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Impact of the Bauhaus of the Sea Sails project

Analytical framework for impact assessment

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Bauhaus of the Seas Sails

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Executive Summary

This report provides a structured and transparent account of how the Bauhaus of the Seas Sails has generated early effects and emerging impact pathways.
The assessment examined how the seven pilot sites — Venice, Genova, Lisbon, Oeiras, Hamburg, Malmö and the Dutch-Belgian Delta — contributed to the project's aims of fostering aesthetic, sustainable and inclusive transformation adapted to different local contexts. A unique analytical impact framework was developed to translate the high-level EU ambitions rooted in the New European Bauhaus Compass (2022) into locally aligned, qualitative tools and indicators. This document has two main objectives: a) to document the methodology used by WP5 to observe, interpret and compare impact across pilot contexts and b) to present the results of applying this framework, focusing on outcomes, early effects and emerging pathways for long-term transformation.

The report is organised into two parts. The first part explains the methodology developed for this purpose during 2024 and 2025, outlining how Work Package 5 built the Impact Analysis Framework. The framework guided a mixed-methods approach that combined context-analysis, group learning and comparative assessment across pilots. A Library of Indicators was created to capture multi-level, process-oriented and long-term effects, aligned with the project's conceptualisation of gradual impact pathways through co-design, implementation and potential long-term impact (drop, ripple and wave as defined in the Description of the Action (DoA)).

The second part presents the impact emerging from the project's deployment and a cross-pilot comparative analysis. Findings showed that the tested solutions were most impactful when artistic, participatory and ecological dimensions were meaningfully integrated into co-design processes. While drops implemented across pilots offered promising ways to reconnect communities with water bodies, their early impact differed according to historical, social and institutional conditions. Pilot teams' working approaches were equally decisive: openness to learning, strong relational practices and long-term commitment consistently led to stronger impact pathways. The adoption of the BoS-Zoöp regenerative governance model reflected these patterns, proving most effective in pilots that deliberately created space for diverse voices, including other-than-human perspectives.

Deliverable 5.2 provides a structured and transparent account of how impact has been approached, observed and interpreted across the pilots. While the project's ambition to foster intergenerational, intercultural and interspecies change extends beyond the timeframe of a three-year project, the assessment identifies early effects and emerging pathways that provide a foundation for continued learning, reflection and action beyond the project duration.

Introduction

The impact assessment of all Bauhaus of the Sea Sails (BoS) pilots was led by a team in Delft University of Technology (TU Delft), responsible for Work Package 5 - Impact Assessment. The team developed a unique analytical impact framework for the project, which provides a **unified way to assess and compare pilots' impact, contextualize impact analysis, and support learning** on how tested solutions were deployed, generating ripple effects and potentially long-term impact (drops, ripples and waves, see Description of Action (DoA)). This methodology complements more standardized quantitative approaches. It establishes a process for qualitative impact assessment that has been tested and refined throughout the project and that makes a valuable contribution to BoS and to broader efforts to evaluate and learn from New European Bauhaus (NEB) projects. It has already received interest and initial uptake in related professional and academic contexts.

The framework for the impact analysis was developed by conducting literature review about existing impact assessment and Monitoring, Evaluation and Learning (MEL) methods, as well as by embedding the needs and perspectives of the project's partners (from pilot and work package teams) to ensure relevance and ownership of the framework. Our work considers and connects with other concepts used in the project such as the 'Ocean Ambassadors' and 'Sea Forums' as actors who took part in co-designing, implementing and evaluating the work of the pilots (Seravalli, Light & Emilson 2022; Zumbrink et al. 2024).

A methodology and a toolbox were developed (including the "Library of Indicators", "Theory of Change", context analysis, thematic deep-dives, pilot visits) and guided the efforts to collect data. These emphasized **qualitative information, cross-pilot exchanges and a long-term orientation** that recognized the interconnectedness between process (i.e., ways of doing) and impact (Section 2). Data collection activities provided opportunities for pilots to get to know each other's work, get inspiration from their respective impact strategies, and make sense of their collective experience as part of the Bauhaus of the Sea Sails project. The WP5 team in TU Delft also developed a narrative geospatial platform (see BoS Deliverable 5.3) which connects these findings in space and serves as a place for exchange and communication including for future projects (https://bauhaus-seas.architecture.tudelft.nl/). The BoS-Zoöp method contributed to the understanding of pilots' impact through its own methodologies and tools and by using the analytical framework developed by Work Package 5.

The use of the methodology and tools to conduct data collection, analysis, and reflection activities enabled the Impact Assessment team to gather a wealth of information, resulting in in-depth analytical insights about the impact of the pilots and their drops. This report provides a **comparative analysis**, namely how the same drop typology was applied and generated impact (from testing the drop, to generating ripples, to potential waves) in different pilot contexts, and what good practices

the pilots developed to generate impact in relation to the project's core values: Aesthetics, Sustainability, Inclusion and Local Groundedness (Section 3). This comparative assessment considered key factors related to the context, stakeholder situation and resources of each pilot and drops. It also provides insights on the long-term impact of the project, beyond the end of EU funding, by looking at pilot's future strategies (also recorded in the BoS Deliverable 4.7) and the 'seeds' (Bennett et al. 2016) for long-term impact (waves) they have planted.

The deliverable is structured in two parts. Part 1 presents the analytical framework and methodology developed in WP5. Part 2 presents the results and comparative analysis across drops implemented in single and multiple locations, followed by a synthesis across impact dimensions and a reflection on long-term impact pathways (waves).

Part 1 - Analytical Framework & Methodology

1. Methodology of impact analysis

1.1. Foundations of the analytical framework

1.1.1. Definition, scope and objectives of the impact analysis

The impact assessment team considered both formal definitions of impact and how BoS pilots themselves understood impact in their local contexts. According to the OECD (2021), "impact addresses the ultimate significance and potentially transformative effects of an intervention." It refers to effects which are long term and broad in scope, including the indirect, secondary and potential consequences of an intervention. Impact also refers to 'transformational change', meaning a "holistic and enduring changes in systems or norms". Therefore, the impact assessment team considered **time** (medium to long term), **scope** (broad effects, across sectors)**, scale** (beyond the individual or the local) and **depth** (transformational change) when shaping the analytical framework of the project.

To integrate the perspectives of project partners on impact, especially pilot teams, an online survey was conducted in May 2024 (one month after the impact analysis team was set up) and asked: 'What does impact mean to you?'. There was considerable variation in the responses, as shown by the image cloud below (Figure 1).



Figure 1. Image cloud (24 respondents, 71 responses), Vevox interactive group exercise, 3 May 2024.

A key takeaway was that project members saw 'impact' and 'process' (understood here as 'ways of doing') as closely interconnected. Indeed, they referred to transformation, results, effects but also participatory processes and community engagement when asked about their understanding of impact. This **interconnectedness between impact and process** was coherent with the overall design and expected impact of the BoS project as defined in its early stages. The 10 mission-oriented goals in the BoS Description of the Action included the following:

- Delivering an intergenerational, interspecies and intercultural co-design process (Goal #1)
- Making real the co-participation of human citizens and non-human agents in pursuit of a broader green transformation (Goal #3)
- Genuinely proving the value of an organisational model for cooperation between generations, species and cultures (Goal #8)

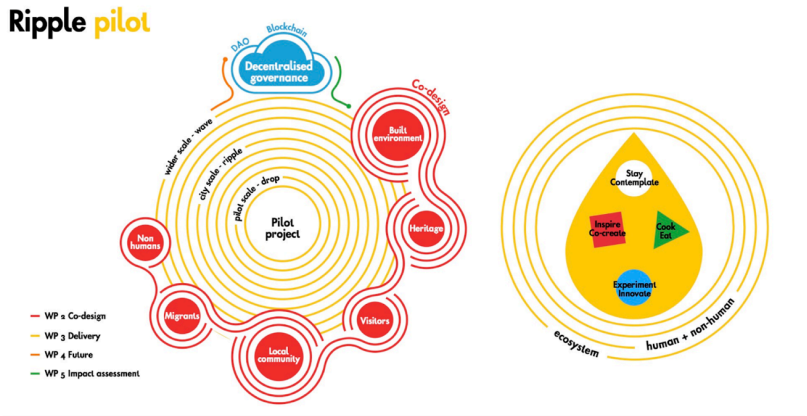


Figure 2. BoS approach to Drop, Ripple and Wave.

Impact assessment is often associated with quantitative (often large) datasets, however, qualitative measurements and impact assessment tools that can be applied to relatively small-scale local interventions are underdeveloped. This interconnectedness of process and impact in the BoS

project was recognized by the impact assessment team and integrated in the development of the analytical framework. We aimed to acquire a deep understanding of how the pilots' ways of working, and the quality thereof, enhanced the impact they generated.

This prompted a close collaboration with other Work Packages involved in co-design (WP2), deployment (WP3) and replication (WP4) to develop joint ways of gathering information and to foster dialogue between pilots. It also led us to embrace, in the analytical framework, the image of the 'Drop, Ripple, Wave' (see Fig. 2 above), developed in the early stages of the project to capture how change happens gradually, starting from the drops as local-level actions that initiate a process towards a potentially transformative impact. As such, impact is seen not as an end goal to achieve by the end of the project, but as a journey that will continue in the years following.

The Figure 3 below illustrates the **scope of the impact analysis** conducted by TU Delft, which focused on both the pilots and their drops (solutions tested) and considered their context, process (e.g., ways of designing, interacting, planning, testing drops, making ripples), outcomes and early impact (manifesting especially in year two and three of the project), as well as their potential for long-term impact. Regarding the latter, impact potential was assessed by analyzing replication and impact strategies (making use of information from Work Package 4 – Replication) and identifying "seeds" (Bennett et al. 2016) for long-term impact (waves) generated by the pilots (see section 2.2.6). We formulated suggestions to pilot teams on how they could improve and expand their impact pathways in the years after the project's completion (Section 3.4). This aimed to support the learning of the pilot teams and the broader project and to "energize" the processes of transformative change (Termeer and Dewulf 2018) initiated by the drops. The figure below also shows the toolbox developed by the Impact Assessment team to perform the impact analysis, discussed in Section 2.2.

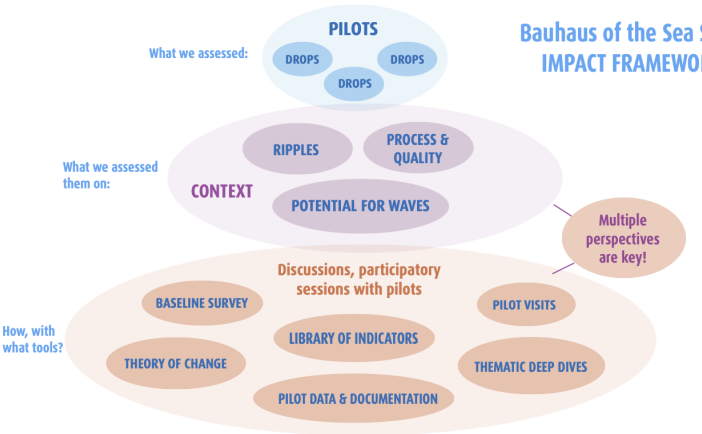


Figure 3. Overview of the BoS analytical impact framework

The analytical framework also incorporated **different dimensions of impact** to reflect the project's multidisciplinary nature (crossing art, science, design, architecture, spatial planning, heritage, food,

policy, computer science, etc.) and the range of outcomes and impacts that would arise from cross-sector collaborations. The impact assessment team drew inspiration from the New European Bauhaus (NEB) Compass (European Commission, 2022) and project-level efforts to translate its high-level guidance to the seven pilot locations. Indeed, before the start of the impact analysis, project partners, in particular Malmö University, leader of Work Package 2 - co-design, introduced 'Locally Grounded' as a fourth core value, referring to the contextual conditions in which co-design and tested solutions came together. This value was incorporated alongside the three NEB Compass values Aesthetic, Sustainable and Inclusive (Seravalli, Light & Emilson 2022), see Figure 4 below. The analytical framework reflected this approach, by acknowledging the significant work undertaken by pilot teams to shape locally grounded actions that translated the NEB values into practice. Therefore, understanding how core values are turned into context-sensitive local impacts became a key area of focus of the impact analysis and influenced the development of our toolbox, especially our Library of Indicators.

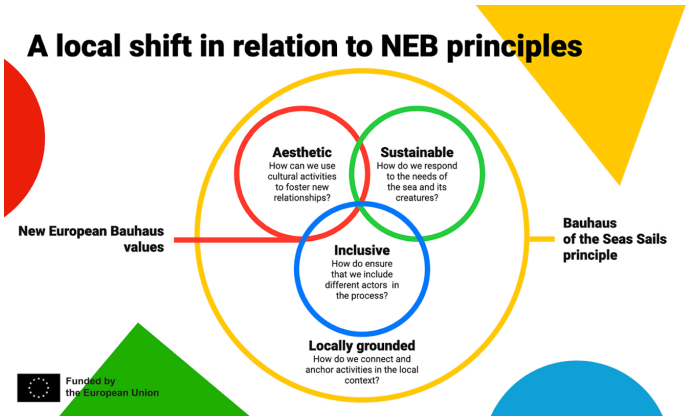


Figure 4. Visualization of the Bauhaus of the Sea Sails approach to NEB principles (European Commission, 2024)

The online survey conducted in May 2024 also captured the expectations of the project partners, including pilots, regarding the impact assessment and its role in the project. Most popular responses were (1) informing and guiding future action, and (2) providing tools, procedures and indicators. Considering this, the impact assessment team formulated the following **core objectives**:

1. Develop **qualitative analytical tools, including a set of indicators**, that embed pilot perspectives, assess the range of outcomes and impacts they generated across dimensions (Aesthetic, Sustainable, Inclusive, Locally Grounded), and enable comparative assessment at the project level.

2. Deliver a **context-sensitive, fine-grained analysis** of the drops, ripples and potential waves generated by the pilots and their drops, across different dimensions of impact.

3. **Support the learning** of project partners, especially pilots' thinking and planning about how to transition from early impacts (ripples) to higher level impacts in terms of scale (wave) and depth (transformation) in the medium to long term.

1.1.3. Methodological approach

To develop our methodology, we had to align ambitions (an innovative, co-designed framework) with project partners' expectations while also accounting for the opportunities and constraints that arose throughout the project. See below a snapshot (which does not claim to be comprehensive) of opportunities and constraints identified by the impact assessment team in 2024 during the methodological development (Box 1).

Opportunities:

- The **NEB Compass** provides a useful basis to develop innovative impact frameworks that embed different dimensions, levels of ambition/transformation, and the interconnectedness of process and impact (core values and working principles, see NEB Compass 2022).
- BoS partners bring knowledge and experience from different disciplines and contexts; these **diverse perspectives** can enrich the impact analysis.
- The same drop typologies are **tested in several locations,** providing relevant insights for context- and comparative analyses.
- The project uses art, culture and design-driven processes/methods which invite creative and collaborative ways of analysing impact.

Challenges, constraints:

- The duration of the project (three years) means that the long-term impact (waves) generated by drops and their ripples cannot be assessed with certainty by our Work Package.
- Project partners from different disciplines have **different perspectives on impact,** how to assess it, and how to learn from impact thinking.
- We faced **time and linguistic constraints** to engage systematically with the pilots and their local partners, to co-develop impact assessment tools and co-analyse their impact. This was exacerbated by overlaps between Work Packages roles and tasks.
- It was not feasible to complement our in-depth qualitative assessment with statistical methods and time comparisons of public data due to the nature of the drops (experimental, arts-based) and internal capacities of our team and project partners.

Box 1. Opportunities and challenges for the BoS impact analysis

To tap these opportunities while recognising challenges, the impact analysis adopted a **flexible mixed-methods approach** to collect and analyse information using several tools. By using context analysis, theory of change, a library of indicators and sensemaking sessions with pilots, we

combined elements of participatory, narrative-based, theory-based and indicator-based approaches to evaluation and impact assessment. Qualitative analysis formed the core of the approach and enabled a deep understanding of the complex dynamics and processes engendered by art, culture and design-led interventions. Because this approach was unusual for certain pilot teams, we developed and shared a guidance note in May 2024 and a Feedback Sheet (first tested at the kick-off event of the Delta pilot in June 2024) to support pilots in gathering qualitative information about their activities, events and workshops. Qualitative analysis was complemented by quantitative elements that capture the scope and reach of the pilots, such as the number of citizens and practitioners involved in participatory processes and public activities.

Another important aspect was the **iterative development of the methodology and tools**, which integrated insights and feedback from pilots and project partners at different moments. Alongside the survey of May 2024, an online question form (15 questions) was sent to pilots in May 2024 to build a baseline understanding of their impact goals and their alignment with the NEB core values and working principles. The question form used a mix of numerical assessments, multiple choice and open-ended questions. Its results shaped the development of our impact assessment tools, especially the Library of Indicators.

Therefore, the development of the analytical framework was the result of a process of constant dialogue and integration between the following elements:

- Review of existing knowledge and literature about impact assessment and Monitoring, Evaluation and Learning (MEL) methods, including challenges and good practices;
- Documentation about the NEB, especially the NEB Compass;
- Documentation and discussions within the BoS project with a focus on the pilots and their impact[1].

The Figure 5 below brings these insights together. It highlights the five main elements that shape our approach (in capital letters) and the related concept, approaches and tools (in blue) as well as current challenges (in red) the team has reflected on and sought to address. The authorship and sources of the concepts, knowledge and tools referenced in this figure are listed in the References section. Several of the concepts highlighted in blue and red were not developed within the Bauhaus of the Seas Sails project but were drawn from existing literature and practice and integrated into the WP5 analytical framework due to their relevance for impact assessment and interpretation.

[1] These included WP5-led discussions but also pilot coordination meetings, pilot executive plans, WP2 documents (D2.1 *Co-design Template*, D2.2 *Ocean Ambassadors Compass*), weekly pilot meetings organised by WP3, benchmarking sessions led by WP4 and Zoöp workshops, notably. The WP5 team made a substantial effort to stay updated on project documentation and participate in the sessions organised by project partners.

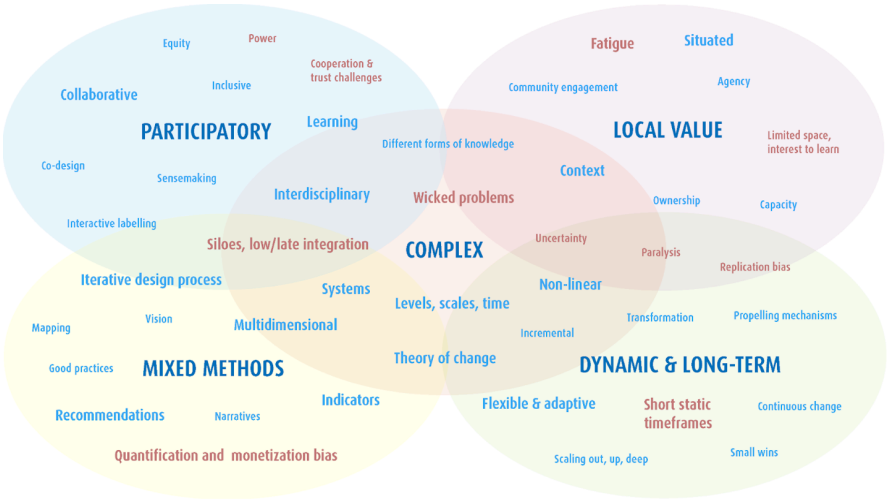


Figure 5. Overview of key considerations underpinning the impact analysis

The five key considerations shaped our approach to impact assessment in the following ways:

- **COMPLEX**: The approach accounted for the complex, cross-sector, interconnected challenges impacting coastal and waterfront cities (e.g. climate change, biodiversity loss, socio-economic inequality, threats to cultural heritage). Consequently, the impact framework included different dimensions, levels, scales and timescales of impact in its selection of indicators and in its data collection strategy. The team developed a **Library of Indicators** that provides a common structure to make sense of complexity and compare the different pilots and drops.

- **MIXED METHODS**: The approach used **different methods and tools** (context analysis, Theory of Change, indicators) to capture the range of impacts generated by pilots and drops and their evolution over time. These methods enabled data collection and fostered dialogue, reflection, and a deep exploration of impact through different lenses (thematic, process-oriented, long-term thinking). Methods were refined over time based on partners' feedback and learning from other WPs.

- **PARTICIPATORY**: The approach prioritized collaborative approaches in the development of the analytical framework. The team developed **participatory sessions with pilot teams and local partners** (online and in-person) that informed the iterative development of context-sensitive impact tools and enabled collective learning and sensemaking.

- **LOCAL VALUE**: The approach sought to generate value for pilot teams and local actors involved in the impact assessment process. The team organized **learning and**

cross-exchange moments for pilots; and identified recommendations and good practices for future development of the pilot projects.

- **DYNAMIC AND LONG TERM**: The approach was rooted in the understanding that impact is a non-linear, long-term process towards transformation. The team organized **Theory of Change sessions** with pilot teams to reflect on their impact pathways and scaling strategies to turn drops into ripples and waves. Considering the need for adaptive and context-sensitive approaches, the Library of Indicators provided a structured catalogue that pilot teams could use in a flexible and dynamic way to assess their impact over time.

1.2. Toolbox and process of impact analysis

This section presents the key tools and methods (summarised in Table 1) used in the process of applying the WP5 analytical framework for impact assessment. Together, these methods enabled a rigorous, context-sensitive and comparable analysis of the pilots' impact pathways, forming the basis for the results presented in Part 2.

Method/Tool	Purpose	Type of Insight
Library of Indicators	Provide a coherent analytical structure across pilots; connect BoS/NEB values to drop-ripple-wave pathway	Qualitative and semi-structured evidence per pilot; comparable dimensions across sites; collaborative analysis with pilots
Context analysis	Situate each pilot within its socio-cultural, environmental and institutional conditions	Factors influencing impact pathways; explanation of differences across pilots
ToC	Map how drops lead to ripples and potential waves; align pilot intentions with a long-term impact logic	Shared understanding of impact pathways and long-term goals; identification of 'seeds' for long-term impact
Deep dive sessions	Enable cross-pilot interpretation of BoS values; refine understanding of how values manifest in practice	Enhanced understanding of pilot outcomes and impact across multiple dimensions, and the role of aesthetics in driving or enhancing impact Comparative insights across pilots
In-person impact sessions	Triangulate impact results shared by pilot teams; incorporate	Inclusion of grassroots actors and artists in impact analysis;

	multiple perspectives in impact assessment; witness the direct effects of pilot activities	improved depth and quality of context- and impact analysis; more tangible and embodied understanding of pilots' work
BoS-Zoop method	Complement WP5 tools with participatory methods, ecological and relational mapping, deeper understanding of regenerative shifts in mindsets and practices	Understanding of local ecological context and regenerative practices; mapping relations, sensory and embodied knowledge

Table 1: Overview of methods and tools used for impact analysis

1.2.1. Library of Indicators

The Library of Indicators is a catalogue of locally-aligned criteria and indicators that was tailor-made for the BoS project. It was designed to provide a **common structure for comparative assessment, and flexibility** by allowing pilot teams to select from various criteria and indicators the ones that best reflect their work. The Library provided pilot teams with a wide range of indicators to qualitatively assess progress over time, across varying levels of impact — from the short term, small scale, narrow scope to the long term, large scale, wide scope. Pilot teams could go through the library, select indicators, and think about the actions needed to sustain or increase impact in following phases – towards transformational impact. This tool can be used by pilot teams autonomously, or with the support of an impact assessment team that takes a supportive or leading role in collecting, triangulating and analysing information as was done in the BoS project.

The Library of Indicators is the result of cross-analysing and integrating two main elements: the locally rooted pilots and drops of the BoS project, and the guiding core values and working principles of the NEB Compass. Cross-analysis and integration were done by using brainstorming and mapping on the Miro platform, and by testing different structures with detailed criteria and indicators on Excel. The criteria and indicators were refined in several iterations to improve their alignment with pilots' approaches and contexts. Pilot inputs and perspectives were collected via meetings, surveys and a baseline question form on impact, as explained in the former section.

The tool was developed along the following structure (Fig. 6):

- **Four impact dimensions or thematic categories** along the three core values of the NEB Compass: Aesthetic, Sustainable, Inclusive, as well as the fourth BoS core value: Locally Grounded. These core values reflect the ambitions underpinning BoS in its path towards impact, and have shaped the co-design, implementation and monitoring efforts of all the pilots.
- **Three levels of impact or process-oriented categories** along the drop, ripple and wave levels of analysis. BoS aims to generate impact incrementally, via catalytic activities (drops) that can turn into ripples and waves in the medium to long term. The criteria and indicators for

drop, ripple and wave are inspired by the NEB working principles: Participatory process, Multilevel engagement and Transdisciplinary approach.

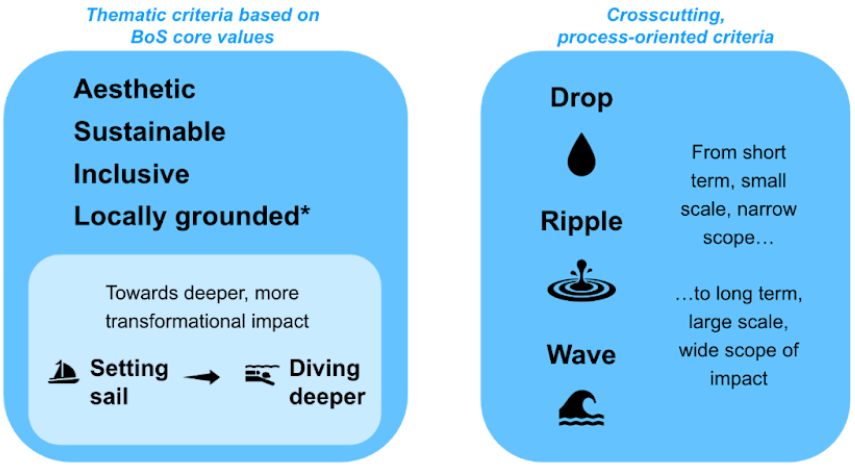


Figure 6. Snapshot of the structure, BoS Library of Indicators

For each of these categories, which are common to all pilots, the Library provides different choices of criteria (Fig. 8 shows the thematic criteria and Fig. 9 the process-oriented criteria), and for each criterion, different choices of indicators. In line with the NEB Compass which defines several levels of ambition for each core value, we acknowledged that pilots started from different positions and aimed for more or less transformational impact at different stages of development. Therefore, we included two levels of impact that reflected **two depths of impact** (Fig. 7). While the drop, ripple and wave levels of impact capture the evolving scope, scale and timescale of the tested solutions, Setting Sail and Diving Deeper bring an additional layer by assessing how deeply the drops engaged with notions of ecosystem regeneration, just transitions and knowledge integration, and to what extent they embraced transformative goals connected to changing systems and structures.

