

## ECO\_CARE Multisensory and Experimental Workshop 2024 “We are the ocean, and the Ocean is us. A Living Laboratory to learn from each other and learn from the ocean”

June 22nd, Rio de Janeiro, Aldeia Maraka'nà

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**Pictures.** Ana Maria Montaña Monoga, Giulia Parola, Rodrigo Tavares.

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Figure 1. Participants of the workshop at the Aldeia Maraka'nà. Photo: Rodrigo Tavares.

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## **Summary**

This report provides an overview of the Multisensory and Experimental Workshop ECO\_CARE that took place in the Aldeia Maraka'nà, a collaborative initiative coordinated by Giulia Parola, Júlia Xavante, Ana María Montaña Mónoga, Natalia Médici Machado, and Aline Wennerstrom, with the participation of Rodrigo Tavares.

## **Acknowledgments**

We would like to thank: the Norwegian Directorate for Higher Education and Skills for funding the project ECO\_CARE(HKDIR UTF-2020/10084); the UArctic Funding at UiT The Arctic University of Norway (OIN Project Number UArctic 580512124); the Norwegian Research Council for funding the Ocean Senses Akma Project, the Faculty of Law, UiT The Arctic University of Norway; all the community members of the Aldeia Maraka'nà (Rio de Janeiro, Brazil) involved in the project who welcomed us and made us feel at home. A photo story of the workshop can be found on the ECO\_CARE Instagram page: [ECO\\_CARE Instagram profile](#) (content creator: Giulia Parola).

## Aim of the workshop and content

### Scientific Outreach

The organization of the workshop was inspired by the premise that scientific dissemination is important today, taking into account the consequences of climate change, especially the effects it has on the oceans. For this reason, it is considered relevant to carry out activities where these issues are made known to different people from all over the world. To continue this approach the workshop, which took place on June 22<sup>nd</sup> in the Aldeia Maraka'nà (multiethnic urban indigenous village), was open to all public, in particular to the children of the Aldeia Maraka'nà and children of supporters of the Aldeia. The workshop focuses on the idea of an exchange of knowledge, with UiT providing scientific knowledge and the Aldeia contributing traditional knowledge, for the conservation of the marine environment. To conduct the scientific outreach activity a tool kit named "[Foraminifera Activity Box](#)" was used. This tool was developed within the AKMA Project and is freely available online. The box was designed to be sent to schools all over the world. With the contents of this box, teachers can incorporate the activities into their lessons and teach children about foraminifera.

In preparation for the workshop, the central axis of the entire event was decided to be through the senses, inspired by 'Ocean senses activity book' (Panieri G., & Stiller-Reeve M., 2023). So, the following spaces were designed to include all the senses in relation to the Ocean.

The multisensory workshop was divided into three parts:

1. **Knowledge Sharing on the Ocean and Foraminifera (Senses: Hearing and Sight):** In this section, we introduced basic concepts and discussed the importance of Foraminifera, essential marine organisms for the ecosystem.
2. **Creativity Workshop with Júlia Xavante on the Defense of Seas and Rivers (Sense: Touch):** Júlia Xavante, an art teacher from the Aldeia Maraka'nà, guided the adult participants in developing ideas and projects to protect our oceans and rivers, including drawing colourful fish.
3. **Convivial Moment (Senses: Taste and Smell):** We concluded the workshop with a convivial moment where everyone shared a snack that the participants had prepared themselves, stimulating the senses of taste and smell.

**Multisensory and Experiential Workshop**  
*A living laboratory to learn from each other and learn from the Ocean*

**June 22, 2024**  
Location: Aldeia Maracanã, Rua Mata Machado 126, Maracanã  
Audience: Children and Participants of all ages are welcome to join

**Program**  
**14:00 – 15:00** Sharing Knowledge about the Ocean and Foraminifera (Senses: Hearing and Sight). In this session, we will explore the importance of the oceans and learn about foraminifera, essential marine organisms for the ecosystem.  
**15:00 – 16:30** Creativity Workshop with Julia Xavante on the *Defense of Seas and Rivers* (Sense: Touch). Join Julia Xavante in a creative workshop where we will develop ideas and projects to protect our oceans and rivers. This hands-on activity will involve various materials to stimulate the sense of touch.  
**16:30 - 17:00** Sharing a Snack (Senses: Taste and Smell)  
We will end our workshop with a convivial moment, where everyone can share a delicious snack, stimulating the senses of taste and smell.

