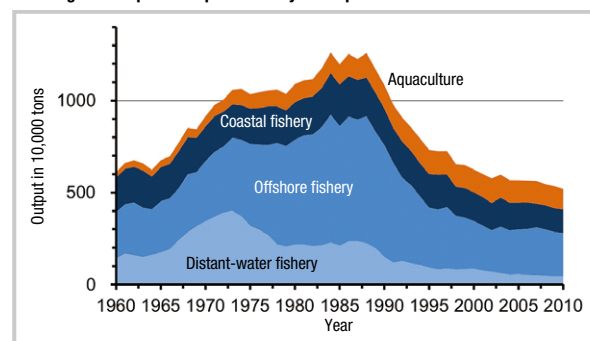
Sharp decrease in fishery production

Production for Japan's fishery and aquaculture industries peaked at 12.62 million tons in 1984, double the 6.24 million tons produced 20 years earlier in 1964. The fishing industry's output in this peak year reached 11.51 million tons, making it the global leader with 15% of the total worldwide output of 77.64 million tons. The Japanese aquaculture industry's output of 1.11 million tons accounted for 21% of the total worldwide output of 5.35 million tons, second to China's output of 2 million tons¹⁾. In the 1980s, Japan had the undisputed number one fishery industry in the world. With the enhancement of the stocks by releasing "seeds" of resources, output at Japan's coastal fisheries was supposed to increase. Likewise, the marine aquaculture industry was supposed to experience further development due to advances in fish farming technology. A quarter of a century later in 2009, however, output of Japan's fisheries had dropped to 4.15 million tons, meaning it was sixth in the world with just 5% of the total worldwide output of 79.51 million tons. Aquaculture output stagnated at 1.20 million tons to give Japan a mere 4% share of the skyrocketing worldwide output of 34.25 million tons. What happened to Japan's fishing industry?

Marine fisheries that hunt and gather

Marine fishing is an industry based on hunting and gathering wild creatures. Thus, by definition, these fisheries are dependent on wild biological resources. Among these fisheries, offshore fisheries are intended to catch primarily sardines, horse mackerels, mackerels, etc. After reaching its prime in 1988 with a record 6.90 million tons, offshore fishery output declined along with the dramatic fall in the Japanese pilchard stock. This periodic cycle of the dominant offshore fish stock being replaced every few decades is called "replacement of dominant species". Offshore fishery output fluctuates significantly as a result. Any fish stock characterized by large natural fluctuations must be safeguarded during the reduction phase and low-level phase by restricting human intervention, such as fisheries' activities,

■ Changes in output for Japan's fishery and aquaculture industries



lest the stock falls below the oceans' potential productivity. In spite of this, the intensive fishing of chub mackerels and Japanese pilchards in the 1990s, both of which had already been reduced due to stock fluctuation, impeded recovery of their stocks. Offshore fishery output was 2.36 million tons in 2010 — that is, 34% of the record in 1988.

Coastal fishery output has declined after peaking in 1985 with 2.27 million tons. The decline may be attributed to inhibited stock reproduction coupled with intensive fishing. The coastal environment has undergone great artificial changes since the period of rapid economic growth in Japan, and one result of this has been the deterioration of the coastal ecosystem's function as a spawning and nursery area for stocks. This shows that artificial breeding cannot succeed while the ecosystem is left to deteriorate. Coastal fishery output was 1.28 million tons in 2010, or 56% of the record.

Likewise, far seas fishery is an industry that focuses on catching wild animals. The output rises and falls as the stocks of the target species fluctuate. But the sharp fall in output since the 1970s is due primarily to international fishery regulations. Japanese fishing operations have expanded outward "from the coast to offshore, then from offshore to far seas" following the abolishment of the MacArthur line in 1952. Output reached roughly 4 million tons in the early 1970s. However, the fishery yield was reduced by the establishment of the exclusive economic zone beginning in 1977,

which extends 200 nautical miles off a country's coast, as well as by regulation of fishing operations on the high seas. Far seas fishery output was 0.44 million tons in 2010.

Aquaculture that relies on production by oceans

Aquaculture output has declined since reaching 1.34 million tons in 1994. Production in coastal waters has reached its limit. Overcrowded aquaculture in shallow waters in inner bays deteriorates the environment of aquaculture sites. A supply that greatly outpaces demand has led to slumping prices. Indeed, Japanese yellowtail farming has been experiencing such a management issue since the 1970s (Hamada, 2012).

Aquaculture bears some resemblance to agriculture or the livestock industry. When you break down the 1.11 million tons in aquaculture production in 2010, fish such as yellowtail accounted for 22% (0.25 million tons), whereas bivalves such as oysters and scallops accounted for 42% (0.47 million tons), and marine algae including laver and *wakame* seaweed accounted for 41% (0.46 million tons). Bivalves live by filter feeding on organic matter naturally produced in oceans, such as phytoplankton and particulate organic matter. Algae are primary producers that depend on natural nutrients. The aquaculture of bivalves and algae thus depends on the material cycle and biological production capacity of oceans. Meanwhile, fish farming is achieved by feeding fish with a high market value, such as yellowtail and blue-fin tuna. They are the top predators in the oceanic ecosystem. Instead of producing food, such activity is actually producing added value by raising cheaper natural resources, such as sardines and mackerels, for feed. Farming of both yellowtail and blue-fin tuna is dependent upon the juveniles called *mojako* and *yokowa*, which are caught in the wild to be used for culture. Years of attempts to artificially produce yellowtail juveniles for breeding and cultivation have never been successful. It is quite difficult to stably raise juvenile fish from the eggs of yellowtails, which lay millions of eggs while migrating through the oceans. Even today, their farming is totally dependent upon juveniles caught in the wild. In Japan, the development of technology to artificially produce juvenile blue-fin tuna (*yokowa*) has begun. However, technical difficulties are very likely with the artificial production of juvenile blue-fin tuna (*yokowa*), considering their transoceanic migration across the Pacific and an early mortality rate that is significantly

higher than yellowtail tuna due relative to the large number of eggs they lay. Even if *yokowa* can be cultured, the cultivation of such a top-level predator in the oceanic ecosystem is inevitably energy intensive. What kind of role might blue-fin tuna farming play in today's society, which strives for energy conservation?

Conservation of the ocean's productivity

The fishery industry has a completely different mode of production from the agricultural and livestock industries in terms of its total dependence on the productivity of the oceans. Agriculture that depends only on a natural material cycle, like algae farming, is unimaginable. Pigs might fly if wild young animals like wild boar piglets could be caught and raised in today's livestock industry. Since the 1960s, Japanese fisheries have sought to achieve a mode of production similar to that of the agricultural and livestock industries under the slogan "toward mariculture, away from hunting and gathering." Yet even a half-century later, 100% of fishery and aquaculture output depends on the oceans' productivity. Since this is the case, we must find a better way to coexist with the oceans, such as through a better understanding of oceans' biological production mechanisms. How should we approach "ocean management" so that we can coexist with the oceans? We must always remember that the term does not mean "ruling over oceans and nature," but rather "regulating the actions of human beings in relation to oceans" (Kuribayashi, 2010). Japanese fisheries can achieve a breakthrough and open up a new dimension only by maximizing the natural, biological productivity of oceans while conserving their ecosystems. ■

1) Output data from the Food and Agriculture Organization of the United Nations and Japan's Ministry of Agriculture, Forestry and Fisheries

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Expectations for the Revision to the Remote Islands Development Act

[KEYWORDS] narrowing gaps / promotion of permanent settlement / expansion of “soft” measures

Hirokazu SHIRAKAWA

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(Ship & Ocean Newsletter No.298, January 5, 2013)

Non-partisan lawmaker-initiated legislation has culminated in an amendment to the Remote Islands Development Act. The amendment provides for significant expansion of intangible assistance measures as well as original tangible upgrade assistance and stipulates the national government’s obligation to promote the development of remote islands.

Laws such as the Act that are related to the development of remote islands, the Basic Act on Ocean Policy, and other relevant laws are designed to promote enduring settlements and sustainable economic activity on Japan’s remote islands, to safeguard areas important for our nation, and to pursue effective conservation and use of oceans. The associated measures are a necessity for Japan to become a true maritime nation over the long term.