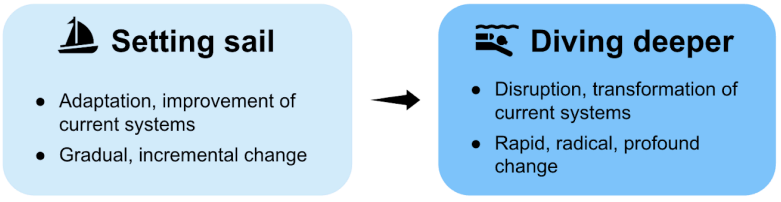


Figure 7. Two depths of impact, BoS Library of Indicators

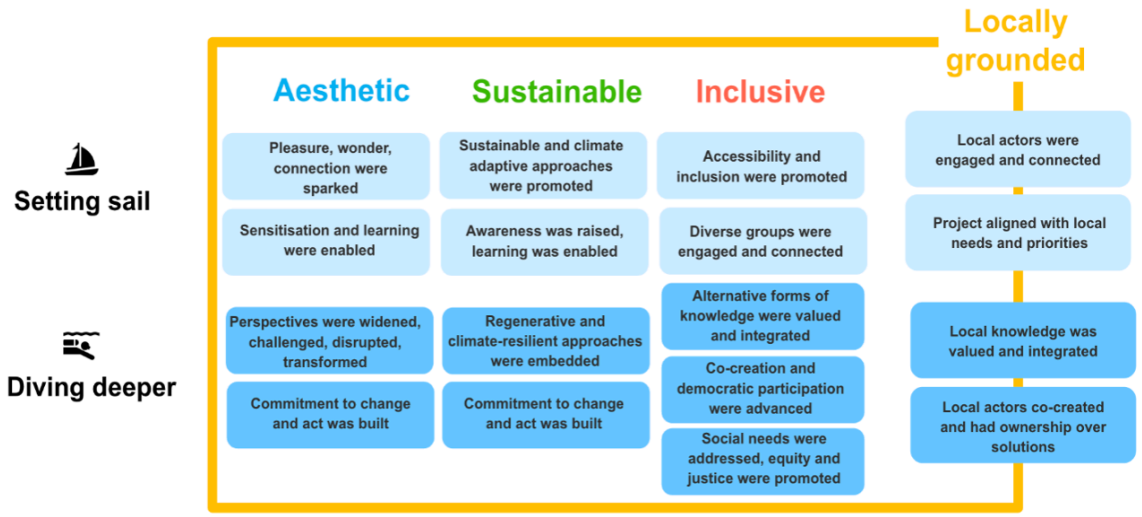


Figure 8. Thematic criteria (blue boxes), BoS Library of Indicators

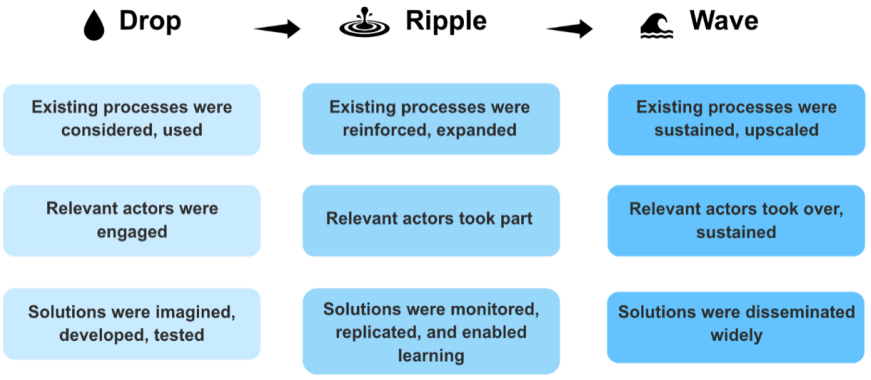


Figure 9. Cross-cutting process-oriented criteria (blue boxes), BoS Library of Indicators

For each of these criteria, detailed indicators were provided (see Fig. 10). These were developed for practical purposes to guide BoS pilot teams that were not used to working with indicators, rather than providing a comprehensive way of assessing NEB projects. As such, they aimed to provide an accessible entry-point into the use of indicators, rather than providing the most state-of-the-art indicators for the different impact dimensions and scales addressed in the project.

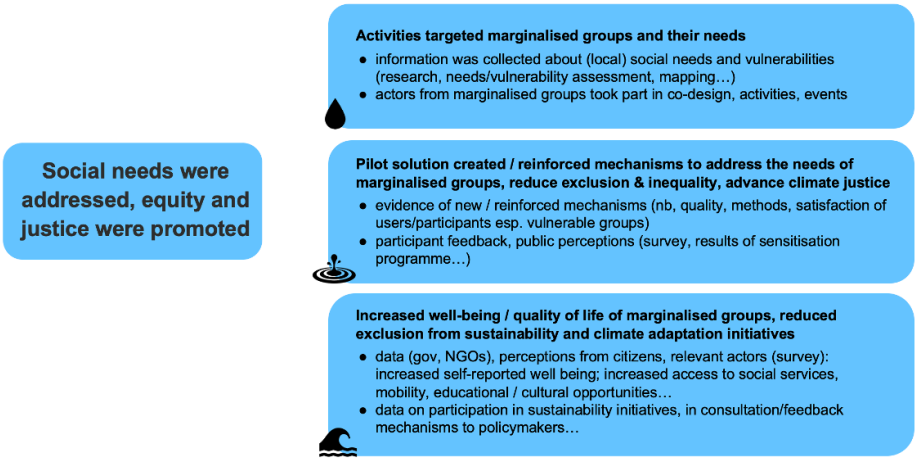


Figure 10. Example of indicators for a social impact criterion, BoS Library of Indicators

The Library of indicators was shared with pilots in September 2024**.** Pilot teams were invited to explore the library and make a pre-selection of criteria and indicators to guide the analysis of their impact until January 2025. They used the Library in an adaptive way, for instance by selecting 'Setting Sail' criteria for Year 1-2 of their work, and moving to 'Diving Deeper' criteria to reflect a deeper kind of impact from Year 3 onwards. This way of working enabled **pilot participation and co-ownership of the impact analysis** from an early stage. The Zoöp team, who tested the BoS-Zoöp method in each pilot, have applied the criteria and indicators of the Library to assess their impact (see Section 2.3). The co-design team led by WP2 also embraced the approach and used the Library of Indicators at different moments to reflect on the role of Ocean Ambassadors and the Sea Forum.

From January 2025 onwards, the impact assessment team started to fill in Impact forms for each pilot, structured by the pilots' selection of criteria and indicators. The forms were used to bring together and analyse all the relevant information, quantitative and qualitative, about pilot impacts from WP2, 3, 4 and 5. This information was gathered through the tools and moments described in sections 2.2.2 to 2.2.5 of this report. The pilot two-year territorial transformation plans, WP4-led benchmarking sessions, and the in-person sessions with Ocean Ambassadors (23-24 June, Rotterdam) led by WP2 and co-organised by WP5 provided useful insights. The Impact forms were shared with pilots in January 2025 and presented as a collaborative working document where pilot teams could add information, review the analysis and provide feedback. Most pilots provided inputs and comments, especially between June and September 2025. This approach supported participatory forms of analysis but was time-consuming for WP5 and pilot teams. In the future, shorter analytical forms and more punctual pilot inputs will be conducted.

1.2.2. Context analysis

The objective of WP5 - Impact assessment was to **contextualise the comparative assessment** of pilots' impact, recognising that each pilot team began from different local conditions, ways of

working and levels of prior experience with their thematic focus. Some pilots experimented with novel approaches (e.g., Art and Science residencies in Lisbon and Oeiras) while others deepened or expanded existing practices (e.g., Zoöp drop).

To gather knowledge about pilots' local conditions, the impact assessment team conducted desk research on each pilot area. This research focused on main trends and 'key facts' about the local relationship with water bodies and ports, delving into multiple dimensions: history, society and economy, culture and heritage, climate change, as well as biodiversity and water ecosystems. Building on this, a hybrid **session about Context Analysis** was organised, together with WP4 (their last 'Benchmarking session') at the Barcelona Quarterly Meeting on 13 February 2025. The session deployed Mural (a digital tool) and fostered dialogue and reflection among pilots (in small groups) on their context and key factors shaping their pathways to impact (Box 2). Pilot teams were also invited to explore the GeoSpatial Platform developed in WP5 and reflect on their contexts, providing feedback on potential improvements to the platform.

Questions for pilots during the session on Context Analysis

- What are the factors or trends (social, economic, political/governance, cultural, environmental) that influence your pilot location in the **long-term**?
- How do these long-term factors manifest in the **physical environment** of your pilot location? Please fill in the boxes: infrastructure; natural environment; land use
- In your opinion, how do these long-term factors shape the **cultural context** of your pilot location? Please fill in the boxes: History & heritage; Cultural practices; Local values & beliefs
- Explore the Narrative Spatial Platform and its information about the context of the pilot locations. Did you learn something new about your location? What opportunities for change do you imagine in this location?
- Considering the characteristics of your pilot location, what have been some important **learnings** for you when trying to be 'locally grounded'?
- What are the key **enablers** in your city that have allowed your project to succeed? (e.g., policies, funding, community support, existing infrastructure)
- What resources or policies would you need to achieve your two-year transformation plan?
- Your feedback about the platform: Is it easy/hard to use? What works well and what can be improved?

Box 2. Overview of the Context Analysis session, 13 February 2025 (WP5 and WP4)

The results of this session were used to identify **recurring contextual factors** in the different pilot locations. See below an overview (which does not claim to be comprehensive) of all the factors identified at this stage (Fig. 11). We then engaged in a process of reflection and comparison (using

Mural) to identify which factors applied to each pilot and drop and in what way. Specifically, we examined whether each factor: (1) shaped the overall context of the drop; (2) was directly addressed by the drop as a thematic focus; and/or (3) influenced the drop's impact. Our analysis focused on the drops implemented across several locations (Future Tidal Architectures, Ocean Literacy, Regenerative Menus) with the BoS-Zoöp included separately given its implementation in all pilot sites. This process enabled us to visualise both shared factors and distinct local variations as shown in Figure 12.

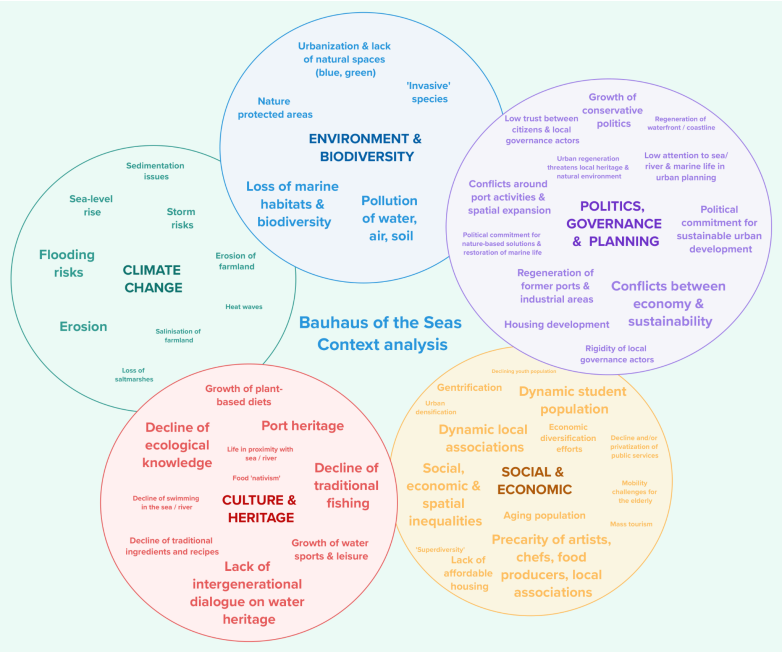


Figure 11. Recurring contextual factors identified by WP5 across pilot locations.

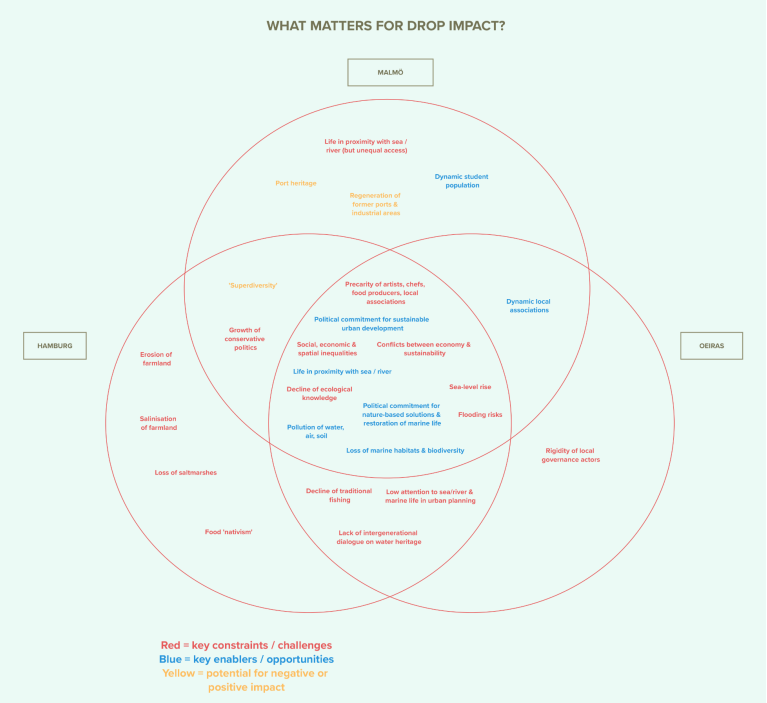


Figure 12. Contextual factors that matter for the impact of the Ocean literacy drops in Oeiras, Hamburg and Malmö. Process of reflection and comparison by WP5 using Mural.

The impact assessment team also used the results of the Context Analysis session of February 2025 to develop a Bauhaus of the Sea Sails adaptation of the Water Values Game, a serious game by the Leiden-Delft-Erasmus Centre for PortCityFutures, TU Delft, IJsfontein, ICOMOS Nederland, Unesco Chair Water, Historic Cities and Ports, and Waterschap Amstel, Gooi en Vecht (PortCityFutures, 2025). For the BoS adaptation of the game, we developed **two scenarios inspired by the BoS pilot contexts**: "Contested Waters" (regional scale) and "Inclusive Water Culture" (local scale), and integrated the drop solutions in the game "combos" (Fig. 13). The BoS version will be made accessible for future adaptations on the PortCityFutures website.The adaptation was played by the pilot teams at the Rotterdam Quarterly Meeting on 24 June 2025. The aim was to facilitate pilots' reflection, in a fun and engaging way, on the similarities and differences between their contexts while raising their awareness of the multiple dimensions (spatial, cultural, technological, economic, etc.) of living with water sustainably. Therefore, this session supported **collective learning about living with water** within the project, and helped the impact assessment team process contextual information through the development of the two scenarios.



Figure 13. Scenarios and Combos (two examples), BoS adaptation of the Water Values Game.

The Impact Assessment team also conducted **pilot visits in Rotterdam, Grenspark Groot Saeftinghe, Venice, Malmö and Hamburg**, which enhanced our understanding of the pilots' context, as explained in Section 2.2.5. Overall, these various context-related moments, alongside regular dialogue with pilot teams in meetings and sessions organised by WP1, 2, 3, 4 and 5, helped us to gradually increase our understanding of pilots' contexts and embed contextual insights in the impact analysis. These insights are included in Section 3 (Results) under the subheading "Contextualisation".

1.2.3. Theory of Change

Theories of Change (ToCs) are associated with theory-based approaches to evaluation and impact assessment. This type of approach focuses on **"how and why" an intervention works** (Abercrombie, Boswell and Thomasoo 2018; DFID 2012). They follow a generative approach to causation, aimed at understanding the mechanisms behind the observable effects of an intervention (DFID 2012). This

focus on the “how and why” is strongly aligned with our analytical framework and its emphasis on the idea that process and impact are deeply interconnected. It can help generate narratives on how impact was generated by the pilots, and possibilities for replication, deepening or expansion of the work. Alongside its relevance for assessing impact, the ToC approach can be a useful tool during project planning, implementation and monitoring, to align expectations about the scope and goals of a project, identify gaps, and inform decisions about next steps.

A common pitfall associated with ToCs is their tendency to simplify impact pathways by making them seem linear, largely technical, and by neglecting the influences of context and complex societal systems. This could lead evaluation teams to overestimate the impact of an intervention). As such, ToCs are usually deemed more effective and realistic when combined with the use of systems thinking, for instance through systems mapping (Abercrombie, Boswell and Thomasoo 2018; Wilkinson et al. 2021). As such, ToCs can be rooted in a contribution-based logic (rather than an attribution-based logic) that recognises that attributing a change solely to one intervention is difficult if not impossible in multidimensional projects addressing complex ecological and social challenges. Contribution logic better recognises the role of several, interconnected factors, including context, in shaping effects and impact. Considering the diversity of the BoS project in terms of local contexts, geographical location and fields of expertise, the **theory-based approach combined with systems-thinking** considerations seemed relevant to capture process-oriented information about the Drop, Ripples and Waves, and to support pilots’ planning and learning.

With this in mind, the WP5 team developed Mural boards (Fig. 14) to visualise pilots’ impact pathways, and their evolution from Drop, to Ripples, to Waves which was represented by three circles that made space for non-linear impact pathways. We facilitated **participatory ToC sessions** (WP4 provided co-facilitation support) in March-April 2025 for pilot teams to map their progress on the ToC boards and discuss their next steps to increase ripple effects and plan for the Waves, i.e. long-term impact. In the mapping exercise, pilot teams used arrows to show interconnections between their activities and achievements, which revealed cumulative effects. They also identified important aspects of their process using icons (e.g., ‘major turning point’, ‘major obstacle’, ‘key collaboration’), and mapped expected future developments leading up to Waves.

The sessions were appreciated by pilot teams, who got an overview of their work, inspiration from other pilot teams, and an opportunity to discuss successes, gaps and future plans. In the Delta pilot, for example, representatives of the three drops talked about possibilities to join efforts and bring their work together into a Wave at the regional level, such as through a joint manifesto or exhibition. Moreover, certain pilots which did not have clearly formulated long-term plans as of March-April 2025 could learn, in a horizontal manner, from other pilots with a more consistent strategy. The ToC boards and the discussions around them provided useful information for the Impact Assessment team and other WPs, especially WP4 and its work on pilot roadmaps. WP5 analysed the results of the ToC sessions and shared takeaways with pilots and project partners on 9 April 2025.

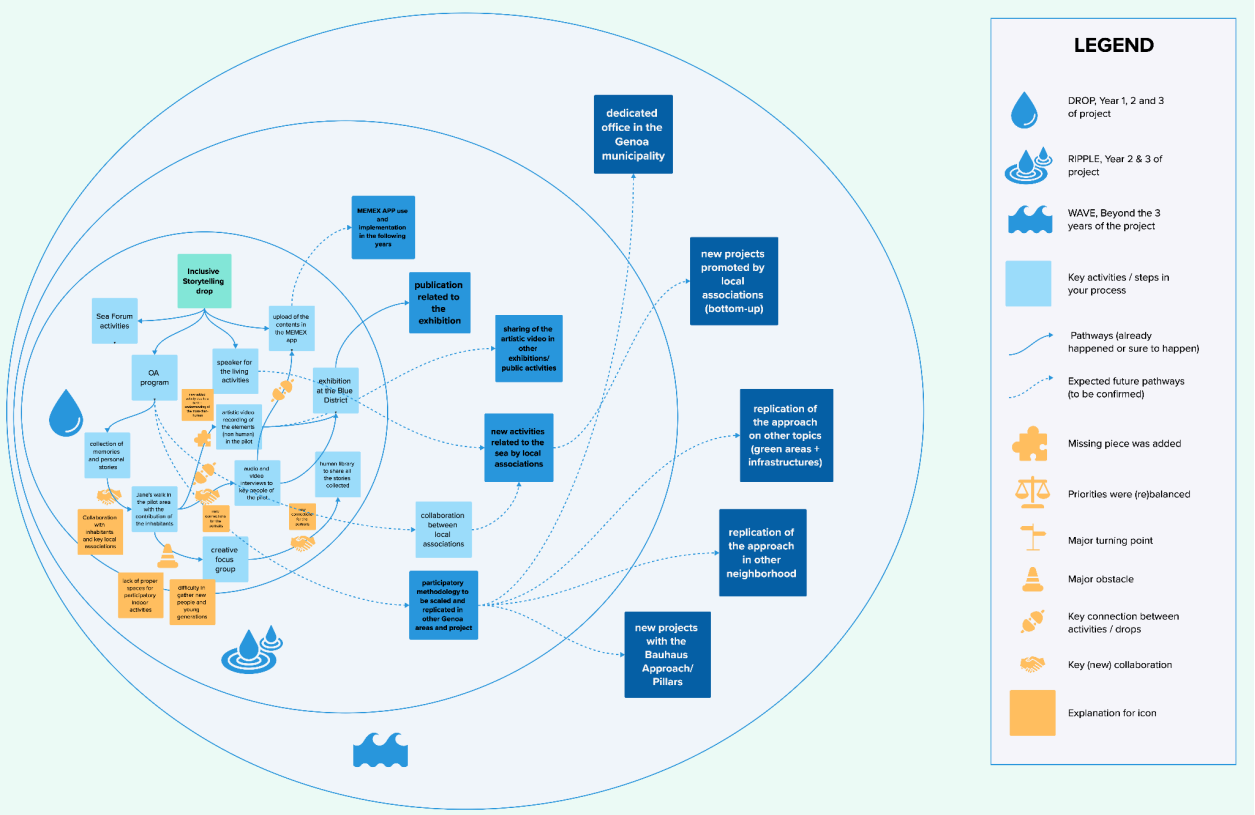


Figure 14. Theory of Change of the Genova pilot as of 12 March 2025

1.2.4. Thematic deep dives

To complement the information collected about pilots' impact pathways through the ToC sessions, the Impact Assessment team organised "deep dives" into the four dimensions of impact defined by the project and the Library of Indicators: Aesthetics, Sustainability, Inclusion and Locally Groundedness. These sessions were held online during pilot coordination meetings (using Mural) from May until September 2025. The two last sessions about Inclusion and Locally Groundedness were co-organised with WP2 to gather information about the role of Ocean Ambassadors and Sea Forums.

The sessions enabled cross-exchanges between pilot teams at a moment of the project at which activities were almost wrapped, and outcomes and early impacts were increasingly visible. Discussions provided qualitative insights about the **multidimensional, tangible and intangible manifestations of impact** emerging from the project, complementing the data collected in one-on-one interactions between pilot teams and the WP5 team. The deep dives also supported collective sensemaking about the impact of the project and its contributions to the NEB values. For instance, pilot teams gave various examples of how their work helped rebuild, or reinforce

relationships (cultural, social, historical, emotional) between coastal communities and water. Notably, the first deep dive helped shape a better project-level understanding of how aesthetics (understood as meaningful experiences with relational qualities that go beyond 'beauty') reinforced the impact of pilot actions. **Shared narratives** about the Bauhaus of the Sea Sails started to emerge from the locally grounded experiences of the pilots, and resulted in a decision to co-author an academic paper about narratives led by researchers from TU Delft with IST-ID, UNIVE and Malmö University.

1.2.5. Local dialogue & triangulation

The impact analysis strongly relied on the collaboration and data collection of pilot teams, who were the main points of contact between Work Packages and the locally-based work. As mentioned in the analysis of opportunities and challenges for impact analysis (Box 1, section 1.1.3), time and linguistic constraints manifested during the engagement with pilots and their local partners. Still, it was deemed essential to **incorporate the perspectives of various local actors beyond pilot leads, to triangulate and enrich information**. Indeed, local associations, artists, students, ocean ambassadors, sea forum members, and citizens participating in activities played an important role in the pilots. It was particularly important to integrate the perspectives of grassroots actors who are well-connected locally, focus on durable practices, and are committed to creating tangible benefits for citizens.

To include their perspectives in impact analysis, we shared a **Feedback Sheet** with pilot teams early on and encouraged them to gather feedback from participants in meetings, workshops, events and activities. The document deployed a simple format (2-3 questions) to collect anonymous inputs in writing or digitally, during or after an activity. The Feedback Sheets, first tested at the Delta pilot kick-off event in June 2024, were used on several occasions in the Future Tidal Architectures drop in the Delta and Venice, to collect feedback from students and multidisciplinary practitioners. Other pilots used more extensive feedback and assessment forms, such as Venice (surveys with seniors and students), Malmö (with their Ocean Ambassadors), Hamburg (with culinary students) and Genova (citizens and associations, participatory storytelling process). The information collected was useful to understand how local actors experienced the project, its local value, the changes it generated for them (e.g. new knowledge, skills, perspectives) and what they planned to reuse in the future. For instance, in the Delta pilot, students reported shifts in mindsets ("The project has taught me that designing with water means accepting change") and a desire to be involved in BoS-like projects again in the future.

Other project partners gathered useful inputs from local actors which we incorporated in our analysis, namely WP2 (Ocean Ambassadors and Sea Forums), the Zoöp team (Speakers for the Living, see Section 2.3) and WP3 (artists and 'creatives' more broadly).

In addition to this, we organised **in-person impact sessions**. Pilot teams and local actors were invited to reflect together on the impact of the work, identify learnings, and discuss next steps. Such moments of local dialogue were organized in all pilots between March and October 2025, and our impact assessment team was able to travel to four of them: Malmö, Saeftinghe, Venice, and Hamburg. In Genova, Lisbon, Oeiras and Rotterdam, we provided guidance and tools to prepare the

sessions which were adapted and conducted by pilot teams. The sessions took inspiration from the "ripple mapping exercise" developed by the Creative Climate Action Ripple project[2] to map outcomes and impacts collaboratively (using printed boards made on Mural, see examples below in Fig. 15 and 16). The boards were combined with moments of small-group discussion and reflection questions about what the project delivered, what could be improved, and what the future of the project should look like — in line with the long-term orientation of the impact analysis.

