



Transdisciplinarity in action: Co-Creating Ocean Literacy with Global Future-Shapers from Japan

An international forum for future shapers to discuss
issues on science and technology in society

Tsukuba Conference 2025
3 October 2025

A deliverable of the UN Ocean Decade Commitment: <https://sdgs.un.org/partnerships/ocean-all-reimagining-justice-love-and-law#deliverables>

Endorsed by the UN Ocean Decade

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Summary

The workshop on Co-creation of Knowledge in Ocean Literacy, organized as an interactive session during the Tsukuba Conference 2025, was chaired by Zia Madani and co-organized by Margherita Paola Poto, with the collaboration of Caroline Bohrer, Youna McGowan, Dana Ahmed, and Claudia D'Andrea. Endorsed by the UN Ocean Decade, the session aimed to explore innovative ways of integrating Japanese principles into legal and ethical frameworks, treating the Ocean as kin. The workshop was divided into two parts. The first part featured an illustrative performance, inspired by the KlimaSeniorinnen ECHR decision and enriched by Japanese principles of Kami (spiritual essence), Satoyama (harmony between humans and nature), and Wa (peace and harmony). The story revolved around three characters: Plastic Bag (Plik), Judge Whale, and mount Tsukuba, with the audience acting as the Court of the Ocean. The narrative highlighted the interconnectedness of humans, nature, and the ocean, emphasizing the urgent need for sustainable practices.

In the second part, the audience was invited to deliberate, co-create and expose a decision or law that wove together the three Japanese principles in a way that respected and treated the ocean as a living kin. This participatory activity encouraged creative thinking

and fostered a sense of responsibility toward the environment, aligning with the goals of the UN Ocean Decade to promote ocean sustainability and stewardship. The workshop is also an implementing activity of the Ocean Incubator Network Learning Toolkit (<https://doi.org/10.1007/978-3-031-78062-2>) and a deliverable of the SDG Ocean Action Commitment: [Ocean for All: Reimagining Justice with Love and Law](#).



Figure 1 Youna McGowan, Zia Madani, Caroline Bohrer, Margherita Paola Poto, Dana Ahmed and Claudia D'Andrea behind the fabric of the puppet show with some of the co-created final works.

Acknowledgments

We would like to thank: the Tsukuba Conference organizing committee for inviting us to present our work, the University of Tsukuba Institute of Humanities and Social Sciences for providing logistics and partially funding, UiT The Arctic University of Norway, UArctic for funding the Ocean Incubator Network (UArctic 580512124) and the Ocean Decade Blues Catalyst (bLYSs (UArctic 580512128)).

Background

The workshop at the Tsukuba Conference was a continuation of the impactful work carried out by the [Ocean Incubator Network](#) (UArctic 580512124) and its Learning Toolkit (ISBN 978-3-031-78061-5). Laying the theoretical foundations of this activity, Zia Madani contributed his expertise in systems thinking, while Margherita Paola Poto laid the groundwork for co-creation in ocean and climate justice. Dana Ahmed brought her innovative and participatory methodology of accessible puppet shows to the forefront. Together, with the support of other team members (Caroline Bohrer, Youna McGowan, Dana Ahmed and Claudia D'Andrea), they designed a dynamic two-step session. The first part featured a puppet show inspired by climate law principles, European Court of Human Rights (ECHR) jurisprudence, and traditional Japanese values such as *kami*, *satoyama*, and *wa*. In the second part, the audience transformed into the "Court of the Ocean," collaboratively crafting their own solution to the case. This co-creation process culminated in a collective and artistic final result, embodying the principles of harmony, justice, and shared responsibility.

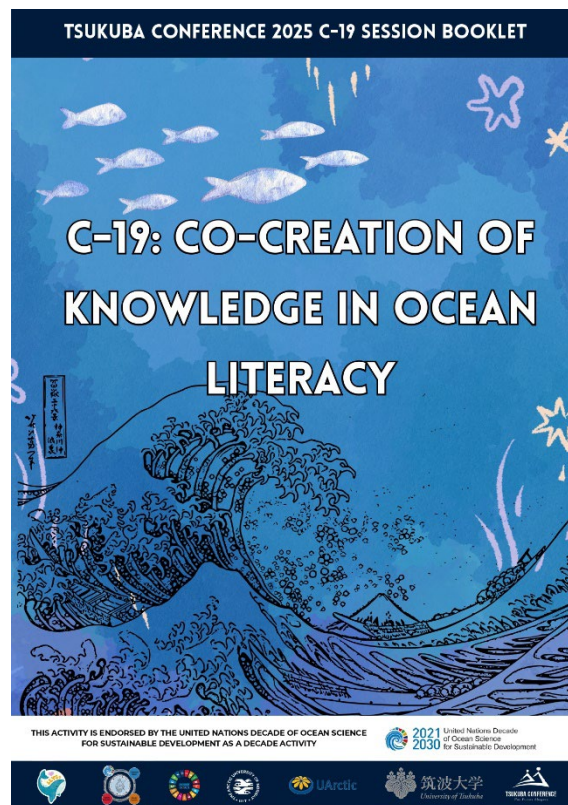


Figure 2 Cover of the booklet developed for the session. Designer: Caroline Bohrer; Content creation: the team.

