BOOK OF ABSTRACTS

This Book of Abstracts provides a comprehensive overview of the session content and is structured into three main sections:

I. Session Description – an introduction to each session, including its objectives and expected outputs
II. Session Program – a detailed schedule for each session, including speakers and timing
III. List of Abstracts – a complete compilation of all accepted abstracts

I. SESSION DESCRIPTION

ID: T2d

Restoration with Nature and People: A Living Lab Approach

Hosts:

	Name	Organisation	E-mail
Host (s):	Ana Lillebø	University of Aveiro	lillebo@ua.pt
Co-host(s):	Vera Helene Hausner Rudiger Voss Pierre Strosser Emma Verling Darragh O'Suilleabhain Raquel Veiga Frederike Tirre	Arctic University of Norway University of Kiel Acteon Environment University of Cork Council Cork County Council CCDRC - Center Regional Coordination and Development Commission University of Kiel	vera.hausner@uit.no voss@economics.uni-kiel.de p.strosser@acteon-environment.eu emma.verling@ucc.ie Darragh.OSuilleabhain@CorkCoCo.ie raquel.veiga@ccdrc.pt ftirre@uv.uni-kiel.de
Other organiser(s):	Dionisia Laranjeiro Isabelle Görres Clara Jarry Olga Mashkina Enrickson Varsori	University of Aveiro Acteon Environment Acteon Environment Acteon Environment University of Aveiro	Dionisia.mendonca@ua.pt i.gorres@acteon-environment.eu c.jarry@acteon-environment.eu o.mashkina@acteon-environment.eu varsori@ua.pt

Abstract:
Delivering coastal and marine restoration requires not only meaningful ecological action but also genuine engagement of the people whose lives and well-being depend on these ecosystems and the knowledge they hold. Anchored in the A-AAGORA project (Atlantic-Arctic Agora), this 90-minute session explores how living labs and related participatory approaches can support restoration that is both nature-positive and people-centered.

The programme combines short presentations by registered contributors with a short policy-framing input and a moderated panel discussion. Additional to the keynote on the functions of the A-AAGORA Living Labs and the experiences gathered throughout the project; enabling conditions and policy barriers; cultural ecosystem services and digital knowledge infrastructures; embodied and behavioural dimensions of human–nature relationships; public awareness and preferences for marine biodiversity conservation; and methods for quantifying marine ecosystem impacts in offshore industries.

The session is aligned with the EU Mission: Restore our Ocean and Waters by 2030 and connects to ESP themes on biodiversity and ecosystem services, governance, participation, and marine and coastal systems.

Goals and objectives of the session:

- Showcase how living lab approaches (co-creation, experimentation, participatory innovation) can advance coastal and marine ecosystem restoration.
- Discuss how governance, policy, cultural ecosystem services, public preferences, and ecosystem-impact assessment can strengthen restoration decision-making.
- Connect researchers, practitioners, communities, and policymakers to co-develop actionable insights for a nature- and people-positive Europe.

Planned output / Deliverables:

- Session synthesis note summarising the key messages from the presentations and panel discussion for ESP proceedings, newsletters, and A-AAGORA dissemination channels.
- Strengthened collaboration network among participants interested in living labs, governance, social learning, cultural ecosystem services, and participatory restoration approaches.
- Follow-up exchange on methods and cases presented in the session, including restoration governance, awareness and preference assessment, and ecosystem-impact quantification.