A groundbreaking amendment in response to the realities of the remote islands and their residents’ voices

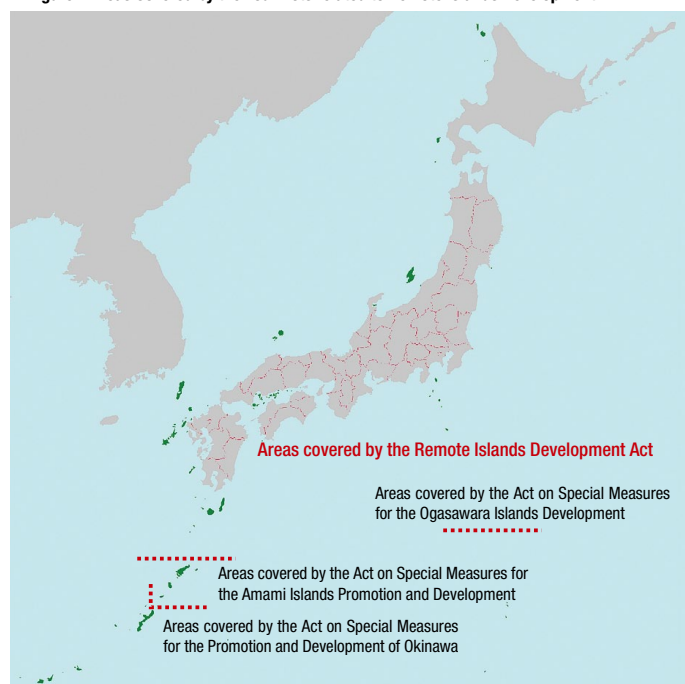
The amended Remote Islands Development Act (a law to partially amend the Remote Islands Development Act) was unanimously approved on June 20, 2012 in an Upper House plenary session and went into effect on April 1, 2013. Since it was enacted in 1953 as non-partisan lawmaker-initiated legislation, the Act has been extended every 10 years and has gone through six amendments, including the latest one.

Initially, this Act served as the basis for addressing the “backwardness” of remote islands by developing their infrastructure related to electricity, water, ports and fishing ports through high-interest government subsidy programs and by improving residents’ quality of life in areas such as

healthcare and education. But the principles and goals have undergone modifications in conjunction with the changing socio-economic realities of the remote islands. The important role remote islands play with regard to the “use of marine resources” was clearly expressed for the first time in the 1993 amendment. The subsequent 2003 amendment replaced the longstanding, fundamental recognition of “the backwardness of remote islands due to their isolation from the main islands” adopted in the original development program with a recognition of their “importance in safeguarding the territorial integrity of our nation.” Thus, both the remote islands’ strategic position as a contributor to national interests and their diverse national roles, such as in the conservation of exclusive economic zones, were clearly identified, making clear their contributions to the nation.

The Basic Act on Ocean Policy enacted in 2007 also stipulates (in Article 26) the important roles of remote islands in the development and use of marine resources. In fiscal year 2009, the Center for Research and Promotion of Japanese Islands organized the “Workshop to Discuss the Future of Islands” and proposed a development plan in preparation for the latest amendment of the Act. The major components included the promotion of maritime and air transport policies and facilities conducive to an environment for settlement. For six months starting in November 2011, lawmakers from both the ruling and opposition parties participated in a series of constructive discussions on the amendment that were based on the findings of site visits and other studies. The radical reform that followed was made possible by the exemplary lawmaker-initiated legislation that stipulated the responsibility of the national government to promote the development of the remote islands, assigned seven additional state ministers-in-charge, and significantly expanded a range of intangible assistance measures

■ Figure 1 Areas Covered by the Four Acts related to Remote Islands Development



as well as original tangible upgrade assistance. We offer our sincere gratitude to the lawmakers, ministry officials, and other relevant parties who dedicated themselves to enacting this groundbreaking legislation in response to the realities of Japan’s remote islands and the voices of the islands’ residents.

Budgetary measures necessary to promote settlement policies

The population of Japan’s remote islands has declined by half since 1955. The population aging rate is 20 to 30 years ahead of the national average. The primary industry that has underpinned the local economy is now battered and depressed. There is a dearth of jobs and opportunities. A sense of insecurity and economic burden looms over health-care, childbirth, and nursing services amid a situation in which 40% of the islands do not have access to medical service. Issues such as poor educational opportunities and a digital divide also greatly impede settlement. Passenger fares and cargo freight that are expensive compared to public transportation on the main islands is a great obstacle, as is the irregularity of available service on both sea and air routes. The National Council of Remote Islands Development, made up of municipalities on remote islands, has voiced its strong desire for proactive assistance policies based on the principles of narrowing the existing gaps and promoting settlement.

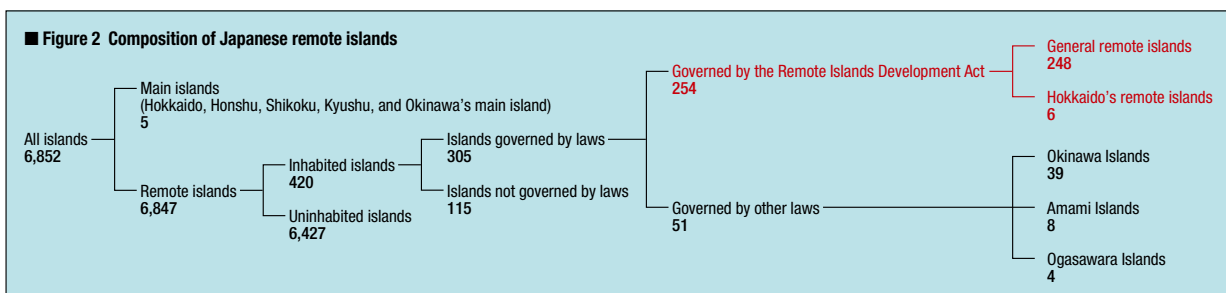
In response to the aforementioned issues, the amended Remote Islands Development Act set forth the government’s responsibility to address the fundamental gaps and defined a framework in which remote islands can plan developmental policies based on their respective situations and receive the necessary assistance from the government. Fine-tuned assistance policies to assist in the enduring settlement of island residents were specified in the amended Act. In particular, with respect to transport policies, which are lifelines for the remote islands, an object clause established a goal to “address the relatively expensive costs, compared to other parts of the country, for travelling and

transporting materials and supplies that are necessary for people’s lives.” Accordingly, special considerations were made for reducing travelling and logistical costs in the section on “ensuring transportation.” The supplementary resolution has also expressly committed the government to considering assistance policies for maintaining sea and air routes, including the enactment of new legislation.

An upcoming cabinet order related to the newly established Remote Islands Vitalization Grant Program will define specific program menus so that projects can be implemented according to the plans established by the respective prefectures. The budget for governmental intangible policies will become much more secure thanks to a legal basis for the assistance that has thus far been made possible only by budgetary measures every fiscal year. In addition to existing projects such as the improvement of logistical efficiency and aid for high-school education, there are great expectations for new intangible projects for the rejuvenation of the remote islands, such as assistance for health check-ups and maternity care for pregnant women.

Since a new provision was established to take “necessary measures to reflect the opinions of residents” in order for municipalities to devise their own remote island development plans, the institution of effective plans that take into account the voices of residents has become a pressing issue for the residents of remote islands. Even with the establishment of the Remote Islands Special Economic Zone Program mentioned in the clause for consideration, it goes without saying that the remote islands face a real test in terms of determination and ingenuity in their voluntary efforts toward development.

Other newly established provisions related to oceans include “conservation and regeneration of the natural environment,” which clearly states that attention be given to issues such as the handling of coastal driftage; “promotion of energy measures,” which encourages the use of renewable energy; and “promotion of disaster-prevention measures,” which sets forth measures to prevent isolation caused by earthquakes, tsunamis, and other disasters. Spe-



cific budgetary measures and bold deregulation measures are much desired for all of these items in the spirit of this amended Act.

Becoming a true maritime nation

The basis for Japan's being known as one of the world's leading ocean and island nations is the existence of its 7,000 inhabited and uninhabited remote islands. The supplementary provision of the amended Act clearly mentions that considerations will be made for special measures for remote islands that play particularly important roles. In the context of maritime advances by neighboring countries in recent years, it is essential to promote settlement on remote islands whether they are located in open or inland seas and to prevent islands from becoming deserted. The conservation and development of the remote islands, which are important Japanese territory, should not be considered merely regional development, but must be regarded as a top priority that directly impacts our national interests.

In addition to the Remote Islands Development Act, there are special pieces of legislation that form the basis of regional development for the islands of Amami (1954), Ogasawara (1969), and Okinawa (1972). These pieces of legislation were enacted against the historical background of their administrative separation from Japan in 1946 and their successive return to the country. The principles and framework set forth in the current amendment to the Remote Islands Development Act are expected to impact the special measures for development of Amami and Ogasawara islands, which are scheduled to be amended in the next fiscal year.

These four pieces of legislation, which include the Act on Special Measures for the Promotion and Development of Okinawa, that was amended in 2012, and the Basic Act on Ocean Policy are intended to ensure stable settlement and sustainable economic activities on Japan's remote islands, to safeguard our nation's important territorial areas, and to pursue the conservation and effective use of the ocean. Such measures are demanded by the present age and are a necessity for Japan to become a true maritime nation. ■

Understanding the Earth through “Tsunagari,” or Connections

[KEYWORDS] Earth observation / space / oceans

Mamoru MOHRI

Chief Executive Director, National Museum of Emerging Science and Innovation (Miraikan), Japan Science and Technology Agency
(Ship & Ocean Newsletter No.298 January 5, 2013)

Human beings cannot survive unprotected for even a moment in the environment of space. Survival is possible only in a man-made Earth-like environment that is equipped with life sustaining measures. The total natural environment of this planet now inhabited by seven billion people is greatly affected by this human presence, and it seems we are approaching the limits of human survivability. Through understanding the tsunagari between the Earth’s environment and human beings, we should be able to identify the path that humankind needs to follow into the future.

