

**Research Report on International
Economy and Foreign Affairs
(Interim Report)
(Excerpt)**

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**Research Committee on International Economy and Foreign Affairs
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Contents

| | |
|---|----|
| Foreword | 1 |
| I. Research Process | 2 |
| II. Research Outline | 4 |
| 1. Concept of Ocean Utilization and Development Including Securing of Marine Energy and Mineral Resources, and Concept of Various Problems and Efforts Regarding the Maritime Environment | 4 |
| (1) Efforts to Address Problems Regarding the Polar Regions | 4 |
| a. Outline of Statement of Opinions by Voluntary Testifiers (Omitted) | |
| b. Main Points of Discussion (Omitted) | |
| (2) Problems and Efforts in the Quest to Conserve Marine Biodiversity and Achieve the Sustainable Use of Marine Bioresources | 6 |
| a. Outline of Statement of Opinions by Voluntary Testifiers (Omitted) | |
| b. Main Points of Discussion (Omitted) | |
| 2. Concept of Various Problems and Efforts Regarding the Maritime Environment, and Efforts and Roles of Japan to Lead the International Community as a Maritime Nation | 8 |
| Efforts and Problems in the Quest to Achieve a Zero-Carbon Society, Including Offshore Wind Power Generation and Zero Emission Ships | 8 |
| a. Outline of Statement of Opinions by Voluntary Testifiers (Omitted) | |
| b. Main Points of Discussion (Omitted) | |
| 3. Concept of Various Problems and Efforts Regarding the Maritime Environment.. | 11 |
| Responses to Conservation of the Maritime Environment and Various Maritime Meteorological Problems | 11 |
| a. Outline of Statement of Opinions by Voluntary Testifiers (Omitted) | |
| b. Main Points of Discussion (Omitted) | |
| 4. Efforts and Roles of Japan to Lead the International Community as a Maritime | |

| | |
|---|----|
| Nation | 13 |
| (1) Problems and Efforts Regarding Maritime Security | 13 |
| a. Outline of Statement of Opinions by Voluntary Testifiers (Omitted) | |
| b. Main Points of Discussion (Omitted) | |
| (2) Current Status and Problems Regarding Maritime Education and Maritime Human Resource Development | 15 |
| a. Outline of Statement of Opinions by Voluntary Testifiers (Omitted) | |
| b. Main Points of Discussion (Omitted) | |
| 5. Japan Living with the World through the Ocean (Exchange of Views among Committee Members) | 18 |
| Afterword | 27 |
| Reference 1 Timeline of Deliberations | 29 |
| Reference 2 List of Committee Members | 34 |

Foreword

Today, the international community faces a variety of complex, wide-ranging problems relating to the ocean, including environmental, economic, and security issues. The Committee established “Japan Living with the World through the Ocean” as the research theme for its three-year term and is pursuing research based on an awareness of the need to identify the contributions that Japan can make as a maritime nation, in order to ensure the appropriate utilization of the ocean—which originally nurtured humankind and a variety of other life on Earth and is essential to its survival—without its becoming a venue for conflict, and to pass it on to future generations in a sustainable form.

In the second year, based on the direction indicated in the interim report of the first year, we undertook more in-depth research into a number of problems highlighted in the first year, and also highlighted and researched new issues, bearing in mind the interrelationships between various problems relating to the ocean.

Polar regions, the conservation of biodiversity, the achievement of a zero-carbon society, maritime security, the maritime environment, and maritime education and human resource development were raised as specific discussion points. Voluntary testifiers offered views that included some thought-provoking suggestions and engaged in multifaceted discussion with Committee members.

This interim report provides an outline of this second year of research.

I. Research Process

The House of Councillors establishes Research Committees to conduct long-term and comprehensive research relating to fundamental matters of government. For the purpose of conducting long-term and comprehensive research on the international economy and foreign affairs, the Research Committee on International Economy and Foreign Affairs was established on October 4, 2019, during the 200th session of the National Diet (Extraordinary session).

At a Board of Directors meeting on December 9, 2019, the Committee decided on “Japan Living with the World through the Ocean” as the theme for this three-year term’s research. We also decided to proceed with research covering the three subsidiary research themes of “Concept of Ocean Utilization and Development Including Securing of Marine Energy and Mineral Resources,” “Concept of Various Problems and Efforts Regarding the Maritime Environment,” and “Efforts and Roles of Japan to Lead the International Community as a Maritime Nation.”

In the first year, the Committee began by seeking to gain a general, high-level grasp of the basic framework of Japan's efforts and the international law of the sea via a government testifier’s explanation concerning “Japan’s Ocean Policy,” which was followed by a question and answer session, and also listened to the opinions of voluntary testifiers on the same topic, followed by another question and answer session. The Committee subsequently furthered its research by listening to the opinions of voluntary testifiers and conducting question and answer sessions with them on the themes “Concept of Ocean Utilization and Development Including Securing of Marine Energy and Mineral Resources” and “Efforts and Roles of Japan to Lead the International Community as a Maritime Nation.” After the Committee members then exchanged views with each other, the Committee decided on the research report (interim report) and submitted it to the President of the House of Councillors on June 10, 2020.