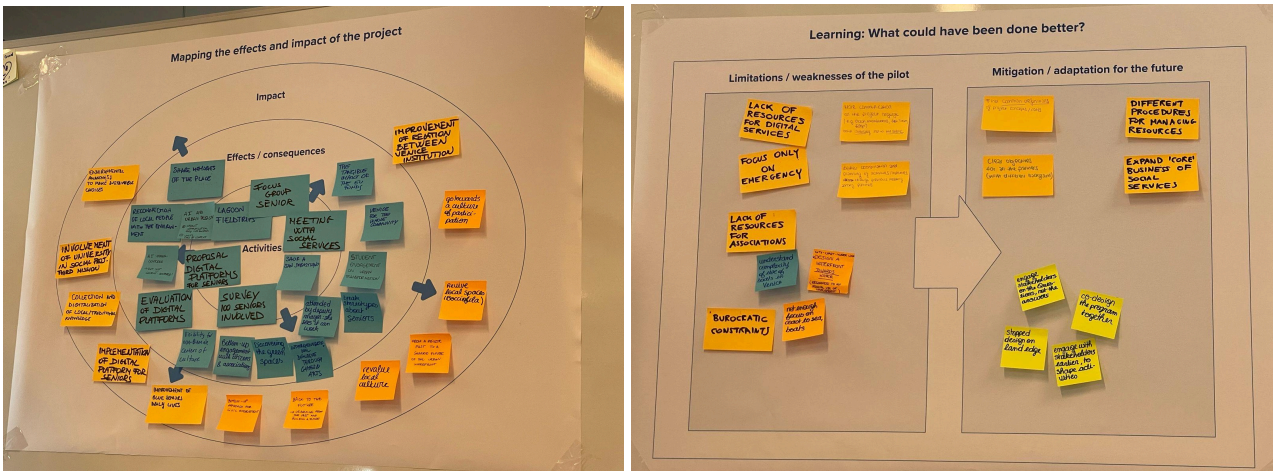


Figure 15. 'Impact mapping' and 'Learning' boards, used in Venice in March 2025.



Figure 16. 'Future' board, used in Malmö in September 2025.

The Genova pilot developed its own evaluation board in Italian which was incorporated in their immersive exhibition (21-22 March 2025, Blue District) and updated at the final restitution and

[2] https://www.creativeireland.gov.ie/app/uploads/2023/03/Creative-Climate-Action-Ripple.pdf

evaluation session (14 June 2025) organised by the pilot and attended by 18 participants including citizens, local associations and institutions (see below Fig. 17).



Figure 17. Impact boards, translated from Italian to English, used at "Tra il dire e il mare: Immersive storytelling exhibition", Genoa Vernazzola pilot, 21-22 March, and completed during the Final Impact Evaluation on June 14th 2025.

Beyond the moments dedicated to assessing impact, the pilot visits allowed us to participate in pilot activities, engage in informal discussions with local actors, and get a more tangible understanding of the local context. This fostered a **deeper and more embodied understanding of the context and impact of the pilots**. For instance, we participated in the After Summer School in September 2024 and 2025, joined the Saòr a San Sebastiano event in Venice (March 2025), and attended the last culinary class at BS 03 in Hamburg (discussing with students, teachers, fellows, and tasting the regenerative plates) in July 2025. The ability to reach pilots by train was a key consideration and a barrier to more systematic pilot visits. Overall, these in-person experiences and moments of local dialogue strengthened the quality of the impact analysis by validating (or not), diversifying and enriching pilot perspectives.

1.2.6. Ripples to Waves: analysing seeds for long-term impact

The duration of the project–three years– was too short to produce, measure or assess meaningful long-term economic, social, spatial or other impact, or, to connect the findings discussed in this impact analysis to broader developments in the pilot cities. Any reflections on long-term impact are necessarily speculative. The impact analysis done over the last two years as part of the project and discussed here according to the NEB Compass, allows only for initial reflections and recommendations based on the qualitative impact assessment of the Bauhaus of the Seas Sails project realized in Work Package 5.

Considering these limitations, the wave-level analysis of pilots' impact focused on their ability to develop "**seeds" for long-term impact (waves).** Seeds can be understood as elements that constitute a strong foundation for waves to unfold. Bennett et al. 2016 defined "seeds of a good Anthropocene" as ways of doing and thinking that are materialised in initiatives or prototypes, are not currently dominant or prominent, and that begin to have transformative impacts as they spread. Seeds may be disseminated through replication but also by interacting with other seeds or by influencing values and further innovations (Bennett et al. 2016). The Global Resilience Partnership (accessed in December 2025) further identified five attributes that characterize seeds with a transformative potential: they (1) they support learning and system understanding; (2) foster relationships and collaborations; (3) are enabled by resources and support; (4) align with the context; and/or (5) enable changes in power structures and norms.

This impact assessment team examined the transformative potential of the pilots and their tested drops by connecting seeds to the concept of **'small wins'** that captures how relatively small changes, in the sense that they initially arise at the micro- or local level, can generate "deep" effects that alter routines, values, frames and logics (Argyris and Schon, 1996 in Termeer and Dewulf, 2018). Termeer and Dewulf (2018) further stress the importance of using dedicated propelling mechanisms to ensure that small wins turn into transformative change. As such, using the concept of seeds for long-term impact led us to consider two interconnected elements:

1. Seeds: What seeds are in place, what is their quality or depth, their potential for durability? Are there propelling mechanisms to deepen, replicate or disseminate seeds?
2. Transformative goal, "big dream" (Urpelainen 2012): Is there a clear long-term goal, and is this goal transformative? Is there a clear connection between the seed(s) and the long-term goal?

To identify the wave goals of the pilots, we used the results of the Theory of Change sessions and the Two-year Programmes for Territorial Transformation developed by each pilot team, which state their long-term vision and foreseen programme for the coming two years. These two year programmes were updated in 2025 as pilots generated new ripples and refined their replication proposals which they shared with the consortium in October 2025 in a seminar led by WP4. Furthermore, the last thematic "deep dive" session included a moment for pilots to reflect on their **strategies for turning ripples into waves**. We took inspiration from the propelling mechanisms identified by Termeer and Dewulf (2018) and asked pilot teams about their strategies, currently (September 2025) and in coming years. Although we lacked time to delve into these questions with all pilot teams during the session, this is an exercise we aim to reuse in the future with more time to discuss what strategies were used, why, and with what initial effects.

Overall, the impact assessment team was able to collect information about seeds for long-term impact (waves) through its various sessions with pilots ('deep dive' sessions, in-person impact sessions and pilot visits), informal updates and active engagement in project-level meetings and information sharing.

1.3. The BoS-Zoöp method and impact analysis

1.3.1 The Zoöp method and its role in the Impact Assessment

The BoS-Zoöp method was incorporated into the impact assessment as a complementary approach that brings a regenerative as well as a more-than-human perspective to understanding change in pilot locations. While the WP5 analytical framework provides a structured way to assess drops, ripples and potential waves through the BoS/NEB values, Zoöp contributes additional tools and practices that make visible relations between humans and other-than-human actors, organisational behaviours and ecological conditions. Zoöp also provides insights on how shifts in ecological awareness and regenerative mindsets take place and under what enabling conditions.

Its methods have supported pilots' capacities to identify how their activities influence and are influenced by local ecosystems, and adopt an ecological mindset and locally-aligned indicators for setting goals and assessing progress towards more regenerative practices. For the purpose of the impact assessment, it offered a source of qualitative data and context insights, and a lens to understand how regenerative and more-than-human practices emerged across pilots.
The method also strengthened participatory elements of the analysis by engaging Speakers for the Living and highlighting sensory, embodied and relational forms of knowledge that are otherwise underrepresented in traditional evaluation frameworks.

The Zoöp workshop also introduces three areas of impact of this more-than-human, regenerative effort:

- ***Sensitising*:** the efforts aimed at making human collaborators experience connection with other forms of life, and experiencing themselves as participants in ecosystems, rather than outsiders. This level of impact is indicated by the Setting Sail level of the library of indicators.
- ***Organising:*** the efforts of changing organisational and management processes so that they include regenerative aims, rooted in a sensibility for the needs and pleasures of other kinds of life. This level of impact is indicated by the Diving Deeper level of the library of indicators.
- ***Strategising:*** the efforts aimed at longer-term development of the connection with more-than-human life and the related regenerative mindset both in the organisations and in the collaborations with external organisations. This level of impact is also mostly indicated by the Diving Deeper level of the library of indicators, but actual impacts can often only be discerned in the longer term.

1.3.2 The Zoöp method and the NEB values

Aesthetics: In the Zoöp drop 'aesthetics' is taken in a wide sense, to include a broad range of aspects of artistic practice. This relates to the original meaning of the term 'aesthetics' of 'pertaining to the senses'.

The Zoöp baseline assessment explicitly asks the human participants to deepen their awareness of the life-worlds (sensory reality) of other-than-human bodies that are part of the Zoöp. In the Library of indicators (see 2.2.1), these aspects of the Zoöp method refer to both the 'Setting sail' indicators of the NEB value of Aesthetics impact category, such as 'pleasure, wonder, connection was sparked' as well as the Diving Deeper indicators as 'perspectives were widened, challenged, disrupted'

Sustainability/regeneration: The explicit aim of the Zoöp practice is to give organisations a hands-on method to transform their current sustainability practices towards regenerative practices that actively support the health of human-inclusive ecosystems. The Zoöp practice introduces the notion of 'humans as useful species' acknowledging that humans have the potential to contribute positively to the ecosystems in which they participate.

The impact of this aim of the Zoöp method is primarily indicated by the Diving Deeper indicators for 'Sustainability'.

Inclusion: The relational method of the Zoöp maps the ecological relations between all actors that give form to the Zoöp. These actors are listed along five different perspectives: human/organisational bodies: other-than-human bodies; legal bodies (laws, contract partners, regulations etc) human artefacts (technologies, buildings, infrastructures, etc) and publics and narratives. If particular groups of underrepresented or under-heard bodies are important for the form of the Zoöp, they are taken into account already with the baseline assessment. The Zoöp method is inherently an inclusive approach.

Also, the Zoöp method is inherently transdisciplinary, and combines affective and embodied ways of knowing from artistic practices with ecological knowledge and with new materialist philosophies.

The impact of this aim of the Zoöp method the Library of indicators (see section 2.2.1) these would be indicated by both Setting Sail and Diving Deeper indicators under **Inclusion**, such as: "Alternative forms of knowledge were valued and integrated' ; "Co-creation and democratic participation were advanced' and 'Social needs were addressed, equity and justice were promoted'.
Locally grounded: The Zoöp method is designed to engage and map local human and other-than-human actors and their relations. It generates or documents situated knowledge about the current, local more-than-human ecosystem, the degenerative and regenerative relations that form its current reality and its main potentials for becoming more life-supporting (regenerative).

For these aspects of the Zoöp method the indicators in the 'Setting Sail' section of the BoS value of Locally **grounded**, give information: 'local actors were engaged and connected' and 'project aligned with local needs and priorities' give information. The 'Diving Deeper' indicator of 'local knowledge was valued and integrated' applies, as well as the indicator of 'local actors co-created and had ownership over solutions'.

Part 2 - Results & Comparative Analysis

Part 2 presents the results of applying the WP5 analytical framework to the seven pilot locations. The impact assessment team wrote **Impact Reports** for each pilot, published on <https://www.portcityfutures.nl/bauhaus-of-the-seas-sails> in early January 2025. We used information from the reports throughout the analysis and highlighted pilot-specific cases in Boxes.

This part follows a four-part structure:

First, we delve into the impact of the **drops tested in a single pilot location** (Section 2.1). Each subsection analyses a drop, its ripples and the contextual factors that shaped the results. This provides a grounded and location-specific understanding of how outcomes and early impact emerged in the different locations.

Some drops were tested by more than one pilot, allowing for comparative insights into how similar approaches unfold in different territorial and organisational contexts. Section 2.2 analyses these **cross-location drops** by examining their shared intentions, the ripple effects generated in each site, and the contextual factors that shaped variation in outcomes. By comparing how the same drop typology evolved in different settings, the analysis highlights good practices, identifies context-specific challenges, and provides a clearer understanding of the mechanisms through which drops generated early impact.

We move on to examining the **impact of the pilots across the four BoS/NEB dimensions**: Aesthetics, Sustainability, Inclusion and Locally Grounded (Section 2.3). This cross-pilot analysis identifies common patterns and good practices through qualitative comparison of how the project's core values manifested in the different territorial and organizational settings.

Finally, we consider the **seeds for long-term impact ('waves')** in Section 2.4. These insights build on the Theory of Change work undertaken with pilots and highlight the conditions, collaborations and practices that may support continuation or scaling beyond the project's duration.

Together, these four parts provide a structured reading path: from pilot-level results, to value-based comparative insights, and finally to possible future trajectories. This structure enables a coherent interpretation of diverse pilot experiences and facilitates a comprehensive understanding of the project's impact.

2.1. Impact of the drops tested in one location

2.1.1. Blue Makerspace (Lisbon)

This section summarises the key results and ripples generated by the deployment of the Blue Makerspace drop, in Lisbon, followed by a short contextualisation of the factors that shaped the pilot's impact.

Analysis of the drop and its ripples

According to the initial BoS DoA, the Blue Makerspace drop builds on the Algae Platform concept created by Atelier Luma (Atelier Luma, 2020) and aims to "work with specialists to explore material applications and sustainable integration of algae, salt, shells and other sea-based resources into urban environments." Therefore, this drop planned to establish a design-research space and knowledge-sharing programme focused on water-based materials from a non-extrativistic perspective, in line with the DoA.

The deployment of this drop in Lisbon, Portugal took shape as an Art and Design residency which tested materials and production techniques to develop a prototype of the traditional Portuguese tiles with biomaterials (see Box 3 for key results). The work was refined, gained visibility and evolved into an emerging sediment laboratory for interdisciplinary experimentation and community engagement (see Box 4 for the analysis of ripples).

Box 3. **Key results** of testing the Blue Makerspace drop in Lisbon

- The drop supported experimentation with biomaterials coming from local river ecosystems (Tagus estuary) and the development of **circular design approaches** that enhance the ecological and cultural value of biomaterials**.**
- The Art and Design residency 'Radical Waters-Concrete Matters' was awarded to the project 'À flor do azulejo, a cor do Tejo' led by the Fahrenheit 180 collective (Jeremy Morris and Lucas Carlisle).[3] The residency studied materials from the Mar da Palha bioregion and experimented with production techniques to develop a **prototype** inspired by traditional Portuguese tiles (Azulejos) that can be used in public space in the future. They experimented with turning oyster shells, often discarded as waste, into biomaterials.
- The residency shed light on the ecological value that oysters bring to local ecosystems by cleaning the water and storing carbon. It also highlighted the cultural significance of oysters (which used to thrive in the region before industrial water pollution) and of Azulejos to show how circular and nature-based design approaches can **reinforce cultural heritage and identity**.
- From September to December 2024, the residency team tested materials (e.g. use of seaweed as a natural binder), production techniques and real-world applications in collaboration with BioLAB

[3] https://gulbenkian.pt/cam/en/projects/bauhaus-of-the-seas-sails/art-design-residency-radical-waters-concrete-matters/

Lisbon which provided essential space and equipment. The residency team also developed key partnerships with suppliers of oyster shells (first restaurants, then oyster farms), TBA21, and with the Art and Food residency by engaging with the artists and local organisations (Marvila Library) to co-develop the Lisbon Spice Rack (see Ripple).

- The residency team organized a participatory tile-making workshop at BioLAB (in collaboration with Fernanda da Costa & Mariana Simoes) with 10 architects and 5 members of the BioLAB community. This sensitised participants to the **potential of oyster shells as versatile biomaterials** while allowing them to create and bring home their own objects.

Box 4. **Main ripples** of the Blue Makerspace drop in Lisbon

- The Art and Design residency was extended for a second phase from January to July 2025. The residency team refined the biomaterial protocols and production process, facilitated **participatory tile-making workshops**, co-developed a Spice Rack and Mobile Kitchen with the regenerative menu drop.
- The **Mobile Kitchen**, made from oyster shells and seaweed, was co-developed with Food from the Block (local association) and aimed to provide functional and adaptable kitchen modules that enable communal cooking and spark conversations about sustainability and resilience among residents of Marvila.
- BioLAB continued to provide space, equipment and advice for the work, building the foundation for BioLAB to become a key partner in the emerging **Sediment lab** in Marvila.[4] The participatory workshops at BioLAB and Marvila Library in May 2025 generated tiles used in the final artistic installations, and shared narratives about water, community and resilience.
- The work of Fahrenheit 180 increased its **reach and international visibility** through a public talk at Disseny Hub Barcelona (February) and exhibition with workshops at Jardim Gulbenkian (12-29 July 2025). The residency team got the opportunity to give a workshop for some 150 children at Port Nazaré with The Hope Zone foundation (16 June 2025), during which kids created fish and seastars from oystershells.
- According to the artists and pilot team, the workshops fostered **curiosity and increased awareness** about the potential of biomaterials for art, design and architecture; the ecological and cultural significance of oysters in the area; and more broadly about rethinking 'waste' to support circular economies, community resilience and cultural heritage. They noted that the accessible, hands-on activities fostered a sense of agency and environmental stewardship among participants.

[4] This is part of the pilot team's long-term plan of creating local laboratories (a Sediment lab and a Food lab) for interdisciplinary experimentation and community engagement, as well as a River School as a meeting point to directly interact with the river.

Contextualisation of results

The following contextual factors influenced the scope of the drop and shaped the ripples observed during implementation. The drop's focus on the Marvila parish of Lisbon was influenced by the limited access to the Tagus River experienced by local inhabitants, which affects daily practices and the sense of connection to the river ("In Marvila, the river is connected to boats, not to people"). The drop complemented Lisbon Municipality's plans to improve access to the waterfront by **reviving often-neglected ecological and cultural dimensions of the relationship with the river**. During the Ripple phase, the residency team moved from material experimentation to participatory workshops with citizens that co-produced familiar objects like the traditional Portuguese tiles and helped convey the ecological and cultural values of oysters through hands-on experiences. Participants, including children and socio-economically disadvantaged groups from the Marvila parish of Lisbon, gained an increased sense of agency and environmental stewardship by creating a product using their imagination and local materials.

The impact pathway of the drop was also shaped by its **local partners**, which included established local institutions with visibility and networks (Lisbon Municipality, Calouste Gulbenkian Foundation) and BioLAB, an initiative of the municipality which provided essential space, equipment, community ties and an open attitude to experimentation that aligned well with artistic residencies. At the same time, the strong roles of the partner institutions in shaping the drop and its ripples brought challenges of bureaucracy and tight timelines (the residencies were both initially planned to last three-four months), along with differences in viewpoints and ways of working.

The residency team faced **contextual challenges** in developing its biomaterial solution. Restaurants' inadequate recycling habits did not generate a consistent supply of oysters for the residency, pushing Fahrenheit 180 to turn to oyster farms for supply. The search for suppliers revealed the substantial need for reusing oyster shells that are otherwise discarded in landfills**.** The residency team also faced **technical challenges** to produce solid and durable bio-based tiles with limited precedent. Nonetheless, there is an overall growing momentum for circular and nature-based approaches in design and architecture which could garner further support for the solutions developed in the residency.

Moreover, the drop solution uncovered an opportunity to revive the memory of the Tagus estuary as having hosted one of the largest natural oyster banks in Europe in the past. Such an approach of aligning regenerative practices with local heritage is promising to shift to more hopeful perspectives about the green transition.

Pilot demonstrator expected outcomes (from DoA)	**Summary of Achievements (Key Results & Ripples)**
Enable experimentation with marine biomaterials	Makerspace activated; biomaterials (oyster shell/seaweed) tested; sediment lab emerging in *Mar da Palha*

Develop sustainable material applications and prototypes	Bio-tile prototype (azulejo) produced using local oysters
Engage local actors in co-design	Workshops with BioLAB, Marvila Library, residents; co-creation of Spice Rack and Mobile Kitchen
Raise awareness of ecological and cultural value of marine materials	Public workshops and exhibitions increased understanding of oysters and circular biomaterials
Strengthen local circular-material ecosystem	Partnerships consolidated; conditions created for a long-term sediment lab in Marvila

Table 2. Summary of key results and Ripples considering the expectation towards Pilot Demonstrator and Territorial Transformation Impact

2.1.2. Living with Water (Delta)

Analysis of the drop and its ripples

This subsection summarises the key results and ripples generated by the **Living with Water** drop, followed by contextual factors that shaped its impact in the Dutch-Belgian Delta region.

The Living with Water drop "addresses the connection of water to a city's identity and focuses on shared water knowledge that can shape the city's vision of itself, and help design a resilient future." It aimed to engage different knowledges and ways of knowing, coming from humans and other-than-human beings who live and work in the city (Delta pilot amendments, December 2023).

This drop was developed, since its inception, with the context of Rotterdam, Netherlands in mind. It was tested in the Delta pilot (Box 5) and supported the integration of the Water School concept (developed by Studio Makkink & Bey) into the After Summer School public programme of Het Nieuwe Instituut. During the Ripple phase (Box 6), the Water School expanded its research and educational activities to another part of Rotterdam and experimented with roleplaying species to enable embodied ways of learning.

Box 5. **Key results** of testing the Living with Water drop in the Delta (Rotterdam)

- The Living with Water drop developed an **alternative way of learning about water and how to live with water in the big port city of Rotterdam**. The Water School, an ongoing initiative by Studio Makkink & Bey to rethink water education through design[5], became part of this drop, executed by the Nieuwe Instituut, and included in the development of its After Summer School programme.
- The After Summer School is a program of public classes with around 20 partners throughout Rotterdam that present **the city as a hub for knowledge and a testing ground** for developing more just

[5] See: https://smb-waterschool.nl/en/home

and sustainable ways to coexist in the city. It gives visibility to the Curriculum for Change under development by the Nieuwe Instituut (Francien van Westrenen and Ania Molenda) and philosopher Rosi Braidotti. Together they create a New Academy where horizontal lifelong learning takes place and fills a gap in conventional education systems.[6]

- As part of the After Summer School programme, the Water School developed new design research and learning experiences focused on areas of Rotterdam where land and water intersect. In 2024, an **interactive walk and roleplay in Het Park** (a tidal park located by the river Nieuwe Maas) was developed with Michou de Bruijn to engage participants in learning about past and present ways of living with water, delving into social and environmental questions surrounding the park. Participants also discussed possibilities for change in the park and its pavilion (a former convalescent home) under restoration (Makkink & Bey re-designed the interior of the pavilion in 2024-2025).[7]
- The Walks in Het Park took place twice during the After Summer School 2024 (30 September - 4 October 2024)[8] and were attended by 21 participants, giving **increased visibility** to the park and the influences of the nearby river (which is not very visible), the pavilion as a restored public space, and to the work and learning methods of the Water School.

Box 6. **Main ripples** of the Living with Water drop in the Delta (Rotterdam)

- In the ripple phase, the drop team continued to develop the Curriculum for Change of the New Academy and **incorporated ecosystem regeneration and living with water as key themes** for the long-term.
- The After Summer School 2025[9] was organized again on 18-21 September 2025 and included a Zoöp workshop as well as two Water School activities. The full program attracted 400+ participants. The Water School activity "The Silver Diplomat"[10] took place on 20 and 21 September in a former harbour area of Rotterdam in transition (Merwe-Vierhavens or "M4H"). Through a Live Action Role Play (LARP), participants **roleplayed "unwanted" species** (non-native species, e.g., seaweed, crab) brought to the area by boats and migratory water channels.
- Facilitators Mathilde Patuelli, Roberta di Cosmo and Chester Chuang developed participatory methods supported by objects, stories and rituals to guide participants into adopting different behaviors and ways of understanding. This created an embodied learning experience for participants who experimented with **new ways of interacting with the ecosystem**. The LARP experience had 22 participants of the After Summer School and 20 young participants at the Wasteland Festival.
- The Silver Diplomat also supported and showcased **research and designs** about non-native species

[6] See: https://nieuweinstituut.nl/en/projects/de-nieuwe-academie
[7] See: https://www.studiomakkinkbey.nl/list/projects/interior_design_the_park_pavilion_rotterdam
[8] See: https://nieuweinstituut.nl/en/projects/de-nieuwe-academie/after-summer-school-2024
[9] See: https://nieuweinstituut.nl/en/projects/de-nieuwe-academie/after-summer-school-2025
[10] See: https://www.studiomakkinkbey.nl/

and river fisheries, including the movie 'Invisible Arrivals' by Di Fang and the sound installation 'Echoes of the Nets' by Anastasia Eggers.

Contextualisation of results

The Living with water drop developed learning experiences focused on water in the After Summer School programme which raised participants' awareness of the presence of marine life in the city of Rotterdam. The activities carried out in a tidal park and a former harbour area increased the visibility of places **that tell alternative stories about living with water**, by revealing salinization phenomena and fostering empathy towards "unwanted" beings. These included both non-native species introduced through global trade and marginalised human groups, such as asylum seekers being housed on a cruise ship in the M4H area in poor conditions. The combination of these locations with the design research and participatory methods used by the Water School challenged dominant narratives about the port city of Rotterdam and highlighted the impact of global dynamics on local ecologies and communities. However, because some of the **topics addressed were largely "invisible" or very little known**, participants' feedback raised the need for more guidance, framing and collective reflection during or after activities in order to understand their meaning and their connection with water and marine species.

Rotterdam is a large multicultural city with a sense of local identity but also **urban segregation and socio-economic inequality**. The After Summer School programme enabled Rotterdam citizens to get to know other parts of their city through the perspectives of grassroots actors that work for a more sustainable and just city. It also helped connect these grassroots actors through a programme which brought them increased visibility and could help them form future collaborations. As several of these grassroots actors **do not feel heard by the Rotterdam Municipality**, having collective platforms that amplify their knowledge and practices could increase their ability to reach local policymakers — several of which attended the After Summer School, although the municipality has not committed to supporting the initiative financially. This creates uncertainties for the long-term life of the After Summer School and New Academy even though their sustainability has been secured for the four coming years. The Water School currently lacks the resources to carry out independent research and produce physical outcomes without external funding.

Pilot demonstrator expected outcomes (from DoA)	**Summary of Achievements (Key Results & Ripples)**
Develop learning experiences focused on living with water in an urban delta context	Learning activities implemented within the After Summer School programme in Rotterdam
Increase awareness of marine life and water-related ecological processes in the city	Increased participant awareness of other-than-human perspectives, and of urban tidal environments and ecologies
Apply embodied, participatory and experiential	Interactive walks, role-play and sensing exercises

learning methods	tested as alternative learning formats
Reveal alternative narratives of water–city relations	Activities in a tidal park and former harbour area highlighted overlooked ecological and social dynamics
Strengthen educational pathways and long-term learning capacity	Water School and Zoöp methods integrated into the New Academy's Curriculum for Change

Table 3. Summary of key results and Ripples considering the expectation towards Pilot Demonstrator and Territorial Transformation Impact

2.1.3. Inclusive Digital Storytelling (Genova)

Analysis of the drop and its ripples

This subsection summarises the key results and ripples generated by the Digital Storytelling drop, followed by the contextual factors that shaped its impact in Genova.