Observing the Earth’s environment

In 1992, when the first Earth Summit was held, I realized that the Earth is a shining blue sphere floating in space. After all, that’s how I saw Earth when, as a Japanese astronaut, I was orbiting our planet. Twenty years have passed since then. During this period, eight other Japanese astronauts have seen the Earth from space. My second space-flight in 2000 was intended for Earth observation. Every day on orbit, I would observe the Earth in detail with synthetic aperture radar¹⁾ to collect data for creating three-dimensional topographic maps of the continental areas. During the day, the land, oceans, and sky are clearly visible, since the Earth is illuminated by the sun. But humans are too small to be seen. However, when we fly over the dark half of the globe, we can clearly see the light produced by humans on every continent. Even on the surface of the oceans I could easily identify the presence of humans; for example, I saw the bright white spots of squid-fishing fleets in the Sea of Japan. This was the moment I realized that humans are connected to the entire Earth using electric energy.

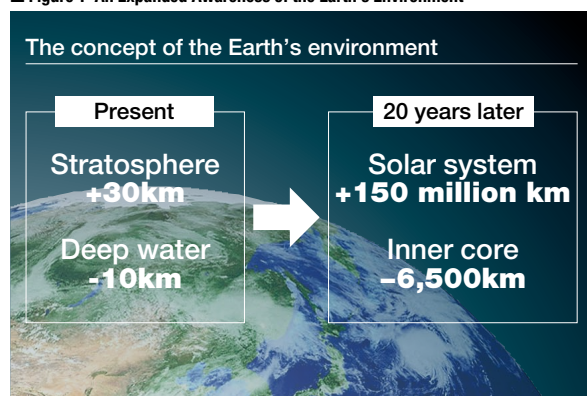
The Earth is so small that our spacecraft can fly around it in a matter of just 90 minutes, and from orbit we can command a panoramic view. In contrast to the vastness of the universe, the view of Earth as seen from space made me realize that Earth is just one small celestial object. The Earth we see from our planet’s surface is utterly vast on

a human scale. Fortunately, the Earth is a sphere with a radius of roughly 6,400 km at most and a circumference of 40,000 km, small enough for humans to study in detail and physically explore. Oceans account for three-quarters of the Earth’s surface. Precise fixed-point observation is impossible given that oceans are made of the property known as water. Unlike continental areas, it is hard to obtain environmental data for oceans. Still, a series of new scientific discoveries is being made in the oceans about submarine hydrothermal poly-metallic ore deposits, the biology of deep sea organisms, and so forth thanks to research conducted by scientists deep underwater and by robot observation in even deeper water. A greater understanding of the Earth’s environment is also being gained in polar regions regarding matters such as the rapid decrease of icebergs in the Arctic Ocean and related ecological changes, the discovery of lake water in the depths of the Antarctic, and changes in the ozone layer over the polar regions.

Satellites in space can observe detailed data about the oceans, such as surface temperature, salt content, and surface position. Yet all of these are merely two-dimensional distributions. It might be possible from space to capture changes in surface flow over time and other data up to a certain depth. However, such data represent only a fraction of the oceans as a whole. Observation of the interior of the oceans is only possible by compiling linear data running from the surface of oceans towards their depths with plane data, both of which are acquired through actual measurements. The simultaneous association of data obtained from space on the atmosphere, geosphere, and hydrosphere with data measured on the ground, in the oceans, and by air, may hold the key for dramatically advancing our understanding of the Earth.

In line with this progress, our concept of the Earth’s environment will presumably expand over the next twenty years, as shown in Figure 1. At present, the concept of the Earth’s environment is limited to the zone conducive to human activity, which ranges from an altitude of 30 km inside the stratosphere and to a depth of 10 km in the oceans. Cooperation among researchers from various fields

■ Figure 1 An Expanded Awareness of the Earth’s Environment



will offer a more interconnected concept of the Earth’s environment, one that extends outward into space to include the entire solar system and inward to include deep waters — and even Earth’s inner core. Perhaps such conceptual expansion is similar to the way DNA mapping allowed us to gain an integrated understanding of the connection between life forms over the past 4 billion years and the connection between the tens of millions of life forms that inhabit the Earth today.

The connection between Earth’s environment and humans

The connection between the Earth’s environment and humans at different levels, as well as the ways we humans should recognize those connections, is illustrated in Figure 2. Mankind has impacted the entire natural environment of the Earth to such an extent that the end of our own existence is increasingly imaginable with the limited space and resources available on Earth. Over the past 4 billion years, the evolving creatures on our Earth have diversified and extended the connections among one another amid Earth’s changing environment. The most basic unit for life on Earth, including humans, is the cell, as shown at the very bottom level in Figure 2. For example, an individual human is made up of approximately 60 trillion cells. The lifespan of each human is limited, and humans can only survive from generation to generation thanks to their social activities.

We humans have created a diverse spectrum of knowledge to ensure our collective survival. We have created various social systems, including religion, politics, economics, science, technology, education, thought, the arts, nation states, corporations, media, and sports. You can recast

these reserves of knowledge created by humans as culture. Today, 7 billion individual human beings inhabit this planet we call Earth. The population explosion in the two centuries since the 19th century was made possible by rapid advancements in science and technology.

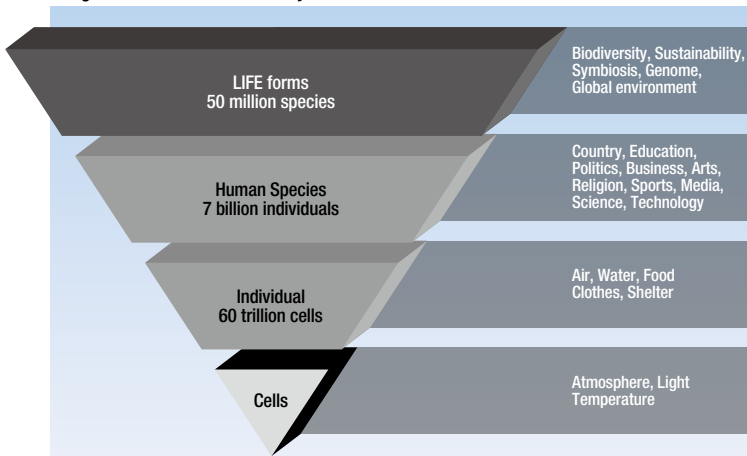
Among life environments on Earth, oceans are characterized by slower overall changes when compared to continental areas, given the larger exposed surface and the fact that water is a fluid, as well as its correspondingly large thermal capacity. Unlike continental areas, once any negative impact become visible in oceans, it will be too late to fix it because the change will already have taken place globally by then.

The Earth, our arcadia

Our human bodies cannot survive unassisted in the environment of space for even a split second. Individual humans can survive just a few years at most inside a spacecraft with an artificial Earth environment called a life-support system. In the spacecraft I lived in (the space shuttle), energy was provided in the form of electric power from a fuel cell, wherein hydrogen and oxygen were combined to release energy. We drank the pure H₂O that was generated through this process. It had an unpleasant taste. All the air and food were brought from Earth. In order to survive in space, we must reproduce the Earth’s environment by applying science and technology and supplying everything from Earth. Except for microgravity, the environment inside a spacecraft seems almost identical to that of the Earth.

I returned to Earth twice after getting used to living in such a simulated Earth environment. Each time I relished the moment real air came into the space shuttle when the hatch was opened. The nostalgic smell and damp sensation on my skin were so refreshing. I felt surrounded by a myriad of microorganisms. I recall the sense of security I felt being at home again on the Earth. A fellow astronaut, who was supporting us and standing by on the ground, opened the hatch and offered us a glass of water. I downed the cold water in one gulp. I’ll never forget how tasty that natural water with its abundance of minerals was. We anticipate quite a challenging future for the 10 billion of us who will ultimately inhabit this Earth. Success or failure depends on whether we can evolve into a species capable of understanding the highest level of “connection between the Earth’s environment and humans.” ■

■ Figure 2 TSUNAGARI—universally connected network



1) Synthetic aperture radar (SAR) is an active radio-frequency sensor designed for observing the physical properties, relief, undulation, slope, etc., of the ground surface by emitting a microwave to the Earth and receiving the reflected wave. The sensor can be used in any weather, day or night, as it is practically unaffected by clouds, rain, or any other weather.

Interview: Living together with the Ocean

Yohei SASAKAWA

Chairman, The Nippon Foundation
(interviewer: Toshio YAMAGATA, Editor, Ship & Ocean Newsletter)
(Ship & Ocean Newsletter No.300 February 5, 2013)

The oceans, which cover 70% of the earth's surface, are becoming more and more important for the future of mankind's development. I believe that as human beings benefit from the great bounty of the oceans, international society should come together and work towards their comprehensive management and sustainable use. In order to pass on healthy oceans to the next generation, it is my firm desire that Japan should take the initiative in the field of ocean management.

Ship & Ocean Newsletter No. 300 Commemorative Issue

—Thank you for taking time out of your busy schedule to meet with us today. With your support, the Ship & Ocean Newsletter has now reached its 300th issue, and so I wanted to take this opportunity to ask you, as Chairman of the Nippon Foundation, about your wide range of activities towards co-existence between man and the ocean.

