

## Workshop on Natural Circulating Water and Nature-based Solutions (NBS)

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**Subject** This research was launched as the Workshop on North Pacific Marine Ecosystems and Maritime Order, Diplomacy, and Security Systems (from April 2019 through June 2021). The workshop aimed at the sustainable management and use of marine resources based on scientific evidence from the collection of fish catch data. The workshop positioned marine resources as the common assets of the people and aimed at advancing the introduction of Individual Transferable Quotas (ITQs), which have not yet advanced in Japan. That has now been realized as the policy of the Fisheries Agency. The workshop also proposed collaboration in the management of salmon and trout international resources and aimed at management of marine ecosystems.

In the second stage, as the Workshop on Food, Ecosystems and Land Use to Overcome Global Warming (from June 2022 through March 31, 2024), the workshop comprehensively and cross-sectionally examined food, in particular reduction of food loss and food waste, development of alternative foods, and measures to improve the agriculture, fisheries, and marine products industries, as well as forests and the forestry industry.

The workshop examined ecosystems and land use, in particular, land degradation, landfills and soil contamination, the loss of wetlands, and other problems and issues, as well as measures to contribute to reducing global warming by improving agricultural land use, animal husbandry, forests and the forestry industry, and

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| Subject             | <p>the fisheries industry. In relation to global warming, the workshop examined international sustainability accounting disclosure standards. The results of the examinations were published as an interim proposal (October 3, 2023) and a final proposal (July 26, 2024).</p> <p>The third stage was being implemented following receipt of the final proposal from the second stage.</p> <ol style="list-style-type: none"> <li>(1) Make natural circulating water a pillar of policy and research</li> <li>(2) Eliminate the divisions separating government organizations, research organizations, and politics</li> <li>(3) Collect scientific data as the foundation for drafting policies.</li> <li>(4) Implement NBS</li> </ol>                               |
| Research Background | <p>Because NBS comprehensively requires botany, ichthyology, physics, and chemistry as well as soil science, hydrology, hydraulics, civil engineering, and other areas of expertise, it demands even greater ties and collaboration across diverse specialized fields than in the past, so the barriers dividing, ministries and agencies, research fields, and implementing enterprises must be taken down so that all the entities can collaborate as one. In this research, the emphasis was placed on natural water cycle, measures formulated by removing the barriers between agencies, and NBS. The workshop is also conducting research on international sustainability reporting disclosure including the UN's TCFD and the EU's CSRD. Such comprehensive</p> |

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| Research Background | examinations and proposals frank to government organs from an international perspective are most suitable for research by the Kajima Institute of International Peace, which is independent from government organs. |
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| Summary of the Research Results | <ol style="list-style-type: none"><li>1) The workshop invited from Japan a river basin flood control expert from the Ministry of Land, Infrastructure, Transport and Tourism and a forestry administration expert from the Forestry Agency of the Ministry of Agriculture, Forestry and Fisheries and from overseas experts from an Australian agricultural NBS specialist organ, the United Nations Food and Agricultural Organization (FAO), and University of Gothenburg School of Business Economics and Law in Sweden as speakers, and broadly and deeply examined the research themes.</li><li>2) As part of the workshop culmination, the Shimanto River NBS International Symposia were held on March 4 (Shimanto City, Kochi Prefecture) and March 5 (Shimanto Town, Kochi Prefecture). A workshop meeting was held to report on these symposia. Moreover, Japan's first NBS project (creating wetlands at Satake Farm) was conducted in the Kubokawa district of Shimanto Town and the second NBS project, which is the removal of a weir on the Niida River, is advancing toward implementation. These are major achievements of the workshop.</li></ol> |
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## Explanation of the Three Stages