Session format:

- 1.5h session
- Keynote presentation on transformative living labs for ecosystem restoration
- Policy-framing contribution
- short presentations by registered contributors
- Panel discussion on stakeholder and end-user integration

Related to ESP Working Group:
TWG 2 – Biodiversity & Ecosystem services

II. SESSION PROGRAM

Room: B2
Date of session: Friday, 22nd May 2026
Time of session: 09:00-10:30

Timetable speakers:

Chair: Isabelle Görres

Time	First name	Surname	Organization	Title of presentation
5'	Isabelle	Görres	Acteon Environment	Introduction and Welcome
10'	Dionisia	Laranjeiro	University of Aveiro	Keynote: Transformative Living Labs for ecosystem restoration

Time	First name	Surname	Organization	Title of presentation
5’	Clara	Jarry	Acteon Environment	Enabling or building barriers to Living Labs – A Policy Guidance
5’	Elizabeth	Barragûan Porras	Guayaba Colectivo	Rewilding Language: Ecosomatic Practices for Restoring Biophilia Between Bodies and Territories Living Glossaries for Nature-Based Transformation
5’	Daphne	Arenas Yance	Universidad Nacional Agraria La Molina - UNALM	From Ancestral Climate Signals to Structured Digital Knowledge: Challenges and Opportunities for Advancing Cultural Ecosystem Services in the Digital Realm
5’	Liu	Dandan	Qilu Normal University	Does nature’s contributions to people value realization policy in China improve public awareness and preferences for marine biodiversity conservation? A temporal stability analysis
5’	Annelies	Boerema	IMDC, Belgium	Advancing Quantification of Marine Ecosystem Impacts: The Marine Ecosystem Performance Framework for Offshore Industries
35’	All			Panel discussion on Stakeholder and End-user integration
5’	Isabelle	Görres	Acteon Environment	Closing Remarks

LIST OF ABSTRACTS

The first author is the presenting author unless indicated otherwise

1. Rewilding Language: Ecosomatic Practices for Restoring Biophilia Between Bodies and Territories Living Glossaries for Nature-Based Transformation

***First author*:** Elizabeth Barragûan-Porras
***Other author(s)*:** Daniela Barragûan-Porras
***Affiliation*:** Guayaba Colectivo
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This presentation explores the renaturalization of language as an ecosomatic practice capable of reshaping behavioral relationships between bodies and territories. Grounded in nature-based therapy, embodied ecology, and biophilic thought, it proposes that rewilding movement, perception, and everyday speech can restore relational ethics between humans and the more-than-human world, supporting both inner and ecological regeneration.

The core object of study is behavioral shift: how ways of moving, naming, sensing, and narrating territory influence our capacity to coexist with living systems beyond extractive and anthropocentric paradigms. Despite increasing scientific knowledge on biodiversity loss and ecosystem degradation, systemic behavioral change remains limited. From an ecosomatic and ecological perspective, this gap is

understood as partly rooted in the abstraction and instrumentalization of everyday language, which distances bodies from lived ecological experience. When language loses fluidity and relational grounding, it also loses its capacity to orient care, responsibility, and attention toward living systems.

This work approaches language as a living, performative technology that actively shapes perception, embodiment, and ecological understanding. The methodology centers on Living Glossary Laboratories: time-unbound, situated spaces of collective exploration where ecological vocabulary is not fixed or corrected, but questioned, expanded, and re-inhabited through embodied experience. These laboratories convene diverse forms of situated knowledge—bodies that live through movement (children, artists, dancers, athletes, therapists), bodies that study territory (ecologists, scientists, academics), and bodies that live the land (farmers, rural communities, Indigenous knowledge holders). Through Guayaba Colectivo's ecosomatic practices, participants engage in movement, sensory attunement, listening, and poetic articulation to nourish language from lived ecological relations.

Rather than seeking semantic consensus, the living glossaries enhance plurality and shared presence as conditions for collective and regenerative understanding. This contribution complements ecosystem services research by addressing the embodied and linguistic conditions through which ecological benefits are perceived, valued, and translated into sustained behavioral relationships with living systems. In this way, language regains movement, permeability, and intimacy with life.

Ultimately, renaturalizing language is proposed as a regenerative, nature-based therapeutic process that reactivates biophilia and restores our collective capacity to inhabit ecosystems—internal and external—as co-constituted territories.