**Participation is free.**  
If possible, please bring a kilo of non-perishable food for donation.

**Organizers:**  
Giulia Parola; Ana Maria Montaña Monoga;  
Julia Xavante; Natalia Médiçi Machado; Cécilia Campos, Aline Wennerstrom

**Aldeia Maracanã convida para**  
**Workshop Multisensorial e Experiential:**  
*"Um laboratório vivo para aprender mutuamente e aprender com o Oceano"*

**22 de Junho 2024**  
**Público:** Crianças (aberto também para adultos)

**Programa**  
**14:00 – 15:00:** Compartilhando Conhecimentos sobre o Oceano e os Foraminíferos (Sentidos: Audição e Visão)  
**15:00 – 16:30:** Oficina de Criatividade com Julia Xavante Em Defesa dos Rios e Mares (Sentido: Tato)  
**16:30 – 17:00:** Compartilhando a Merenda (Sentidos: Gosto e Olfato).

**Custo:** um quilo de alimentos não perecíveis.  
**Inscrições e mais informações:** 21973814526

Local: Aldeia Maracanã,  
Rua Mata Machado 126, Maracanã-  
Entrada pelo portão verde de grade  
ao lado do prédio do antigo Museu do Índio

Figure 2. Program of the workshop in English and Portuguese. Design: Giulia Parola

## First part: Sharing knowledge about the Ocean and Foraminifera (Senses: Hearing and Sight)

To start off the workshop Giulia gave a short lecture to all participants to explore the importance of the oceans and learn about foraminifera, an essential marine organisms for the ecosystem. The content of the lecture was inspired by the AKMA expedition in 2022, as well as the first educational activities on ocean senses conducted in elementary schools in the Chiquitano territory, Mato Grosso, Brazil (see the video: [Ocean Literacy and Chiquitano Cooperation: Empowering Children and Teachers Description](#)). This video showcases the collaborative efforts of two projects, Akma 2 Ocean Senses and ECO\_CARE, led by Giuliana Panieri and Margherita Paola Poto, respectively. The video documents their work on ocean literacy in partnership with the Chiquitano villages of Mato Grosso, skillfully coordinated by Giulia Parola.

Following the lecture, the group was divided between the children and adults. The adults focused on the activity led by Júlia Xavante, explained later in the report. The children focused on exploring the material available in the 'Foraminifera activity box' and then creating some art. First, they took their time in looking at the seafloor sediment and the different foraminifera samples. Afterwards, they completed the activity entitled 'Foraminifera as a sea surface thermometer', part of the activity kit included in the box. A

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more detailed explanation of the contents of the box can be found at this link [Foraminifera Activity Box](#). To finish the session with the children, there was a moment of creation, where inspired by the new knowledge learned about foraminifera, they dedicated themselves to creating crafts such as drawings and some modelling clay pieces.



Figure 3 Set up of materials and 'Foraminifera activity box' for the workshop. Photo: Ana Montaña



Figure 4. All participants using the contents of the 'Foraminifera activity box'. Photos: Ana Montaña



Figure 5. Art created by the children inspired by the lecture and content of the 'Foraminifera activity box'. Photos: Ana Montaña.

## Second part: Creativity Workshop with Júlia Xavante in the Defense of Our Rivers and Seas (Sense: Touch).

Júlia Xavante, an Indigenous art teacher at the Indigenous University of the Aldeia Maraka'nà, led the adult participants through a creative and collaborative process where they developed ideas and projects aimed at protecting our oceans and rivers. The premise of the workshop arose because Indigenous people care for and preserve rivers, seas, fish, and the environment. The work was divided into three phases: showcasing designs, called

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*grafismos* made by different Indigenous peoples about pre-made fish models; a discussion about the importance of protecting our waters; and research on Indigenous designs to be applied to fish. Under her guidance, the participants engaged in drawing colourful fish, which symbolised the vibrant life within these aquatic ecosystems. This hands-on activity was carefully designed to be both educational and sensory, involving a variety of materials such as paper, paints, and clay to stimulate the sense of touch. Through this tactile experience, the participants not only expressed their creativity but also deepened their connection to the environmental themes discussed, reinforcing the importance of conservation and sustainable practices. It is important to mention that this activity was run and coordinated from an Indigenous perspective, and that Indigenous and non-Indigenous views were successfully woven together, thanks to the collaboration of both Indigenous and non-Indigenous scholars and the integration of law, marine sciences and Indigenous knowledge systems.