In the second year’s research, which this report covers, during the 204th Diet session

(Ordinary session), while bearing in mind the interrelationships between the subsidiary research themes, the Committee took up the “Concept of Ocean Utilization and Development Including Securing of Marine Energy and Mineral Resources, and Concept of Various Problems and Efforts Regarding the Maritime Environment.” At each of two meetings, the Committee listened to opinions from three voluntary testifiers and conducted question and answer sessions with them on the subject of “Efforts to Address Problems Regarding the Polar Regions” and “Problems and Efforts in the Quest to Conserve Marine Biodiversity and Achieve the Sustainable Use of Marine Bioresources” (February 10 and 17, 2021). Following on from this, the Committee highlighted the “Concept of Various Problems and Efforts Regarding the Maritime Environment, and Efforts and Roles of Japan to Lead the International Community as a Maritime Nation,” listening to opinions from three voluntary testifiers and conducting a question and answer session with them on the subject of “Efforts and Problems in the Quest to Achieve a Zero-Carbon Society, Including Offshore Wind Power Generation and Zero Emission Ships” (February 24, 2021). In addition, taking up the “Concept of Various Problems and Efforts Regarding the Maritime Environment,” the Committee listened to opinions from three voluntary testifiers and conducted a question and answer session with them on the topic of “Responses to Conservation of the Maritime Environment and Various Maritime Meteorological Problems” (April 21, 2021). Furthermore, highlighting the “Efforts and Roles of Japan to Lead the International Community as a Maritime Nation,” the Committee listened to opinions from three voluntary testifiers on the topic of “Problems and Efforts Regarding Maritime Security” and from two on the subject of “Current Status and Problems Regarding Maritime Education and Maritime Human Resource Development,” conducting question and answer sessions on each (April 14 and May 12, 2021). Finally, the Committee members exchanged views with each other on the topic of “Japan Living with the World through the Ocean,” which is the theme for this three-year research period (May 19, 2021).

II. Research Outline

1. Concept of Ocean Utilization and Development Including Securing of Marine Energy and Mineral Resources, and Concept of Various Problems and Efforts Regarding the Maritime Environment

(1) Efforts to Address Problems Regarding the Polar Regions (February 10, 2021)

The polar regions are composed of Antarctica and the Arctic. The Antarctic Treaty, which sets forth the basic principle of freezing any territorial claims, was signed in December 1959 and a framework promoting international cooperation on matters of common interest has grown up around it. Japan was one of the original signatories of the treaty.

While the Arctic is regulated by the United Nations Convention on the Law of the Sea (UNCLOS), there is no comprehensive framework like the Antarctic Treaty and discussion of matters concerning the coordination of international cooperation relating to the Arctic and rule-making for this purpose is being carried out in the Arctic Council, which was established in 1996. Holding Observer status in the Arctic Council since May 2013, Japan has engaged in international cooperation with relevant countries through its involvement in the formation of international frameworks in the Arctic and has also promoted international partnerships for research and human resource development at other countries' research and observation stations via the Arctic Challenge for Sustainability research projects.

Japan is located closer to the Arctic than any other country in Asia except for Russia and is therefore more susceptible to various changes in the Arctic. While the rapid environmental changes symbolized by the decline of Arctic Ocean sea ice since the 1980s will open up new possibilities for the Northern Sea Route and resource development, they are also a source of growing concern to the international community, due to such

worldwide issues as global environmental problems and changes in the security environment.

Amid this situation, the government's Headquarters for Ocean Policy formulated "Japan's Arctic Policy" in October 2015, while in the Third Basic Plan on Ocean Policy, which was formulated in May 2018, the government positioned Arctic policy as a major measure for the first time. Given the need for international decision-making and rule-making aimed at the sustainable use of the Arctic, as well as for further accumulation of associated scientific knowledge and observation, Japan's efforts in this arena are being called into question.

Based on this awareness, the Committee listened to the opinions of voluntary testifiers and discussed with them the current status and issues related to the international order surrounding the polar regions, relationships to the Arctic from the perspective of science, and future prospects for the Northern Sea Route.

The points of discussion included the following matters: the current status and future prospects of the international order in the Arctic; Japan's approaches to activities involving the Arctic Council; the current status and future issues relating to efforts in academic fields relevant to the Arctic; the prospects for the Northern Sea Route and approaches to national support for their development; the current status and issues related to environmental problems in the polar regions; and various issues surrounding Arctic indigenous peoples.

a. Outline of Statement of Opinions by Voluntary Testifiers

(Omitted)

b. Main Points of Discussion

(Omitted)

(2) Problems and Efforts in the Quest to Conserve Marine Biodiversity and Achieve the Sustainable Use of Marine Bioresources (February 17, 2021)

Even now, human life is sustained by various bounties of the sea, derived from the ocean's diverse organisms and ecosystems. Conserving marine biodiversity and promoting its sustainable use are essential if we are to ensure that humankind can continue to survive and enjoy these blessings of the sea into the future.

At the 10th meeting of the Conference of the Parties to the Convention on Biological Diversity (COP 10) in 2010, the Strategic Plan for Biodiversity 2011-2020 and Aichi Biodiversity Targets were adopted as global targets for the period through to 2020. This Strategic Plan establishes "Living in harmony with nature" as the long-term Vision to 2050 and takes "effective and urgent action to halt the loss of biodiversity" as the short-term Mission to 2020. Furthermore, it sets out five strategic goals for achieving the Mission and, below those, 20 individual targets (the Aichi Biodiversity Targets) to be achieved by 2015 or 2020.

In September 2020, in the fifth edition of the Global Biodiversity Outlook, the United Nations Secretariat of the Convention on Biological Diversity announced its assessment that none of the 20 Aichi Biodiversity Targets had been fully achieved, with six partially achieved and 14 not at all achieved. In light of these grim results, efforts including more effective promotion of biodiversity conservation and sustainable use will be required, in order to bring to fruition the Vision of living in harmony with nature by 2050.