The Inclusive Digital Storytelling drop, as defined in the BoS DoA, was inspired by the MEMEX project[11] created by IIT and IST-ID. It "explores the use of digital storytelling as a co-design strategy for community building and intercultural polyvocal dialogue, serving as a strategy to co-create with communities at risk of exclusion and non-humans whose voices are rarely heard concerning our living spaces." The drop aimed to use Artificial Intelligence (AI) and Augmented Reality (AR) technologies to develop a digital storytelling platform that advances social inclusion and cultural participation.

This drop was tested in Genova, Italy, with a focus on the Sturla-Vernazzola neighbourhood (Box 7). The drop developed a participatory storytelling process with community members that generated stories, portraits, an artistic immersive exhibition, and the development of PAVIS AR app, to share local stories using Augmented Reality. The drop evolved to generate ripples (Box 8), especially through the Speaker for the Living who played an important role in reaching children and youth with ocean literacy activities. The municipality adopted a more long-term view with plans to replicate the participatory process in another part of Genova.

Box 7. **Key results** of testing the Inclusive Digital Storytelling drop in Genova

- The drop developed a methodology for inclusive digital storytelling that delivered a **strong participatory creative process and immersive outputs** about the local heritage and relationship with the sea in Sturla-Vernazzola, Genova.
- Key elements of this methodology included: open meetings and communication with the community

[11] See: https://memexproject.eu/en/

to build engagement, a cultural agent (selected via an Open Call) experienced in participatory processes to facilitate creative activities (Heritage Walk, Creative Focus Groups) with community members, as well as the development of a "human library" and immersive exhibition (21-22 March 2025 at the Blue District in Genova) attended by around 200 visitors. Multiple forms of media were used (audio, photo, video) to disseminate the stories through the PAVIS AR app and the immersive exhibition.

- The **PAVIS AR app**, launched in late 2025, uses Augmented Reality to provide an immersive dive into the local environment and its stories. It is based on a preexisting version that was enriched with a new user interface, and possibilities to showcase stories with audio, video and multiple images. It features a new functionality showing the stories as elements in a cartoonized version of Sturla and Vernazzola for app users away from the location.
- PAVIS provides an **opportunity to preserve and disseminate the stories** of inhabitants. The app was tested by 5 storytelling participants at the final restitution event on 14 June 2025, which shared the pilot's results with community members and gathered their feedback on the process, impact and potential future developments.
- The participatory process has involved 30+ consistent participants (inhabitants, local culture and sports associations, local municipality)[12] and has fostered an improved understanding between them (participant feedback: "Contacts have been established between associations and individuals in the area, creating a first real network").
- The drop generated learning on participatory processes and how creative methods can stimulate new feelings (curiosity, excitement), perspectives and learning experiences for citizens. This process made participants **feel seen and considered** while the opportunity to share their memories, personal stories and perceptions in a creative way had an emotional impact on them.
- The Zoöp concept was introduced in Genova, which supported the co-design of the drop and gave the Speaker for the Living (marine biologist with a long-term commitment for environmental education) an increased role and visibility. The Speaker for the Living has incorporated more-than-human perspectives in the participatory process and has reported an **improved ability to communicate** about the value of ecosystems and regenerative perspectives, through empathy and considering humans as part of the ecosystem rather than as outsiders using its "services" (i.e. ecosystem services). The Zoöp workshop generated more attention to the perspectives of other-then-human lives in the storytelling effort.
- The pilot has generated an improved awareness of the landscape, ecosystem, and past relationship with water in Sturla and Vernazzola among participants, with a spotlight on the sea and local beach. It has **revived a feeling of cultural belonging and emotional attachment** to the area that may contribute to future environmental preservation.

[12] The following organizations took part, as reported by the pilot team: *Unione ecologica sportiva Ciappeletta; Circolo Urania; Circolo Vele Vernazzolesi; Associazione i ricostruttori; Club Pesca Quarto; Bagni Santa Chiara; Comitato Residenti Vernazzola e Comitato residenti Sturla; Municipio IX Levante*.

Box 8. **Main ripples** of the Inclusive Digital Storytelling drop in Genova

- The pilot increased its communication and dissemination by sharing its experience in local and regional networks (Genova University, Blue Festival[13], Liguria region, network of 14 Italian municipalities, scientific conferences). In October-November 2025, the pilot and Speaker for the Living conducted ocean literacy activities at the Festival della Scienza in Genova.[14] This enabled the pilot to **reach more students and young people and raise awareness of local species**.
- The **Speaker for the Living has taken a growing role** by developing her pedagogical skills on ecosystem regeneration and conducting activities that promote citizens' participation in the monitoring of the local ecosystem (workshops, survey, regular contact). She has conducted ocean literacy activities at local schools and beaches, reaching 50 schoolchildren aged 3-5 as of early October 2025.
- Feedback from citizens, local associations and institutions (14 June 2025) suggests that new awareness and perspectives were gained about local species ("I didn't know the importance of Posidonia, which everyone criminalizes. I want to learn more about it"); and that the project **conveyed the value of the neighborhood and its culture** beyond seaside tourism, contributing to a more holistic vision.
- The project has convinced the municipality and local partners of the **value of participatory and creative processes** to engage citizens, revive cultural heritage and foster (re)connection with local ecosystems. The municipality has applied for funding (EU, private banking foundation) to replicate the participatory process with neighborhoods, associations, artists, environmental scientists and schools in the western part of Genova.
- The digital research centre IIT that developed the app has **used technical insights from PAVIS development** (app structure, backend, server) in its other project RAISE[15] that also developed an app using Augmented Reality.

Contextualisation of results

The participatory storytelling process of the drop successfully engaged inhabitants and dynamic local associations (e.g., sport clubs) in Sturla-Vernazzola. It benefitted from the stories of citizens who have lived in the area for a long time, although elderly participants were overrepresented in the human portraits due to an **aging population**. The pilot team and Speaker for the Living worked to redress this imbalance in the Ripple phase by conducting ocean literacy and dissemination activities with students and children from the local nursery school. These efforts were supported by the Speaker for the Living's ocean literacy commitment and skills, and by the existence of the Blue District in Genova as a physical space focused on the sea and innovation. Still, there remains a need

[13] https://www.genovabluedistrict.com/cosa-stanno-facendo-i-progetti-europei-per-il-clima-e-il-mare/
[14] https://www.festivalscienza.it/
[15] https://www.raiseliguria.it/

for more intergenerational dialogue about conflictual topics such as access to the Sturla beach and the need to balance housing, leisure, environmental preservation and cultural heritage in an area undergoing regeneration.

Local perceptions of the coastal regeneration plan PON Metro Plus (2021-2027) led by the Genova Municipality are marked by uncertainty and fear that the local heritage is under threat. Inhabitants saw their participation in the storytelling processes a way to preserve memories and traditions ("We hope for an improvement of the village and the preservation of its traditions") even though the BoS pilot leads in the municipality do not have direct influence over the plans, as these are managed by another department. This raised the importance of communicating clearly to citizens, aligning projects with municipal plans and coordinating within municipalities to ensure that project results are used to inform policymaking.

The evolution of the drop was also shaped by a **multidisciplinary team** which successfully bridged artistic and participatory approaches but struggled to develop a common long-term plan combining app development and community engagement. The participatory storytelling process inspired the municipality to increase ocean literacy activities with citizens, generating Ripples, while the app was finalized in the last months of BoS. The digital partner, as a research centre, noted that its main focus was research and experimentation rather than the maintenance and further development of the app, which resulted in a gap for the app's dissemination and sustainability (this was taken over by other project partners).

Pilot Demonstrator – Expected Outcomes	**Summary of Achievements (Key Results & Main Ripples)**
Develop a digital storytelling tool to collect and share place-based narratives	**PAVIS app** developed and deployed as a platform for sharing local stories
Enable inclusive participation in storytelling processes	Citizens and local associations engaged through creative storytelling activities and human portraits
Strengthen citizens' connection to coastal and port-city places	Stories collected through the storytelling process revived pride in the neighbourhood and personal, cultural and historical relationships with the sea
Make local knowledge and lived experiences visible	Stories, portraits and recordings, integrated in PAVIS, highlighted everyday experiences often absent from dominant narratives
Seed longer-term use of digital tools for participatory engagement	PAVIS content was gathered through participatory activities, received feedback from citizens, and provided insights for new projects

Table 4. Summary of key results and Ripples considering the expectation towards Pilot Demonstrator and Territorial Transformation Impact

2.1.4. Blue seniors (Venice)

Analysis of the drop and its ripples

This subsection summarises the key results and ripples generated by the Blue Seniors drop in Venice, followed by a contextualisation of the factors that shaped its impact.

The Blue Seniors drop, first defined in the DoA, "explores interactive design as a support for inhabiting a place, starting from examining seniors' peculiar needs and involving them in the design and evaluation of platforms and/or tools elaborated and prototyped in workshops." The drop aimed to address seniors' needs, recognise them as holders of knowledge and traditions, and promote intergenerational approaches that support spatial and cultural justice, in line with the DoA.

This drop was tested in Venice, Italy and collaborated with seniors' associations and students in designing digital prototypes to address seniors' need and foster a reconnection with the lagoon environment (Box 9). The drop delivered Ripples by increasing synergies with the Regenerative Menus drop, developing a digital platform for lagoon recipes, and adapting activities for persons with mobility challenges (Box 10).

Box 9. **Key results** of testing the Blue Seniors drop in Venice

- **A new educational format** was developed for university students to learn about co-design, social value creation and their local context, via a course on digital design involving about 100 students. Students learned to use human stories and seniors' feedback (from interviews, focus group discussions, lagoon boat trips, evaluation of digital prototypes) as valuable local knowledge to guide future sustainable solutions.
- The pilot team built connections between the university (teachers & students) and local institutions and organisations, especially the municipal social services and seniors' associations.
- Students and researchers collected **information about the needs and challenges of seniors** in water cities like Venice (over 100 interviews). They identified 9 key themes. Students, university professors and social services learned about these needs which created opportunities for dialogue and fed the students' design process.
- 12 boat trips, organized by the Regenerative Menu drop in collaboration with the Blue Seniors drop, gathered some 360 participants and facilitated **physical access** to the lagoon for seniors, **revived memories and sensations** of the lagoon (emotional impact), created opportunities for social connection and increased awareness of the lagoon ecosystem among participants. Boat trips are an activity with potential to be replicated and expanded in the future (more in Ripples).
- Students designed **27 prototypes of digital platforms** to address challenges faced by seniors in Venice, with a focus on social inclusion, mobility, water heritage and sustainability, and were evaluated by some 200 seniors. Students' designs suggest an improved understanding of seniors'

needs and of the importance of intergenerational solidarity.

Box 10. **Main ripples** of the Blue Seniors drop in Venice

- The Blue Senior and Regenerative Menu drops reinforced collaboration and synergies between their drops, which **enhanced their visibility** in Venice and **created ripples**.
- In particular, the Saòr event on regenerative food involved seniors' associations, in **intergenerational activities** with some 60 children (e.g. Bocce, demonstration of volunteers diving to clean the canals) and in discussions with local producers and the municipality. It helped the Blue Seniors drop to connect with the community living in San Basilio. It also gave more visibility to the digital design process for blue seniors and students' digital prototypes exhibited at the Bocciofila.
- The strengthened collaboration between drops increased their awareness of how seniors' daily challenges (mobility, access to natural spaces) intersect with environmental challenges (reduced access to the lagoon environment, threats to Venice's water culture). Ca' Foscari researchers and students gained an **improved understanding of interconnected social and environmental challenges**, and how they manifest locally. This also uncovers common causes such as the prioritization of tourism and trade by city decisionmakers.
- This more integrated understanding revealed solutions to address social and environmental challenges jointly. Lagoon boat trips were identified as an educational and sharing experience to be expanded with another round of boat trips (summer 2025) that used immersive technological tools to record the lagoon environment. This provided an **immersive, sensory experience of the lagoon to fragile persons** (e.g. seniors with severe mobility challenges) unable to participate in the boat trips.
- The drops developed a set of **geolocalised stories** that could be integrated in the Narrative Geospatial Platform of the BoS project in the future. These stories aimed to preserve and disseminate seniors' traditional knowledge of the lagoon, contributing to an increased, and more grassroots knowledge of Venice's water culture (its "culture of the tides").
- The drops also implemented one digital solution from the co-design phase with students: a **digital platform focused on traditional Venetian recipes** <https://regenerativelagoon.unive.it> and their relationship with the lagoon ecosystem and human practices. The digital platform was evaluated by seniors in a pilot study and aimed to amplify seniors' knowledge of traditional recipes while providing a tool for communication and community engagement to seniors' associations. The pilot team sees this digital platform as a replicable tool for other cities.
- Learnings from the digital design process with seniors informed the **next computer science course at Ca' Foscari University** starting in September 2025. The course has planned to include 3 additional themes and involve a new group of students and seniors. Insights from the digital design process and BoS engagement will also be disseminated through academic publications and could be used in other cities with an aging population and rich water heritage.

Contextualisation of results

The driving role of computer scientists and digital technologies in the drop, Venice pilot and the wider BoS consortium stimulated the use of digital tools to generate joint ripples between drops, including a digital platform, geolocalised stories and immersive recordings of the lagoon. However, co-designing digital tools that aligned with multiple local actors was challenging. This process was influenced by the **tense relationships and power dynamics** between citizens, institutions and policymakers in Venice, marked overall by low trust. Ca' Foscari University developed digital design activities in dialogue with seniors' associations and municipal services but struggled to find mutually beneficial solutions that addressed seniors' aspirations, aligned with municipal plans and provided educational benefits for computer science students.

Senior representatives noted that there is an overall **strong sense of cultural, social and spatial loss among island residents**, linked to overtourism, which would require structural solutions and political commitments that go beyond what a three-year drop could achieve. Addressing these challenges would require a longer and deeper co-design with seniors, social services, and students as future inhabitants in the context of an aging and diminishing island population. Students who took part in the course, most of whom live on the mainland of Venice, have gained a better understanding of seniors' challenges on the island and the need for intergenerational solidarity. However, **students face their own challenges to find housing and employment** in Venice, hence the need for their needs and aspirations to also be amplified and discussed, towards the development of intergenerational dialogue and solutions that generate reciprocal value and solidarity.

Pilot demonstrator expected outcomes (from DoA)	**Summary of Achievements (Key Results & Main Ripples)**
Address seniors' needs in coastal and island cities through inclusive design	Seniors' needs were documented through 100+ interviews and integrated into digital prototype design.
Recognise seniors as holders of local knowledge and traditions	Seniors' stories, memories and lagoon knowledge informed design and geolocalised narratives.
Develop and test digital tools adapted to seniors' abilities	27 digital platform prototypes designed and evaluated by around 200 seniors.
Improve seniors' access to and connection with water environments	Lagoon boat trips enabled physical and sensory access to the lagoon for seniors.

Table 5. Summary of key results and Ripples considering the expectation towards Pilot Demonstrator and Territorial Transformation Impact

2.1.5. Nature-based Reef (Malmö)

Analysis of the drop and its ripples

This subsection summarises the key results and ripples generated by the Nature-based Reef drop in Malmö, followed by a contextualisation of the factors that shaped its impact.

The Wellbeing Reefs drop, as initially defined in the DoA, was based on the work of Alex Jordan[16] at the Max Planck Institute of Animal Behaviour (via TBA1) and aimed to support design and construction strategies to "build better for life under the sea" using scientific and historical information about human and other-than-human life around regenerated port areas where artificial reefs are created. This initial drop description was later adapted into the Nature-based Reef, which aimed to create common activities for human and other-than-human communities around the South Wharf Basin of Malmö, using existing nature-based solution processes to explore a new ocean culture and raise awareness about the importance of the sea for all life, as redefined by the pilot team.

The drop was tested in Malmö, Sweden (Box 11). It involved a "Sea Forum" of policymakers, designers and grassroots actors along with artists and students in an effort to socially activate a former industrial basin and raise public awareness about marine life and nature restoration efforts. In the Ripple phase (Box 12), Sea Forum members more actively co-designed activities at the basin and embraced an ecocentric perspective. The drop team developed lasting physical installations at the basin and consolidated relationships for long-term impact.

Box 11. **Key results** of testing the Nature-based Reef drop in Malmö

- The drop developed a **method for the social activation of urban nature-based solutions**, as part of the regeneration of former port and industrial areas, connecting a physical space (the South Wharf Basin) with public ocean literacy activities.
- The method consisted of setting up a **Sea Forum** with key actors for basin regeneration and activation (municipality, urban planners, architects, NGOs, etc.), building trusted relationships, co-creating public activities and installations with the Sea Forum, and organizing World Ocean Day at the basin.
- The two World Ocean Days were attended by some 600 citizens as well as ocean ambassadors, coast guards, NGOs and city policymakers. They made the basins (South Wharf, former Ferry Terminal) and the efforts to regenerate marine life more visible for the population of Malmö. **Citizens took part in the creation of a nature-based reef** (by adding rocks in the basin) in 2024, in addition to the eight reefs created during the reshallowing of the basin by the municipality. This was combined with storytelling and creative participatory activities facilitated by the Ocean Ambassadors (ocean literacy

[16] https://thejordanlab.com/alex/

drop). The events positioned citizens as active participants in the regeneration of marine life in Malmö and made this underwater life more visible and tangible for them.

- The Municipality took part in World Ocean Day 2024 and inaugurated the South Wharf Basin as Malmö's first "underwater park" which **sparked curiosity around this new public space** in the city. Students also played an important role in supporting the organization of World Ocean Day, co-developing installations at the Basin, and participating in activities.
- Sea Forum members report a **shift towards more ecocentric perspectives** thanks to the Zoöp workshop and the collaboration with the Speaker for the Living from the Marine Education Center. They have gained a better understanding of the needs of marine life and implications for urban planning. They report a shift in perception from "keeping water away from buildings" to rethinking collectively how we can live with changing water levels, building closer and more mutualistic relationships with marine life. They now see water challenges as an opportunity for urban planning, not just a threat.
- The pilot **provided 44 design students opportunities to participate** in basin regeneration and ocean literacy efforts. In a master course, students developed 13 projects that led to three master-thesis projects and one ongoing PhD-thesis project. Four projects were commissioned by the pilot-team to be shown at the World Ocean Day 2025.

Box 12. **Main ripples** of the Nature-based Reef drop in Malmö

- Relationships with certain Sea Forum members deepened and they played a **more active role in co-designing and co-delivering activities** at World Ocean Day 2025.[17] This allowed the pilot team to test a collaboration with the City of Malmö and build trust for future collaboration in other parts of the city (e.g., New Harbor area).
- **Four types of public installations** were developed in the context of World Ocean Day 2025 to raise public awareness of ecosystem regeneration in the basin: sound installations[18], signs about the ecosystem, buoys with QR-codes leading to 3D-films of the reefs below the surface, and underwater binoculars with information about species in the basin. An electronic Underwater Binocular showing the past, present and future underwater environment of the South Wharf Basin was under development as of October 2025.[19]
- The installations gave **visibility to the work of former students and Ocean Ambassadors**. According

[17] Active Sea Forum members were: White Arkitekter, City of Malmö's Street and Buildings Department, and Environmental Department; Allas lika värde; SLU, World Maritime University.
[18] The two sound installations part of Havsreflektioner/Ocean reflections are "Sensing the Sea" developed by Land Art Skåne artist Lucy Cathcart Frödén and "Below/Above" developed by sound artist (and former student) John Cowhie.
[19] This was developed with former student Josefine Klintberg.

to current plans, the sound installations, signs, and buoys should stay long-term. The pilot team is in discussion with the municipality regarding other installations.

- The Ocean Ambassadors (ocean literacy drop) helped activate the basin on World Ocean Day 2025 by bringing participants from different parts of the city and developing participatory activities for citizens (e.g., collaborative listening sessions, storytelling, crafting with basin materials).[20]
- The last session consulted citizens on what the future underwater park of the South Wharf Basin could look like. The goal was to collect ideas and anchor the basin as a public space for environmental stewardship in Malmö. According to Ocean Ambassadors, the organization of World Ocean Day improved in 2025 and provided **increased accessibility to the basin**. Overall some 200 participants joined.
- The drop collaboration has resulted in the **adoption of a Zoöp Memorandum of Understanding by the Sea Forum** (Malmö University, Marine Education Center, White Arkitekter, World Maritime University, Swedish University of Agriculture, Association Allas lika värde (everyone's equal worth), Studiefrämjandet). This formalized the role of the Speaker for the Living, giving him added legitimacy in dialogue and advocacy efforts with institutions beyond the pilot team.
- Malmö University and the Marine Education Center formalized their partnership and formed the **Ocean Culture Hub** which provides an institutional basis for future work on regenerative ocean culture in Malmö. They have applied to several grants (European and national) with the Municipality's Environmental Department to continue the work. The Sea Forum is planned to remain as an advisory group of the Ocean Culture Hub, with possibilities to join the Hub upon more formal long-term commitment.

Contextualisation of results

The following contextual factors influenced how the Nature-based Reef drop unfolded and how its ripples developed over time:

The drop team has navigated **complex stakeholder relationships and institutional procedures** to consolidate its Sea Forum and organize two World Ocean Days at Malmö's former industrial basins in 2024 and 2025. The drop has aligned with the Malmö Municipality's ongoing plans to reshallow old port basins to regenerate marine life and provide new public spaces for Malmö citizens although the basins are managed by several municipal departments that lack a coordinated approach. Further, while the city brands itself as a frontrunner in sustainable urban development, contradictions remain and the unequal access to the sea and water activities for Malmö citizens (due to urban segregation, socio-economic inequality, cultural and linguistic marginalization, mainly affecting non-Western diasporas) is a neglected topic.

[20] https://bauhaus-seas.eu/malmo-world-ocean-day-underwater-park/

In this context, municipality representatives took part in the Sea Forum and voiced intentions to continue collaborating but a formal commitment has not yet materialized. NGOs and lifelong learning organizations also participated, although grassroots actors were overall difficult to engage on a regular basis without remuneration. Moreover, bureaucratic constraints of the municipality and university as well as turnover in the municipality slowed down the work of the Sea Forum and World Ocean Day preparations, creating hurdles to set up permanent installations at the South Wharf Basin. Despite these challenges, the drop team was able to set up several long-term installations at the basin and foster a shift to regenerative perspectives among Sea Forum members, formalized by a Zoöp Memorandum of Understanding. The **collaboration between Malmö University and the Marine Education Centre**, which started before BoS, was instrumental in achieving this impact and will continue sustaining the work in coming years.

Spatial and social dynamics also influenced the impact of the work. World Ocean Day 2024 and 2025 attracted citizens from different parts of Malmö to the basins and raised awareness of underwater life in the basin. This was facilitated by the engagement of Malmö's dynamic student population, and the outreach efforts of Ocean Ambassadors (especially Flod 57) who brought groups from disadvantaged neighborhoods to the basin by public transport. However, the South Wharf basin remains overall little-known to citizens who do not live or work in the area. Therefore, the effort to revive the basins as public underwater parks will require time and sustained efforts, such as more physical installations that make marine life visible and yearly World Ocean Day events, according to the drop team and its partners.

Pilot demonstrator expected outcomes (from DoA)	***Summary of achievements (Key results & main ripples)***
Apply nature-based solutions to regenerate marine ecosystems in port areas	Nature-based reef co-created in the South Wharf Basin to increase citizen participation and awareness of municipal reshallowing works
Increase public awareness of marine life and ocean regeneration	World Ocean Day 2024–2025 engaged ~600 citizens in activities around regenerated urban basins and created installations to see or listen to underwater life.
Create inclusive public engagement around marine regeneration	Citizens, students, artists and NGOs participated in reef-building and ocean literacy activities.
Foster ecocentric perspectives among institutions and practitioners	Sea Forum members reported shifts towards ecocentric thinking in urban planning and formally committed to Zoöp approaches.

Strengthen collaboration between institutions and grassroots actors	Sea Forum consolidated trust and enabled collaboration with the City of Malmö.

Table 6. Summary of key results and Ripples considering the expectation towards Pilot Demonstrator and Territorial Transformation Impact

2.2. Impact and comparative analysis of drops implemented in several locations

This section analyses drops that were implemented in more than one pilot location, offering a comparative perspective on how similar approaches unfolded across different territorial, institutional and cultural contexts. This complements Section 3.1 by identifying shared mechanisms, contrasting outcomes and context-specific conditions that shaped the impact pathways of these drops. This comparative analysis supports cross-pilot learning and clarifies which elements show potential for transferability, adaptation or scaling.

2.2.1. Future Tidal Architectures (Delta, Venice)

The Future Tidal Architectures drop was implemented in both the Dutch–Belgian Delta and Venice, providing a basis for comparative analysis across two distinct coastal contexts.

Comparative analysis of the drops and their ripples

The Future Tidal Architectures drop, as defined in the project DoA, aimed to engage young architects and spatial designers in co-designing scenarios and adaptive strategies for coastal areas, deltas and wetlands impacted by climate change. The drop focused on coastal and port cities and their neighbouring rural areas and wetlands, and aimed to reconcile different groups and interests by building dialogue and collaborations with citizens and stakeholders of different scales and power.

While the core intention of the drop was shared across locations, its implementation and early impact pathways differed significantly depending on local conditions. This drop was tested in two pilot locations: the Delta (i.e., the Dutch-Belgian delta region) and Venice. Our analysis of the key results from developing and testing the drops revealed **significant differences in depth, scale and scope** between the two sites. We identified the following key differences:

- A longer and deeper involvement of students in the Delta drop, integrated in the curriculum.
- A longer, deeper and more deliberate involvement of citizens, grassroots actors and multidisciplinary practitioners in the Delta drop, through multiple co-design activities. This resulted in shifts in mindsets (more long-term) among *streekholders* (i.e., active regional stakeholders) in Grenspark Groot Saeftinghe.
- A neighborhood-scale focus in the Venice drop, and a broader focus in the Delta drop including local and regional crossborder scales. Young people from 20+ universities across the Eurodelta region were involved through the Next Generation Podium for Eurodelta (2024 and 2025 editions).

There were also several **similarities and synergies** between both locations:

- The drops delivered educational benefits for students (future architects and designers) in both locations. Students involved gave positive feedback on their learning experience and expressed a desire for more.
- The drops used similar methods (educational, design, analytical) that put emphasis on water-land interactions, multidisciplinary perspectives (incl. historical, social, cultural, ecological aspects), the role of ports, context sensitivity (site visits, discussions with local actors), value-based approaches (considering/negotiating different interests), group work, and importantly, developing scenarios.
- The drops made youth perspectives more visible and involved local governance actors from municipalities, ports, and semi-government to provide input and feedback into the design activities.
- The workshop in Venice was co-organised by the Delta drop team which provided in-person co-facilitation, shared methodologies, and gave several presentations. Two PhD researchers (one in TUD Delft/Vereniging Deltametropool, one in IUAV/TU Delft) have collaborated to prepare, conceptualise and analyse results arising from the two drops and design activities with students. This built on the preexisting relationship between TU Delft and IUAV.