***Keywords*:** Biophilia, Behavioural change, Regenerative transformation, Ecosomatic practices, Rewilding ecosystems

2. From Ancestral Climate Signals to Structured Digital Knowledge: Challenges and Opportunities for Advancing Cultural Ecosystem Services in the Digital Realm

***First author*:** Daphne Lisbeth Arenas Yance
***Other author(s)*:** Luz Angelica Baldeon Ramos, Francis Egoavil Casimir, Galia Hellen Pollera Gamarra, Elizabeth Silvestre Espinoza, Marco Antonio Carhuapoma Huamani
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Ecosystems provide multiple ecosystem services that support human well being, including provisioning, regulating, and cultural services. Among these, their role as natural indicators of climate variability remains underexplored in formal climate information systems. In Indigenous and rural communities across Peru, weather forecasting has historically relied on long-term observation of animals, plants, celestial bodies, and seasonal patterns. These ancestral climate signals represent traditional ecological knowledge and a form of cultural ecosystem services that has supported agricultural decision-making for generations. However, in the digital era, this knowledge remains fragmented, unstructured, and marginalised.

Across Peru, ancestral climate forecasting knowledge has been documented in academic papers, NGO reports, and institutional publications. Its main limitation today is not the absence of information, but its dispersion: signals are scattered across multiple sources, making them difficult to integrate into contemporary climate-related decision-making.

To address this challenge, we present Raíces Climáticas, an ongoing initiative focused on organising, visibilising, and centralising ancestral climate forecasting signals already available in open-access sources. The project does not extract or appropriate community knowledge; instead, it builds upon information that has been voluntarily shared, prioritising structure and attribution so these signals do not remain isolated.

As an initial phase, we conducted a rapid exploratory review of academic literature, NGO reports, and

institutional documents using targeted keywords related to traditional climate knowledge and forecasting. From 42 sources, nine documents explicitly describing forecasting signals were selected, yielding over 500 preliminary records currently under refinement.

Each signal is organised using a transparent data structure including signal type, observed indicator, associated forecast, temporal scale, and geographic location. These data are being consolidated into a web-based open repository.

By transforming dispersed knowledge into a shared and searchable digital infrastructure, Raíces Climáticas illustrates how digital tools can support cultural ecosystem services research and contribute to inclusive climate knowledge systems.

Keywords: Cultural ecosystem services, traditional ecological knowledge, digital platforms, climate adaptation, Indigenous knowledge

3. Transformative Living Labs for ecosystem restoration

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Ecosystem restoration is essential for achieving critical societal objectives, such as halting biodiversity loss, mitigating climate change, enhancing ecological resilience, and ensuring the well-being of future generations. However, restoration efforts often face significant challenges, including slow progress, limited scalability, high costs, and uncertain outcomes. We address these challenges by developing transformative living labs to accelerate large-scale coastal ecosystem restoration. These living labs serve as collaborative spaces where citizens, governments, businesses, and researchers co-create solutions, test ideas through real-world experimentation, and engage in iterative learning processes for the purpose of reducing anthropogenic pressures, implementing ecosystem-based management, and employing nature-based restoration measures. We presents insights from three transformative living labs: (1) Norway, where efforts focus on regenerating kelp forests, restoring local fish stocks, and halting seabird population decline; (2) Community-led wetland restoration, empowering local communities to enhance ecological resilience; and (3) Ria de Aveiro Lagoon, where seagrass meadows are restored to improve biodiversity and climate resilience. The living lab cycle is structured into three phases: co-designing solutions, developing and experimenting, and co-evaluating outcomes. The process has been designed to build trust, combining diverse knowledge systems, engaging multi-level governance, and collaborating with partners to create long-term impact of actions. A digital blueprint has been developed to guide the replication and scaling of ecosystem-based restoration efforts. Finally, we discuss the transformative potential of living labs in addressing complex restoration challenges for the purpose of creating a nature and people positive future.