Amid this situation, the appropriate stewardship of fishery resources is also a crucial challenge in conserving marine biodiversity. At just over 4 million tons, Japan's current fishery output is somewhere around one-third of what it was at its 1980s peak. Reasons cited for the decline include overfishing, marine ecosystem shifts occurring at intervals of a few decades, environmental degradation of coastal ecosystems, falling consumption due to a shift away from eating fish, a decline in the number of fishery workers and the aging of the population working in the sector, and withdrawal from overseas fishing grounds.

While some parties note the importance of further promoting the establishment of marine protected areas, which seek to protect certain areas of water to conserve marine ecosystems, Japan must seek to balance the conservation of marine ecosystems and biodiversity with the sustainable development of the fisheries industry through appropriate stewardship based on scientific knowledge, and to work closely with relevant countries and regions.

Based on this awareness, the Committee listened to the opinions of voluntary testifiers and discussed with them the current status and issues related to the conservation of marine biodiversity and the importance of the Aichi Biodiversity Targets, international trends related to the conservation of marine biodiversity and sustainable use, along with Japan's role therein, and issues related to the sustainable use of living marine resources and the future direction thereof.

The points of discussion included the following matters: approaches to Japan's international contribution in the biodiversity field; reviews of policies and associated issues related to biodiversity; efforts to promote public understanding of biodiversity; efforts and issues surrounding sustainable oceans; efforts and issues aimed at promoting a One Health approach; efforts related to sustainable food production, distribution, and consumption; the actual situation of plastic recycling in Japan and approaches to international agreements; the current status of efforts related to whaling and associated issues; and the sustainable use of living marine resources in the polar regions.

a. Outline of Statement of Opinions by Voluntary Testifiers

(Omitted)

b. Main Points of Discussion

(Omitted)

2. Concept of Various Problems and Efforts Regarding the Maritime Environment, and Efforts and Roles of Japan to Lead the International Community as a Maritime Nation (February 24, 2021)

Efforts and Problems in the Quest to Achieve a Zero-Carbon Society, Including Offshore Wind Power Generation and Zero Emission Ships

In recent years, the introduction of renewable energy with a minimal environmental impact and the creation of a low-carbon society have become major challenges for the international community in its quest to reduce greenhouse gas (GHG) emissions to combat climate change.

Amid this situation, Prime Minister Suga declared in October 2020 that Japan will strive to become a carbon-neutral, decarbonized society by 2050, devoting all possible effort to the creation of a green society by positioning a positive cycle of economic growth and environmental protection as a key pillar of the Green Growth Strategy. A concrete roadmap for achieving this goal must be set out. For Japan, which has a vast marine area under its jurisdiction, promoting the use of maritime renewable energy is regarded as not only an important environmental measure, but also a key issue of ocean policy. It would be fair to say that the power source regarding which hopes are particularly high is offshore wind power generation, which can be installed on a large scale and will make a substantial contribution to reducing the burden on the public by lowering costs, as well as having a significant economic ripple effect. December 2020 saw the compilation of the “Vision for Offshore Wind Power Industry (1st),” which set a target of installing up to 45 gigawatts (GW) of capacity by 2040 and stated that the public and private sectors will work together to promote initiatives to strengthen industrial competitiveness in this area. The Vision also identified a number of future challenges, including the establishment of power grids, ports and harbors, and other infrastructure, the relaxation of multiple regulations that could become roadblocks in the business environment, the establishment of a resilient supply

chain, and the enhancement of domestic procurement capacity.

International shipping accounts for about 2% of global GHG emissions and in April 2018, the International Maritime Organization (IMO) adopted an initial strategy on the reduction of GHG emissions from ships that set the goals of halving GHG emissions by 2050 and phasing out GHG emissions from shipping entirely before the end of this century. In light of this situation, Japan, as one of the major players in the global shipping sector, established the “Shipping Zero Emission Project” in collaboration with the industrial, academic, and public sectors in August 2018. In March 2020, the Project formulated the “Roadmap to Zero Emission from International Shipping,” which incorporates such goals as launching the commercial operation of “Zero Emission Ships”—the ultimate in eco-ships free from GHG emissions—by 2028. Going forward, effective government backing is necessary to prevail in the face of fierce international competition from China and South Korea, while Japan’s shipbuilding industry should tap into currently predominant environmental performance technologies in the development of Zero Emission Ships.

Based on this awareness, the Committee listened to the opinions of voluntary testifiers and discussed with them the current status and issues related to offshore wind power generation, and future expansion of research and development focused on Zero Emission Ships.

The points of discussion included the following matters: efforts and problems in the quest to achieve more widespread use of offshore wind power generation in Japan and to cultivate and strengthen the industry; the profitability and costs of renewable energy and offshore wind power generation projects; differences between ministries and agencies relating to renewable energy projects; assessments of the Green Growth Strategy from the perspective of private sector companies; offshore wind power generation projects as regional development measures and a means of regional revitalization; lessons learned from an experimental project in Fukushima aimed at the future development of offshore wind power generation; the impact of offshore wind power generation on the environment and fisheries industry, and the role that companies should play in ensuring coexistence

with the fisheries industry; the necessity of local citizens' involvement and consensus in implementing offshore wind power generation projects; the importance of developing open systems for technology in the wind power generation industry; the future strategy for Japan's shipbuilding industry; the relevance of electric ships and autonomous shipping systems to the development of Zero Emission Ships; and approaches to interministerial coordination in promoting the development of infrastructure for creating Zero Emission Ships.

a. Outline of Statement of Opinions by Voluntary Testifiers

(Omitted)

b. Main Points of Discussion

(Omitted)

3. Concept of Various Problems and Efforts Regarding the Maritime Environment

(April 21, 2021)

Responses to Conservation of the Maritime Environment and Various Maritime Meteorological Problems

According to the report “The New Plastics Economy: Rethinking the future of plastics” by the World Economic Forum (Davos Forum) in January 2016, around 8 million tons of plastic waste enter the oceans worldwide each year and estimates suggest that, if left unchecked, there will be more plastic waste than fish (by weight) in the world’s oceans by 2050. Among the various problems highlighted as being caused by ocean plastic waste are degradation of the marine environment and ecosystems, a decline in coastal functions, adverse impacts on the landscape, obstruction of maritime traffic, and impacts on the fisheries industry and tourism. Leveraging its knowledge, experience, and technologies relating to proper waste disposal, Japan must contribute to effective measures for preventing plastic waste from entering the oceans and to efforts to ascertain the true nature of the situation, as well as contributing to the development of materials with a lower environmental impact and promoting a shift to such materials.