Our impact analysis also assessed the 'Ripples' of each drop, i.e. their ability to generate outcomes and early impacts within the project timeframe. In the Delta pilot, activities were consolidated and expanded in 2025, resulting in better-informed student scenarios, increased interdisciplinary dialogue, intergenerational insights, extended networks, and dissemination efforts including a final exhibition to share student scenarios with Saeftinghe citizens and *streekholders*. In Venice, design activities with students ended in 2024 and were followed by the Port Authority's decision to set up a small public space in the Santa Marta area in February 2025, to be used by the local community of port users and residents.

In both locations, students mentioned in their feedback that more time would have been beneficial to develop more in-depth scenarios and test practical implications. Although students appreciated the freedom and creativity of the design activities, port actors and Saeftinghe *streekholders* suggested providing more technical inputs to students to increase the **applicability of the design ideas**. The drop teams in both locations noted that producing a concrete design output would require more resources. Moreover, the drops in both locations initiated **intergenerational dialogue** through design activities and exhibitions with students, governance actors and citizens. This dialogue remained largely mediated by drop teams, as such moments of direct conversation and negotiation between different perspectives were limited.

Contextualisation of the comparative insights

Factors related to the local conditions of Venice and Delta pilots help contextualise this analysis. First, the two pilots were designed with **different geographies** in mind. The Venice pilot focused on Venice island and zoomed in on the San Basilio and Santa Marta area for the workshop with architecture students. This area, part of the Port Authority's waterfront regeneration plans and host to IUAV buildings and students, is separated from the lagoon with a fence and offers limited

possibilities for physical reconnection with the sea. This was an inherent limitation that the IUAV students had to contend with in a one-week workshop. The Delta pilot focused on a large, complex, cross-border region with very different local contexts, including big port cities and low-density rural areas in proximity to one another. Architecture students from Delft, Netherlands conducted projects about Grenspark Groot Saeftinghe and discovered the local context largely remotely. Students from each cohort had a site visit with opportunities to discuss with locals, but the course timeframe and physical distance to Saeftinghe did not allow for a deeper engagement with the place and its communities.

The role of **young people** was prevalent in both locations, which benefitted from a dynamic student population in Venice and Delft. In Saeftinghe, however, the youth population is declining and Grenspark Groot Saeftinghe has been struggling to build a regular engagement with them. The drop team was able to involve the local youth in Saeftinghe in co-design activities at certain moments rather than continuously. Both local contexts are also characterized by an aging population and limited intergenerational dialogue around water, heritage, sustainability and urban planning. Therefore, the drops helped initiate dialogue between youths, policymakers and practitioners by amplifying the perspectives of architecture students and creating moments of feedback. However opportunities for direct dialogue between groups, especially about potentially conflicting values and interests, remained limited and largely mediated by the drop teams. In the Venice workshop, the different perspectives between students and the Port Authority were particularly visible, and the small public space developed by the Port Authority in Santa Marta did not fully reflect student scenarios and more broadly the BoS project's core values. While the Venice context is particularly conflictual and characterised by low trust between citizens and institutions, differences in perspectives were also visible in Saeftinghe where *streekholders* were not always convinced by students' emphasis on nature-based solutions.

The two drops were also marked by **different levels of engagements of the ports**. In Venice, the North Adriatic Sea Port Authority was part of the pilot- and drop team. Overall the Venice pilot was largely driven by institutions, namely Venice universities, the municipality and Port Authority. In the Delta pilot, the Port Authority was not a project partner and the work was led by Grenspark Groot Saeftinghe/EGTS Linieland, a semi-governmental partnership. Because of this, the Port Authority in Venice played a bigger role in shaping the drop, its focus area (San Basilio and Santa Marta) and contribution to the waterfront regeneration plans. These regeneration plans have raised questions and concerns among citizens of Venice, and also have implications for the IUAV students living in the area, which created a real need for multi-stakeholder dialogue. Still, across both Venice and the Delta, there was a sense that the Ports' role in co-design and implementation were not sufficient to negotiate interests and arrive at a mutually beneficial outcome. Students in Venice and the Delta were introduced to useful concepts to understand complex stakeholder relationships, but a deeper engagement between youth, port and society, with more active and open participation from Port Authorities, would be needed to redesign beautiful, sustainable and inclusive waterfronts and coastlines.

Lastly, the drops in Venice and the Delta started from **different levels of community engagement**. As the drop was launched in the Delta, Grenspark Groot Saeftinghe was an established partnership

which had built trust, collaborative networks and a culture of dialogue among *streekholders*. Such collaborations had been direly needed due to the conflictual situation around the depoldering of the area, and took several years to build. Grenspark Groot Saeftinghe generated more horizontal dialogue and co-design activities with the community, which made space for introducing new ideas from students and designers during BoS. In Venice, as mentioned above, relationships between citizens and institutions are overall more tense and the Port Authority in particular has been looking for ways to engage with communities — but improvements in public perceptions seem limited so far. The Venice drop did not rely on as strong a foundation for co-designing scenarios as in the Delta, which can partly explain that its impact was more limited.

The drop in the Delta also benefited from the participation of the well-connected regional think tank Deltametropool, which had been co-organising Next Generation Podium for three consecutive years before the start of Bauhaus of the Sea Sails. This enabled the drop team to tap into a **network of 20+ universities** across the Eurodelta region to further develop and disseminate the Future Tidal Architectures methodology among future architects and designers, increasing its visibility and outreach.

In summary, the comparative analysis shows that while Future Tidal Architectures functioned as a **flexible design-research drop**, its impact pathways were strongly shaped by local institutional and educational ecosystems.

Expected outcomes (from DoA)	**Key achievements & ripples (comparative across locations)**
Engage young architects in co-designing adaptive scenarios	Implemented through long-term curriculum integration in the Delta and a short, intensive workshop in Venice.
Support learning and capacity building	Deep educational embedding and repeated cohorts in the Delta; limited-duration learning experience in Venice. Increased student understanding of scenario-making, local adaptation and regeneration dilemmas, and socio-cultural dimensions of water.
Foster dialogue with citizens and stakeholders	Sustained co-design with *streekholders* and students in the Delta; more limited, institution-mediated engagement in Venice.
Address multiple territorial scales	Regional and cross-border focus in the Delta; neighbourhood-scale focus in Venice (San Basilio–Santa Marta).
Enable transferability of design-research methods	Core methodology transferable; impact shaped by

	local institutional and educational ecosystems.

Table 7. Summary of key results and Ripples considering the expectation towards Pilot Demonstrator and Territorial Transformation Impact

2.2.2. Regenerative Menus (Hamburg, Lisbon, Venice)

Comparative analysis of the drops and their ripples

In the initial BoS Description of the Action, the Regenerative Menus drop "argues for shifting food landscapes to follow the new seasonalities behind human-made climates. Developed from the Climavore concept (created and practised by Cooking Sections via TBA21),[21] it researches seasons of food production and consumption that react to human-induced climatic events and landscape alterations through co-design with local partners and communities. (...) Unlike carnivore, omnivore, locavore, vegetarian or vegan, Climavore is about the origin of ingredients and the agency that those ingredients have in providing spatial and infrastructural responses to human-induced climatic events for a certain period. At the core is the idea of embracing a flexible form of eating, shifting, for instance, to drought-resistant crops in a period of water scarcity or filter feeders during times of polluted or acidified waters."

This drop was tested in three locations: Hamburg, Lisbon and Venice. Here there were several similarities and differences between the three drops (in their framing, planning, approach to food and art, target audience), some of which were substantial and some of which were more subtle.

The drops in Hamburg and Lisbon supported **experimentation with regenerative food practices** through paid Fellowships/Residencies and raised the visibility of these alternative practices through public programmes and tastings. In Hamburg, the pilot design lead used local networks and informal discussions to identify Fellows that were aligned with the drop's vision, experienced and committed for the long-term. The selection process for the Residency in Lisbon used an Open Call followed by a jury decision. The drop was implemented differently in Venice, which focused on the elderly population ('seniors') and organized boat trips to the lagoon as its main activity in 2024 to raise awareness of cultural and ecological connections between the city, lifestyles, and lagoon species - food-focused activities with producers and consumers took place largely in 2025.

The drops took a **different approach to culinary heritage and food systems transformation**. While all three drops considered local ecologies, culinary heritage and traditional practices, the Hamburg and Lisbon drops more explicitly challenged current food practices and promoted a regenerative shift that would embrace certain past practices but also prioritize ecological wellbeing. Although, in Lisbon the use of spices and ferments to accompany traditional dishes aimed to introduce this shift gradually. In Venice, the drop focused on raising awareness about lagoon species and sustainable food choices (locally-sourced seasonal products) and on reactivating traditional knowledge through stories and recipes.

[21] See https://www.visibleproject.org/fellowship/climavore/ and https://www.climavore.org/becoming-climavore

The drops also engaged **different actors and target audiences**. The Hamburg drop focused first and foremost on culinary communities (chefs, artists, researchers, culinary students) whose research and practices were consolidated, expanded and shared with a broad audience during the School for Survival exhibition in 2024. This required a dedicated effort from the pilot team to adapt to the different ways of working and schedules of culinary professionals. The Residency in Lisbon supported the collaboration of actors in art, food and community to develop interdisciplinary solutions and to disseminate new food practices to local citizens, children and museum audiences. The Venice drop started from the perspectives of local communities, especially seniors and the idea of using past knowledge to reconnect with the lagoon and its ecologies. This knowledge was used as a basis to build intergenerational dialogue with students, as well as children and a wider audience in 2025 through the *Saòr a San Sebastiano* food festival. The drops in Lisbon and Venice (through the *Saòr a San Sebastiano* event in 2025) both organised game-like activities about food and ecology for children which introduced them to new ideas about water, local species and the ingredients used to make food.

The actors involved in the drops also marked a difference in how they approached 'food'. In Venice, food was seen mainly as a way to convey and revive cultural heritage, while in Lisbon and Hamburg, food was also used as an **artistic medium** to foster sensations, emotions, and rethink relationships with other-than-human beings. These drops saw conviviality as a quality of experience but also as a purposeful method to initiate difficult conversations in a conducive environment.

Further, Venice worked mainly with actors living in Venice (students, seniors, local boat company, local artist collectives) while the drops in Hamburg and Lisbon engaged **international researchers/artists**. They brought different perspectives but faced challenges to build meaningful and durable relationships with local communities within the timespan of their Fellowship/Residency - especially due to mobility, language and availability aspects.

The Ripple analysis of the drops revealed differences in co-design and planning. The teams in Venice and Lisbon increased **collaborations and synergies between their drops** in 2025, by developing joint activities, events and outputs. This fostered more dialogue and coherence within their pilots and helped them reach broader audiences. The Lisbon drop, in particular, developed an extensive public programme in 2025 to disseminate the results of the Residency and boost community engagement. In Hamburg, the Regenerative menu and Ocean literacy drops were closely connected from the beginning and the Fellows took part in the School for Survival programme in 2024. This enabled the pilot to build early synergies around food education and consolidate the connections between the local Fellows and the Culinary School through the Summer Course in 2025. This last year of the project **built strong foundations for long-term impact**.

Alongside public activities, the pilot teams in Venice and Hamburg both developed **online platforms** as a way to preserve and share the recipes, knowledge and stories gathered in the project. They envisage these platforms as tools to connect people/beings (food users to suppliers, seniors to community events, humans to other-than-human species) and to continue expanding after the end of BoS.

Contextualisation of the comparative insights

Key factors related to the local context and setup of the pilot teams should be considered when reading the comparative analysis of the regenerative menu drops. In terms of environment, all three drops focused on the connection between food and water bodies and the special ecological conditions provided by **marshland areas**. For example, halophytes (salt-resistant plants) were used in the regenerative menus in both Lisbon and Hamburg. Interestingly, the international fellows that worked on halophytes in Hamburg, the Tidal Garden, are based in Venice. Focusing on marshlands helped rethink interactions between water, land and communities, and provided opportunities for environmental education as these ecosystems are often little-understood.

The different approaches to culinary heritage mentioned above find explanations in the **different food contexts** of the pilots. There is an overall stronger attachment to traditional food diets in Lisbon and Venice, and a heightened sense that heritage needs to be protected in a context of mass tourism that threatens tangible and intangible forms of heritage. This helps explain why the Venice drop focused on reviving traditional recipes, while the Lisbon drop opted for a Spice Rack that introduced foraged ingredients as accompaniments of traditional dishes - aiming to introduce subtle, gradual changes to local diets. In Venice, the focus on traditional recipes also aimed to highlight the knowledge of seniors, a group whose perspectives are rarely highlighted in Venice despite the aging of the island's population. In Northern Europe and in Hamburg, plant-based diets and sustainable food movements have a bigger support base, thus developing ways to support these diets responded to the needs of the local chefs and their restaurant guests. The regenerative approaches of the Fellows resonated with culinary students and museum audiences but also confronted certain perceptions, for instance in discussions about dual-purpose chicken and possibilities to produce and consume meat sustainably.

Challenges of **food safety regulations and perceptions** emerged during drop implementation. The Hamburg chefs and regenerative farmers noted that European regulations were ill-suited for regenerative practices and that different regulations could be applied to small regenerative producers and chefs to support rather than constrain their work. In the Lisbon and Venice drops, food safety concerns came into play especially when it came to activities with children. The Lisbon drop team noted that there is a perception in the Marvila parish that the Tagus River is polluted and that food coming from the river is unsafe. This generated concerns and skepticism from the parents of the schoolchildren involved in activities organised by the Art and Food residency team - raising the need for a long-term engagement with the school and community in Marvila to shift perceptions, according to the drop team. Regulations also did not allow for serving children a regenerative menu which might have made it harder for children to fully grasp the connection between their natural environment and the food they eat. In Venice, too, children could not eat the same meal as adults during the *Saòr a San Sebastiano* event.

Lastly, the **drop team composition and setup** had an influence on ways of working and results. In Venice, Ca' Foscari University led the regenerative menu drop and started from its expertise on the lagoon's ecology - connections with food practitioners were developed in later stages. The situation was different for the Hamburg drop where the pilot design lead was specialized in regenerative food

and already had connections with producers, chefs or researchers in Hamburg, Venice, Rotterdam, etc. The Hamburg design lead also had more freedom to collaborate with the Fellows that best aligned with the drop's vision - while public institutions such as universities and municipalities are generally required to use Open Calls and select subcontractors based on cost efficiency criteria. In Lisbon, there was a strong emphasis on community engagement in Marvila and public-facing activities, driven by the municipality and Calouste Gubenkian Foundation, which was difficult to combine with the experimental nature and timeline of the Art and Food residency. Overall, the Hamburg drop had limited manpower and institutional backing but benefitted from the agility of planning within a smaller team, while the Venice and Lisbon drops had to manage the expectations and ways of working of more partners.

Expected outcomes (from DoA)	**Key achievements & ripples (comparative across locations)**
Experiment with regenerative food practices responding to climate change	Implemented through interdisciplinary Fellowships/Residencies in Hamburg and Lisbon; and through community-centred activities and lagoon trips in Venice.
Reconnect food practices with local ecologies and water systems	Marshland ecologies addressed across all locations, with differing emphases on regenerative experimentation (Hamburg, Lisbon) and heritage (Venice).
Raise awareness and foster dialogue through public engagement	Broad audiences reached, including citizens, food practitioners (students, producers, chefs) and local associations, through public tastings, exhibitions, festivals and community outreach efforts.
Support continuity and longer-term impact	Online platforms and educational synergies developed in Hamburg and Venice; foundations for long-term impact built through Hamburg's School for Survival and Lisbon's public programme.

Table 6. Summary of key results and Ripples considering the expectation towards Pilot Demonstrator and Territorial Transformation Impact

2.2.3. Ocean Literacy (Malmö, Oeiras, Hamburg)

Comparative analysis of the drops and their ripples

The Ocean Literacy drop, as defined in the DoA, was inspired by the concepts of Escola Azul[22] and Eco-Schools Network, and the expertise of FamStudio[23]. The drop aimed at educating new generations to become more responsible and participative in ocean sustainability. It planned to approach families as key agents, use a play-led strategy, and translate major shifts affecting future generations into actionable insights, actions, and products.

This drop was adapted to BoS pilots' different contexts and ways of working, involving a diversity of actors including but not limited to children. The drop was tested in Malmö, Oeiras and Hamburg. While the core conceptual framework of the drop was shared across locations, its implementation and early impact pathways differed significantly depending on local contexts and pilot team configurations. The overall approach to ocean literacy had several similarities across the three locations:

- The drop developed **creative, interactive and embodied ways of learning** about water bodies and marine life. The learning experiences included a strong **sensory dimension** and fostered audiences' curiosity, fascination, and a desire to learn more. Artists and food practitioners played a major role in developing these learning experiences.
- The drop **challenged conventional perspectives about the role of art and museums**. Malmö promoted participatory arts in different parts of the city, and Hamburg and Oeiras reframed the museum as a space to build skills and interact with rivers and marine life.
- **Young generations** (children, students) played an important role by participating in learning activities, but also, in Malmö and Hamburg, in applying their new skills in design or food to create educational installations at the basin or regenerative plates (respectively) as 'ripples'.

The drops in Oeiras and Malmö shared similarities in terms of **key partnerships**, with municipalities (leading role in Oeiras) and in alignment with municipal plans, and with scientific institutions that have a longstanding commitment to ocean literacy. The Oeiras and Malmö Speakers for the Living played essential roles in strengthening the ecological dimension of the work and had important positions within their scientific/educational organisations. In Hamburg, the regenerative farm and Speaker for the Living played a similar role by bringing practical knowledge about food production combined with a long-term interest in public education and community-building. The municipality was not involved but the pilot design lead developed collaborations with **policy advocacy** organisations in 2025.

We also noted several differences between the drops. First, in the process of **developing ocean literacy activities and community-building**. As mentioned in 3.1.2, Hamburg's informal selection

[22] See https://escolaazul.pt/en/escola-azul/literacia-do-oceano
[23] See https://famstudio.co/

process for its Fellows was different from Oeiras and Malmö which both used Open Calls, in collaboration with TBA21. The drop teams in Hamburg and Malmö reported dedicated efforts to ensure alignment with BoS values and regenerative principles in dialogue and training sessions (Malmö) with Ocean Ambassadors/Fellows. Additionally, the matchmaking process used in the Malmö pilot enabled the formation of a new artistic collective 'Land Art'.

Looking to Ripples, **the three drops expanded their work significantly**, by starting a new residency project (Oeiras), a second round of activities (Malmö), developing a summer course and a School for Survival 2.0 in Berlin (Hamburg), and reinforcing relationships with key partners (all three).

In Malmö, the Ocean Ambassador programme established a **committed community** around regenerative ocean cultures and participatory arts that was previously missing in Malmö. The work in Hamburg, too, consolidated a community of food practitioners interested in regenerative practices and public education (as a result of both drops which were strongly connected from the start). In Oeiras, the drop enabled interdisciplinary collaboration between an artist and scientists but the durability of these relationships was limited due to the international profile and part-time commitment of the artist. This means that local actors such as the Aquarium and Municipality will take the lead in sustaining the work and engaging new artists. As mentioned in 3.1.2, it was overall more challenging for pilot teams (here, Oeiras and Hamburg) to build meaningful relationships between international artists/researchers and local actors due to mobility, language and availability aspects.

In terms of ocean literacy activities for the public, the Hamburg and Malmö drops included a specific focus on the **social dimension of the learning experiences** which was not as present in Oeiras. Indeed, the School for Survival programme in Hamburg aimed to create moments of "radical conviviality" through dinners and tastings, and the Summer Course emphasised practical ways of learning to make regenerative knowledge accessible. The summer course at the culinary school in 2025 (Ripple) gave students space, time and possibilities to use their creativity, while they are used to working under time pressure for large restaurants. In Malmö, the Ocean Ambassadors prioritised their participants' wellbeing and fostered learning environments of social connection, intergenerational connections and mutual care. Ocean Ambassadors Flod 57 and Land Art **reached disadvantaged groups** in Malmö, encouraged participants to use their native language, accommodated different needs (single mothers, elderly persons, children) and supported people in discovering the sea for the first time.

Contextualisation of the comparative insights

Looking at the different local conditions of the three drops, including city context and project partners, gave important insights about the evolution of the drops and their ripples. The ocean literacy activities largely relied on artists and food practitioners (chefs, food producers and culinary students) that face **challenging, often-precarious working conditions**. In all three drops, these creatives received temporary support that did not always turn into a longer-term collaboration. This

made the way of engaging with these actors particularly important to establish supportive, transparent and collaborative relationships.

All three drops provided financial support and network-building, although the Hamburg and Malmö drop teams developed a closer relationship with creatives that involved adapting to their ways of working (Hamburg) and seeking feedback through discussion and surveys (Malmö). The Malmö drop team worked to build more horizontal relationships with the Ocean Ambassadors, especially in 2025. The profiles of the drop team members in Malmö University, with their focus on participatory design, helps explain this deeper attention to improving collaborations and evaluating ways of working. In the evaluation session of the Oeiras pilot, artists suggested to "create more intimate and safe spaces" and moments to share feedback and concerns during the residencies. Overall, the impact assessment team experienced a stronger commitment to learning and reflection in the Malmö and Hamburg teams, which could be explained by the more horizontal ways of working of the two pilot teams.

The Malmö drop also reached more **diverse citizens** through its ocean literacy activities, including diasporic communities from less affluent neighborhoods. This effort was aligned with the context of Malmö as a 'superdiverse' city (Vertovec, 2007) where many nationalities cohabit and have different levels of interaction with the sea. Marginalised groups face more barriers to go to the sea and the Ocean Ambassadors witnessed several cases of participants experiencing contact with the Øresund for the first time. This made the ocean literacy activities particularly relevant to fill this gap, although it also brought to the front the wider challenges of socio-inequality and the different "rights to the city" that minorities experience - on which the drop had limited impact within a three-year project.

In Hamburg, also a large city home to many nationalities, the School for Survival programme brought more diverse audiences to the museum in a temporary manner, and the culinary students at BS 03 who have gained new skills come from diverse backgrounds. The Fellows noted that it remains a challenge for them to reach young people from less affluent backgrounds. Oeiras has a different context with lower levels of ethnic diversity in the city (Council of Europe, 2019). Therefore, the drop team focused on engaging a wide audience and on increasing the participation of young people, which materialised especially in 2025. The collaboration with the Aquarium, which is used to hosting children and families, was key in this regard.

The role of institutions in the pilot teams had an impact on the drops and the durability of their outcomes. In Hamburg, the pilot design lead experienced challenges to secure long-term institutional support from the cultural partner and the culinary school, despite the high quality of the work. The drop has secured a new edition of the School for Survival in Berlin and built strong relationships with Hamburg Fellows (including the Speaker for the Living), nonetheless the lack of lasting institutional backing will continue to foster uncertainty about the future. Consequently, the pilot design lead is exploring possibilities to give the online platform "The_knows everything" a legal body.

In Oeiras, the municipality's leading role ensured alignment with multi-year municipal plans up to 2030 and involved local institutions that could sustain the work, such as the Aquarium and Portuguese Navy. This is promising for the continuation of the work in the coming years, provided that the spirit of BoS and its emphasis on participatory arts is preserved. In Malmö, the partnership between Malmö University and the Marine Education Center has been formalised which provides a strong foundation for long-term impact. Nonetheless, to expand the ocean literacy work and continue supporting Ocean Ambassadors as they plan to do, they will need to secure external funds and sustain their collaboration and alignment with the municipality.

Expected outcomes (from DoA)	**Key achievements & ripples (comparative across locations)**
Educate new generations on ocean sustainability through play-led approaches	Implemented through creative, embodied learning experiences across all locations, with varying social and educational emphases
Engage families and communities as key agents	Engaged children and families through the Aquarium (Oeiras), collaboration with summer schools (Malmö) and public events (all); Focused engagement with culinary students in Hamburg; and broader community engagement across all locations
Integrate art, food and science in ocean literacy	Artists and food practitioners played central roles across all pilots, with stronger institutional anchoring in Malmö and Oeiras
Foster participation and skills development	Youth and students contributed to creative projects, installations, food practices and educational outputs in Malmö and Hamburg; more limited skill transfer in Oeiras focused on listening skills

Table 7. Summary of key results and Ripples considering the expectation towards Pilot Demonstrator and Territorial Transformation Impact

2.2.4. Zoöp (all pilots)

BoS-Zoöp as a drop and a method tested in all pilots

The Zoöp drop ('BoS-Zoöp'), created by Het Nieuwe Instituut and practised by other consortium members, was initially defined in the project as 'multispecies assemblies'. Inspired by the zoöp concept[24], it "develops, curates and shares knowledge about ecological regeneration and governance of the local pilots. [...] Multispecies Assemblies will enable citizens and other

[24] https://zoop.earth/nl/

stakeholders to become aware of climate impacts and risks addressing systemic climate justice issues, [...] engage in the co-creation and sharing of data, knowledge, and solutions fundamental for the transformation to become climate resilient (including by building on citizen science, social dialogue and social innovation)," as defined in the DoA.

The Zoöp model was introduced to all pilot teams and sites, applied to the requirements of the BoS project, and adapted to the needs and capacities of different pilot teams to bringZoöp concepts and methodologies to their other BoS drops.Applying the Zoöp method provided pilots with a practical framework and tools to work from a regenerative perspective and include both human and other-than-humans interests in the work on the executive plans. The Zoöp method, as described in WP3, worked with three distinct elements:

- The Zoöp baseline workshop, part of which is a set of didactical tools to include the roles of humans in ecosystems;
- Installing and working with a Speaker for the Living in the pilot projects;
- A focus on the regeneration of (human-inclusive) ecosystems.

Zoönomic baseline workshop and intervision sessions:

Zoönomic baseline workshops were conducted with each pilot team. The workshop is a two-day program organised by the Zoöp team in each pilot site. Participants include the pilot team, Sea Forum partners, Speakers for the Living and other guests. The workshop familiarised participants with the ways of working of a Zoöp, and introduces key concepts, vocabulary and practices, through presentations, role-play, hands-on exercises, discussion and co-creation (see exercises below in Box 13)

The baseline assessment, refined during BoS with new exercises and Miro worksheets, enabled participants to see themselves as part of an ecosystem engaged in multiple socio-ecological relationships. Further, participants learn to characterise these relationships as life-supporting (regenerative) or not (degenerative), which helped pilot teams refine their executive plans with such relationships in mind.