“Three hundred issues already? When the Newsletter was being launched, I thought it extremely important that it be issued regularly over a long period of time. However, I do remember feeling some unease at beginning the venture, not knowing who our readership would be, what kind of people might have an interest in the ocean. So I'm very happy to see, that through the efforts of all involved, beginning with you yourself and other academics, the Ocean Policy Research Foundation's central role in the creation of ocean policy is being widely understood and appreciated through the Newsletter articles. By all means, make your next goal the five hundred mark!”

—Thank you for those encouraging words. We on the editorial board plan to continue informing as many people as possible about the importance of the ocean. I want to ask you now about your keynote speech on the ocean at the United Nations on World Oceans Day, June 8th 2012. The



occasion was the UN's 30th Anniversary Commemoration of the adoption of UNCLOS and you were the only speaker invited from the private sector.

“It is indeed the 30th anniversary of the adoption of UNCLOS, but the U.S., essential to its success, has yet to ratify it. The UN has been involved in a wide variety of activities in the 60 years since World War 2, but I believe it's fair to say that initiatives on the ocean have lagged behind all the rest. Although a global population of 10 billion has now become a possibility, the ocean, indispensable to man's survival, is being polluted and fish stocks are decreasing. The urgency of comprehensive ocean management is something I believe all informed people around the world should share.”

—I understand your invitation to give the keynote address was in recognition of your international contributions to capacity development in regards to comprehensive ocean management.

“While I believe comprehensive management is necessary for all fields, that perspective was only applied to the ocean when the introduction of the EEZ regime began an era in which national borders could now be at sea. However, as maritime capacity development had been completely neglected, when those in developing countries were told to manage their EEZs, they found that they lacked personnel and as well as the necessary agencies and ministries. The Nippon Foundation discovered this situation at an early stage and has since then devoted its efforts to long-term capacity development. I expect it was these efforts that were being recognized by the invitation to speak.”

—I understand that the Nippon Foundation has developed scholarship programs at the World Maritime University and a variety of other institutions.

“To date, we have provided about 400 scholarships to WMU. We are also enabling people to study at the International Maritime Law Institute in Malta, the Seafarers International Research Centre at Cardiff University

in Wales, the Division for Ocean Affairs and Law of the Sea at UN headquarters, and the Partnership for Observation of the Global Oceans in Canada. Our focus is not limited to developing seafarer leadership, as a variety of ocean programs are helping to develop experts in maritime fields, in ocean observation, and international conflict resolution, etc., with highly qualified personnel as a result.”

—How many ocean professionals are now active around the world as a result of the Nippon Foundation’s efforts?

“To date, there are 780. It was rewarding to have our capacity development efforts recognized by the UN, but we still have a long way to go. Fortunately, however, one result of our long-term support is that those who have benefitted by it are now taking the initiative in international conferences and other meetings. With the emergence of these networks, Japan’s presence in maritime capacity development is now being felt around the world. This is something we are proud of.”

—The Nippon Foundation has long been a leader on the international scene, not limiting itself to a Japanese context. Can you tell me your thoughts on future capacity development efforts?

“A good example is our project to map the ocean floor, of which only about 10% has been completed. At this pace, it will take 100 years to finish. These kinds of extreme long-term programs require the right kind of personnel to continue advancing. There is also the field of maritime transport, which accounts for 90% of the movement of the world’s goods. But there is no end to examples of the ocean’s importance. From this perspective, you could say that we were late in starting our capacity development efforts. I believe we have to do more, so that countries around the world will come to realize the importance of maritime capacity development.”

—I understand that from a capacity development perspective you want to promote coordination with ocean industries.

“Shipping companies’ organization is outdated, and as for seafarer development, we have to say they are behind the times. For example, LNG carriers and other ships must shift to personnel that can fully understand the highest safety standards. To accomplish this, we must carry out seafarer education as quickly as possible. And it is my view that we must promote a common approach to seafarer education based on an international standard. Having established the International Association of Maritime Universities, I would like to see it contribute to seafarer education by producing a textbook based on



a common international standard suitable to this age of globalization. Ultimately, my dream is the creation of a systematic curriculum in which its activities would be expanded to provide competence in LNG technology.”

—In order for Japan to become a true maritime state, ocean education is a necessity and I believe needs to be actively promoted. What thoughts might you have in this regard?

“Japan is a maritime state” and “Japan is a great sea power” are expressions often used these days, but to me they sometimes seem to be just empty words. I mean, they are out of touch with actual conditions. This is another reason why we need a proper system of ocean education, which, as far as I can tell, has been almost totally lacking in the sixty years since the end of World War Two. Raising knowledge levels about the ocean from elementary school might at first glance seem a roundabout way toward progress, but I think it might actually be a shortcut.”

—I agree with you. The guiding spirit behind the Basic Act on Ocean Policy was that we should instill a feeling of familiarity with the ocean. Becoming familiar with the ocean, learning about it, protecting it, and using it, these are all important. The Ocean Policy Research Foundation, in its *Grand Design for Ocean Education in the 21st Century*, proposed that an ocean curriculum be developed and included in the National Curriculum Guidelines for elementary, junior, and senior high schools. This seems a step in the right direction.

“A person’s education never ends. Capacity development in the future won’t be up to us alone, but will need broad coordination of the efforts of a variety of people and institutions to succeed.”

Oceanography and Science

—Oceanography is a comprehensive science, so requires an interdisciplinary approach from among existing disciplines. I was at the School of Science of the University of

Tokyo until last year, and so able to witness the launching of the Ocean Alliance network which was established there with the support of the Nippon Foundation.

“Is that right? Among all that has taken place in Japan recently regarding the ocean, I believe it was epoch-making when the University of Tokyo established the Ocean Alliance in the President’s Office, setting in motion a powerful linking mechanism. It set out to unify an organization whose members, though part of the same university, had rarely collaborated on common goals. Making this a reality was a great achievement. As it is a model case for intramural collaboration among experts from every field that might be necessary for Japan’s ocean management in the future, I believe it truly marks a new era.”

—At the time the Ocean Alliance was being launched, I looked again at how many people were involved in ocean-related research and found that there were several hundred within the University of Tokyo alone. As everyone’s efforts had until then been without any coordination, the Alliance’s trans-disciplinary effect has been wonderful.

“Japan seems to be a little weak in the area of coordination between the natural sciences and the humanities and social sciences, but I think in future an approach based on a broader as well as international perspective will become important.”

—I believe you’re right. The International Council for Science (ICSU) has joined in an alliance with the International Social Science Council (ISSC), UNESCO, UNEP, the United Nations University, the Belmont Forum, and others to actively contribute to building a sustainable society through promoting useful dialogue between science and society. ICSU is now at the center of a large-scale, trans-disciplinary program called Future Earth that is being planned in response to the outcome document of Rio+20 entitled *The Future We Want*. Hearing your ideas today, you seem to be working towards a Future Ocean, one that will be sustainable. Aiming at the well being of both humans and the environment we will need a stronger framework for collaboration among experts and all of society’s stakeholders.

“As I understand it, all scholarship, including the natural sciences, is connected to the improvement of human life on the planet. Scholarship should not be allowed to become an end in itself. It is very important that what we do benefits mankind. I believe it is vital to raise awareness in society that the oceans we depend on for our very survival will be severely threatened if we continue our current ways. To accomplish this, I believe the proper stance for scientists is one that works to bridge

the gap between themselves and the general public.”

—I totally agree with you. Research cannot be done for its own sake. We should promote research designed with society in mind and its results should then be used to make society better informed.

“We carried out relief activities for 10 years in Chernobyl, and it was based on this experience that six months after the 3.11 disaster we brought together 32 of the world’s leading radiation scientists for a conference at Fukushima Medical University. We then submitted the proposal that resulted from the conference to the Japanese government. What I felt was the biggest problem then, and which was also one of the conclusions of the scientists participating, is why scientists could not provide convincing explanations to the disaster victims in terms they could easily understand. They were forced to reflect on the fact that even though they are radiation experts and are occupied daily in research activities, they did not have the words to communicate their results to society at large. That’s when, after consulting with the scientists, we decided to begin table talk meetings. We went from house to house, into people’s living rooms, and used everyday language so that they could understand the situation and gain some peace of mind. I believe these kinds of activities will become more important for scientists in the future.”

—That’s an excellent example of how to facilitate communication. Table talk meetings have lately come to refer to talks in front of an audience, but its original meaning is talk around a dinner table.

“That’s it exactly. Politicians often use the term ‘table talks,’ but when they are held in front of two or three hundred people I don’t everyone comes away with a good understanding of things. But it’s different when, over a cup of tea, you can say to an elderly resident, ‘You really don’t have to worry so much. This is how things are...’” I think this kind of communication is extremely important.

Corporate Social Responsibility for International Contributions and the Ocean

—I think it’s very meaningful that the Nippon Foundation, from the private sector, actively pursues cooperative projects around the world. A few years ago, the Nippon Foundation took the initiative in improving traffic safety and security in the Malacca Singapore Straits, and lately it is cooperating in maritime security improvement with the three countries of Micronesia.

