

## Study Group on Food, Ecosystems and Land Use to Overcome Global Warming

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**Subject**            The study group was launched as the second stage of the research whose first stage was the “North Pacific Marine Ecosystems Study Group” (abbreviated name).

In this stage—based on the first and second issues and the final recommendations of the first stage—a consideration will be made, in a comprehensive, cross-sectional, and concrete manner, of the possible roles of agriculture, fisheries, and aquaculture in reducing food loss and waste, and developing alternative food sources. Also, an exploration will be made of ways to contribute to global warming reduction by addressing land use (land degradation, waste, landfill, soil contamination, the thawing of frozen soil, and the disappearance of wetlands), as well as ways to improve agriculture, livestock production, fisheries, and aquaculture.

In addition, marine pollution and loss of coastal areas reduce the service capacity of the ecosystem and ocean resilience, as well as the ability to respond to global warming. The project will also comprehensively consider measures to deal with waste heat from power plants and steel mills flowing from the land into the sea through rivers, as well as measures to control marine pollutants such as radioactive and chemical substances, along with a comprehensive and practical exploration of the ability of the marine ecosystem, as well as fish and marine mammals, to absorb carbon dioxide and generate oxygen, and the usage, etc., of tidal and wave power.

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**Subject**                    These comprehensive measures and recommendations will fully support the COP26 and IPCC responses on air quality from the aspects of food, land, and ecosystems, and aim to complement air-quality measures as NBS (nature-based solutions) for nature, ecosystem and land-use measures.

**Background of the Study**                    This study was newly launched as the “Study Group on Food, Ecosystems and Land Use,” as the successor to the “North Pacific Marine Ecosystems Study Group” (abbreviated name) of the first stage, based on the topics of discussion (recommendations) of the previous two rounds and the final recommendations of May 27, 2022.

The North Pacific Marine Ecosystems Study Group focused on the changes to marine ecosystems under the effects of global warming and the response to such changes. It discussed fisheries, agriculture, marine organisms, and legal systems, with a focus on responses to the assumed impact of global warming on the migration of marine resources, which could lead to food conflicts and diplomatic issues.

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Summary of Research Results      In FY2022, the study group successfully completed its schedule, conducting extensive research on various topics, as follows: NBS (nature-based solutions), by the Smithsonian Environmental Research Center (SERC) / Underwood & Associates and the Maryland Department of Natural Resources (DNR), riparian restoration using nature, salmon farming and marine ecosystems in Tasmania, Arctic Ocean development and environmental protection, food loss, cooperatives and global warming action, NBS initiatives in Japan (Kesennuma and Hirota Bay), Japanese and Korean fisheries and North Pacific salmon, Maryland's Conservation Financial Act and credit system, accounting standards for International Sustainable Openings and EU taxonomy, and trends in European environmental legislation and the need for Japan's response, focusing on the proposed EU draft directive on corporate sustainability due diligence.

Topics to be discussed in August are still being arranged, but will include the following: (1) ecosystems and land use (NBS), (2) international sustainability accounting (ISSB) and (3) Credits (Maryland CFA).

Period                                  June 7, 2022 to May 25, 2023

Date of meeting

Study Groups and Discussion Topics

FY2022

	Date	Main theme
#1	June 7, 2022 Presented by five U.S. participants. Postponed for two years due to the COVID-19 pandemic.	<ul style="list-style-type: none"> <li>• Launch of the 2022 study group.</li> <li>• Dr. Dennis Whigham, Smithsonian Environmental Research Center (SERC), “NBS (Nature-Based Solutions),” and Prof. Ryan S. King, Baylor University (Texas), “Restoring the River Environment and Pollution Across Two States,” Maryland Government NBS Policy, and Underwood &amp; Associates, etc.</li> </ul>
#2	July 8, 2022 Postponed for two years due to the COVID-19 pandemic.	<ul style="list-style-type: none"> <li>• Dr. Donald Ross, Assistant Professor, Institute of Oceanography and Antarctic Studies, University of Tasmania, Lecture, “Salmon Aquaculture and Marine Ecosystems in Tasmania”</li> </ul>
#3	August 26, 2022 Discussion meeting for the launch of this study group. General discussion	<ul style="list-style-type: none"> <li>• How food, ecosystems and land use improvements can contribute to reducing (drawing down) global warming               <ol style="list-style-type: none"> <li>1. Global warming solutions and mitigation measures for food production, processing, distribution and consumption, ecosystems, and land use.</li> <li>2. Recommendations of the previous committee; J-credits, legal systems including sustainable economy accounting standards, certification systems and implementation measures, etc.</li> </ol> </li> </ul>