Introduction

The session *C-19: Co-Creation of Knowledge in Ocean Literacy* was held on 3 October 2025 as part of the Tsukuba Conference 2025, an international forum that brings together emerging researchers and future leaders to discuss issues at the intersection of science, technology, and society. The session was endorsed by the United Nations Ocean Decade for Sustainable Development, representing both a milestone in the ongoing collaboration between Tsukuba University and UiT The Arctic University of Norway, and a forward step in the development of transdisciplinary methodologies for advancing ocean literacy and sustainability.

Figure 3 Poster of the session Designer: Mayara R. B. De Matos and Caroline Bohrer

The session began with welcoming remarks by **Zia Madani**, Assistant Professor of International Law at the University of Tsukuba and Chair of the session, who greeted participants and introduced teammates and gave a brief overview of the session agenda. The session then continued with the opening remarks of **Kyosuke Nagata**, President of the University of Tsukuba, who highlighted the importance of fostering creative, co-

creative, and participatory approaches to knowledge production—approaches that align with the University of Tsukuba’s vision of global engagement and sustainability leadership. He also underscored the value of future collaborations with networks such as the University of the Arctic (UArctic), envisioning new opportunities for research partnerships focused on the High North, the Arctic, and the global ocean.

In his introductory statement, President Nagata emphasized that Session C-19 builds upon the open-access publication *The Ocean Incubator Network Learning Toolkit* (Springer Nature, 2025), which serves as a pedagogical foundation for co-creative and transdisciplinary education. The session, he noted, embodies the university’s aspiration to integrate the humanities, social sciences, law, and natural sciences in advancing the UN Sustainable Development Goals—particularly SDG 4 (Quality Education), SDG 5 (Gender Equality), and SDG 14 (Life Below Water).



Figure 4 opening remarks of the President of the University of Tsukuba, Kyosuke Nagata Credit: Zia Madani

Following the President's remarks, Dr. Madani introduced the session's co-organizer and team members:

Margherita Paola Poto, UiT The Arctic University of Norway – research professor in climate and ocean justice;

Claudia D'Andrea, LL.M. at UiT The Arctic University of Norway, expert in climate justice and law of the sea

Dana Ahmed, University of Glasgow and coordinator of the Asfour Initiative – expert in science communication and environmental initiatives;

Youna McGowan, McMaster University, Canada and Practicum student for ECO_CARE at UiT The Arctic University of Norway, focusing on co-creation and science communication

Caroline Bohrer, Research Student at the Tsukuba University, contributing insights from maritime law and environmental studies.



Figures 4 and 5 Conference poster on the venue in Tsukuba International Congress Center; and the conference Poster of the session. Credit: Zia Madani

Together, this interdisciplinary team presented *co-creation* as a methodological and pedagogical approach to advancing ocean literacy—bridging theory and practice through participatory engagement. The session was conceived as both a research outcome and a learning experience, connecting with the broader Ocean Incubator Network (OIN)

project (UARctic 580512124), whose forthcoming publication, *Reimagining Justice with Care and Law: From Climate to Ocean Protection for a Just Future* (Palgrave Macmillan, forthcoming 2026), continues this collaborative trajectory.

The event's interactive format combined academic dialogue, artistic expression, and audience participation. Following the introductory remarks, participants engaged in an illustrated puppet storytelling performance inspired by the *KlimaSeniorinnen* climate justice case, adapted to an oceanic context. The characters—Judge the Whale, Plik the Plastic Bag, Sea Turtle, The Ocean, and the symbolic Mount Tsukuba—embodied diverse perspectives on marine justice and environmental responsibility. Through this creative performance, the session invited participants to explore the moral and legal dimensions of human–ocean relationships and to reflect on how local landscapes, such as Mount Tsukuba, inspire collective sustainability action.



Figures 6 participants brainstorming on how to approach the judgement Credit: Youna MacGowan

After the performance, attendees worked collaboratively in groups to co-create a judgment or a normative decision on the case presented by the puppets, engaging directly with the concepts of positionality, inter-/trans-/cross-disciplinarity, and co-creation—the

three conceptual pillars of the OIN framework. These activities aimed to stimulate dialogue across disciplines and generations, empowering future-shapers, students, early-career researchers, and practitioners, to experiment with co-creative knowledge processes in tangible contexts.