“In our project to strengthen the maritime security capabilities of the three Micronesian countries, we pro-

vided support for a small patrol boat. Given the scale of the problems in this ocean area however, this was only a small act of cooperation. From a maritime security perspective, Micronesia is one of the most important areas in the world. China is active in the area and America and Australia have a keen interest in the island States of the South Pacific, to the extent of setting up a cooperative framework there.”

—What are your views on our national response to security in the South Pacific? For example, how do you evaluate the response of the Japanese government compared with that of the U.S.?

“At the beginning of 2012, Secretary of State Hillary Clinton made an official visit to the countries of the South Pacific and political science scholar Michael Green visited nine countries in the region as Director for Asia. In contrast, not even a cabinet minister from Japan has visited the region in the whole of last year. In 2011 former Prime Minister Mori did make a brief visit. It was in the interest of deepening the relationship between the South Pacific island States and Japan that the Nippon Foundation made its modest gesture of cooperation.”

—The island States of the South Pacific are made up of small islands and large ocean areas. As an archipelagic nation itself, isn't it important that Japan support and cooperate with those countries?

“Palao is a country of only 28,000 people. Such a small country, acting alone, faces insurmountable problems, not only in security, but in waste disposal, environmental protection, and other areas. Along with security issues, there has long been a need for the Japanese government to establish a working, cooperative relationship with such countries as a matter of national policy.”

—Participation and contributions by the private sector, especially corporations, are indispensable for activities on the high seas and along the coasts. As a part of that, CSR has been receiving a lot of attention in the last few years. What is the Nippon Foundation's view of CSR?



“I am not a maritime affairs scholar, but do believe that amateurs can sometimes have valuable insights on things. For example, seven years ago, when the precepts put forth by the 17th century maritime scholar Grotius that ‘the ocean is boundless’ and ‘use of the ocean is free’ were still the consensus view, I first submitted, as regards the Malacca Straits, that ‘use of the ocean is not free.’ From now on, I said, those who benefit from the ocean should take on an appropriate level of responsibility for it. I especially wanted to bring shipping companies over to this way of thinking, so paid calls on many Western shipping company organizations to ask for their cooperation. However, I'm afraid they were a little taken aback at being told by an outsider, all of a sudden, that they should cooperate and take on an ‘appropriate level of responsibility.’ Although CSR on the oceans is still lagging far behind where it should be, we have gotten to the point where the shipping industry voluntarily hosted its on conference on the subject, in April of 2012 in Singapore.”

Towards Hosting a World Ocean Conference in Japan

—We all benefit from the ocean in a variety of ways, but to manage the ocean and use it in sustainable ways calls for leaders in a variety of fields. I've asked you about many different topics in this interview, but could you sum it up by telling us what kind of concrete plans the Nippon Foundation has for the future in this regard?

“The ocean is still far from being the object of concerted attention by the international community. There is a need to raise the awareness of the world's politicians and others in leadership positions that the world's oceans are in a perilous condition. What I would really like to do is synthesize the scientific data and present it before an international conference in Japan, to be a warning to the world. And as soon as possible. If a comprehensive international conference on the oceans could be held in Japan for at least five or ten years, the world would recognize, that, ‘concerning management of the world's oceans, it is Japan that is taking the initiative.’ That's the kind of country I would like to make Japan.”

—I have great hopes for a comprehensive international oceans conference that would address the issues in a trans-disciplinary way. If it could be held regularly, Japan would be known everywhere as a maritime state dedicated to protecting the world's oceans. I'm confident the Nippon Foundation will continue to demonstrate growing leadership on the international stage. Thank you sharing your valuable thoughts with us today. ■

The Iwate/Sanriku Implementation of a Recovery Based on Ocean Energy Resources

[KEYWORDS] Sanriku recovery / renewable ocean energy / marine industry creation

Takuya TASSO

Governor, Iwate Prefecture

(Ship & Ocean Newsletter No.302, March 5, 2013)

In response to the Basic Act on Ocean Policy, Iwate prefecture drew up the “Iwate-Sanriku Marine Industry Promotion Guideline” in 2009 as part of its efforts to encourage active utilization of ocean resources and foster marine industries. In order to bring about a successful recovery to the Sanriku coast after the massive damage caused by the 2011 Great East Japan Earthquake and Tsunami, we want to recreate the area by viewing the ocean that spreads out before us as a major resource, speeding up existing initiatives, and proceeding with efforts to make the area a center for research in renewable ocean energy, accompanied by viable projects.

Devastation by the Great East Japan Earthquake and tsunami and the reconstruction plan

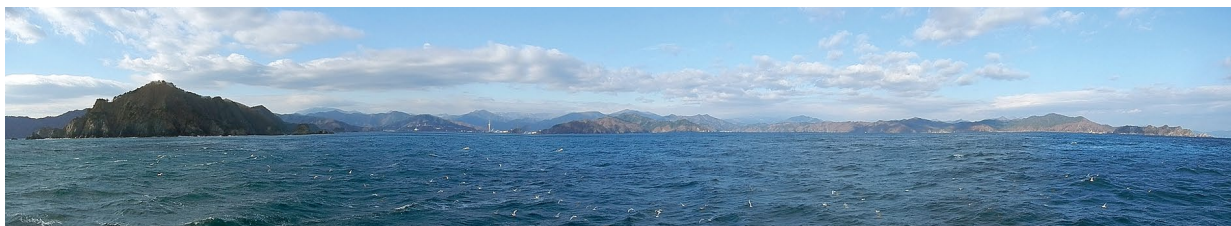
On March 11, 2011, many precious lives and assets were lost when a massive 9.0-magnitude earthquake and its associated tsunami struck eastern Japan. Widespread devastation also impacted daily life and transportation infrastructures and cities themselves. As of December 2012, 4,672 people were confirmed dead, 1,171 people were missing, and 38,908 people (16,400 households) were living in temporary housing. On August 11, 2011, the Iwate Prefecture Great East Japan Earthquake and Tsunami Reconstruction Plan was developed with three basic principles: ensure safety, rebuild lifelines, and restore livelihoods. Our prefectural government is currently putting all of its efforts toward early recovery in the development of disaster-resilient communities, the creation of disaster-recovery public housing, and the restoration of fisheries, which are a key industry for coastal areas. This plan also establishes the Sanriku Creation Project to build a new world-class community. This long-term plan exemplifies the goals of reconstruction. Measures such as the creation of an international center for research exchange and the Sanriku eco-town are already under way.

Reconstruction by harnessing Sanriku's marine resources

Prior to the disaster, Iwate Prefecture had been engaged in the creation of new industries and local development by harnessing the diverse marine resources available off the

Sanriku Coast. In fact, in December 2009, the Guidelines for the Development of Marine Industry on Iwate's Sanriku Coast were developed to create a center for ocean research, by utilizing its cluster of ocean research institutes, and to attract marine renewable energy development projects. These activities are crucial for addressing a host of challenges in the areas affected by the major earthquake and tsunami, such as the recovery of the marine ecosystem and fishery environment, which underwent drastic changes; the prevention of long-term power outages; and the creation of new industries and jobs. These can only be achieved over the medium- to long-term and were thus incorporated into the reconstruction plan as the Sanriku Creation Project, through which marine environment and ecosystem research centers and marine renewable energy research centers are to be formed and their findings implemented and applied.

Presently, joint research is being conducted in the fields of marine environment and ecosystems among universities, research institutes, fisheries cooperatives, and other partners. The Tohoku Marine Science Center Development Project, a major Ministry of Education, Culture, Sports, Science, and Technology project, is being spearheaded by the Atmosphere and Ocean Research Institute of the University of Tokyo, Kitasato University, and the Japan Agency for Marine-Earth Science and Technology. At the prefectural level, the results of activities by the Iwate Ocean Research Consortium, comprised of ocean research institutes and local communities on the Sanriku Coast, will be provided as feedback to those involved in fisheries and the fishery industry. We will seek to expand networks among research-



Panoramic view of Sanriku's ria coast near Kamaishi

ers both in Japan and abroad.

The coast of Iwate Prefecture is characterized by a diverse terrain. The area around Miyako City, located roughly in the middle of the coast, divides the raised beach with coastal cliffs and terraces in the north and ria coast typical of Japan that was shaped by the submerged foot of the Kitakami Mountains in the south. For this reason, the coastal waters off the northern coast have submarine shoal topography and waters off the central and southern coast have diverse hydrographic conditions and precipices. We think that this area holds great potential for the field of marine renewable energy, from research to verification.

Seabed-mounted wind farms off the northern coast

Given the great wind energy potential and shoal topography, the commercialization of seabed-mounted wind farming is being pursued along the northern coast. In May 2012, the Iwate North Coast Marine Renewable Energy Research Group was launched as a partnership of local fisheries cooperatives, the business community, universities, government agencies, etc., to engage in research on marine renewable energy and to study measures to effectively use such energy. The group is furthering its understanding of the latest developments in Japan and abroad as well as ways to work with fisheries by inviting intellectuals and experts to give lectures. It is also clarifying the challenges of implementing seabed-mounted offshore wind turbines in the area and investigating the corresponding measures necessary to address them. The study has thus far pointed out concerns with vibrations and undersea noise caused by the offshore wind turbines and its effect on migrating fish such as salmon, one of the prefecture's core products. The prefecture will conduct further research projects to address such challenges while referring to existing studies and expert opinions from both Japan and abroad, offshore wind-power demonstration projects by the government, etc.