Box 13. Exercises of the Zoönomic baseline workshop adapted for BoS

- **Exercise 1: Identifying** (Fig. 18): Participants answer the question: Which bodies give form to the Zoöp? As it is not possible to provide an exhaustive answer, participants identify which bodies play important roles as a starting point. There are five lenses through which bodies can be identified: (1) More-than-human bodies: the living beings; (2) organisational bodies: human collectives that shape the work of the pilot; (3) human artefacts: relevant material infrastructures, objects, buildings, technologies etc.; (4) legal bodies: rules, regulations, contracts, laws; and (5) public narratives: expectations, themes, worldviews of humans.

- **Exercise 2: Sensing & Listening** (Fig. 19): These two exercises use a basic technique for participants to start adopting the perspective of other-than-human participants in their context. Through playing out and discussing from the perspectives of various human and other-than-human points of view, the participants develop a sensibility to different social, material, political, ecological relationships. Doing these exercises outside helps to better connect with the other-than-human bodies in pilot sites.
- ***Exercise* 3: Characterising** (Fig. 20): Participants map the most important socio-ecological relations between the bodies that form the Zoöp. They discuss and draw the supportive and mitigating, regenerative and degenerative relationships that shape the pilot. This helps participants develop an integrated view of their pilot plans through a human-inclusive ecological perspective[25].
- **Exercise 4: Focusing**: The relational map enables participants to discuss focus points (important aspects, goals) that would increase their pilot's positive impact on marine ecosystems, human-sea relations, and public awareness. This also helps define what the Speaker for the Living will focus on as an advisor to the pilot team.
- **Exercise 5: Intervening** (Fig. 21): The focus points in turn give rise to specific actions (interventions) that help weave the Zoöp practice and values into the pilot's executive plan, and develop longer term aims and activities.

[25] The Zoöp method works from the starting point that humans participate in ecosystems. This starting point is made actionable through the worksheets. Following the exercises reveals how ecological relations exist between actors that are usually kept in separate conceptual boxes like 'nature', 'culture', 'technology' etc. By adopting responsibility, and aiming for improvement of those ecological relations that humans participate in, the general health of a, thus human-inclusive, ecosystem can be developed.



Figure 18. Screenshot of the outcome of the Identifying exercise with the Hamburg pilot

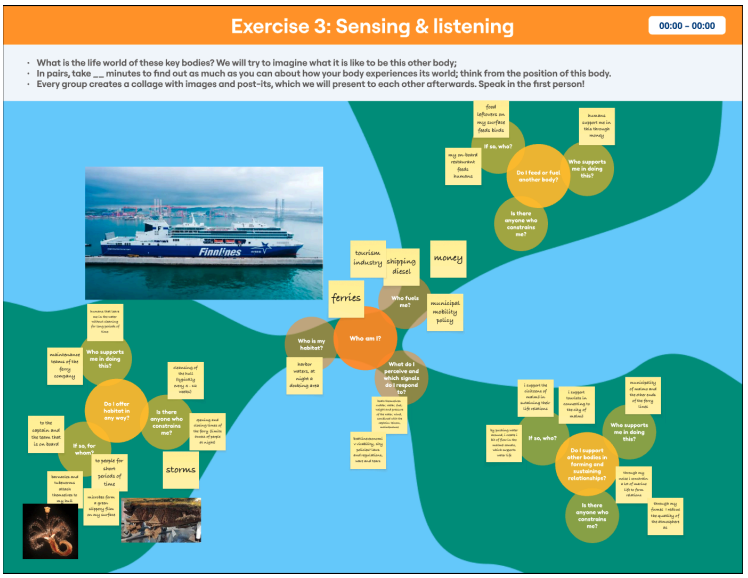


Figure 19. Screenshot of one outcome of the Sensing & Listening exercise of the Malmø pilot.

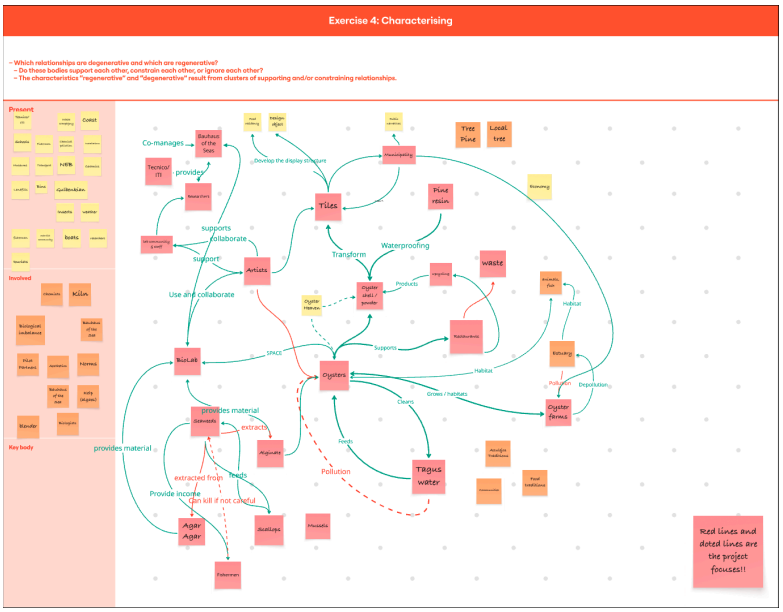


Figure 20. Outcome of the Characterising exercise by the Oeiras pilot

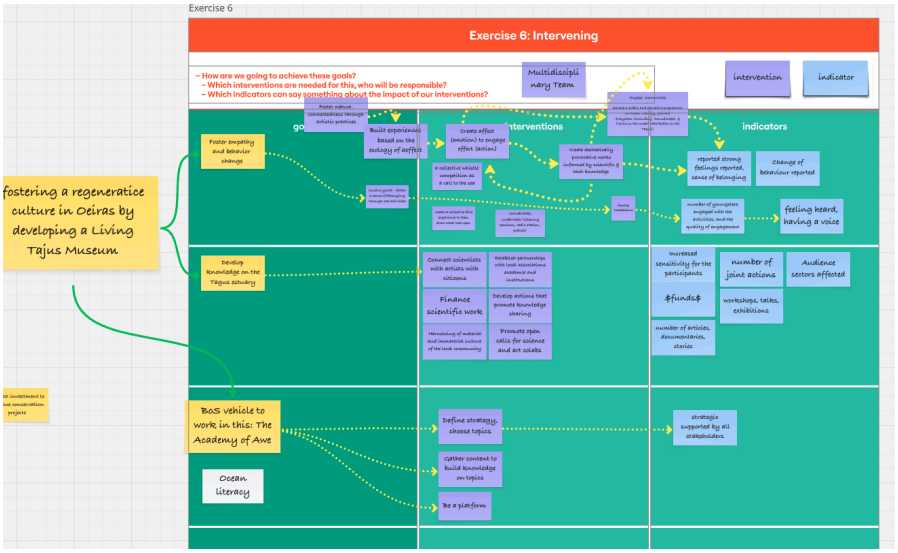


Figure 21. Screenshot of first draft of the zoönomic plan of Oeiras pilot outcome of 2nd workshop day.

After the baseline workshops, , intervision sessions took place over the course of 2025 with interested members of pilot teams and the Speakers for the Living. These sessions enabled Speakers for the Living and pilot teams to discuss issues and seek advice from other Speakers for the Living or the Zoöp team.

Speakers for the Living:

All pilots were asked to find candidates for the role of Speaker for the Living, based on a shared profile. Analysis of this process conducted in BoS suggests that a promising candidate has ecological knowledge, is able to see humans as participants in ecosystems, and can take other humans along in adopting more-than-humans perspectives. Team Zoöp assessed the suitability of the candidates,

The formal role of a Speaker for the Living in the Zoöp methodology is to be the human spokesperson for the interests of other-than-human life that participates in or is impacted by the operations of the pilot team. As such, other-than-human interests are no longer considered externalities. The main objectives of working with a Speaker for the Living are to:

- Sensitise human collaborators and audiences to their participation in ecosystems and to the possibility of actually contributing positively to the health these ecosystems (which is not the same as 'doing less harm', the common goal of sustainability practice)
- Sensitise collaborators and audiences to other-than-human beings as actual stakeholders in decision-making processes, creating a more level playing field among different forms of life,
- Share knowledge of ecological processes and dependencies, sharing insights with other Speakers.

Shifting narratives and practices through the combined Zoöp methods and three-year engagement

The Zoöp team combines methods with sustained engagement to generate shifts in narratives/discourse and practices over time. The goal is for the baseline workshop and the work with a Speaker for the Living to generate cumulative effects that equip pilots to contribute to the development of a regenerative culture and economy in the long run. As such, the Zoöp method is designed to help humans come to terms with the possibility of becoming a useful species for other forms of life, and to help organisations or projects to navigate a path towards a life-sustaining practice.

Comparative analysis of the BoS-Zoöps in seven locations

Reflection on the effects of the Zoöp workshop

By doing the baseline assessment, the pilot teams and partners learned to see themselves as participants in their local ecosystem, engaged in a wide number of socio-ecological relationships. They identified which relationships were life-supporting (regenerative) or not (degenerative). This view gave added perspectives on the executive plans that were developed by pilot teams. The plans were not rewritten, but important focus points and activities were added in their execution.

We identified two shared factors that impacted the effects of the Zoöp workshop across all the pilots. First, the **timing and flexibility of pilots' executive plans** influenced the workshops' ability to stimulate regenerative shifts in approach. The impact of the Zoöp workshop was shaped by how advanced each pilot's executive plan was at the time of the workshop. When plans were still flexible (Malmö, Hamburg), the workshop generated new strategies, actions, and ideas for community engagement. When plans were well developed but not yet fully implemented (Genova, Venice), the workshop did not alter the structure and activities of the plan but did have an important influence on the way they were executed and the relationships between the various activities. In contexts where multiple plans and teams overlapped (Lisbon/Oeiras), the workshop's effects varied.

Our general (and maybe not surprising) observations here are that the Zoöp workshop is more transformative in relation to actual execution when conducted early in the planning, when it can still shape the basic forms for activities. However, it has a different but still valuable effect later in the planning, when it can add focus points, perspectives and sharpened sensibilities, but not necessarily new activities. Either way, the workshop always also invited and led to long-term strategic thinking.

The second factor is the extent to which the pilot already had a **long term perspective** beyond the goals of their executive plan. When outcomes of the project at hand largely dictated the long term possibilities, (so when there was no perspective beyond BoS yet developed) the workshop did invite this long term thinking which then in turn helped shape focus points for the work at hand, that enhanced longer term possibilities. (Hamburg, Genova, Venice) For example: in Genova, the long-term vision of regenerating more-then-human coastal ecosystem brought in focus the need of a local community being more in touch with marine ecosystems, which suggested a more narrative, connective, more-than-human way of working for the Speaker for the Living / Colectiva Dafne, also beyond BoS.

If there was already a long-term perspective in place, the Zoöp workshop, through its relational approach and focus on human-inclusive regeneration, helped to integrate and align the BoS efforts with the long-term vision. (Malmø, Delta, Oeiras)

Comparing the ways the Zoöp drop and its impacts played out in the different pilot teams and locations, we have to look at the three effects of the Zoöp methodology (see 2.3) generated by the Zoöp workshop, the work with a Speaker for the Living and the focus on regeneration. We compare and contrast the different Zoöp drops along these three aspects.

Below follows a short reflection on the goings of each workshop in the different pilot locations.

Hamburg

The Identification exercise clarified who was central to the scope of the workshop: the School of the Survival program, the Regenerative Menu Drops pilot, and Deichtorhalle as a key organisational and physical partner.

The Sensing & Listening exercise increased participants' awareness of ecological relationships, showing how human and non-human bodies influence and depend on each other, and reframing the pilot as part of a broader ecosystem. These are Setting Sail and Diving Deeper indicators for the

Aesthetic and Sustainable value.)
Creating a relational map in the Characterising exercise generated new ideas for partners' long-term regenerative strategies. It also identified the Gemeinschaft as a potential future key partner in the culinary scene, beyond the Bauhaus of the Seas Sails project. (A Diving Deeper indicator for the Locally Grounded value)

Malmö
During the Baseline Assessment Workshop, Michael Palmgren from the Marine Education Center led participants to observe the Wharf basin's ecological conditions. Participants learned that healthy eelgrass indicates good water quality and supports other marine life, a Setting Sail indicator for the Sustainable value. The workshop helped the pilot team pinpoint ways to strengthen ocean literacy in Malmö. One clear opportunity was connecting ecosystem health to people's desire to swim and dive in the basins, connecting Diving Deeper indicators for Inclusion with indicators for Sustainability and Local Inclusion.

This sensory, relational perspective supported the project's broader aim of fostering more empathetic and ecocentric relationships with marine life in the cit
It also became clear that a narrative on ecosystemic regeneration and human participation in ecosystems should become part of the local culture. Interventions were formulated about including these narratives in the programming of a local radio station, and ideas for a range of ludic actions were formulated.

Venice
The Zoönomic baseline assessment, especially identifying bodies and mapping relationships, prompted a revisit of the project's goals and a realignment of tactics within the executive plan. It helped the group shift from focusing on "what" they were doing to "why." Participants began to see that small changes — like coordinating drops with the same groups of seniors and highlighting the relationships between bodies — could create a more integrated impact. For example, recognizing how the Fondamente's hard barriers reduce both lagoon access for seniors and overall ecosystem resilience showed how the different drops interacted with each other and how they could benefit from enhancing internal interaction, indicating impact in the Setting Sail range for the Aesthetics and the Locally Grounded value.

Genova
The Zoönomic Baseline workshop brought all key project partners together, strengthening their shared vision and revealing that the executive plan was already advancing well. The Zoöp methodology helped the team understand the value of a more-than-human approach. Marine ecologist Simona Busotti of Collectiva Dafne shifted her communication strategy as a result. She began using narratives that connect communities emotionally to local ecosystems by highlighting the perspectives of sea and coast-dwelling creatures. This approach increased public interest in marine life and boosted the pilot's effectiveness. The workshop also led to a decision to include more-than-human perspectives in the project's storytelling app. This impact falls in the Diving Deeper range for the Aesthetics value and the Inclusion value, the Setting Sail range for the Sustainability and the Locally Grounded value.

Lisbon
With the pilots of Lisbon and Oeiras the Zoöp team organised a combined workshop with a shared introduction followed by two separate baseline assessments. In Lisbon, the workshop increased awareness of regenerative practices. A key insight came when participants realised the oysters used in the Blue Makerspace drop were imported from France, not locally grown. The drop then shifted to working with local oysters, highlighting the need to revive local oyster cultivation alongside oyster-eating culture. This supports both stronger connections between local human communities and the marine ecosystems, as well as a means to support ecological regeneration, as oysters are a keystone species of coastal ecologies. The practice of Oyster Heaven was identified as a potential partner aligned with regenerative oyster farming. Overall, the Zoöp methodology helped the Lisbon pilot adopt a more regenerative mindset and practice.This impact falls in the Diving Deeper ranges for the Aesthetics and the Sustainability value, and sets the stage for Diving Deeper impact for the Locally Grounded value.

Oeiras
The Oeiras pilot was the last to use the Zoöp workshop, so the focus was on sustaining the project's effects beyond the workshop and aligning BoS elements with local long-term regenerative goals. The Zoöp method gave Marco Alexander Ferreira the role of Speaker for the Living in the wider project. This had a meaningful impact: he helped design and shape the exhibition at the Vasco da Gama Aquarium from his Speaker perspective, improving its content and structure, and he was a primary actor when it came to the activities related to the public within the project like workshops and listening sessions. Inspired by the more-than-human approach, Marco also created a new activity that will become part of the aquarium's long-term educational offerings and expand the institution's engagement with art and ecology.These impacts fall in the Diving Deeper range for the Aesthetics value the Sustainability as well as the Inclusion value.

Delta
The Delta pilot was unique because Zoöp Nieuwe Instituut already existed before BoS began, so no baseline assessment was needed with the Nieuwe Instituut team. Instead, two different approaches were chosen.

First, with the team of Grenspark Groot Saeftinge the Zoöp team explored the potential of applying the Zoöp methodology to the development of their new reception dwellings. This introduced partners to the Zoöp approach and helped them see how socio-ecological regeneration could integrate with the Grenspark's mission. Further exploration of Zoöp methodologies will take place in 2026, and potentially new Zoöp workshops will be planned.

Secondly, the Zoöp method was applied at Buitenplaats Brienenoord as part of the New Academy programme. A workshop around regenerative public space identified food cultures as key, building on insights from the Regenerative Menus drops and feeding directly into the Convivium NEB project. https://convivium-neb-project.com/. Furthermore it directly led Buitenplaats Brienenoord (whose team participated in the Zoöp workshop) to choose to become the second fully established Zoöp in Rotterdam.

The Zoöp team also evaluated and refined the Zoöp workshops and its tools. Notably, the format of the relational map underwent distinct changes, leading to more clarity in the process of focusing. This process of the development of the Zoöp method is described in D2.5.

Throughout the BoSS project, the Zoöp model gained visibility and was applied by many more organisations. By November 2025, there were 16 full Zoöps — mostly in the Netherlands, plus one in Belgium and one in London — showing significant uptake of the approach.

The Zoöp impacts in the Delta pilot fall in the Setting Sail range for the Grenspark Groot Saeftinghe workshop. The continued development of the method led to thorough grounding of all four BoS-NEB values in the method, and thus henceforth in all future Zoöps.

Reflection on the effects of the work with the Speaker for the Living

A key element of the Zoöp practice is to appoint a Speaker for the Living: human spokesperson for the interests of other-than-human life that participates in the operations of the (pilot)organisation. This means that these interests, that are commonly considered as externalities,are no longer externalities.

The main objectives of working with a Speaker for the Living are to:

- Sensitise human collaborators and audiences to their participation in ecosystems and the potential of actually contributing positively to the health these ecosystems (which is not the same as 'doing less harm', the common goal of sustainability practice);
- Sensitise collaborators and audiences to other-than-human beings as actual stakeholders in decision-making processes, creating a more level playing field among different forms of life;
- Share knowledge of ecological processes and dependencies, sharing insights with other Speakers.

Across all pilots, one factor proved decisive for the effectiveness of the Speaker for the Living: the relative positioning and independence of the Speaker in relation to the pilot team. The degree to which the Speaker was trusted and able to operate with a measure of autonomy strongly influenced their impact.

Hamburg had the strongest example, with a very experienced regenerative farmer with strong links to other farmers and restaurant culture in Hamburg which enabled strategic influence beyond the formal project. In Malmö, the Speaker role was institutionally embedded in the Marine Education Center, and was formally anchored through an MoU, which described the Zoöp method and clarified responsibilities. This formal mandate allowed Michael and Linn to act as Speakers not only within the pilot team but also outwardly, in relation to the municipality and the wider public. Venice's Speaker began as skeptical but gradually embraced the role and contributed in a meaningful way. Genova's Speaker (Collectiva Dafne) was independent and knowledgeable. Her influence was mainly narrative and communicative, but greatly supported the impact of the project and secured existence beyond BoS. The speaker in Oeiras had a lasting influence too but Lisbon's speaker did not have the chance to perform their role.

Our conclusion: Speakers who hold a more independent position —while trusted by the pilot team—tend to have a stronger and more visible impact on the pilot's direction and plans. The Malmö pilot, in particular, shows that a clear and formalized mandate (such as through an MoU) can help create the necessary space for the Speaker to act effectively.

Below follows a short reflection on the involvement of the Speaker for the Living in each location.

Hamburg
Formally establishing Hannes Höhne as Speaker for the Living strengthened the Hamburg pilot. Living and working on a regenerative farm near Hamburg, Hannes brought practical insight and helped guide activities with the School of Survival and the culinary school.

Hannes' farm Gut Haidehof is also a member of the Gemeinschaft, an association of regenerative farmers around Hamburg. The strategic possibilities of this body was acknowledged in the Zoöp workshop but it was not yet part of the executive plan. Throughout the unfolding of the pilot project, Gut Heidehof and the Gemeinschaft became important practical links for the culinary school, as source of a wide range of regenerative products. Thus a stronger relational fabric for the local network of regenerative food producers was established.

These impacts fall in the Diving Deeper range for the Sutainability value and for the Locally Grounded value.

Malmö
The Marine Education Center (Linn and Michael) became the Speaker for the Living in the Malmö pilot. Already advising the city on marine ecosystems, they were effectively fulfilling this role even before the Zoöp process began.
Ocean literacy was central to the pilot, and the Center's expertise in public education on local marine life made their involvement very meaningful. Establishing the Marine Research Center formally as Speaker for the Living in a Zoöp practice, and using the MoU that was developed by the Zoöp team, enabled them to also be recognised to the city of Malmö as a body with a real mandate to speak on behalf of other-than-human life.

This impact falls into the Diving Deeper range for the Locally Grounded value.

Venice
Fabio Pravoni served as Speaker for the Living in the Venice pilot, bringing deep knowledge of the lagoon and its ecological challenges. Initially skeptical, he questioned the idea that human intervention could be beneficial to the ecosystem. Through the Zoöp workshop, Fabio engaged with the idea that regeneration doesn't necessarily mean artificial restoration, but rather creating the conditions for ecosystems to recover and thrive. This shifted his perspective, showing how humans can support ecological recovery. In the Venice pilot, the focus of Fabio Pravoni has been to alert communities to the need for ecological regeneration of the Venice lagoon.

This impact falls in the Diving Deeper range for the Aesthetics value.

Genova
In the Genova pilot Collectiva Dafne performed the role of Speaker for the Living through Simona Bussotti. Before the Zoöp workshop, Simona communicated ecosystem health mainly through the lens of human benefits ("ecosystem services"). The workshop shifted her approach toward storytelling that also centers other-than-human perspectives, which resonated much better with her audiences. The Speaker for the Living reported that she now uses her (deep) knowledge about what different marine creatures do and need to help people imagine the underwater world, and uses beach walks to encounter marine creatures as starting points for telling stories and facilitating connection.

This impact falls in the Diving Deeper range for the Aesthetics value.

Lisbon & Oeiras
In the Oeiras pilot, Marco Alexandre Morgado Frade Ferreira acted as Speaker for the Living, alongside his role as Ocean Ambassador and representative of the Vasco da Gama Aquarium. Throughout the duration of the pilot he felt that his input was consistently taken into account.
He played a key role in the Call to the Sea art residency jury, co-curated the Aquarium exhibition, and helped lead public workshops and listening sessions. Inspired by the Zoöp methods, he and his team also developed a new long-term educational activity and broadened the Aquarium's engagement with art and ecology. His role significantly advanced the pilot's ocean literacy goals, though he noted limited interconnection between all of the actors involved within the scope of the overall BoS project.

This impact falls into the Diving Deeper range for the Aesthetics, Sustainable and Locally Grounded value.

In the Lisbon pilot, Ilda Teresa Castro was appointed Speaker for the Living but was not actively involved, so she had little impact on the pilot's development or outcomes.

Reflection on the effects of the focus on regeneration

The larger aim of the Zoöp approach is to foster the development of a regenerative culture and a regenerative economy that sustains life instead of diminishing it. Its main objective is to replace — where possible — and complement old-school sustainability thinking and its focus on net-zero, circular "green growth," and human-centred ecosystem services. These approaches, while well-intentioned, still continue to erode the planet's life-supporting capacity. Zoöp instead offers a vision of an economy that is embedded within ecosystems, supports the flourishing of diverse forms of life, and strengthens the ecological conditions that make long-term human and more-than-human wellbeing possible.

The main factor we identified here was **prior familiarity with the regenerative discourse** within the pilot team, BoS community and for the Speaker for the Living. This familiarity varied significantly across pilots, which influenced how the Zoöp drop was received and worked with. Overall, the Zoöp drop tended to strengthen or deepen regenerative knowledge and make it more actionable where it

already existed (Hamburg, Malmö) while participants whose familiarity was less established were sensitised to new concepts and approaches (Venice, Genova, Lisbon).

Hamburg had an existing engagement with regenerative thinking and practice, which meant the workshop mostly added nuance and long-term linkages rather than introducing new ideas. Malmö likewise had lots of ecological know-how and a focus on ecological regeneration of the Wharf basin. The Venice pilot team included extensive knowledge about the ecology of the Venetian lagoon, but was less convinced by the regenerative discourse, informed by failing earlier attempts at regeneration of the saltmarshes through crude human interventions. Genova shifted from an approach based on ecosystem services towards a more relational and emotional engagement through the involvement of Simona Busotti. And Lisbon/Oeiras exhibited varied levels of familiarity across multiple teams, resulting in a less consolidated approach.

Hamburg

Both the project lead Katinka (project lead) and Hannes (Speaker for the Living) were already well versed in the regenerative practice and discourse. Deichtorhalle (the host of the School for Survival) very much focused on net-0 circularity as an end goal. They gained new insights in the workshop, but these were not turned into action exactly because they were already so invested into the net-0 circularity coalition. Also the pilot's work did not focus on the operation of the Deichtorhalle. The Culinary School has been influenced more deeply by the project, and because of it embraced regenerative principles in courses in their curriculum. They are now considering continuing their work with Hannes Höhne as Speaker for the Living.

This impact falls into the Diving Deeper range for the Sustainable value.

Malmö

The Marine Education Center brought so much knowledge about the area and all life present within that the Zoöp methodology did not have that much to add on that level. The members of the Malmö pilot also were super committed to work towards a healthy relationship with the sea. The pilots' main struggle was to engage wider publics in Malmö with the Ocean Literacy narrative. The baseline assessment delivered new strategic ideas on how to broaden the regenerative narrative and appeal. Malmö is a highly diverse city, and it is not easy to find inclusive language and messaging that resonated across different communities. This is a continuous point of attention in building broader support for ocean literacy.

The focus on regeneration did not have an added impact in Malmö.

Venice

In the Venice pilot, the idea of ecological regeneration was initially met with a bit of skepticism, especially by the Speaker for the Living. In his perspective, based on a wealth of experience in the lagoon, minimizing harm was already a major challenge, 'humans can not regenerate'. However, through the workshop, he began to acknowledge there is a possibility for humans to contribute to regeneration in a collaborative way: humans (with the actual ecological know-how) can have regenerative impact supporting natural processes and making space for ecosystems to recover.

This impact falls into the Setting Sail range for the Aesthetics and Sustainability value.

Genova
In Genova, the focus on regeneration and the possibility of humans contributing to it, was an important factor in adopting the more-then-human approach by Collectia Dafne (the Speaker for the Living) and in the narratives of the storytelling app.