Along with oil spills and air pollution, the destruction of ecosystems due to the migration of organisms contained in ballast water and attached to ship hulls and resultant damage to fisheries and other industries have been cited as marine environment pollution issues caused by ships. To resolve such ship-related problems, the IMO has formulated uniform international rules, including the International Convention for the Prevention of Pollution from Ships (MARPOL) and the International Convention for the Control and Management of Ships’ Ballast Water and Sediments (Ballast Water Management Convention). As a leading maritime power, Japan must lead the international community in such efforts.

The ocean covers the vast majority of the earth’s surface and plays an important role in global climate systems, including through the absorption of a huge amount of heat and

carbon dioxide. Continuous oceanographic observation on a global scale that takes into account the relationship to the cryosphere—which is highly sensitive to the ocean and effects of global warming—is imperative in tackling climate change and it is vital for Japan to strategically and proactively build and strengthen systems for partnership and cooperation both within Japan and overseas.

Based on this awareness, the Committee listened to the opinions of voluntary testifiers and discussed with them issues concerning ocean plastic waste and prospects for addressing the problem, the current status and issues related to marine pollution caused by ships, and the impact of climate change on maritime meteorology and efforts to tackle associated problems.

The points of discussion included the following matters: efforts and issues surrounding the problem of ocean plastic waste; efforts and issues related to reducing GHG emissions; efforts and issues related to compensation for pollution damage caused by ships; efforts and issues related to maritime meteorological observation systems; efforts required to achieve a shift to unprecedented social systems; measures aimed at promoting science and technology diplomacy; and issues associated with the quest to utilize Arctic Ocean shipping routes.

a. Outline of Statement of Opinions by Voluntary Testifiers

(Omitted)

b. Main Points of Discussion

(Omitted)

4. Efforts and Roles of Japan to Lead the International Community as a Maritime Nation

(1) Problems and Efforts Regarding Maritime Security (April 14, 2021)

Adopted in 1984 and also referred to as the “Constitution of the Oceans,” UNCLOS is an important international law that comprehensively regulates various problems relating to the ocean and incorporates new systems such as exclusive economic zones (EEZs), while building on the existing body of law, such as the Geneva Conventions on the Law of the Sea and customary international law of the sea.

However, in recent years, China has stepped up activities in East Asia—particularly in the East China Sea and South China Sea—that could be regarded as a challenge to the order of the law of the sea based on UNCLOS and the like, including routine incursions by government vessels into Japanese territorial waters surrounding the Senkaku Islands, the February 2021 entry into force of the Coast Guard Law, and the establishment of new administrative units and moves to bolster military capacity in the South China Sea.

Guaranteeing maritime security and the rule of law based on UNCLOS in geopolitically critical waters traversed by sea lanes of importance to East Asia and, ultimately, the entire world is a matter of concern that involves the interests of not only Japan, but also the international community as a whole. As such, the question of how Japan should address this issue while working in partnership with the international community has been raised once again.

Based on this awareness, the Committee listened to the opinions of voluntary testifiers and discussed with them maritime security and the rule of law, problems surrounding China’s Coast Guard Law and Japan’s measures in response, and efforts aimed at maintaining order and guaranteeing security in the sea around Japan.

The points of discussion included the following matters: the current status of the order of the law of the sea based on UNCLOS and response measures targeting China; the current

status of problems surrounding China's Coast Guard Law and those surrounding the East China Sea and South China Sea, including waters around the Senkaku Islands and Taiwan, and measures in response to these issues; measures aimed at securing and making effective use of maritime human resources; approaches to the effective use of Japan's remote border islands; prospects for the upgrading of Japan Coast Guard vessels; and responses to human rights violations by China and its perceptions surrounding the rule of law.

a. Outline of Statement of Opinions by Voluntary Testifiers

(Omitted)

b. Main Points of Discussion

(Omitted)

(2) Current Status and Problems Regarding Maritime Education and Maritime Human Resource Development (May 12, 2021)

To boldly promote ocean policy as a maritime nation, public understanding of the importance of the sea is essential. Moreover, the next generation of personnel with specialist knowledge and skills must be secured in a stable manner, in order to ensure the development of Japan's maritime industry. Accordingly, it is vital to begin promoting maritime education at the elementary and secondary school level, so that children gain a deeper understanding of the sea and develop an interest in it. Furthermore, it is hoped that maritime education providing a deeper understanding of the sea as a public good that goes beyond the natural sciences and social sciences will contribute to children's personal growth as the main actors in a sustainable society in the future.

Given this situation, matters concerning the ocean and maritime affairs are clearly positioned as content to be covered in school education in the elementary and junior high school curriculum guidelines for social studies revised in March 2017 and lessons on the topic began at all Japanese elementary schools in 2020 and at all Japanese junior high schools in 2021. Taking into account the implementation status of these lessons, it will be necessary to further enhance maritime education going forward by identifying any issues faced and making the requisite improvements.