Keywords: marine ecosystems, coastal restoration, nature-based solution, co-creation, sustainability transformations

4. Does nature's contributions to people value realization policy in China improve public awareness and preferences for marine biodiversity conservation? A temporal stability analysis

First author: Dandan Liu
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Management policies are crucial for safeguarding sustained and stable marine biodiversity amidst ongoing pressures such as land use change, pollution, resource overexploitation, invasive alien species and climate change. China established a nature's contributions to people value realization policy (NCPVR) in 2021, aiming to encourage stakeholders to prioritize environmentally beneficial production and consumption choices, thereby stimulating intrinsic public motivation for ecological conservation.

Biodiversity conservation is an integral component of the NCPVR policy. A choice experiment method was employed to investigate the changes in public preferences for marine biodiversity conservation in Jiaozhou Bay before and after the enactment of the NCPVR policy (in 2017 and 2023, respectively), aiming to evaluate the effectiveness of the policy on marine biodiversity conservation. The results indicate that two years after the implementation of the NCPVR, the public's overall breadth and depth of awareness regarding marine biodiversity increased. Additionally, public preferences for marine biodiversity conservation increased, expanding from two categories in 2017 (shallow-water swimming organisms and marine plants) to five categories in 2023 (with the addition of seabirds, plankton, and intertidal and benthic organisms). The willingness to pay (WTP) for seabirds, plankton, and intertidal and benthic organisms, as well as shallow-water swimming organisms, increased from 32.21~85.77 CNY/person·year to 98.21~140.49 CNY/person·year. China's NCPVR policy effectively conveyed important information about biodiversity conservation in the short term, enhancing public awareness and preferences for marine biodiversity conservation. The study also revealed that economic incentive policies for NCPVR remain at the conceptual propaganda level and lack operational incentives for biodiversity conservation. It is recommended that the government deepen the design of value realization pathways and market trading arrangements to stimulate the intrinsic motivation of the public for marine biodiversity conservation and ensure the long-term effectiveness of policies.

Keywords: Ecological product value realization, Marine biodiversity conservation, Choice experiment, Temporal stability, Jiaozhou Bay

5. Advancing Quantification of Marine Ecosystem Impacts: The Marine Ecosystem Performance Framework for Offshore Industries

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Human activities at sea, like building wind farms, can harm vulnerable marine ecosystems, but they can also help if designed carefully. Offshore industries face growing regulatory and societal demands to demonstrate sustainable practices and ecosystem-based management. However, quantifying the impacts of offshore activities on marine ecosystems remains a scientific challenge due to the complexity and multidimensionality of marine processes.
Our business-oriented innovation project Marine Ecosystem Performance framework (MEsP) addresses this gap by developing a two-tier framework for assessing marine business performance in relation to ecosystem health. Tier 1 offers a semi-quantitative scoring system for rapid assessments, while Tier 2 integrates advanced quantification models. To develop Tier 2, we tackle the challenge of diverse quantification models for a variety of ecosystem parameters such as turbidity, reef effect, underwater noise, carbon fluxes, and biodiversity indicators. For each impact, we list candidate methods/models and evaluate them against both their scientific robustness (e.g., accuracy, spatial–temporal resolution) and business applicability (e.g., data requirements, user friendliness, licensing).
The assessment approach and selected best-available & best-applicable impact quantification methods are tested on offshore wind farms in the Belgian part of the North Sea. In addition to the impacts of the offshore wind farm itself, much attention goes also to the added value of possible nature-inclusive design and positive ecological impacts. Validation workshops with both marine ecosystem specialists and offshore development companies will ensure scientific rigor and practical applicability. The overarching aim is to implement this approach in a business tool that helps offshore businesses understand and quantify their environmental footprint in relation to the Good Environmental Status of the marine environment. This will support healthier oceans and a more sustainable blue economy.

Keywords: Marine ecosystem services, quantification methods, business impacts, Good Environmental Status