*Figure 6. Adults participants working on their activity and results. Photo: Giulia Parola and Ana Montaña.*



### Third part: Convivial Moment (Senses: Taste and Smell)

The workshop ended with a convivial moment, where everyone shared a snack, stimulating the senses of taste and smell. All the snacks were contributions prepared by the participants. The gathering was intentionally designed to be plastic-free, with an emphasis on reusing materials. Even the plastic bottles were reused and recycled, and some of the food offerings were vegan. The concern over plastic use stemmed from the fact that 80% of marine litter is composed of single-use plastics (EEA 2023), so even during this social moment, the aim was to raise awareness of this issue. To further this effort, everyone brought their own cup and plate to minimize waste and reinforce the message of sustainability.



*Figure 7. Snacks table with contributions from all participants. Photo: Ana Montaña*

## Participants

The key participants in this event were researchers and community members from the ECO\_CARE Team and namely: Giulia Parola, Julia Xavante, Ana María Montaña Mónoga, Natalia Médiçi Machado, Aline Wennerstrom and Rodrigo Tavares. In total, we estimated around 40 participants, including children, elders, community and team members.

## Workshop Outcomes

1. Participants expressed great curiosity and willing to learn more about Foraminifera.
2. During this workshop 'The foraminifera activity box' was tested for the second time, and there was a good reception from the children who participated.
3. Cooperation was achieved between the aldeia and the ECOCARE team, since the event was held in the aldeia.

## Meeting with Colombian educators.

Ana Maria had the opportunity to meet in Bogotá, Colombia, the director of the Colegio Campestre Goyavier school, which has been working since November 2023 in collaboration with Giuliana Panieri and her team, as an outreach activity of the AKMA project. The school has been conducting a series of activities to teach preschool, primary and secondary school students more about the environment of the Ocean, especially in the Arctic. To continue with this approach, during the meeting, socialization and recognition of the 'Foraminifera activity box' was made, with all its content so that later on at school, the teachers can make use of the activities to continue motivating their students to keep learning more about the ocean and marine organisms such as Foraminifera.



Figure 8. Right, School director Gloria Mónoga. Left, School director and teachers in Floridablanca, Colombia. Photo: Ana Montaña.

## Ways forward and the next steps

It is worth noting the good impact that all the mentioned activities in this report has had on participants, teachers and students, therefore is important to share and document the activities in a scientific book, which is a result of the [Ocean Incubator Network](#) workshop

on Ocean Literacy, edited by Margherita Paola Poto and Laura Vita (a project funded by UArctic). The book brings information to enhance Ocean Literacy through diverse research, educational and Interdisciplinary approaches. In the chapter on Positionality (co-authored, among others, by Ana Montana), the authors invite the reader to reflect on how the knowledge of the ocean is linked to one's surroundings and social context, and also to explore the importance of 'connecting with each other' and 'connecting with the ocean'. Therefore, the practical approach to these activities plays an essential factor in finding a middle point between law, science, and art.

## **Reference list**

### **Relevant literature**

M. P. POTO, L. VITA, PANIERI G. (eds) (2024) Ocean Literacy: The Toolkit, a project from the Ocean Incubator Network, accepted by Palgrave MacMillan, Gold Open Access, endorsed by UNESCO The Ocean Decade for Sustainable Development, forthcoming end of 2024.

EEA, European Environment Agency (2023, January 1<sup>st</sup>), From source to sea – The untold story of marine litter, web report, available at: <https://www.eea.europa.eu/publications/european-marine-litter-assessment>, last access September 1<sup>st</sup>, 2024.

Panieri, G., Poto, M. P., Murray E. M. (ed. by) (2024) Emotional and Ecological Literacy for a More Sustainable Society, Palgrave MacMillan, Springer Nature SDGs Series, ISBN: 978-3-031-56771-1.

Panieri G., & Stiller-Reeve M. (Eds) (2023). The Ocean Senses Activity Book. Septentrio Educational, (1). <https://doi.org/10.7557/se.2023.1>

Panieri G., Stiller-Reeve M., & Poto, M. P. (Eds) (2023). The Ocean Senses Activity Book (Chinese version). Septentrio Educational, (2). <https://doi.org/10.7557/se.2023.2>.

### **Websites**

[The ECO\\_CARE Project](#)

[ECO\\_CARE Instagram profile](#)

[Ocean Sense and Chiquitano Cooperation](#)

[The Akma Project](#)

[Foraminifera Activity Box](#)

[Department of Geosciences, UiT The Arctic University of Norway](#)

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

[Ocean Incubator Network](#)

[Follow Your Heart](#)

[The Deep Network Project](#)

[Universidade Intercultural Indígena Aldeia Maraka'nà.](#)

[Aldeia Maraka'nà Instagram profile](#)