At the same time, as Japan is surrounded on all sides by sea, virtually all cargo exported and imported across its borders is carried by sea, while coastal shipping accounts for around 40% of all domestic cargo transportation. Thus, the shipping industry plays a highly significant role in the Japanese economy and the lives of the public, so securing seafarers to take charge of it is also extremely important from the perspective of economic security. The number of Japanese seafarers in the coastal shipping sector remains more or less flat, and while the number in the younger age bracket has been gradually increasing in recent years, those aged 50 or over still account for about half of the workforce. In the international shipping sector, Japanese seafarers numbered 2,174 in 2019 and growth has

been more or less flat in recent years, following a long-term decline. From the perspective of steadily passing on ship handling and other maritime skills to the next generation, securing and developing Japanese seafarers is a crucial issue in the quest to ensure the stability of shipping in Japan.

Based on this awareness, the Committee listened to the opinions of voluntary testifiers and discussed with them the current status and issues related to maritime education in Japan and worldwide, the current status of seafarers working in international shipping, the personnel profile of those suited to becoming seafarers, and efforts required by seafarer training institutions.

The points of discussion included the following matters: the causes of the decline in Japanese seafarer numbers, along with efforts to cultivate and secure Japanese seafarers and the significance thereof; efforts to cultivate female seafarers and associated issues; the need to expand seafarer training institutions and to provide government support for this, and the significance of private sector seafarer training institutions; the current status of efforts to develop autonomous ships and the future prospects thereof; seafarer experiences in international shipping; the significance of resuming tall ship training; reasons for the lack of progress in maritime education in Japan and the shift in the younger generation's focus away from the sea; use of ICT and readers in maritime education; regional development through maritime education; the significance of conducting maritime education separately from environmental education; efforts to enhance maritime education in the curriculum guidelines and reactions among recipients of the education; team-building and collaboration with school education and other education in the practice of maritime education; and the relationship of maritime education to peace education, and interaction with Taiwan and South Korea in the field of maritime education.

a. Outline of Statement of Opinions by Voluntary Testifiers

(Omitted)

b. Main Points of Discussion

(Omitted)

5. Japan Living with the World through the Ocean (Exchange of Views among Committee Members) (May 19, 2021)

The main opinions expressed in the exchange of opinions among Committee members are as follows.

(Basic approach of research)

- As the whole country is being urged to shift to teleworking to combat the spread of COVID-19, this Committee also should put in place without delay an environment enabling the opinions of voluntary testifiers and the like to be heard online. In addition, once the pandemic has been resolved, the Committee needs to devise operational methods that will enable a wider range of opinions to be sought, such as dispatching members to conduct field surveys, rather than relying solely on having experts come in to address the Committee.
- With the Third Basic Plan on Ocean Policy about to reach its halfway point, this Committee should provide the government with constructive recommendations aimed at the formulation of the next Basic Plan, so that it can contribute to the United Nations Decade of Ocean Science and the Sustainable Development Goals (SDGs), based on the premise of resolutely protecting the national interests of Japan as a maritime nation that lives in harmony with the world through the ocean.
- Based on the research conducted so far by this Committee, I feel there seem to be some elements common to the various multi-layered themes related to sea, so in our third year of research, we should set and discuss themes incorporating a bigger dimension, which are still centered on the sea, but also include other aspects. Environmental problems are a long-term challenge, while maritime security is a key issue of pressing concern and, with tension growing to quite a considerable extent, researching approaches to foreign

policy aimed at identifying the stance that Japan should take as a maritime nation in its dealings with the world is of significance.

- When I went on a fishing boat to see the Senkaku Islands 10 years ago, I realized that those engaged in the fisheries industry in the waters around those islands face an extremely harsh environment. Based on this experience, I would like this Committee to create opportunities to visit the Senkaku Islands and Japan's remote border islands.
- When selecting voluntary testifiers, we should invite people involved on the front line of various sea-related campaigns and activities, such as nonprofits and nongovernmental organizations, so that we can listen to a variety of views, including the difficulties faced in the course of their activities.
- While it is a fact that there are various problems, such as climate change, we need to deal with the situation calmly, from a long-term perspective. For example, 45 years ago, based on "The Limits to Growth," a report commissioned by the Club of Rome, there was a debate in Japan concerning the need to limit the birth rate due to fears of a population explosion, but in a complete turnaround, the Angel Plan was formulated 15 years later as a measure to counter the declining birthrate. Moreover, with Western car manufacturers promoting electric vehicles (EVs), rather than switching to EVs without careful consideration, Japan must think about ways of making the switch without destroying our automotive industry, of which we should be proud. When it comes to the problem of plastic shopping bags, too, I have doubts based on consideration of the volume of CO₂ emissions generated in the process of manufacturing reusable shopping bags. We must continue to look at the situation calmly, to ensure that a fallacy of composition does not arise.
- If we can conduct our research online, it will be vital to listen to opinions from the front

line of sea-related activities.

- As the aquaculture industry can take many forms, this Committee must also conduct research concerning areas of the fisheries industry that received little coverage during the second year of our work.
- Through this second year of research, I have realized anew that Japan is a maritime nation with tremendous potential in various fields, including marine resources, renewable energy, security, and logistics. In discussions aimed at resolving issues in the future, it was recommended that, although Japanese wind turbine manufacturers have withdrawn from the offshore wind power generation sector, open access should be granted to the technology now, while the know-how is still available. In connection with addressing climate change, it was stated that Australia and European countries are investing large sums in building monitoring systems on a global scale, due to their deep concern about rising sea levels and food crises. Given this situation, I have become aware of the need for Japan to enhance such efforts as well, and this Committee should therefore feed these points into its recommendations.