Through this session, Tsukuba University reaffirmed its role as a hub for transdisciplinary dialogue and global partnership in the pursuit of sustainable ocean futures. The collaboration between Japan and Norway exemplifies how shared learning, creative engagement, and collective reflection can contribute to the UN Ocean Decade's vision of *"the science we need for the ocean we want."*



Figure 6 Youna, Margherita, Claudia, Dana, Caroline. Credit: Masako Hara

The show

Plot of the Show

The story revolves around three protagonists: Plastic Bag, Judge Whale, and Tsukuba Sama. The narrative begins with Plastic Bag reflecting on the events of the previous show (developed as [UNOC3 side event](#), in Nice, June 2025), and pointing out that Judge Whale, despite her immense wisdom and authority, has been unable to resolve the pressing issue of plastic pollution in the ocean. Troubled by this, Judge Whale decides to seek the

guidance of Tsukuba Sama, a wise figure known for her deep understanding of nature and harmony.

Tsukuba Sama responds by referencing pivotal cases and principles that highlight the interconnectedness of humanity and nature. She cites the [Klimasenorinnen](#) case from the European Court of Human Rights (ECHR), which underscores the importance of environmental justice, and the [Satoyama Initiative](#), which advocate for societies in harmony with nature. Tsukuba Sama then begins her storytelling, emphasizing the three foundational Japanese principles—*kami* (spiritual essence), *satoyama* (the harmony between humans and nature), and *wa* (harmony and balance)—as the keys to restoring equilibrium in the natural world.

As the story unfolds, Judge Whale and Tsukuba Sama engage in a dialogue about the role of collective responsibility in addressing environmental challenges. By the end of the case, they reach a consensus: the Court of the Ocean, symbolised by the public, must take an

active role in protecting the ocean as a kin, treating it not as a resource to exploit but as a living entity deserving of care and respect.

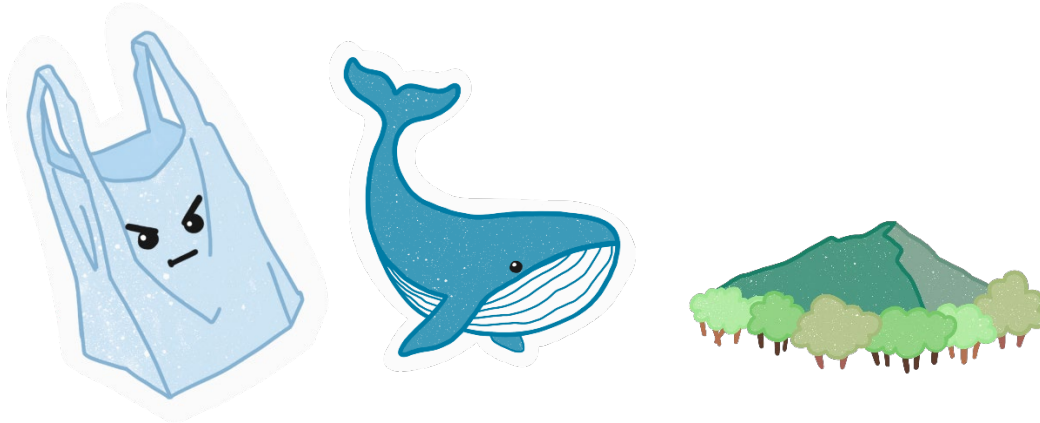


Figure 4: Plastic Bag, Judge Whale and Tsukuba Sama, illustrations for the booklet, created by Claudia D'Andrea



Figure 5: Tsukuba Sama and Judge Whale. Crocheted by Dana Ahmed. Picture: Zia Madani

Methodology

The show employed a unique combination of puppet theatre and shadow theatre to convey its message, creating a visually and emotionally engaging experience for the

audience. The three Japanese principles—*kami*, *satoyama*, and *wa*—were brought to life through three interconnected stories, each designed to resonate with different aspects of the human experience. These stories bridged generational and spiritual divides, connecting children, elders, and the sacredness of nature in a meaningful way.

The shadow theatre served as a powerful medium to illustrate these principles, using light and silhouettes to evoke the spiritual and symbolic dimensions of the narrative. For example, *kami* was represented through the reverence for the spiritual essence in all living things, *satoyama* through the balance between human activity and the natural environment, and *wa* through the pursuit of harmony and unity.

In one of the final scenes, the principle of *wa* (harmony) was brought to the forefront. The audience was invited to actively participate in the resolution of the story. Using the technique of a mirror, the public was encouraged to reflect on their own role in restoring harmony and to provide an answer to the central question of the show: how can we collectively protect the ocean as a kin? This participatory element not only deepened the audience's engagement but also reinforced the show's central message of shared responsibility and interconnectedness.