Attracting demonstration fields

We are striving to create new industries on the central and southern coast by setting up demonstration fields for floating offshore wind-power generation, wave-generated electricity, etc., while making the most of the diverse submarine topography and hydrographic conditions. On May 2012, the government's Secretariat of the Headquarters for Ocean Policy established the Governmental Policy for the Promotion of Development of Ocean Renewable Energy to develop demonstration fields in Japan. The first production-scale demonstration field of marine renewable energy in Asia is expected to encourage accumulation of knowledge

by researchers and companies from around the world, as well as to produce great economic effects, thanks to a cluster of research institutes and manufacturers and the creation of jobs. In order to attract such a demonstration field, our prefecture is engaged in the measurement of the ocean's energy potential in coastal areas and study of the utilization of marine areas, as well as idea exchanges with fishery operators and local community members. We have also invited experts from the European Marine Energy Centre of Scotland, which is the world leader in marine energy development, to our coastal area and continue to forge a partnership while deepening our understanding of local conditions and fostering momentum for the initiative through lectures and on-site assessments.

A new Sanriku through marine renewable energy

We believe that reconstruction in the aftermath of the recent earthquake and tsunami should go beyond merely restoring what used to be. The desire to secure a supply of energy, which was necessary following the disaster, is shared throughout the coastal areas of Sanriku. A stable energy supply is also a pressing need to turn the fishing industry, which is a key industry for these areas, into a high-value added industry. In all likelihood, marine renewable energy will not only address these challenges, but also play a crucial role in the development of a new Sanriku. We ask for your continued help and support to make this plan a reality. ■

My Desire for Reinventing Shima City

[KEYWORDS] *sato-umi* / comprehensive coastal zone management / blue economy

Hidekazu OGUCHI

Mayor, Shima City, Mie Prefecture

(Ship & Ocean Newsletter No.304, April 5, 2013)

Many natural bounties are to be found in the area surrounding Shima, but how to carry out long-term sustainable use of such resources is also a global issue, being the focus of discussions at the Oceans Day event at Rio+20 on how to establish a “blue economy.” Being located within the boundaries of a national park, Shima’s natural abundance is consciously protected by many of its residents, but Shima’s future development and economic growth depends on whether it can reinvent itself as a new “*sato-umi* city” in line with the blue economy approach.

Introduction

Shima City has incorporated comprehensive coastal management into the core of its regional development policy and is engaging in sustainable development. Let me give you some of the history behind our effort and share my thoughts on it with you.

Shima City was created on October 1, 2004 as a result of the merger of five towns belonging to Shima District: Hamajima, Daio, Shima, Ago, and Isobe. In 1992, Ago Bay’s pearl aquaculture industry was devastated by the red tide caused by toxic plankton called *heterocapsa circularis-quama*. At that time I fully realized that traditional stopgap measures could not produce sustainable regional development. But I was frustrated because, at the time, Ago Bay was subject to the jurisdiction of four towns, which was not conducive for an integrated approach to development.

2009, five years after the merger of Ago Bay’s towns into Shima City, proved to be a watershed year. In June of that year, we hosted Dr. Chua Thia-Eng and members of the Ocean Policy Research Foundation. As I listened to what they had to say, the plan for regional development that I had been seeking, along with the way that Shima City should interact with the ocean, began to come together in my

mind. After participating in the East Asian Seas Congress in the Philippines that same year (Photo 1), I became convinced that all the citizens of Shima City should promote environmentally-aware productive activities with a sound understanding of the material cycle in nature—from the mountains to the rivers, and from the rivers to the oceans—in order to revitalize our city and build a community of joy and happiness. Comprehensive coastal management was incorporated into the core of Shima City’s regional development policy because I believe that its basic principles, being scientifically based on nature’s laws and the natural order, can ensure the survival of both individual human beings and our community.

Earn! Learn! Enjoy! The Creation of a New *Sato-umi*

Comprehensive coastal management is quite an effective tool for creating a happy populace, but since the involvement of all citizens is necessary to carry out our plans, it is important to educate our citizens. For this purpose, I have developed clear policy guidelines entitled “The Basic Plan for Creating a *Sato-umi* in Shima City” (Photo 2). Specific activities have been planned in line with each category in the subtitle, “Earn! Learn! Enjoy! The Creation of a New *Sato-umi*.” We have organized various events to raise awareness among citizens and spread information. Let me express my commitment to this goal through part of a speech I gave at a recent event.

For ages, we people of Ago Bay have fully enjoyed the natural bounty found in our mountains and our ocean—hence the ancient name for our region “*miketsu kuni*,” which means that we produced a surplus of food and fed others. Our ancestors lived in peace and harmony with nature while they enjoyed the food and the comfortable environment it provided, forging a great local culture that remains an intrinsic part of us to this day. But somewhere along the line we started to neglect the ties that bind us with nature: the ties between the mountains and people, the earth and people, and the ocean and people. We began to selfishly plunder nature’s bounty and ended up destroying the

■ Photo 1



The East Asian Seas Congress 2009 in Manila. From the left, the then-chairperson, Masahiro Akiyama from OPRF; the author; former President of the Philippines Fidel Ramos; Hiroshi Terashima from OPRF; and Dr. Chua Thia-Eng

material cycle connecting forests with rivers and rivers with oceans—and ultimately the workings of nature as a whole. So let us now be mindful and follow in the footsteps of our ancestors, who lived in harmony with nature and cherished the gifts that the mountains and ocean of this Shima area provided. We must also remember their awe for and deep pride in the mountains, earth and ocean.

In the latter phase of The Basic Plan for Comprehensive Coastal Management in Shima City, we will focus our effort on “community development through the creation of a new *sato-umi*.” Our community development is intended first to revitalize the economy of Shima City and restore the ties between its citizens and nature. Our ultimate goal is to create a town that will pass on to our children and future generations the wonderful bounty of nature found in our area—one that is unsurpassed the world over—our beautiful mountains and wonderful earth that produce nature’s gifts and our ocean brimming with infinite wealth. Thus, in order for us, the people of Shima City, to continue to earn a living, the first step is to think about our abundant natural environment and act to preserve nature’s blessing here in Shima City.

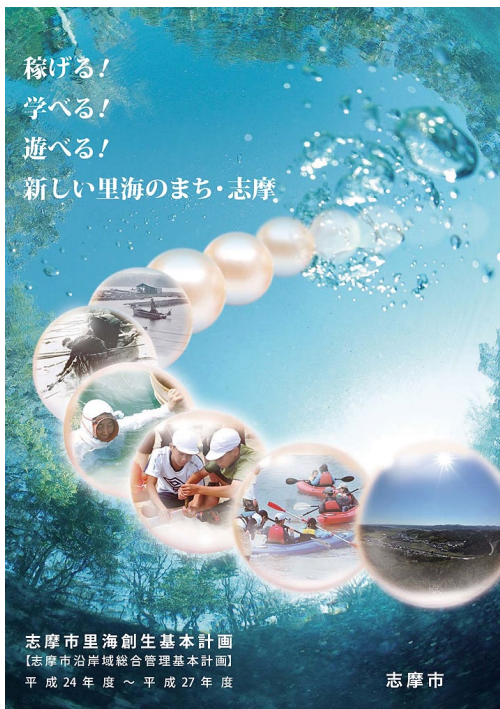
Simultaneous pursuit of environmental conservation and regional development

Shima City’s commitment to sustainably harvest the ocean’s natural bounty has some things in common with

the global agenda to establish a blue economy discussed recently in Brazil on Oceans Day at Rio+20. The city is located inside a national park, so many of its citizens make a conscious effort to protect nature’s genuine bounty. The development and promotion of the city depends on whether it can successfully forge “a new community built around a *sato-umi*” in the spirit of a blue economy. What we envision in our “community development through the creation of a new *sato-umi*” is a community that attracts people—those who want to buy safe food produced in a protected natural environment, those who want to buy sea lettuce, fish, and the beautiful pearls harvested from our clean ocean, as well as those who wish to visit or even live in Shima City. I believe this effort will lead to the establishment of a blue economy that combines marine environmental conservation and economic growth.

Our “community development through the creation of a new *sato-umi*” calls for all citizens to take the necessary actions for pursuing comprehensive coastal management and building an image of “Shima, a new city built around a *sato-umi*,” both in name and in reality. Both individual citizens and the businesses in our city are encouraged to make effective use of this image to improve livelihoods and business development. After all, economic development is achieved not only by our local products, but also through our wonderful scenery and the Shima City brand itself.