(Maritime security, rule of law and diplomacy)

- The enactment of the Coast Guard Law and other moves by China aimed at using force to change the status quo presents Japan with the extremely crucial questions of how to deepen multilateral collaboration while complying with international law and how to build a security system for protecting the nation's territory. In light of this, Japan should swiftly move forward with environmental enhancements and efforts to address the gray zone, including endeavoring to secure human and physical resources for the Japan Coast Guard (JCG) and bolstering collaboration between the JCG and the Self-Defense Forces. It would be no exaggeration to say that such issues are a matter of life and death for Japan and this Committee should take on the role of sharing information to ensure

widespread awareness of these issues both at home and overseas.

- To address China's hegemonistic behavior, it is vital for Japan to ensure the international order underpinned by basic rules in the form of the rule of law and, while applying diplomatic pressure in partnership with the U.S. and the countries of the EU, with which Japan shares common values, to demonstrate a willingness to build peace by strengthening cooperative relationships. In particular, cooperative relationships with Japan's neighbors South Korea and Taiwan will be of paramount importance.
- Japan has become a super-aging society and, given the fact that, with its population in decline and its appeal as a market fading, the nation is becoming unable to keep going economically through its own strength alone, cooperative relationships with the countries of Southeast Asia are essential. In terms of Japan's basic stance, it is vital to promote exchange with other countries, thinking of the sea as a shared asset, rather than facing off against countries on the other side of it.
- With regard to the use of the ocean, Japan must continue to present the international community with justifiable claims and appeals for proper operation based on UNCLOS. Furthermore, as the maritime security environment around Japan becomes increasingly challenging, Japan should always respond calmly on the basis of international law and, rather than overreacting to China's Coast Guard Law, must apply pressure in the course of deepening international collaboration, to ensure that the Coast Guard Law is not allowed to operate in forms that do not accord with the law of the sea.
- As well as enhancing systems in accordance with the "Policy on the Strengthening of the Coast Guard System," the imbalance in systems for the execution of business within the JCG should be eliminated and efforts to secure education and training promoted. In addition, bold efforts should be made to promote effective use of those who formerly

worked for the JCG.

- Japan should move forward with negotiations on the Maritime and Aerial Communication Mechanism with China. In addition, diplomatic authorities should make all possible efforts to ensure a successful outcome in the quest to eliminate the risk of military escalation, engaging in negotiations calmly and on the basis of international law, while persistently and clearly saying what needs to be said.
- I could not help but agree with the comment that there is a need to step up advocacy of Japan's assertion that the Senkaku Islands are an inherent part of the territory of Japan, both historically and internationally speaking, and that there exists no issue of territorial sovereignty to be resolved concerning the Senkaku Islands, as this assertion has not necessarily permeated throughout the international community. China's hegemonistic behavior and use of force to change the status quo surrounding the Senkaku Islands is absolutely unacceptable. With regard to territorial disputes, it is vital to continue to make claims based in reason and to resolve matters diplomatically and peacefully on the basis of international law.
- When it comes to problems surrounding the Senkaku Islands, it is important for the parties concerned to clearly indicate to each other where they have received information from and what the situation is on the ground when exchanging opinions. Moreover, it is necessary to adopt a separate perspective from that of security, deploying maritime diplomacy and striving to achieve maritime peace, based on the understanding that Yonaguni, which is located closer to Taiwan than to Okinawa and Ishigaki islands, has had a different relationship to the sea from that associated with coastal and international shipping, and also that, in the golden age of Ryukyuan trade, the Senkaku Islands served as the venue for trade between Ryukyu and China.

(Conservation of maritime environment)

- As the conservation of biodiversity is not only essential to achieving the SDGs, but also closely connected to climate change, security, and the economy, Japan must manage and conserve marine protected areas, promote widespread adoption of Japanese models through ODA, and lead international rule-making, taking into account the continuity of land and sea.

- As efforts are necessary to tackle ocean plastic waste and climate change in Asia in particular, Japan should seek to address these issues by swiftly putting in place frameworks relating to multidisciplinary oceanographic observation systems, as well as by undertaking technology transfer to developing countries.

- In seeking to protect the Arctic and global environment and ensure their sustainable development, it is vital to work in partnership with indigenous people and tap into their knowledge in the policymaking process. In Japan, too, it is important to work with the Ainu people on protecting the environment, including the ocean around us, and to leverage in the policymaking process the wisdom and experience of the Ainu people and the people of outlying islands such as Okinawa and Amami Oshima, who have traditionally lived in harmony with the sea.

- When it comes to the problem of ocean plastic waste, the lack of international rules is a pressing issue, so Japan should lose no time in joining a framework aimed at the establishment of a treaty without delay, so that the nation can be involved in rulemaking from the outset and demonstrate its leadership. Japan bears a heavy responsibility, as it generates a large volume of plastic waste and has a low domestic recycling rate compared with other countries, so from the perspective of seeking to protect marine life and achieve a zero-carbon society, efforts to curb the volume of plastic waste generated are essential.

- Some have noted that the thawing of the permafrost due to global warming is giving rise to the possibility of unseen dangers from the anthrax bacillus and other pathogens, along with a growing risk that people will become infected with unknown viruses as deforestation reduces the distance between humans and nature. In light of such warnings, it is vital to discuss future approaches to socioeconomic activities and marine environmental problems from the perspective of the One Health approach, which regards the health of the environment, humankind, and animals as an integrated whole.
- With regard to efforts to address the issue of plastic waste, measures dependent on heat recovery affect climate change and maritime meteorology due to CO₂ emissions from disposal by incineration. Another important thing pointed out by a testifier is that we need to reduce the overall amount of plastic, as recycling alone inevitably results in some waste entering the sea. It is necessary to conduct research aimed at reducing plastic, including looking into the responsibility of plastic manufacturers.