This impact falls into the Diving Deeper range for the Aesthetics and Sustainability value.

Lisbon & Oeiras
In Lisbon, specifically, the focus on regeneration in the baseline workshop gave crucial weight to the source of the oyster shells that were used (see the Lisbon section of the zoönomic baseline workshop assessment). In the Oeiras pilot it is hard to identify a specific impact of the focus on regeneration. What can be said, though, is that it was accepted as an obvious need, and that this reinforced the necessity for local communities to re-connect to local marine ecosystems. This in turn supported the decision to not build a museum on the borders of the Tagus river, but to consider the Tagus river itself as a living museum. In that approach a strong connection was made between a heritage narrative and the focus on ecological regeneration.

For Lisbon, the impact falls into the range of Diving Deeper for the Sustainable value. For Oeiras the impact falls into the Diving Deeper range for the Sustainable value, but in a circumstantial, added way.

2.3. Impact on the four BoS dimensions

2.3.1. Aesthetics

The concept of aesthetics was essential in the development of the BoS project and its drops. Aesthetics is understood in the NEB as attention to "collective sensitivity, intelligence and competences into creating a positive and enriching experience for people–beyond functionality." In the BoS project, we collectively adopted a **relational understanding of aesthetics** which shifts from a focus on form and function of products and systems to an understanding of "the deep interconnections of life, habitat and ways of living" (Seravalli, Light & Emilson 2022).

Our analysis found that creative practices by artists, architects, cooks, educators or citizens were key drivers of impact in the project. In most pilots, methods from art and design were at the core of the drop solutions, took on multiple dimensions, and helped pilots initiate a **"deep" kind of impact** with the potential to alter routines, values, frames and logics (Argyris and Schon, 1996 in Termeer and Dewulf, 2018). In some pilots, creative elements were brought in at specific moments to improve citizen engagement and bring awareness to "invisible" underwater phenomena (e.g., Blue Seniors and Regenerative Menus in Venice). Overall pilots used aesthetics to develop **engaging learning experiences** for citizens that used the senses, creativity, memories and capacities of

participants. This fostered increased ecological awareness, emotional connection to marine life, and initiated a sense of environmental stewardship.

We identified a number of good practices and processes for generating impact:

Malmö: The pilot supported Ocean Ambassadors who are artists and educators to become a group with shared values, tools and future goals (towards a future Ocean Culture Community). They developed ocean literacy activities in public spaces by the Øresund and in regenerated harbour areas, with sensory and participatory approaches that engaged citizens in learning, creation, imagination and reflection exercises using natural materials, underwater sound, diving or dancing.

Oeiras & Lisbon: Increased collaborations between artists and scientists proved successful to develop innovative designs and engage the public in sensorial and engaging learning experiences. Art and science residencies used sound, light, taste and participatory activities (making tiles, listening underwater) to raise awareness about sound pollution and vocal species in the Tagus (Oeiras, see Box 13 below), wild edible plants in the Tagus estuary, and the potential of local biobased materials (Lisbon).

Genova: The pilot developed a participatory storytelling process and immersive exhibition that centred citizens' stories. The process of gathering stories incorporated creative activities (heritage walk, photo portraits) and exercises (mind maps, writing postcards from the point of view of the sea) that stimulated inhabitants' curiosity, interest and new ways of reasoning. Participants found the immersive exhibition "relaxing", "engaging" and "powerful" as its visual and sensory elements enhanced the stories of their neighborhood, helping them come alive and reach a wider audience. Artistic methods, multiple media and digital tools helped create the immersiveness of the exhibition and app.

Hamburg & Lisbon: Dinners and food tastings created sensorial experiences and a convivial environment that raised awareness and sparked conversations about regenerative plates, where ingredients come from and why changes of practices are needed. Fellows from different disciplines combined food, biology, research and artistic practices to raise public awareness and were connected by the pilot to a Summer Course at the local culinary school. This course encouraged students to use their creativity in developing regenerative plates and to see food as an artistic practice.

Box 13. Analysis on the Aesthetic dimension, Oeiras Impact Report

The pilot developed two multidisciplinary residencies that used artistic methods to create engaging ocean literacy experiences for the public, **making the "invisible" and neglected topics of underwater species and sound pollution more tangible**. The residencies created immersive sound compositions including different acoustic elements, such as underwater frequencies, field recordings, processed sound layers, and interviews with local experts.

The 'Underwater Ecotones' residency project, exhibitions and live performances led by Francisca Rocha

Gonçalves combined sound installations, light, ice sculptures that melt over time; and were complemented by educational visit-talks, workshops and underwater listening sessions.

- The exhibition "Interferences in the Tagus" (2025) at CAM–Calouste Gulbenkian Foundation reshaped the museum space as a 'Lusitanian Toadfish nest', broadcasted underwater sounds and vibrations, but also **confronted the public to the disturbances of anthropogenic noises** which prevent the fish from communicating.[26] Visitors were encouraged to become active participants by engaging in **"deep listening"**. This experience made vocal marine species, the underwater acoustic environment and the impact of human-induced sound pollution more concrete for the public.
- The live performance "Time Capsules" at Oeiras Valley Science Festival used storytelling, light and crystalline ice sculptures containing vocal species from the Vasco da Gama Aquarium collection to symbolize the memory of rivers and oceans and their exposure to time and climate change as the ice structure melts.[27] This performance sensitized the audience to the importance of preserving stories and species that connect people to the past and future.

The residency project "Estação Eco-Fluvial do Bugio" established in 2025 brought in an additional dimension by focusing on a local heritage site, the Bugio Lighthouse. The residency project brought the dual benefit of **reviving a significant cultural space and making local ecologies more visible**. The "Radio Bugio" has conducted live transmissions that included "scientific testimonies with original soundscapes composed of field recordings, underwater frequencies, atmospheric pulses, mineral vibrations, and bioacoustic compositions created by Diana Policarpo and Bernardo Gaeiras."[28] Their work, also available on an open-access online platform, created a "shared field of listening" that included human and other-than-human voices.

According to feedback from the artists and the pilot team, participants in the ocean literacy activities expressed feelings of 'curiosity', 'excitement' and 'inspiration'. The pilot team aims to **build on these emerging feelings of connection to the ecosystem to set up the Academy of Awe** as a future think tank that facilitates residencies and cultural programmes for community engagement. Such a think tank would formalize the recognition of artistic processes as valuable forms of research. It would support the long-term objective of establishing a Tagus River museum, that reframes the conventional role and format of museums by taking place along the Tagus River and by interacting with its ecological context, fostering connection between visitors and the environment.

2.3.2. Sustainability

The goal of sustainability as defined in the NEB compass is to "avoid and reduce environmental impacts and favours durability, adaptability, recyclability" but also to include "the needs of all life

[26] https://franciscagoncalves.com/portfolio-item/underwater-ecotones-interferencias-no-tejo/
[27] https://oeirasvalleysciencefestival.com/exposicao-time-capsule-no-dia-24-de-maio/
[28] https://www.radiobugio.stream/#sobre

forms and of the planet by ensuring that human activity does not exceed planetary boundaries," (European Commission 2022). (NEB) BoS partners adopted an approach to sustainability that aims to "reconcile with the sea" by shifting from understanding the sea as a resource to understanding the sea, people and cities as interdependent and connected (Seravalli, Light & Emilson 2022). Such an approach requires new methodologies, values and lifestyles.

Several drops initiated a deep rethinking of the concept of sustainability beyond solely environmental and technical approaches. Overall the pilots generated **increased ocean literacy and ecological awareness** (among citizens, professionals, policymakers, multidisciplinary pilot teams), **circular and regenerative practices and skills**, and **shifts of mindsets** towards being more adaptive, regenerative, and empathetic of other-than-human beings.

The following good practices and processes were particularly impactful:

The Zoöp method was adapted to the project and provided all pilots with a framework to understand ecocentric concepts (e.g. regenerative relationships) and make their planned activities more regenerative for more-than-human life. See section 3.2.4.

Hamburg: Practitioners used regenerative food production and preparation practices (supporting biodiversity, health and wellbeing of soil and animals, local sourcing, seasonality) and have gained financial support, visibility/ new audiences, and a reinforced local network. They have consolidated and expanded their cooking techniques (fermentation, head-to-tail use of animal products) and educational skills. 150 culinary students in Hamburg have gained increased awareness and skills on regenerative farming and cooking. The project has shifted their perspectives on the relationships between producers and restaurants and on possibilities for sustainable meat production. See Box 14 below.

Lisbon: New biomaterials have been created in Lisbon by recycling oyster shells destined for landfills. Residencies delivered production protocols, objects and installations to showcase the versatile potential of the biomaterials (facades, interior design, artistic sculptures) and sensitize audiences. Suppliers are identified (mainly local oyster farms), funding and private partners remain needed to consolidate the model.

Malmö: The pilot has raised public awareness of the potential for nature-based well-being reefs to support participatory cultural activities, environmental awareness and community engagement. They have made the South-Wharf basin and its marine life more accessible for diverse Malmö citizens, offering a model for regenerating other urban basins.

Venice and Genova: Stories about the lagoon and local beach helped sensitize elderly residents to the centrality of water in their memories of place. The boat trips organised by the Venice pilot, in particular, were an effective way to revive memories of the lagoon, share stories and connect with others (considering challenges of loneliness among seniors) while being immersed in the lagoon and learning about its ecology. These experiences built a deeper understanding of the connections between social and environmental challenges and how they manifest locally, such as the increased

difficulty for seniors or other inhabitants to access natural spaces (e.g. lagoon, local beach). This set the scene for more multidimensional environmental action and the creation of social and cultural spaces.

Box 14. Analysis on the Sustainability dimension, Hamburg Impact Report

The pilot has developed a **strong vision and conceptual framework for regenerative food** that centers an ecocentric perspective, involves diverse regenerative practices (farming, fishing, foraging, cooking, eating) and positions them as acts of healing, multi-species collaboration and conviviality.

In line with this vision, the pilot has developed an **impactful method for deepening/expanding regenerative knowledge and practices**, raising their visibility and disseminating knowledge and practical skills among culinary and non-culinary publics. Key elements of this method, that reinforce each other, are the Fellowship, School for Survival program and Course at the culinary school.

Through their Fellowship, interdisciplinary researchers, food producers and chefs explored different topics related to **water, soil, the relationships between human and more-than-human life** (e.g. microbial life, herring, chicken) and the challenges posed by **climate change**.[29] For example, Fellow Restaurant Klinkers created a **fermentation lab** to make Miso, Shoyu and Koji, with the goal of offering diverse, flavorful plant-based meals in their restaurant all year-round. In the words of Fellow Aaron Hasenpusch, Klinkers wants to "make plant-based foods cool" in order to reach wider diverse audiences, beyond people who are already committed to sustainability.

The Fellowship process has produced **new recipes** served in Hamburg restaurants, **new research** bridging gastronomy, ecology, art and design, as well as a **reinforced the local community** of regenerative practitioners that share common goals such as food education. The recipes and research projects are showcased on the **online platform** "The_knows everything" that gives visibility to and helps disseminate these new practices.

In continuity, the pilot team and three local Fellows co-created and gave a **Course** for culinary students at the BS 03 school in June-July 2025. They transferred knowledge, skills and techniques developed during their Fellowship to future chefs, also developing their teaching skills.

According to students' feedback, they gained a **better understanding of what regenerative gastronomy is, why it is important and how it can be practiced**, by building relationships with responsible producers and cooking differently (fermentation, using more parts of chicken). This filled a gap in the curriculum of the school and the students' apprenticeships. The course will be offered again at least twice in 2026, fully funded by the culinary school.

[29] Details about the research and menus developed in the Fellowships are available at <https://www.the-knowseverything.org/> and were used in the description of each project below.

2.3.3. Inclusion

The concept of inclusion as defined in the NEB compass (2022) aims to empower different communities and give them voice. In BoS, inclusion extended to other-than-human life forms and to the integration of plural, including marginalized perspectives (Seravalli, Light & Emilson 2022).

Our impact analysis found that pilots created valuable connections between local actors and added to this perspective by including more-than-humans, drawing on the Zoöp model. Overall, the pilots have fostered **more dialogue and understanding** between groups of different ages, backgrounds, disciplines, enabled **interdisciplinary collaboration** (art, science, policy), and **amplified marginalized forms of knowledge** (other-than-human, traditional, grassroots, embodied knowledge) by supporting knowledge-holders with platforms, networks, conceptual frameworks, formal recognition (for Ocean Ambassadors and Speakers for the Living) and public activities that raised their visibility.

The following good practices and processes were particularly impactful:

Venice, Delta, Genova: The pilots highlighted the perspectives of different generations and fostered more dialogue and collaboration between them through co-design activities. They created new opportunities for inhabitants (seniors, students) to share stories and lived experiences and sought to amplify their knowledge. The Venice pilot highlighted the value of seniors' local and traditional knowledge for reviving Venice's water culture, while in the Delta the knowledge of citizens helped reconstruct the history of living with water in Grenspark Groot Saeftinghe. In Venice, students interviewed their grandparents and gathered information about their everyday needs and challenges living in a water city, identifying the need for increased social services, access to the lagoon, opportunities for social and cultural connection, as well as digital devices and digital literacy.

Malmö, Lisbon, Delta, Hamburg: These pilots reached citizens and students from different socio-economic and cultural backgrounds through the involvement of disadvantaged neighbourhoods and diaspora communities, and through transfer of skills to culinary school students from different backgrounds (Hamburg). It remained challenging for the pilots to reach people beyond "the usual suspects" visiting cultural institutions. Having dedicated activities for certain groups (schoolchildren, specific neighbourhood from a disadvantaged area) proved most successful in engaging new publics.

Malmö: Ocean literacy activities developed by the Ocean Ambassadors have supported mutual care, wellbeing and intergenerational solidarity. Collective Flod 57 challenged stereotypes about marginalized communities of Malmo and helped them (re)connect with the Øresund, sometimes by being in the sea for the first time. The Land Art collective and Ellen Bjerborn adapted to participants' different languages and paces of learning. Through its Sea Forum, the Malmö pilot also brought together municipality representatives, universities, a large architecture firm, civil society and lifelong learning organizations to socially activate former industrial basins. See Box 15 below.

Delta: The pilot amplified underrepresented actors and perspectives. In Rotterdam, grassroots actors were recognized as key knowledge holders and connected in a network via the After Summer School programme. The Water School challenged dominant perspectives about water and non-native beings considered 'unwelcome'. The drop in Grenspark Groot Saeftinghe worked with *streekholders*, connecting representatives from diverse institutional, disciplinary, and other backgrounds.

Hamburg: The School for Survival programme showed a film documentary that raised awareness about disappearing professions - through the example of the last remaining fishers of the river Elbe — and the resulting loss of knowledge and heritage. The public was sensitised to these traditional forms of ecological knowledge that need to be revived as alternatives to better coexist with nature. This also had an emotional impact on the fisher featured in the film, who felt proud of this new visibility in the museum. The pilot design lead aims to advance the inclusion of this marginalised knowledge in policy discussions and has built partnerships with policy advocacy actors (Seas at Risk and BUND) towards this goal.

Box 15. Analysis on the Inclusion dimension, Malmö Impact Report

Ocean literacy

The pilot reached large groups of citizens across Malmö through public, free-of-charge activities and events. The creative activities by Ocean Ambassadors reached some 890 inhabitants of Malmö. This has made ocean literacy more accessible to a wide and diverse range of citizens, enabling different levels and types of engagements adapted for different groups. All Ocean Ambassadors involved in the ripple phase reported that their participants had little to no prior experience with activities focusing on ocean awareness. The ocean literacy work **amplified alternative forms of knowledge**, including more-than-human perspectives, the knowledge and skills of citizens including marginalized groups, as well as the knowledge gained from artistic, slow and experiential forms of learning.

Ocean Ambassadors stress the importance of adapting to different participants' needs, abilities, backgrounds, languages and prior knowledge/experience with the sea, so as to create a **safe and inclusive learning environment that fosters care and wellbeing**. They also emphasized the value of creating a non-competitive, low pressure environment (e.g. Land Art Skåne, Creators' Club) that gave participants space to learn at their own rhythm but also connect socially, meet new people, and express themselves freely. Several participants were newcomers in Malmö and discovering new people and places in the city was part of their motivations for joining the activities. Ocean Ambassadors have developed participatory learning experiences for different ages, including children, adults, as well as families and mixed age groups, enabling **intergenerational exchange**. A majority of women joined the activities for adults.

The activities provided new opportunities for participants to exercise their agency and co-create their own relationship with the sea and marine life, by creating, dancing, taking pictures, sharing reflections, etc. This fostered **increased self-confidence and emotional connection with the sea** as well as a willingness to learn and explore further. Ocean Ambassadors aimed to build relationships of trust with participants and allow

them to participate on their own terms.

Ocean Ambassadors also engaged **participants from different backgrounds, origins and parts of Malmö**, including migrant communities. They sought to develop hands-on activities accessible to many and communicated with simple language.

- Flod 57, seen as a reference in the group, has built relationships with Rosengård inhabitants, who are impacted by urban segregation and socio-economic inequality. They hired an Arabic translator, formed a long-term relationship with the Rosengård Library and allowed participants to join activities with their whole family. This enabled mothers who usually cannot join such activities to participate with their children.
- The Flod 57 film screenings at Rosengard library sparked feelings of pride among locals and raised the interest of new participants. They aim to disseminate the film to **challenge prejudices** about Rosengård inhabitants and spread awareness about the diversity of human relationships with the sea.
- Flod 57 helped address urban segregation in Malmö by supporting Rosengård inhabitants who may lack resources or knowledge (navigating the city, swimming skills) to build a relationship with the sea. They organized day trips to the sea, the Marine Education Center's venue and the South Wharf basin, sensitising participants to public transport routes to access these spaces. They also provided free materials (snorkeling sets, underwater cameras, wadding pants) for participants to explore the sea, from dipping their feet and **feeling the sea for the first time to swimming, diving and interacting with underwater life**. The trust established with participants enabled them to hold children who could not swim and elderly people requiring support. In the long run, Flod 57 aims to foster a sense of belonging to the city among marginalized communities, and to "reverse perspectives, where Malmö residents visit Rosengård to experience sea stories from local inhabitants".
- Ocean Ambassadors, especially Land Art Skåne and Flod 57, invited participants from different backgrounds to speak in their own language (e.g. how do you say ocean in your own language?). They noted that participants felt more self-confident and got to share their knowledge with others. They aim to continue working in **multilingual ways** in the future to challenge linguistic hierarchies.

Several Ocean Ambassadors reported challenges to reach marginalized communities in Malmö and **increased their outreach efforts** throughout the project, learning from each others' experiences. Strandfynd collaborated with the Marine Education Center in 2025 to connect with leisure programs and organize performances for children from diverse socio-economic backgrounds. Ellen Bjerborn's book shares digestible information and simple exercises that citizens can do to learn about and connect with marine life.

The pilot team noted that working in iterations, and having a ripple phase with follow-up funding, was effective to learn how to engage different groups and **increase inclusion over time**. The pilot team adapted their own way of engaging with the Ocean Ambassadors to build a more horizontal relationship, aiming to be seen as "mentors" rather than "fundors", in their own words.

Nature-based Reef

The drop enabled **broad public participation** through World Ocean Day 2024 and 2025, attended by some 600

citizens, children, students, and local actors from different professions (artists, divers, firefighters, politicians). Participatory activities such as building the nature-based reef enabled them to become **agents of the basin's regeneration** while creating opportunities for social connection and dialogue.

Through the Ocean Ambassadors' activities, inhabitants from different parts of Malmö including disadvantaged neighborhoods discovered **new public spaces** connected to water. Flod 57 travelled with their participants to World Ocean Day 2025 using public transport routes, to support their mobility skills, sense of belonging and their rights to the city in the long run.

According to Sea Forum member Allas lika värde (Everyone's equal worth), the ocean literacy activities provided new inspiration to **engage marginalized youths** by making the ocean more "fun" for young people, encouraging them to interact with water and challenge perceptions that water and algae are "dirty". This supports their long-term goal of encouraging young people to become environmental ambassadors and advocate for better collective futures. Another Sea Forum member, Studiefrämjandet, included an ocean literacy Study Circle in their lifelong learning initiatives.

The pilot **provided 44 students opportunities to participate in basin regeneration and ocean literacy efforts**. In the context of a master course, design students developed 13 projects that led to three master-thesis projects and one ongoing Phd-thesis project. Four projects were commissioned by the pilot team to be shown at World Ocean Day 2025, including one sound installation and a collaboration with Seaforum member White Arkitekter. Students also attended activities and helped disseminate regenerative ocean cultures among young people in Malmö.

The Sea Forum connected organizations that do not usually meet. Planners, policymakers, architects, NGOs and educational organizations developed their network and became a group with shared values of public participation and ecosystem regeneration. The Sea Forum aimed both to **influence powerful actors in city planning** and to amplify the perspectives of underrepresented groups.

2.3.4. Locally Grounded

The Bauhaus of the Seas Sails has emphasized the value of being locally grounded in addition to the three core values of the NEB compass. This fourth dimension served as a qualifier for the first three values, with a specific focus on anchoring processes among local communities alongside institutions and starting from people's "concerns, needs, fears, and hopes to develop processes that are not only relevant to their interests but are able to deeply engage them" (Seravalli, Light & Emilson 2022).

At the same time, all of the pilots included in the Bauhaus of the Seas Sails are located in global port city territories that are connected by flows of goods and people. They are all related by the same ocean waters and face challenges of sea level rise, flooding risk or biodiversity loss. These **global dynamics have specific local impacts**. Questions of aesthetics, sustainability, or inclusion manifest

and are understood differently depending on context and local conditions. Spatial, social, institutional conditions, historic developments and cultures deeply shape environmental conditions, practices of participation and collective perceptions of what is 'beautiful'.

Pilots partnered with local actors and networks to align their drops with existing efforts and aspirations. This alignment was sometimes challenging and took time to develop. It helped pilots to **anchor their engagement in places** that are well-known to communities (e.g., libraries in Lisbon and Malmö, lighthouse in Oeiras, beach in Genova). Certain pilots also reactivated places with potential for community engagement, ocean literacy, intergenerational dialogue and access to nature (e.g., regenerated basins in Malmö, Bocce club-urban garden in Venice). Certain pilots successfully **strengthened local communities** by amplifying their knowledge and practices and by helping them make new contacts and connections. Pilots also put a focus on the **water bodies** (lagoon, estuary, river, etc.) and the special ecological conditions and cultural ties they created in each location.

The following good practices and processes were particularly impactful:

Delta: The Delta pilot exemplified the interconnections of global flows and local conditions and initiated more dialogue between local networks and regional discourse on climate adaptation in a crossborder deltaic region. Grenspark Groot Saefthinge, a crossborder network that connects urban and rural perspectives, partnered with TU Delft and Vereniging Deltametropool to engage citizens, grassroots actors, students, interdisciplinary practitioners and policymakers in long-term planning and foresight for the Delta region. The *streekholders* in Saeftinghe built on established participatory process and strong local connections to expand their network (to regional experts on water, climate resilience, etc.) and test creative methods. Design scenarios by TU Delft students stimulated new ideas and a shift to long-term perspectives which could initiate cultural change in an area that struggles to remain attractive for young people. See Box 16 below.

Genova: The pilot initiated a new, informal local network in Sturla-Vernazoola by bringing together organizations that do not usually meet (marine sports and cultural associations, fisherfolks) around a common goal of highlighting the area's heritage and relationship with the sea. Sharing personal stories helped build mutual understanding between participants. The storytelling process and exhibition gave inhabitants the opportunity to share their perception of their neighborhood. This reinforced a sense of belonging, emotional connection and shared heritage, and amplified local perspectives via the exhibition and app. Feedback from participants suggests that they felt represented by the project's outputs and expressed a desire to continue sharing memories and stories so that they are preserved and passed on to future generations. The immersive exhibition attracted participants from other parts of Genova, which made the area better known to other inhabitants of the city and highlighted its value beyond seaside tourism. Storytelling participants reported being impressed by the level of interest in their area.

Box 16. Analysis on the Locally Grounded dimension, Delta Impact Report

Future Tidal Architectures

The drop built on, and **reinforced the existing local network, participatory approach and culture of dialogue** of Grenspark Groot Saeftinghe. Embedding a bottom-up approach with *streekholders* was essential considering the recent local history of the area. Policy decisions to depolder the Hedwige and Prosper polders in the early 2000s were perceived as top down and met with resistance, while reconciling local interests between nature, port and agriculture is an ongoing challenge.

The drop developed **scenarios in close collaboration with around 30 *streekholders*** over a period of two years. Their local knowledge was valued, shared with students, and integrated into the final outputs, i.e. the scenarios. Students learned about local value conflicts and dilemmas while engaging into creative foresight about climate resilient futures for the area. The drop team members from Grenspark Groot Saeftinghe noted that working with designers required time to learn about the local context, and freedom for the creatives to shape the process and outputs.

The drop aimed to build local ownership for the scenarios by focusing on local knowledge holders and the lived experiences of inhabitants. The co-design process put an emphasis on the historical relationship with water and citizen's perspectives through a storytelling process which revived the local memory of key events and fostered more understanding of **how global or regional changes** (e.g., flood, port expansion, depoldering) **impact individual lives**. The drop team aims to strengthen the agency of local actors to adapt to future climate- and water challenges. In its renewed partnership as of 2026, Grenspark Groot Saeftinghe plans to reuse student scenarios and integrate ways of working from the drop in its community engagement.

The drop also established **new connections between actors working at different scales** (local, regional, crossborder) and facilitated **dialogue and knowledge exchange** between Saeftinghe and the wider Delta region. Grenspark Groot Saeftinghe's professional network has expanded, bringing new ideas and perspectives to their local work. At the same time, the drop team used insights from the locally grounded work in Saeftinghe to shape the development of multidisciplinary narratives and scenarios for the crossborder Delta region, via the Next Generation Podiums (2024, 2025) and Delta expert meetings. This **two-way exchange** is a key benefit of the Future Tidal Architectures methodology.

Living with Water

The drop contributed to the development of the After Summer School which **partnered with 20+ grassroots knowledge holders in Rotterdam** (community activists, artists, think tanks, NGOs). The BoS drop consolidated the partnership with the Zoöp and the Water School and embedded their knowledge on ecosystem regeneration and water as priority themes in the Curriculum for Change of the New Academy for at least four years (as of 2025).

In 2024 and 2025, the After Summer School **raised the visibility of local changemakers and connected them in a local knowledge network**. It enabled the Zoöp team to build relationships with new partners such as Buitenplaats Brienenoord in 2024, which later became a Zoöp, and with community actors working on food (community kitchens, urban gardens, educators, researchers) in 2025 in connection with the NEB project

Convivum (see section 3.2.4). In the longer term, the New Academy aims to ensure that the knowledge of Rotterdam's grassroots actors is better recognized, valued and used for the sustainable development of the city.