The development and prosperity of Shima City depends on whether it can successfully forge “a new community built around a *sato-umi*” in the spirit of a blue economy, which is increasingly becoming the mainstream throughout the world. We ask for the continued understanding, support, and active participation by our fellow citizens in our efforts to achieve “community development through the creation of a new *sato-umi*” in Shima City. ■



■ Shima City's Basic Plan for Creating a *Sato-umi*
<http://www.satoumi-shima.jp/>

“Earn! Learn! Enjoy! Shima, a new city built around a *sato-umi*”
The Basic Plan for Creating a *sato-umi* in Shima City
FY 2012-2015 Shima City

Japan's Sovereignty over the Senkaku Islands

[KEYWORDS] occupation / discovery / historical rights

Shigeyoshi OZAKI

Professor Emeritus, University of Tsukuba
(Ship & Ocean Newsletter No.307, May 20, 2013)

There is no doubt that the Senkaku Islands are a part of Japanese territory, both historically and in terms of international law. They are by no means disputed territory. In essence, the Senkaku dispute is a diplomatic and political issue triggered by the abrupt Chinese territorial claim over an area which had been thus far acknowledged as Japanese territory. The territorial dispute is not a “legal dispute” between nation states according to international law.

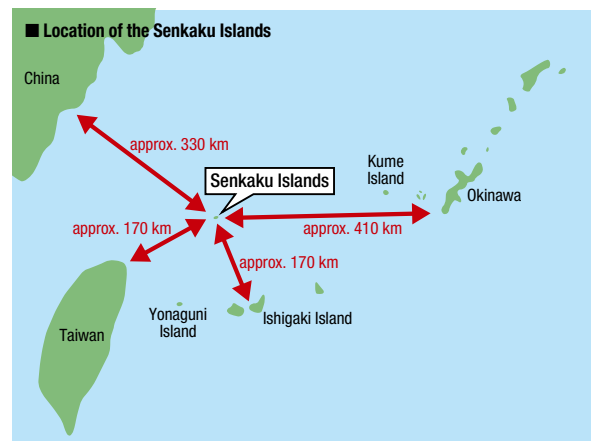
Japan's sovereignty over the Senkaku Islands based upon occupation

A series of measures undertaken by the Japanese government starting in January 1895 to incorporate the Senkaku Islands into Japan meets the prerequisites for occupation under international law and thus legally justifies Japan's assertion that it legitimately acquired territorial sovereignty over the islands. Specifically, these actions are (1) Japan's intention to retain possession of the islands was made sufficiently clear by a Cabinet decision in January 1895 to recognize the islands as being “under the jurisdiction of Okinawa Prefecture”; the development of the islands by a private citizen who planted flag poles and hoisted the Japanese flag on a regular basis after having won approval from the government; and a series of sovereign acts that implicitly expressed Japan's intention to retain possession of the islands; and (2) the exercise of sovereignty over the Senkaku Islands fully met the prerequisites for effective occupation. A variety of sovereign acts by the Meiji government includes the designation of the islands as state-owned land, the granting of approval to a private citizen for exclusive use of the land for designated purposes, the registration of the islands in the National Property Ledger, assignment of lot numbers, the collection of taxes from the owner, land surveys by the national and prefectural governments, and the rescue of people in maritime accidents.

Were the Senkaku Islands *terra nullius* under international law? Were they historically China's territory?

In 1971, China and Taiwan suddenly began to claim that “the Senkaku Islands had historically been China's territory, but Japan unilaterally incorporated them into its own territory.” It is rather incredible for a nation state to leave any part of its territory forgotten for three-quarters of a century after being annexed unilaterally by another country. However, after 76 years, China began denying Japanese sovereignty with such claims.

It is easy to examine the legal status of the Senkaku Islands by tracing their chronological history under the Ming Dynasty (1368-1644) and the Qing Dynasty (1644-



1912). The questions are (1) whether the Senkaku Islands were a territory of China during the Ming Dynasty and (2) (if they were not) whether the islands became part of China under the Qing Dynasty. Here we first need to take into account the undeniable historical fact that the island of Taiwan (Formosa) was not a territory of China during the Ming Dynasty.

Let's first consider the Ming Dynasty. Given the aforementioned fact, it could not have been possible that the Senkaku Islands, which are much farther from China than the island of Taiwan, were a territory of China at that time. Being much farther than Taiwan, these islands were not enclaves of Fujian Province, nor were they under the direct control of the Chinese central government in Beijing.

So what about the claim that China “discovered” the Senkaku Islands, as it's termed under international law, during the Ming Dynasty? China asserts that in 1534, Chen Kan, a Chinese envoy, saw the Senkaku Islands en route to the Ryukyu Kingdom (present Okinawa Prefecture) as part of an imperial mission on behalf of the Ming court and recorded the names in Chinese, which constitutes a “discovery” under international law. However, such a claim is inadmissible. The description in the record by Chen Kan alone does not indicate any intention to possess the Senkaku Islands. Chen Kan, who also saw *Kume Island*, simply wrote that “this is an island belonging to Ryukyu.” As a matter of fact, Chen Kan knew nothing of the islands

he passed on the way until he arrived at Kume Island and learned from the Ryukyuans that the island belonged to Ryukyu. In those days, voyages by Chinese imperial envoys to Ryukyu depended totally on pilots and experienced sailors dispatched by the Kingdom of Ryukyu. His report implies that the envoys translated the names of the island into Chinese after hearing the local names from Ryukyuans on board. At the time, ships owned by the Ryukyu government had long accounted for the overwhelming number of voyages between Ryukyu and China.

China also quotes the next Chinese envoy, Guo Rulin, who noted in 1561 that “*Chi Yu* (Jp. *Seki-sho*) is an island that borders the Ryukyu region.” Lately, however, it has been pointed out that the very same Guo Rulin indicates in a passage in *Shiquan Shanfang Wenji* (Jp. *Sekisensanbo-bunshu*) that “*Chiwei Yu* (Jp. *Sekibi-sho*) is the island that marks the boundary of the Ryukyu region and the island was named by the Ryukyuans.” Moreover, evidence that the Senkaku Islands belonged to China during the Ming Dynasty cannot be found in maritime defense documents from the late Ming Dynasty, such as *Zhouhai Tubian* (Jp. *Chukaizuhēn*) and *Ri Ben Yi Jian* (Jp. *Nihon Ikkan*). Therefore, historical materials from Ming China prove that the Senkaku Islands were not a part of Chinese territory during the Ming Dynasty. Now let’s move on to the Qing Dynasty. Generally speaking, it is quite difficult to prove that the Senkaku Islands, which were not Chinese territory during the Ming Dynasty, became part of China during the Qing Dynasty. In fact, there is no evidence that Qing China possessed the islands or exercised effective control over them. None of China’s historical materials explicitly describe the islands as Chinese territory, and there is no direct evidence to prove such a fact. Many of the passages from the literature quoted by China to support their claims are ambiguous and metaphorical and hardly serve even as indirect evidence.

Likewise, no evidence is found for the claim that the Chinese government and people considered the Senkaku Islands as appertaining or belonging geographically to the island of Taiwan throughout the Qing Dynasty. China proposes an interpretation of the passage “*diaoyu yu xiaodong xiaoyu ye*” from the *Ri Ben Yi Jian* (Jp. *Nihon Ikkan*) that means that “the Senkaku Islands are small islands belonging to Taiwan.” As discussed in detail by the author in a separate article, such an interpretation is impossible both in terms of literal interpretation and historical background. Actually, the overwhelming majority of historical materials (including documents, maps, and charts created by Chinese, Ryukyuans, Japanese, and Westerners) suggest that the Senkaku Islands were geographically regarded as part

of the Ryukyu Islands in the 19th century. Therefore, it is concluded that “the Senkaku Islands never became a territory of China during the Ming and Qing dynasties and have never been regarded as islands appertaining or belonging to Taiwan” based upon Chinese and other historical materials.

Acquiescence and a lack of protest for 75 years

The Senkaku Islands are closest to Ishigaki Island and Yonaguni Island of the Sakishima Islands, which are a part of the Ryukyu Islands. For ages the islanders used to travel back and forth between those islands (the distance from Taiwan is also the same, but in those days almost no islanders from Taiwan traveled to the remote Senkaku Islands). The overwhelming number of vessels owned by the Ryukyu government on the Senkaku route and the fact that Chinese imperial envoys depended completely on Ryukyuan pilots indicate that the Senkaku Islands are historically the territory of the Ryukyu Kingdom (a semi-domain; not national territory in terms of international law) and the surrounding waters are historically Ryukyu’s waters. In fact, in the 1550s, the Portuguese called the waters “*mare leucorum*,” or Ryukyu Sea. The Meiji government incorporated these islands into Japanese territory through “occupation” in 1895. The Qing government did not react to this move, a sharp contrast with Qing China’s reaction to the issue of “Nishizawa Island” in the Pratas Islands in the South China Sea during roughly the same period. For the subsequent 75 years until 1970, China never objected, instead acquiescing to Japanese sovereignty over the Senkaku Islands. Therefore, Japan had fully established sovereignty over the islands, for which the country believed it had historical rights, by means of “occupation” and “a peaceful, continuous display of possession.”