(Maritime renewable energy)

- In developing floating offshore wind power generation facilities and Zero Emission Ships, the government should provide backup to mitigate development risks, and also should undertake efforts with the primary objective of contributing to the revitalization of Japanese industry through the creation of a zero-carbon society, tapping into human resources and technical capabilities in a wide range of sectors, including the automotive and aviation industries.
- While its manufacturers have withdrawn from the production of wind power generators, Japan still has outstanding engineers and sites ideal for offshore wind power generation across an extensive area. Accordingly, if it were possible to develop wind turbines and maintenance technologies suited to local conditions, while also listening to the views of

local communities, there could be significant potential for nurturing it to become a new industry. Moreover, with a view also to making a global contribution through wind power generation technology of this kind, efforts should be made to shorten development periods and reduce costs by open sourcing such technology.

(Developing and securing maritime human resources)

- Given the current circumstances, in which almost all international trade is reliant on marine transportation, and also in light of the nature of the work carried out by seafarers, who face harsh working environments and even life-threatening situations in an emergency, it is vital to improve the treatment and welfare programs provided to seafarers. Furthermore, from a security perspective, measures should be taken to ensure that the number of Japanese and foreign seafarers is maintained at an appropriate, stable level into the future.

- It is important to ensure that the next generation develops an interest in the sea by proactively incorporating maritime education into science education. In addition, it is desirable to increase the number of people who aspire to become seafarers in the future, in order to maintain the operation of international shipping in perpetuity. To ensure that maritime work is appealing not only to men, but also to women, it is necessary to build interest in safeguarding coastal environments together through the traditional Japanese approach of satoumi, which is the maritime counterpart of the satoyama practiced in mountain areas.

(Arctic Ocean)

- With regard to the discussion point around how to increase Japan's presence in the Arctic, an area of growing international importance in both security and economic terms, as it is crucial to provide support for activities and develop the relevant human resources in the fields of both science and technology and social sciences, Japan should formulate

a grand vision and promote its polar policy based on collaboration between industry, government, and academia.

- Japan has a responsibility in respect of the shared potential and environment involved in making use of the Arctic Ocean and can contribute to the formulation of international rules, while demonstrating its superiority in such areas as the maritime meteorological observation capabilities and information provision systems that the nation has cultivated over many years. Accordingly, in light of the need to secure the vessels required for oceanographic observation and to enhance the environment by such means as improving rescue systems, the government should clarify the future prospects for the Arctic Ocean and strengthen collaboration systems and partnerships with the rest of the world. As such, we would like the government to steer a bold course toward the development and operation thereof, including through budgetary measures.

- As fostering public understanding regarding the Arctic is essential, efforts to highlight the usefulness and appeal of the Arctic for Japan are required.

Afterword

Following on from the first year, the Committee's second year of research again had to be conducted amid constraints arising from the spread of COVID-19. We would like to express our gratitude to the voluntary testifiers who were kind enough to attend our meetings and give us the benefit of their valuable opinions under these difficult circumstances. At the same time, given these tough experiences, we hope to see progress on deliberations in the House concerning the possibility of conducting research online going forward.

In our second year of research, we succeeded in addressing almost all of the topics highlighted as remaining challenges in the Afterword of the first-year interim report and also most issues requiring more in-depth discussion. Our research to date has started to reveal some of the interrelationships and matrix-like structure of the wide range of issues related to the ocean.

As efforts to address marine issues have a substantial role to play in the achievement of the SDGs, which is a major task for the international community, it would be desirable for Japan, as a maritime nation, to contribute to the future of both our nation and the world as a whole by striving to resolve those issues based on a full understanding of the interrelationships between them, while also seeking to create synergies among them.

Moreover, amid growing tensions in the East China Sea in recent years, it would be fair to say that another key perspective can be found in seeking to work together on solutions to address the SDGs based on the recognition that the ocean is a public good, while pursuing calm, cooperative diplomatic efforts and security framework enhancements, as well as firmly asserting Japan's standpoint on the basis of international law, with a view to achieving peace.

Science should be one of the keywords in considering Japan's efforts. Issues relating to strategy and systems, and the need for human resource development to make effective use of Japan's advanced scientific knowledge, technical capabilities, and credibility were

repeatedly mentioned, so further research that listens to the voices of those on the ground would seem to be crucial.

In the third and final year, we hope to make further progress in our research, taking these points into consideration, so that we can make constructive recommendations in the final report.

Reference 1 Timeline of Deliberations

| Diet session and date | Outline |
|---|--|
| 202nd (Extraordinary session) September 18, 2020 | • Election of a director |
| 203rd (Extraordinary session) December 4, 2020 | • Resignation of directors and election of substitutes |
| 204th (Ordinary session) February 10, 2021 | <p>• Hearing opinions of voluntary testifiers and conducting a question and answer session (regarding the research theme of “Japan Living with the World through the Ocean,” focusing on “Concept of Ocean Utilization and Development Including Securing of Marine Energy and Mineral Resources, and Concept of Various Problems and Efforts Regarding the Maritime Environment” (Efforts to Address Problems Regarding the Polar Regions))</p> <p>(Voluntary testifiers)</p> <p>IKESHIMA Taisaku Professor and Dean, School of International Liberal Studies, Waseda University</p> <p>ENOMOTO Hiroyuki Vice Director, National Institute of Polar Research</p> <p>HAMAZAKI Kazuya General Manager, LNG Carrier Division, Mitsui O.S.K. Lines, Ltd.</p> |
| February 17 | • Hearing opinions of voluntary testifiers and conducting a question and answer session (regarding the research theme of |

