OPRI's Policy Recommendations based on findings of IPCC SROCC

Ocean and Cryosphere in changing climate – The Future of the Ocean at its Turning Point

(Provisional Translation)

The International Panel on Climate Change (IPCC) released the "Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC)" in September 2019, the first report specializing in the linkage between climate change and the ocean and cryosphere (polar region and high mountains). The IPCC warns that some of the marine ecosystems are seeing phenomena that indicate that they have already passed a "tipping point" and that we are facing a crisis of the ocean, and even the planet, highlighting that "choices made now are critical for the future of our ocean." The current rate of global mean sea level rise is about 2.5 times faster compared to that of the 20th century due to ice loss from the Antarctic and the Greenland ice sheet, which could result in a rise in sea levels of up to 110 cm in 2100. People living in low-lying and coastal regions, including coastal megacities such as New York and Shanghai, will be affected drastically and Tokyo and Osaka are no exceptions. Keeping in mind that climate change is already irreversible, and changes affecting the ocean will continue in the far long-term, it is essential to advance comprehensive measures including efforts toward the realization of the Sustainable Development Goals (SDGs), especially SDG13 (climate action) and SDG14 (life below water). Even if the UNFCCC parties fully implement their Nationally Determined Contributions (NDCs) currently submitted under the Paris Agreement, the global temperature rise would not be limited under 1.5℃ or even 2℃ compared to the pre-industrial era. More timely, ambitious and fundamental actions on a global scale are necessary. In response to this situation, the Ocean Policy Research Institute of the Sasakawa Peace Foundation (OPRI-SPF) recommends the following 10 ocean-based solutions.

To Enhance Ocean-based Mitigation

①Ocean-based mitigation options such as ocean-based renewable energy and improved energy efficiency in ocean-based transport may contribute up to 21% of additional mitigation measures (decrease in greenhouse gas emissions) to limit global warming to 1.5℃. The Government of Japan should further promote ocean-based mitigation that generates a win-win situation for all sectors and submit to the UNFCCC its updated and more ambitious NDCs.

②Japan should accelerate R&D on the carbon sequestration potential of Blue Carbon, including from seaweed, develop the estimation methodologies for its CO_2 emissions/removals and start to include the estimations in the national GHG inventory and reporting to the UNFCCC. Co-benefits of Blue Carbon such as disaster risk reduction and water quality improvement should be properly assessed; efforts toward conservation and restoration of seagrass/macroalgal beds should be further promoted.

To Promote Integrated and Community-based Approaches from a Long-term Perspective

③In response to rising sea levels and the increasing intensity and frequency of climate-related disasters, the Government should plan and implement comprehensive risk evaluations in coastal areas, resilient infrastructure, and ecosystem-based adaptation measures, and strengthen support to municipal governments to undertake such response measures. In addition, the Government should provide tailor-made support to developing countries in the Asia-Pacific region, including small island developing states, regarding coastal disaster prevention, adaptation measures, and relocation, based on respective national development strategies and plans.

④The Government should formulate and implement a comprehensive package of measures to combat climate change as well as land-based pollution (including nutrient management and reduction of plastic waste).

⑤The Government should develop a framework for all stakeholders in the fisheries sector to share and utilize scientific knowledge and data such as long-term monitoring of fish distribution per species.

⑥The Government should set and utilize marine protected areas (MPAs) in a strategic manner by using local (indigenous) and scientific knowledge and taking changes in the ocean into account to enable biodiversity conservation and sustainable use of ecosystem services.

To Advance Ocean Science Innovations for Global Climate Action

⑦The Government should encourage research relevant to monitoring the ocean and cryosphere (e.g., the ARGO project and Arctic monitoring) toward long-term and comprehensive global ocean monitoring. International cooperation should be enhanced by providing information-sharing systems and means for domestic and international human resource development, as well as to address insufficient data availability in the Global South.

⑧The Government should promote innovation in Japanese scientific technologies (e.g., spearhead the achievement of zero-emissions from vessels /micro pH sensor).

To Encourage Ambitious and Concrete Actions by All Stakeholders

⑨All stakeholders, including every actor in the ocean sector, should enhance resilience and cultivate knowledge through promoting education and climate literacy. It is also crucial for women to participate in the decision-making process regarding climate change policies and resource management.

⑩The business sector should build a long-term strategy/plan based on its own climate-related risk assessment and convert it into a business model. In addition, both mitigation and adaptation (e.g., expansion of disaster prevention technology and provision of services to counteract risks from climate change) should be promoted in the process of creating business opportunities.