	Date	Main theme
#4	September 16, 2022	• Dr. Naoki Nakazawa, CEO, Systems Engineering Associates, Inc., “Arctic Ocean Development and Environmental Protection”
#5	October 21, 2022	• Prof. Tomio Kobayashi, Japan Women’s University, “Current Status and Issues of Food Loss and Measures to Reduce Global Warming” (tentative title)
#6	November 11, 2022	• Yoshiyuki Toyoguchi, Director, River Environment Division, Water and Disaster Management Bureau, Ministry of Land, Infrastructure, Transport and Tourism, “Disaster Prevention in the Face of Intensified Infrastructure Obsolescence”
#7	November 25, 2022	• Yoko Tanaka, Representative Director and Chief Editor, Coop-News, Inc. “Activities of Japanese Consumers’ Cooperative Unions to Fight Global Warming and Examples” (tentative title)
#8	December 23, 2022	• Prof. Katsuhide Yokoyama, Department of Civil and Environmental Engineering Course, Tokyo Metropolitan University, “Fishing Village Development Balancing Disaster Prevention and Environment, Based on the Restoration of Brackish Waters: Earthquake Disaster Reconstruction in the Moune District, Kesenuma City”

	Date	Main theme
#9	January 27, 2023	<ul style="list-style-type: none"> <li>• Prof. Masatoshi Matsumasa, Iwate Medical University, “Prospects for Riparian Use in Hirota Bay: How to Link Oyster Cultivation, Blue Carbon, and Riparian Management” (tentative title)</li> </ul>
#10	February 24, 2023	<ul style="list-style-type: none"> <li>• Kim Dae-Young, Director, Fisheries Policy and Business Division, Korea Fisheries Development Agency, “Current Status and Future of the Northeast Asian Fisheries Industry and Korea-China-Japan Fisheries Cooperation: Current Status of the Korean Fisheries Industry and the Future of Korea-China-Japan Fisheries Cooperation”</li> </ul>
#11	March 24, 2023	<ul style="list-style-type: none"> <li>• Prof. David Fluharty, University of Washington Seattle, “Problems in Salmon Hatchery Operations and the Status of North Pacific Salmon”</li> </ul>
#12	April 13, 2023	<ul style="list-style-type: none"> <li>• Mr. Matthew Fleming, Director of Conservation, Maryland Department of Natural Resources, “The Credit System Based on the Conservation Financial Act”</li> </ul>
#13	April 21, 2023	<ul style="list-style-type: none"> <li>• Dr. Svetlana Subelfeld, Researcher, Gothenburg Research Institute (GRI), School of Business, Economics and Law, University of Gothenburg, “Accounting Standards and EU Taxonomy”</li> </ul>

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#14	May 25, 2023	<ul style="list-style-type: none"><li>• Prof. Tadashi Otsuka, Faculty of Law, Waseda University, “Trends in European Environmental Legislation and the Need for Japan’s Response: Focusing on the Proposed EU Directive on Corporate Sustainability Due Diligence”</li></ul>

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Members	<p><b>Dr. Masayuki Komatsu (Leader)</b>          Visiting Researcher, Kajima Institute of International Peace          Chair/President, Ecosystem Research Institute          Visiting Professor, Asian Growth Institute</p> <p><b>Nobuyuki Hiraizumi</b>          President, Kajima Institute of International Peace          Director, Kajima Corporation          Advisor, Avant Associates, Inc.          Director, The Board Director Training Institute of Japan</p> <p><b>Katsuhide Yokoyama, Ph.D. in Engineering.</b>          Professor Department of Civil and Environmental Engineering,          Tokyo Metropolitan University</p> <p><b>Zentaro Kamei</b>          Senior Fellow, PHP Institute, Inc.          Specially Appointed Professor, Graduate School of Social          Design Studies, Rikkyo University</p> <p><b>Yasuhiro Takarada</b>          Professor, Faculty of Economics, Nanzan University</p> <p><b>Hiroshi Terashima</b>          Advisor, Japan Society of Ocean Policy          Ex-Executive Director, The Sasakawa Peace Foundation          Ex-President, Ocean Policy Research Institute, The Sasakawa          Peace Foundation</p> <p><b>Tatsunobu Kawasaki</b>          Former Adviser to The Daily Minato</p>
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