|                         | First Stage  | Second Stage   | Third Stage   |
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| Name                    | Workshop on North Pacific Marine Ecosystems and Maritime Order, Diplomacy, and Security Systems  | Workshop on Food, Ecosystems and Land Use to Overcome Global Warming   | Workshop on Natural Circulating Water and Nature-based Solutions (NBS)  |
| Objectives and Contents | <p>(1) Stipulate that marine resources are the common asset of the people</p> <p>(2) Implement fisheries management based on resource assessments</p> <p>(3) Propose introduction of Individual Transferable Quotas (ITQs), exit regulations (observer system), etc.</p> | <p>(1) Food; reduction of food loss and food waste with large CO<sub>2</sub> emissions</p> <p>(2) Ecosystems; responses to land degradation and loss of wetlands</p> <p>(3) Land use; Contribution to mitigating and eliminating global warming through responses to landfills, soil contamination, and the use of agricultural land</p> | <p>(1) Position natural circulating water as the origin for resolving problems</p> <p>(2) Adopt measures and responses that transcend ministries and agencies, research, and business sectionalism</p> <p>(3) Conduct research focused on NBS which requires all areas of expertise</p> |

|                         | First Stage  | Second Stage   | Third Stage  |
|-------------------------|--|--|--|
| Objectives and Contents | <p>(4) Manage salmon and trout international resources; US, Russia, and Canada</p> <p>(5) Work for the revitalization of the Japanese fishery and marine products industry</p> | <p>(4) Examinations of international sustainability disclosure standards</p>   | <p>(4) Revive the fishery and marine products industry through the restoration of marine ecosystems and marine resources as resolution to the first stage problems</p>   |
| Main members            | <p>Masayuki Komatsu (Leader)</p> <p>Nobuyuki Hiraizumi</p> <p>Tatsuo Hatta</p> <p>Zentaro Kamei</p> <p>Kenji Mochizuki</p> <p>Masahide Kaeriyama</p> <p>Tatsunobu Kawasaki</p> | <p>Masayuki Komatsu (Leader)</p> <p>Nobuyuki Hiraizumi</p> <p>Katsuhide Yokoyama</p> <p>Masatoshi Matsumasa</p> <p>Zentaro Kamei</p> <p>Yasuhiro Takarada</p> <p>Hiroshi Terashima</p> <p>Tatsunobu Kawasaki</p> | <p>Masayuki Komatsu (Leader)</p> <p>Nobuyuki Hiraizumi</p> <p>Katsuhide Yokoyama</p> <p>Zentaro Kamei</p> <p>Masatoshi Matsumasa</p> <p>Yasuhiro Takarada</p> <p>Tetsuo Murakami</p> <p>Taikan Oki</p> <p>Tatsunobu Kawasaki</p> <p>Satoru Itagawa</p> |

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| Period   | July 26, 2024 to March 31, 2025  |
| Location | For Fiscal 2024, workshop meetings were held online and in person. The various themes regarding natural circulating water and NBS were set, lecturers were invited, and workshop meetings were held. |
| Time     | The last Friday of each month from 1 to 3 p.m.   |

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1) Dates and Themes of Fiscal 2024 Workshop Meetings

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| #1 | Friday, July 26, 2024                    | Examination and adoption of the final proposal (draft) of the Workshop on Food, Ecosystems and Land Use “Fiscal 2024 Guidelines for Examinations by the Workshop on Natural Circulating Water and NBS,” Dr. Masayuki Komatsu, Workshop Leader |
| #2 | Friday, August 23, 2024, 11a.m. to 1p.m. | Dr. David Fisher, Professor of Botany, University of Wisconsin  |
| #3 | Friday, October 4, 2024                  | “Installation of Flood-mitigation weirs on Mulloon Farm, Rising Groundwater Levels, and Agriculture Improvement,” Carolyn Hall, CEO & Managing Director, Mulloon Institute, Australia   |
| #4 | Friday, October 25, 2024                 | “Report and Examination of the Prior Survey regarding the Shimanto River NBS International Symposium,” Workshop Member Masatoshi Matsumasa, Workshop Member Katsuhide Yokoyama  |
| #5 | Friday, November 22, 2024                | “Regarding River Basin Flood Control and Ecosystem Networks,” Director, Masaru Kojima, River Environment Division, Water and Disaster Management Bureau, Ministry of Land, Infrastructure, Transport and Tourism                              |