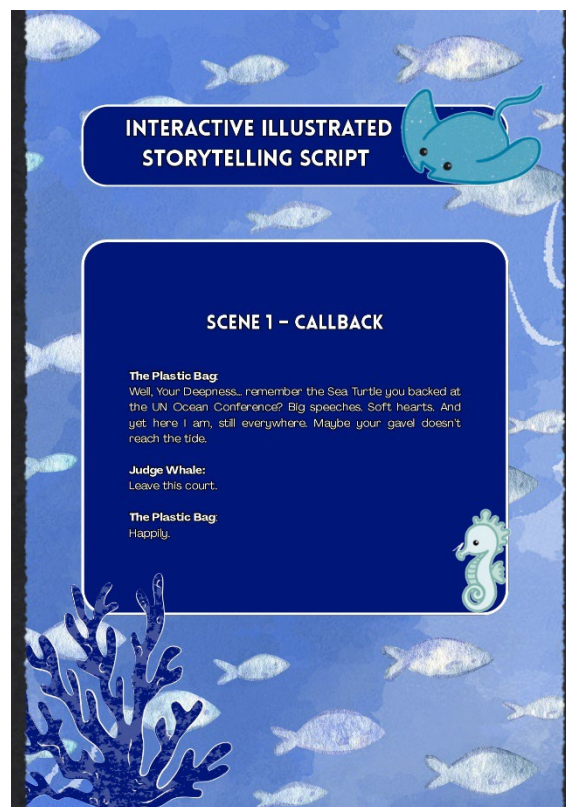


Figure 6: A picture of the booklet, containing the script of the puppet show. Booklet designed by Caroline Bohrer, illustrated by Claudia D'Andrea and co-authored by the team members, after Dana Ahmed's input.

The co-created activity: the decisions of the Court of the Ocean

As part of the Court of the Ocean initiative, participants engaged in a co-created activity designed to deepen their understanding of the research question: How is it possible to weave together the principles of *kami*, *satoyama*, and *wa* to develop a law or decision that regards the Ocean as a kin rather than as a resource? To explore this question, participants were divided into five groups, each tasked with collaboratively developing creative responses that integrated their unique skills and perspectives.

The outcomes of this collaborative process were both imaginative and thought-provoking. One group crafted a poem and an accompanying infographic, blending artistic expression with visual clarity to convey the interconnectedness of the principles. Another group created a co-designed origami representation of *kami*, *satoyama*, and *wa*, symbolizing the harmony between humans and the natural world. A third group developed an origami-based story, where humans and more-than-human entities actively participated, illustrating the shared responsibility for ecological balance.

Additionally, one group presented a cartoon-style visual representation, where the law was personified as a more-than-human figure, a protective cat, safeguarding the act of creation and the principles of harmony. These diverse and creative outputs not only reflected the participants' engagement with the principles but also demonstrated the power of collective imagination in rethinking the relationship between humanity and the ocean. Together, these co-created works embodied the spirit of the Court of the Ocean,

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emphasising the need for collaborative, inclusive, and innovative approaches to environmental justice.



Figure 7 One group presenting their co-created decision. Picture: Masako Hara



Figure 8 Groups deliberating on their co-created decision. Picture: Claudia D'Andrea

Ways forward and the next steps

Building on the outcomes of this workshop, we are committed to further developing the ideas and decisions that emerged from the Court of the Ocean. These insights will serve as the foundation for our next activities, fostering deeper engagement with the principles of climate and ocean justice. One of the key initiatives moving forward is the co-authored book on climate and ocean justice, which has already been accepted for publication by Palgrave Macmillan. This book will synthesise the collaborative research and creative outputs from this and related workshops, contributing to both academic discourse and broader public understanding.

In addition, some of our team members are organizing the next major activity within the Ocean Decade Blue Catalyst project (bLYSs), a workshop to be held in Canada in Spring 2026. This event will build on the themes explored in the current workshop, further connecting academic and non-academic partners in co-creating innovative approaches to environmental justice. Alongside these efforts, we will continue developing an illustrated book and a tactile touch book version, designed specifically for the communities connected to our projects. These accessible formats aim to bridge the gap between academic research and community engagement.

Through these initiatives, we aim to sustain the momentum generated by this workshop, fostering ongoing collaboration and creativity among our partners. Together, we will continue to explore and advocate for a vision of justice that recognises the ocean as a kin, weaving together the threads of law, art, and community to inspire meaningful change.

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Websites

[Tsukuba Conference for Future Shapers 2025](#)

[The ECO CARE Project](#)

[ECO CARE Instagram profile](#)

[Faculty of Law, UiT The Arctic University of Norway](#)

[The Ocean Decade Blue Catalyst \(bLYSs\)](#)

[Ocean Incubator Network](#)

[Follow Your Heart](#)