It can be determined that Japan established unshakable sovereignty over the Senkaku Islands in accordance with international law through these deeds. The rest belongs to the domain of diplomacy and politics. Japan should maintain its resolve and equanimity, while exercising all due consideration for peace and stability in the East Asian region. At the same time, further attention is necessary so that Japan does not lose effective control of the Senkaku Islands. ■

Prospects for the Marine Logistics Hub Initiative

— Technical Challenges —

[KEYWORDS] Japan Offshore Design and Engineering Platform (J-DeEP) / deep-water development / marine industry development

Masanori SHUKU

Chief Director, Japan Offshore Design and Engineering Platform (J-DeEP)
(Ship & Ocean Newsletter No.310, July 5, 2013)

On February 18 of this year, the Ministry of Land, Infrastructure, Transportation and Tourism approved the launch of the Japan Offshore Design and Engineering Platform (J-DeEP). The platform is currently striving to expand the application of floating structure technology by engaging in commercial offshore and deep-water projects in Brazil. Eventually, it aims to develop new marine industries such as resource development within Japan's exclusive economic zone (EEZ) by honing basic technologies and developing talent.

The Japan Offshore Design and Engineering Platform

On February 18 of this year, the Ministry of Land, Infrastructure, Transportation and Tourism approved the launch of the Japan Offshore Design and Engineering Platform (J-DeEP). J-DeEP is a nationwide private-public project designed to unite all Japanese shipbuilders and shipping companies (such as IHI, JMU, MHI, and NYK) that are willing to go beyond their individual corporate frameworks and join in marine development. In the immediate future, the priority is to create a logistics hub system in Brazil. Through the development of these commercial projects, the platform aims to expand application of floating structure technologies that offer various advantages. In the medium to long term, the platform aims to accumulate the resources necessary for future resource development inside Japan's exclusive economic zone by honing basic technologies (e.g., deep-water mooring) and by developing talent capable of accurately managing marine projects that involve many risks.

Japan is well-versed in marine development in terms of research, design, and construction with respect to semi-submersible rigs, offshore oil storage stations, the Mega-Float, the Deep-Sea Scientific Drilling Vessel *Chikyu*, FSO, FPSO¹⁾, and so forth. Nevertheless, the country has barely established a foothold in the marine oil and natural gas development market that is currently in the international spotlight. Korean shipbuilders have already shifted their focus from commercial vessels to ocean development, leaving their Japanese counterparts in their wake. Because of the lack of exposure to international competition at the forefront of ocean development, the technologies and human resources at companies in Japan's maritime industry have become uncompetitive—although there are exceptions. If the current trend continues, it may be no exaggeration to say that there is no tomorrow for Japan's maritime industry. We must put an end to this vicious cycle by pooling knowledge from our nation's companies at J-DeEP and continuously engaging in and developing commercial projects.

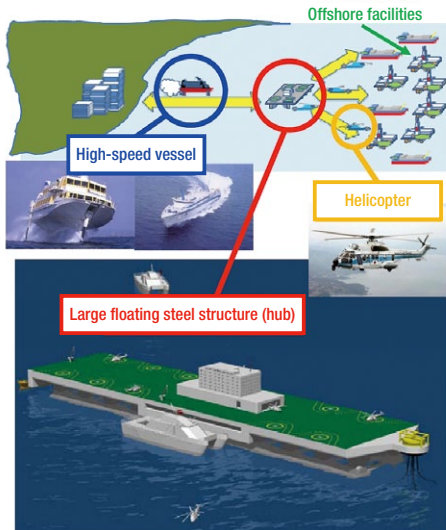
Fortunately, on April 26 of this year, a cabinet decision

was made regarding the new Basic Plan for Ocean Policy that prioritizes the development and creation of marine industries. In response, Dr. Tetsuo Yuhara submitted an article entitled "Toward the Creation of Marine Industries" to the "Economics Classroom" column in the April 30th edition of the Nikkei. In this article, Dr. Yuhara pointed out four important steps for creating new marine industries based upon successful examples from abroad. These steps are: (1) setting policy targets and development of laws (political initiative); (2) building a foundation (government initiatives supported by the private sector); (3) fostering projects for commercialization through applied use (private-public partnerships); and (4) encouraging commercialization and reinforcement of international competitiveness (private initiatives supported by the public sector). J-DeEP's activities fall under step (3) as they "apply public funds to reduce risks for private companies in order to implement private-public projects in actual ocean areas." We recognize how crucial our projects are and that Japan's success in developing tomorrow's marine industries depends on them.

The marine logistics hub initiative and the technical challenges

Now let's take a look at our top priority: creating a marine logistics hub in the immediate future. The Brazilian offshore fields that have been developed are about 100 km off the coast. Helicopters have served until now as the main method of transporting personnel to the drilling vessels and FPSOs used for oil and natural gas development. The developing offshore fields in the southern part of the country near Santos, however, may suffer reduced economic efficiency due to very deep waters in the area and a sizeable distance of 200 to 300 km from the coast, which would require refueling along the way if the conventional method is to be applied. With the marine logistics hub initiative proposed by J-DeEP, around 400-500 personnel would be transported by a high-speed vessel to temporarily board a large-scale floating logistics hub used as a transit point. They would subsequently be transported by helicopter to

■ Schematic view of the logistics hub system



drilling vessels or FPSOs. We judged that Japanese technologies accumulated over the years in engineering, quality assurance, environmental conservation, and construction of high-speed vessels and large-scale floating structures can be integrated to achieve a new highly reliable system that meets customers' needs. In addition to facilities for helicopters, the floating logistics hub will be equipped with lodging and medical facilities in case of sudden weather changes.

Of course many challenges will need to be addressed in light of the rough wave conditions off the coast of Brazil. They include high-speed vessel turbulence, the hub's ride quality, the safety and efficiency of towing high-speed vessels to the floating logistics hub, as well as pier docking, boarding, and disembarkation. We will seek appropriate solutions through a series of brainstorming sessions involving relevant manufacturers. Ultimately, it is our plan to comprehensively verify our proposed solutions in terms of safety, reliability, etc., using the experimental tank for marine situations and the navigation risk simulator at the

Prospects for the Marine Logistics Hub Initiative
— Technical Challenges —

world-class National Maritime Research Institute (NMRI).

It is essential to thoroughly evaluate the risks associated with any highly innovative concept, even one based on a combination of existing technologies, when it is put into operation. We intend to mobilize the expertise of the NMRI and request third-party evaluations by classification societies such as ABS or DNV.

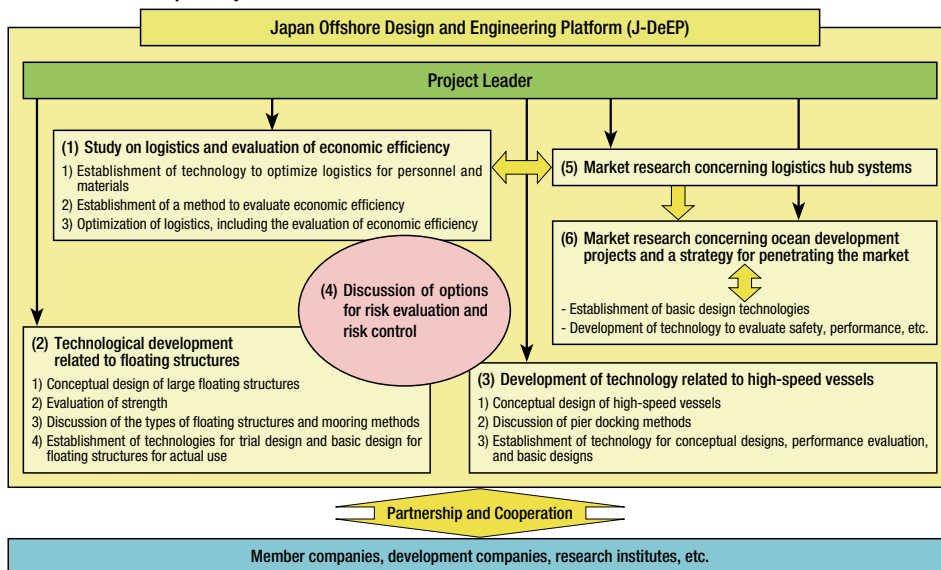
We aim for the horizontal development of this marine logistics hub initiative by launching this technology not just in Brazil but on the global stage. But our aspirations extend even further, as we seek to cultivate market demand for infrastructure facilities that utilize a mobile floating system that requires a short on-site construction period.

Striving to achieve our dream

In addition to the technical aspects of the J-DeEP discussed above, it is also important to establish a project scheme that takes finances into account. We will do so with the generous support of all parties concerned.

Any project starts out as a grand vision and entails a process for assembling a team of passionate people who will engage in an all-out effort to make the dream come true (i.e., practical application). The initiative, no matter how spectacular, would make no social contribution nor serve any purpose were it to fall apart without any results. Such frustration might discourage the young professionals otherwise destined to lead the next generation. We will take a simple, honest approach to achieve our dream while exercising bold, flexible ingenuity. ■

■ Research and Development System



J-DeEP's logo mark features a red J (Japan), green to represent Brazil, and blue to represent deep water

1) FPSO stands for floating production storage and offloading system; FPSOs are used for oil and gas. Many FPSOs have the shape of a ship. A similar system, one without production facilities that is used exclusively for storage and offloading, is called FSO, or floating storage and offloading vessel.