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| #6  | Friday, December 27, 2024                | “Forest Functions and Maintenance and Conservation,” Deputy Director-General Zentaro Kosaka, Forestry Agency   |
| #7  | Thursday, January 23, 2025, 9 to 11 a.m. | “Water Resources, AgEBS, and Integrated Water Resource Management (IWRM)” (tentative title), Dr. Amani Alfarra, Land & Water Division, FAO   |
| #8  | Friday, January 24, 2025, 4 to 6 p.m.    | “The EU’s CSRD: Corporate Sustainability Reporting Directives and Application to SMEs,” Dr. Svetlana Sabelfeld and Dr. Marita Blomkvist<br>Note: This workshop meeting is a Sweden-Japan climate change collaborative project, but members of the workshop and observers can participate |
| #9  | Friday, March 6, 2025, 1 to 3 p.m.       | “Introduction of NBS to the Shimanto River,” Dr. Dennis Whigham; Matt Fleming, Maryland Department of Natural Resources; Keith Binsted and Chris Becraft, Underwood & Associates   |
| #10 | Monday, March 17, 2025, 4 to 6 p.m.      | “The EU’s CSRD: Corporate Sustainability Reporting Directives and Application to Corporations,” Dr. Svetlana Sabelfeld (sustainability accounting in general) and Dr. Conny Overland (application of CSRD to large companies)  |



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#### Fiscal 2025 Workshop Meetings Schedule

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| #1 | Friday, April 25,<br>2025 | “Regarding the Policy and Schedule for the Fiscal 2025 Workshop on Natural Circulating Water and NBS,” Workshop Leader Masayuki Komatsu (15 minutes)<br>“NBS in the Shimanto River Basin: Collaboration for Introduction and Implementation of NBS toward Nature Positive,” Workshop Member Satoru Itagawa |
| #2 | Friday, May 30,<br>2025   | NBS Wetlands Creation Project (Satake Farm) and Site Report on the Niida River Weir (following monitoring on April 29, 2025)<br>Workshop Leader Komatsu; Professor Katsuhide Yokoyama, Tokyo Metropolitan University, and Satake Farm Managing Director Kota Satake  |
| #3 | Friday, June 27,<br>2025  | Adoption of fiscal 2024 interim proposal   |

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| Members | <b>Dr. Masayuki Komatsu (Leader)</b>   |
|         | Visiting Researcher, Kajima Institute of International Peace                                       |
|         | Chair/President, Ecosystem Research Institute  |
|         | Visiting Professor, Asian Growth Institute   |
|         | President, Toto Enterprise Owners Society  |
|         | <b>Nobuyuki Hiraizumi</b>  |
|         | President, Kajima Institute of International Peace   |
|         | Advisor, Avant Associates, Inc.  |
|         | <b>Katsuhide Yokoyama, Ph.D. in Engineering</b>  |
|         | Professor, Department of Civil and Environmental Engineering,<br>Tokyo Metropolitan University     |
|         | <b>Zentaro Kamei</b>   |
|         | Senior Fellow, PHP Institute, Inc.   |
|         | Specially Appointed Professor, Graduate School of Social<br>Design Studies, Rikkyo University      |
|         | <b>Yasuhiro Takarada</b>   |
|         | Professor, Faculty of Economics, Nanzan University   |
|         | <b>Masatoshi Matsumasa</b>   |
|         | Dean, Center of Liberal Arts and Sciences, Iwate Medical<br>University                             |
|         | Professor, Department of Biology, Center of Liberal Arts and<br>Sciences, Iwate Medical University |
|         | Chair of Tohoku Chapter, The Ecological Society of Japan   |

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| Members | <p>Tetuo Murakami, Ph. D. (Science)</p> <p>Honorary Adviser, The Nature Conservation Society of Japan</p> <p>Former Professor, College of Bioscience and Biotechnology,<br/>Chubu University</p> |
|         | <p>Taikan Oki</p> <p>Professor, Graduate School of Engineering, The University of<br/>Tokyo</p>  |
|         | <p>Tatsunobu Kawasaki</p> <p>Former Advisor to The Daily Minato</p>  |
|         | <p>Tomoko Nakamura (Research Assistant)</p> <p>Assistant, Ecosystem Research Institute</p> <p>Former Senior Research Officer (Agriculture), Australian<br/>Embassy in Tokyo</p>                  |