“Japan Living with the World through the Ocean,” focusing on “Concept of Ocean Utilization and Development Including Securing of Marine Energy and Mineral Resources, and Concept of Various Problems and Efforts Regarding the Maritime Environment” (Problems and Efforts in the Quest to Conserve Marine Biodiversity and Achieve the Sustainable Use of Marine Bioresources))

(Voluntary testifiers)

DOHKE Teppei

General Manager, Communication Division, The Nature Conservation Society of Japan

TOBAI Sadayosi

CEO, WWF Japan

MORISHITA Joji

Professor, Department of Marine Policy and Culture, Tokyo University of Marine Science and Technology

- February 24
- Election of a substitute director
 - Hearing opinions of voluntary testifiers, and conducting a question and answer session (regarding the research theme of “Japan Living with the World through the Ocean,” focusing on “Concept of Various Problems and Efforts Regarding the Maritime Environment, and Efforts and Roles of Japan to Lead the International Community as a Maritime Nation” (Efforts and Problems in the Quest to Achieve a Zero-Carbon Society, Including Offshore Wind Power Generation and Zero Emission Ships))

(Voluntary testifiers)

SATO Iku

Senior Director, Ocean Renewable Energy Division,
Promotion Office for Strategic Business, Toda Corporation

MANABE Hisafumi

President and CEO, Marubeni Offshore Wind
Development Corporation

TANAKA Seiichi

Chairman, Japan Ship Technology Research Association

- April 14 • Hearing opinions of voluntary testifiers and conducting a question and answer session (regarding the research theme of “Japan Living with the World through the Ocean,” focusing on “Efforts and Roles of Japan to Lead the International Community as a Maritime Nation” (Problems and Efforts Regarding Maritime Security))

(Voluntary testifiers)

SAKAMOTO Shigeki

Professor Emeritus, Kobe University

KOTANI Tetsuo

Professor, Faculty of Languages and Cultures, Meikai
University

Senior Fellow, The Japan Institute of International Affairs

MUKAIDA Masayuki

Former Vice Commandant for Operations, Japan Coast
Guard

- April 21 • Hearing opinions of voluntary testifiers and conducting a question and answer session (regarding the research theme of

“Japan Living with the World through the Ocean,” focusing on “Concept of Various Problems and Efforts Regarding the Maritime Environment” (Responses to Conservation of the Maritime Environment and Various Maritime Meteorological Problems))

(Voluntary testifiers)

SUNAMI Atsushi

President, The Sasakawa Peace Foundation

TOMIOKA Masashi

Vice President and Distinguished Professor, Graduate School of Law, Nagoya University of Economics

SUGA Toshio

Professor, Graduate School of Science, Tohoku University

- May 12 • Hearing opinions of voluntary testifiers and conducting a question and answer session (regarding the research theme of “Japan Living with the World through the Ocean,” focusing on “Efforts and Roles of Japan to Lead the International Community as a Maritime Nation” (Current Status and Problems Regarding Maritime Education and Maritime Human Resource Development))

(Voluntary testifiers)

KAYANNE Hajime

Vice Director, Center for Ocean Literacy and Education, Graduate School of Education and Professor, Graduate School of Science, University of Tokyo

HEMMI Shin

Professor, Faculty of Marine Technology, Tokyo

University of Marine Science and Technology

- | | |
|--------|--|
| May 19 | • Exchange of views among Committee members (“Japan Living with the World through the Ocean”) |
| June 2 | • Decision on the research report and its submission to the President of the House of Councillors • Decision to offer the report at a plenary meeting |

Reference 2

List of Committee Members

| | |
|----------|---------------------------|
| Chairman | TSURUHO Yosuke (LDP•VP) |
| Director | IMAI Eriko (LDP•VP) |
| Director | TSUGE Yoshifumi (LDP•VP) |
| Director | NAKANISHI Yusuke (LDP•VP) |
| Director | KAWADA Ryuhei (CDP) |
| Director | MIURA Nobuhiro (KP) |
| Director | YANAGASE Hirofumi (JIP) |
| Director | UEDA Kiyoshi (DPFP-SR) |
| Director | ITO Gaku (JCP) |
| | ASAHI Kentaro (LDP•VP) |
| | INOUCHI Kuniko (LDP•VP) |
| | ONODA Kimi (LDP•VP) |
| | KANEKO Genjiro (LDP•VP) |
| | NINOYU Satoshi (LDP•VP) |
| | MORI Masako (LDP•VP) |
| | YAMADA Shuji (LDP•VP) |
| | YOSHIKAWA Yumi (LDP•VP) |
| | ONUMA Takumi (CDP) |
| | KUMAGAI Hiroto (CDP) |
| | TAJIMA Maiko (CDP) |
| | YOKOSAWA Takanori (CDP) |
| | SATOMI Ryuji (KP) |
| | TAKAHASHI Mitsuo (KP) |
| | TAKARA Tetsumi (OW) |
| | NAGAE Takako (HS) |

Note: LDP•VP: Liberal Democratic Party and Voice of The People
CDP: The Constitutional Democratic Party of Japan and Social Democratic Party
KP: Komeito
JIP: Nippon Ishin (Japan Innovation Party)
DPFP-SR: Democratic Party For the People and The Shin-Ryokufukai
JCP: Japanese Communist Party
OW: Okinawa Whirlwind
HS: Hekisuikai

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