In 2024 and 2025, the Zoöp and Water School classes **enabled participants to (re)discover different parts of the city** (Het Park, Merwe-Vierhavens, garden and pond at Het Nieuwe Instituut, Buitenplaats Brienennord, De Hillevliet) where water and land interact (creating special ecosystems and water cultures) and where new forms of local cooperation have emerged. The Zoöp and Water School classes used participatory methods that encouraged learners to share their experiences of living in the city and to shape their own relationship with the local environment. The Water School also **raised participants' awareness of the local impacts of global trends**, such as trade through the port of Rotterdam which has brought new "unwanted" species into the city.

2.4. Towards Waves: pilots' long-term impact

2.4.1. The potential for waves: a cross-analysis

Insights about pilot's strategies and seeds for long-term impact (waves)

Insights about pilots' wave strategies

Overall, pilots' wave strategies were **contextually relevant and logically connected** to their drops and ripples. Several strategies associated long-term goals with a **dedicated structure or format**, such as the Ocean Culture Hub in Malmö; the Academy of Awe in Oeiras; the Food lab, Sediment lab and River School in Lisbon; and the New Academy and After Summer School in Rotterdam. Such an approach would provide resources and spaces to build targeted capacities and deep impact but raises questions about how to durably finance and shape such bodies. Organizations that directly **integrate pilot long-term goals in their existing structures** (Grenspark Groot Saeftinghe in the Delta pilot, universities and their educational activities, municipal plans) may ensure a more diffuse but also more flexible and sustainable integration of project learnings.

The level of ambition of several pilot long-term plans (e.g., the three bodies envisaged by the Lisbon pilot: a Food lab, Sediment lab and River school) did not fully match available resources, meaning that pilots formulated plans with the **expectation or hope of mobilizing additional external funds**. It remains overall challenging for pilots developed through external funds to plan for lasting impact without follow-up external funding, although the Hamburg pilot offers an alternative where ownership of the local work was transferred to the Speaker for the Living (regenerative farm) and the regenerative food community, whose practices and relationships are developed enough to carry the project's legacy forward.

Another interesting dimension of the wave strategies is the extent to which **separate drops were brought together to foster cumulative impact**. The Malmö and Hamburg pilot stood out in their abilities to co-design very synergetic drops from an early stage, which contributed to strong outcomes and early impact. They plan to take these combinations (between fellowships and artistic public programmes; between ocean literacy activities and nature-based solutions in urban spaces) forward. Other pilots (Lisbon, Venice) increasingly built connections and synergies in 2025 which helped them generate more ripples. Their long-term plans take these connections forward to an extent. In the Delta, the long-term plans reflect the separate course that the drops (in particular Future Tidal Architectures and Living with Water) have followed during the project and which are largely due to the difficulty of bringing together very different contexts even within the same region.

In some cases, pilot's long-term plans show the evolution of their local work which, shaped by context and the people involved, took on **new forms**. This is especially visible in Venice where the long-term plans for the regenerative menu drop focus not on food but on lagoon experiences and urban gardens, and in Genova where the participatory storytelling process and ocean literacy activities are the main elements that the pilot team aims to sustain in the future.

Lastly, pilot long-term plans do not always foresee a strong integration of aesthetics through sustained collaboration with artists or more broadly "creatives". This suggests that although artistic methods are seen as core to the project's impact at the level of the BoS consortium, several pilots have not found ways to build **durable interdisciplinary collaborations** that provide secure working conditions for artists and make them feel equally valued as other disciplines. This relates to more structural issues that cannot be fully addressed in a three-year project. In this regard, the After Summer School in Rotterdam offers a positive model that centers and amplifies the knowledge of artists, designers and grassroots actors while providing a platform for them to meet and connect. By addressing the core issue of how artistic knowledge is valued and supported, this initiative could have positive impacts on the broader working environment for creatives in Rotterdam.

Insights about pilots' seeds for long-term impact

Pilots were able to plant seeds for long-term impact by generating ripples and using certain propelling mechanisms that increase the potential for waves. The impact assessment team identified five main types of seeds that support pilots' pathways towards waves.

First, pilots created or reinforced **relationships** that could sustain the impact of the work by using **formal commitments, shared values and practices, and transfers of ownership**. The Malmö pilot used formal commitments by formalizing its relationship with the Marine Education Center, forming the "Ocean Culture Hub" that will drive efforts to continue embedding regenerative ocean cultures in Malmö. They also facilitated the adoption of a Memorandum of Understanding between their Sea Forum and the Zoöp, ensuring a continued integration of regenerative principles and supporting the long-term legitimacy of the **Speaker for the Living**. Further, the Malmö and Hamburg pilots have consolidated local communities of practitioners (Ocean Ambassadors, and regenerative food practitioners/former fellows, respectively) by enabling them to collaborate, formulate shared values and goals (regenerative ocean cultures, food education) and learn from each other. In Malmö,

especially, Ocean Ambassadors reported feeling like a group and became connected through personal relationships as well as a collective mission of sharing their passion for the ocean through participatory arts.

Several pilots have transferred ownership of the work, in part or comprehensively, to local actors. These were often connected to the Speakers for the Living and ocean literacy activities, as seen in Hamburg with the regenerative farm, in Oeiras with the Aquarium, and in Genova with Cooperative Dafne. These Speakers for the Living play an important role in their organizations, have a long-term commitment to ocean literacy, embrace regenerative principles, and have pedagogical skills along with thematic expertise (marine biology, regenerative farming techniques). This being said, their ability to carry the work forward in the long run will also depend on their access to resources, the support and motivation of their partners and local communities, and the wider political and economic environment that should provide more enabling conditions for their work. In the Lisbon pilot, ownership of the work has partly been transferred to **Ocean Ambassadors** from local initiatives (in particular BioLAB, Food from the Block, Marvila Library) who played an important role in building engagement between Marvila citizens and the interdisciplinary residencies.

Second, several pilots and drops **replicated their methods or formats** or have planned to replicate them in the near future. The most striking example is the Zoöp drop which has expanded significantly in the course of the project, by adapting its model to diverse organizations and gaining traction, reaching a total of 16 Zoöps as of November 2025 (Nutma and Kuitenbrouwer, 2024; Zoöp Newsletter, autumn 2025).[30] This expansion is part of the long-term goals of the Zoöp team and is backed by several funding sources as well as organizational structures (Zoönomic Institute, Het Nieuwe Instituut). Direct replications have also taken place during the Ripple phase in Oeiras (second residency in 2025), Venice (new rounds of boat trips in 2025), Malmö (second round of the Ocean Ambassadors programme and second World Ocean Day at the basin in 2025) and Grenspark Groot Saeftinghe/Delta (second round of co-designing scenarios with students with increased inputs from local citizens and Delta-scale practitioners). Certain replications will go beyond the end of the project, ensuring the continuation of the work for the coming years, such as in Hamburg (School for Survival 2.0 in Berlin in 2026) and Rotterdam (After Summer School happening yearly for the coming four years with the Water School and Zoöp in the curriculum).

Third, several pilots have used their drops and ripples to **improve or enrich existing practices, educational formats and political programmes**. This was particularly visible in the Delta, where Grenspark Groot Saeftinghe added a more creative and long-term dimension to its community engagement activities through the partnership with architecture students in TU Delft. The university, in turn, developed the use of co-design and scenario-making as educational methods and tested them in a crossborder area that brings an interesting mix of urban-rural settings, port, agriculture and nature. The university plans to use future courses but also academic networks and communities of practice (e.g., PortCityFutures) to integrate BoS insights. In Venice, too, the project developed educational methods for co-design between computer science students and seniors that are already being reused in courses at Ca' Foscari. In the municipality-led pilots, especially Oeiras,

[30] See: https://zoop.earth/nl/page/591/op-weg-naar-12-zo%C3%B6ps-in-2025

Genova and Lisbon, the project complemented existing political programmes for sustainable development and waterfront regeneration by supporting public programmes and ocean literacy activities that highlighted the social and cultural dimensions of living near water bodies. Pilots are also integrating BoS results by **connecting them to ongoing and upcoming projects** such as in Oeiras with the BioMarCO project and the new EU-funded project "Anchor Cities for the Blue Economy".

This is related to the fourth element that supports pilots' long-term pathways: **dissemination**. All pilots have been sharing and celebrating their drop solutions and results through public programmes, participatory learning activities and artistic exhibitions that have attracted wide audiences, including as part of the project's final event in Venice on 15 November 2025. Pilots have also shared practices and insights through their organizations, local and professional networks as well as through the media, with a big contribution from the BoS Communications work package (WP6). The BoS partner universities, especially IST-ID (Lisbon), Malmö University, TU Delft (Delta) and UNIVE (Venice) have collaborated on academic publications and presentations to disseminate the knowledge and experiences of the project and its pilots.

Lastly, certain pilots have engaged in efforts to "scale up" their impact (Moore, Riddell and Vocisano 2015) by connecting with policy advocacy organizations and **working towards policy change**. The design lead of the Hamburg pilot design lead has participated in the European Week of Regions and Cities (October 2025), and has built dialogue with Seas at Risk and BUND to develop joint advocacy efforts towards the inclusion of marginalized voices (e.g. traditional fishers) in policy discussions. The Delta pilot also plans to use the project's results, especially the scenarios developed by students in the Future Tidal Architectures drop, to spark discussions with policymakers at the local and regional levels.

However, the impact assessment team does not have evidence so far that BoS has impacted policymaking in the pilot cities, despite the driving role of several municipalities. We suggest that **municipalities that led pilots should make increased use of their experience in BoS to push for policy reforms and democratic dialogue in their cities**. For example, the Oeiras municipality could formulate policies to protect marine species and combat sound pollution (as the work of the 'Underwater Ecotones' residency highlighted how geographically defined conservation zones are not sufficient to address sound pollution propagating below water[31]). The wealth of scientific, artistic and citizen knowledge highlighted in projects like Bauhaus of the Sea Sails should be used to address key drivers of the ecological crisis and socio-economic inequalities. The Venice municipality, too, should provide its social services sufficient resources to address seniors' health, mobility and social challenges and improve their digital literacy - giving them access to more tools and information to participate in social and cultural initiatives.

[31] https://franciscagoncalves.com/portfolio-item/underwater-ecotones-interferencias-no-tejo/

2.4.2. Learning for impact: areas for improvement and further development

The seven Pilot Impact Reports, to be published open-access in early 2026, suggest avenues to improve and further develop the work of the pilots. These suggestions were based on the in-depth analysis we conducted and combined reflections from the Impact Assessment team, and from the pilot team and their partners. They pointed to different ways that pilot teams could refine their project setup and methods, sustain the work in the long run, reach more diverse communities, expand collaborations, etc. Below, we summarize **11 areas for improvement and further development across pilots**:

1. Improve early-stage co-design and communication
2. Co-design digital tools and platforms with end users and have a long-term strategy
3. Combine past stories with future perspectives about water bodies and climate adaptation
4. Pay more attention to power dynamics when engaging partners and grassroots actors
5. Support longer educational initiatives with students
6. Build financial incentives to invest in relationship-building, dissemination and outreach
7. Set up local grounding mechanisms in collaborations with international practitioners
8. Combine regenerative ideas with regenerative actions
9. Embed moments of learning and impact thinking within pilots
10. Diversify pilots' support base and work collectively
11. Build more cross-context interaction and collaborations

The following section provides more explanation about each recommendation.

1. Improve early-stage co-design and communication to foster a conducive pilot environment, value multiple perspectives, and avoid misaligned expectations between partners.

Concretely, pilots could:

- Formulate their Theory of Change at the beginning of the project to set clear goals in the short, medium and long term. Share this with (potential) local partners. Discuss connections between drops (collaboration, potential synergies) as well as common criteria to guide the main (expected) outputs of the pilot and their alignment with BoS core values and local partners' goals. The Theory of Change can be a living tool for pilot teams and their partners to review goals, assess progress, reflect and make necessary adjustments, for example twice a year.
- Seek the participation of key actors for pilot implementation and durability (e.g., artists, local associations, ocean ambassadors, sea forums, influential municipal actors, Port Authority) and expected users of the drop solution (e.g. app users) in the early co-design of the drops' core elements and ways of working. This would support their ownership of the process and show that their inputs are valued at a strategic level. As this would likely require negotiations of interests and priorities, we suggest working with an experienced facilitator familiar with

the local context. A precondition is that definitions of drop solutions in grant applications leave room for adaptation.

- Consult pilot team members and key local partners on what mechanisms should be developed for communication (internal and external), giving feedback/voicing concerns, engaging with local communities, assessing progress and adjusting planning. When working with potentially vulnerable groups such as volunteer associations, small artists and entrepreneurs (e.g., dependent on pilot support, with a precarious financial or professional situation), extra efforts might be needed to make partners feel valued and safe to share concerns openly. As embracing open dialogue and trust takes time, a "person of trust"[32] (not in a management/leading position) could be designated for partners to turn to if concerns arise.
- For pilots with municipality partners or leads, ensure that pilot goals are aligned with municipal plans and communicated early on with municipal actors that have power to influence policymaking.

2. Co-design digital tools and platforms with end users, supported by clear strategies for **future use and dissemination**:

- Digital tools and online platforms can help preserve and amplify knowledge if potential users are aware, interested and equipped to adopt them. Potential users should be involved in co-design at an early stage of the project to determine whether digital tools are needed/desired, by whom, and how they can bring value.
- The early co-design stage should integrate key contextual factors such as digital device ownership and digital literacy levels of different groups, priorities of needs, and commitment of local actors (municipal, grassroots) to adopt the tools in the future.
- Pilots should ensure that their solution remains accessible to- and known by users by identifying strategic collaborations or spaces to reach users. For instance, pilots (e.g., Genova) could agree with local guides or schools that they will use the app in activities with families and children in the coming years. Pilots could place QR codes in well-known locations (physical or online) that will remain available after the project ends.
- We suggest the online platform of the Hamburg pilot as a good practice with potential for long-term impact. It was designed to expand to other locations over time (through new fellowships with local and international practitioners), connecting culinary professionals and homecooks to recipes, suppliers and research about other-than-human beings.
- Pilots could also explore making the use of digital solutions more participatory and interactive by enabling users to add content (sound recording, pictures, recipes, etc.) and co-moderate content. This would align with BoS principles and could increase users'

[32] Trust persons are legally required in Belgium for companies above 50 employees. Their role is informal and they can take training, receive concerns from employees (who can remain anonymous) and give advice. See: https://www.pwclegal.be/en/news/appointing-person-of-trust-will-soon-be-mandatory-in-companies-w.html

motivation to download apps and use digital solutions more than once, thereby supporting a growing sense of stewardship among users.

3. Combine past stories with future perspectives about water bodies and climate adaptation to generate shifts in mindsets and practices.

- Pilot experiences suggest that using past stories/traditional knowledge alone to promote sustainable water cultures may generate processes and results that remain human centric and do not fully embrace regenerative principles.
- Pilots generated more dialogue and mindset shifts (e.g., more long-term and regenerative) when they engaged both young and old generations in a deep manner (e.g., over a period of several months) and combined their viewpoints to develop solutions.
- The co-design of scenarios with students and *streekholders* of Grenspark Groot Saeftinghe (Future Tidal Architectures drop, Delta pilot) was a successful example of how past stories and citizens' local perspectives can inspire students to develop creative scenarios that sparked conversation about nature-based solutions.
- The experience of the Malmö pilot suggests that notions of "local knowledge and heritage" should be expanded to include the knowledge and practices of new inhabitants/diaporas in highly diverse cities such as Malmö, Rotterdam and Hamburg. This approach, along with dedicated outreach efforts, helped Ocean Ambassadors develop ocean literacy activities that reached and resonated with citizens from different parts of Malmö. This is promising for scaling out these activities across the city in the coming years.

4. Pay more attention to power dynamics (socio-economic, profession, gender, age, origin, language, political influence) when engaging partners and grassroots actors in co-design, activities and evaluation sessions (this also applies to the WP5 team).

- While certain pilots made efforts to engage diverse groups and paid attention to power dynamics, the overall BoS approach did not consider these aspects enough. Few pilots chose impact indicators (from the Library of Indicators) that indicate an ambition to advance social justice and address the needs of marginalized groups. Pilots' approach to co-design and inclusion did not have clear mechanisms in place to attenuate or recognize power imbalances between participants.
- This prevented certain pilots from building relationships of open dialogue and trust, where some of their partners (artists, local associations) did not feel there was an enabling environment for raising concerns. Pilots could develop a more supportive environment by ensuring that mutual expectations are set clearly, that regular check-ins and feedback mechanisms are in place, and that partners can build trust by meeting in person regularly.

5. Support longer educational initiatives with students to enable them to appropriate information and test practical applications:

- Student feedback across different pilots (Delta, Venice, Hamburg) showed that students

value having the time and space to learn by doing, test different approaches and use their creativity. Practical moments helped students digest and appropriate information, raising the likelihood that they remember and reuse what they have learned in the future.

- The Venice students who took part in the one-week workshop suggested having a semester-long studio or class to develop more elaborate and concrete design outputs for the regeneration of the San Basilio-Santa Marta waterfront. This would give students a higher chance of developing actionable scenarios that can be reused by local decisionmakers.

6. Grant allocations from pilot teams and from the EU could **build incentives to invest more in relationship-building, dissemination and outreach** in support of long-term impact.

- The experiences of pilots that successfully engaged diverse participants suggest that dedicated outreach efforts towards a certain group (e.g., hiring a translator, partnering with a local association that people know and trust) are often needed. Building relationships took time and resources. Pilots should consider this relationship-building process alongside activities and outcomes when allocating grants to partners (e.g. Ocean Ambassadors, Fellows, Residency teams).
- Alternatively, pilots could take on an increased role in communicating and disseminating the Fellowships, Residencies and ocean literacy activities. This would require a re-allocation of resources to prioritise these aspects more at pilot-level. However, just like their local partners, pilot teams are incentivised in EU grant allocations to focus more on activities and outcomes (short to medium-term). As such, Horizon Europe teams in the European Commission could rethink financial incentives to promote more long-term-oriented pilots.

7. **Include local grounding mechanisms within collaborations with international artists**, practitioners or researchers, such as a collective residency with a dedicated local advisor/partner, sufficient time on site and an adapted travel budget.

- In several pilots, it was challenging for international artists to build lasting relationships with local actors and gain a deep understanding of the local context within the timeframe of residencies/fellowships. Residencies would have required more time, on-site presence, local partners as well as a commitment to stay engaged after the project.
- To mitigate this, the Lisbon and Oeiras pilots suggested a collective residency format where the international artist collaborates with a local advisor (or Ocean Ambassador) who is familiar with the local context and embedded in the community for the long run. This would help make the residencies' outcomes more locally relevant and sustainable, as the local advisor could sustain relationships and appropriate drop solutions beyond project timeframes.
- International collaborations should start from clear mutual expectations about the level of on-site presence and engagement with local communities. If pilots aim to partner with practitioners committed to working in an area for several years, this may require rebalancing

the selection criteria towards people who are less thematically specialized or experienced at first.

8. Combine regenerative ideas with regenerative actions to support marine life and help participants appropriate new behaviours:

- Pilots' experiences show that embodied learning experiences enabled citizens to connect with marine life and experiment with new practices and behaviours. However most pilots did not engage in direct environmental action with their participants, which limited the ecological impact of the BoS project.
- In the future, regenerative practices could become a core element of the Ocean Literacy drop, enabling citizens to act upon their new knowledge and build a stronger sense of agency. The stone reef built by Malmö citizens on World Ocean Day (Nature-based Reef drop, Malmö pilot), the tile-making workshops by Fahrenheit 180 (Blue Makerspace drop, Lisbon pilot) and the cooking techniques shared with culinary students (Hamburg pilot) are good practices that can be embedded in ocean literacy efforts.

9. Embed moments of learning and impact thinking within pilots by gathering feedback from participants and having check-ins with pilot team members and partners to reflect on progress and areas for improvement.

- Pilot teams who collected feedback from participants in activities (Hamburg, Delta, Venice, Genova) and key partners (e.g., surveys with Ocean Ambassadors in Malmö) gained a better understanding of their impact and how to improve their process and methods. For instance, Malmö's midterm survey with Ocean Ambassadors helped the pilot team adapt the second phase of the Ocean Ambassadors programme. Such an approach could inspire other pilots to learn from their partners and participants to increase the quality and impact of their work over time.
- Pilot teams could experiment with ways to gather feedback from larger audiences in events and extensive public programmes, as their impact can be difficult to assess. It could be done in a fun, gamified manner, for instance through quizzes to test knowledge or interactive boards where visitors could draw/create (e.g., the regenerative plates of the future). Informal feedback moments could be integrated at the end of workshops. Pilots focusing on a specific group or area (e.g., neighborhood, basin) could use baseline, midline and endline surveys to measure changes in environmental knowledge, values and behaviours within a representative sample of the population - with support from universities.
- We recommend pilots to use open and semi-open questions in surveys/feedback forms to allow respondents to give nuanced answers and provide suggestions of what could be improved. Survey results should be used first and foremost for adaptation and learning.
- Pilot teams who used/supported regenerative practices could develop a more precise understanding of their environmental impact by combining qualitative and quantitative information. For instance, the Malmö pilot could collect data on how the nature-based reef built by citizens helped restore marine life in the basin (what species were supported, how

much) and the Hamburg pilot could make estimations of how much food waste is avoided through head-to-tail use of dual purpose chicken.

10. Diversify the support base and work collectively to make pilot legacies more resilient and durable:

- Projects often rely on a few committed individuals who put in a lot of effort. This puts pressure on singular persons and poses risks for the sustainability of the work. As pilots build local partnerships, they could aim to gradually move from interpersonal relationships to strategic collaborations between organizations based on mutual interests and goals. Formal agreements (e.g. Memorandums of Understanding) between organizations can be useful, as seen in Malmö and Oeiras.
- Support communities rather than individual practitioners to develop and sustain drop solutions. Pilots can use an Ocean Ambassadors programme, Sea Forums, collective residencies (see suggestion 7), or consolidate existing communities by providing creative ideas, financial, technical, facilitation and network-building support. Pilots can help build interdisciplinary experimentation, shared values and goals, mutual learning, solidarity mechanisms (e.g., co-financing agreements, cooperatives) and fundraising skills within communities.

11. Build more interaction and collaborations between pilots and their partners to enable mutual learning, expand networks and build future opportunities for collaboration

- Several pilot teams and their partners, such as artists, educators and Ocean Ambassadors, noted that BoS did not make full use of opportunities for cross-context exchange and collaboration. They saw such opportunities as one of the main benefits of participating in European projects.
- Consortium meetings, in-person and online, often focused on planning, reporting and activities led by Work Packages. Instead they could include more open moments for pilots and their partners to bring their own ideas and proposals for collaboration.
- Project partners could make a dedicated effort to foster exchanges between drops tested in several locations. For example, although the the Future Tidal Architectures Delta team co-organized the Future Tidal Architectures workshop in Venice, the collaboration could have been more reciprocal and included student visits between Delft and Venice to allow students to learn from both contexts. Such drop-level collaborations could be built into project proposals in the future.
- Transnational exchanges should aim to limit carbon emissions from flying, in line with BoS core values. Projects could favour collaboration between teams that are able and willing to reach each other by train or boat, and prioritize online exchanges between other teams.

Conclusion & Legacy

The impact analysis of the BoS project delivered both **deep and numerous insights that can inform future projects** about creative climate action and ecological regeneration. The analytical framework and collaborative effort generated an in-depth understanding of the quality and impact of creative interdisciplinary solutions tested in seven locations. The impact assessment team combined qualitative analysis across four dimensions (Aesthetics, Sustainability, Inclusion and Locally Grounded) with a dynamic, long-term approach to understand the interconnected process and impact of the pilots and their drops (Drops, Ripples, Waves). Participatory sessions with pilots enabled cross-context learning and stimulated long-term thinking about impact beyond the end of project. Further, through context and comparative analysis of drops tested in several locations, we gained insights on key factors that shaped local developments and the approaches that proved most impactful. Our analysis also identified seeds for long-term impact planted by the pilots and highlighted 11 areas for improvement and further development.

Our team plans to continue using and refining impact assessment methodologies and tools. We have identified **areas where we could improve and develop further**: (1) embed impact thinking from the very beginning of projects by using our Theory of Change as a living tool for learning and assessing progress; (2) reuse and further develop serious games as a tool for context and comparative analysis in multi-country projects; (3) adapt formats and timing of pilot engagement to balance ambitions (participatory, in-depth analysis) with accessibility and time-efficiency; (4) complement our qualitative approach with insights from quantitative data analysis, ecological restoration, spatial analysis and environmental psychology to enrich the Library of Indicators and develop comprehensive assessment tools; and (5) build on the analysis of BoS narratives we conducted with project partners to explore how narrative analysis can reinforce impact assessment methods

Further, the team in TU Delft will continue to **share its impact assessment methodology, tools, findings and policy recommendations** (see Deliverable 4.5 co-authored with WP4) in networks, events, professional courses, publications and other visual outputs. We have already integrated the impact assessment methodology in a professional course on Sustainable Transitions in Port Cities held in the Hague, Netherlands and Rabat, Morocco in 2025. We plan to continue transmitting this knowledge to diverse participants in university teaching and future professional workshops to be held twice a year. The EU-funded COST Action PACT CA23138 (Port City Territories in Action) also builds on the work of the BoS impact assessment methodology and continues its implementation in pilot case studies.

All these efforts support our long-term ambitions:

- **Innovation:** advance impact assessment methodologies, tools, processes and data donor procedures with the understanding that generating environmental, social and cultural impact is a long-term process, not just an end goal and that this process needs to be carefully safeguarded and institutionally accompanied.

- **Academic discourse:** continue to develop and test qualitative impact analysis as part of academic discourse and for professionals to gain a better understanding of the various ways impact can materialize (tangible, intangible, across multiple dimensions) and how they can learn from the process (improved learning culture) beyond quantitative KPIs.
- **Public dissemination:** provide accessible platforms to disseminate open access methodologies and tools for projects and organisations committed to an inclusive green transition.
- **Cultural empowerment:** provide creative projects and initiatives involving cultural interventions, artistic practices, speculative approaches and regenerative perspectives (e.g. Zoöp) with impact, evaluation and learning tools that are adapted to their ways of working, emphasizing quality, methods, context and intangible dimensions (e.g. mindset shifts)
- **Policy recommendations:** equip local actors (associations, projects, institutions) with tools to apply high-level European guidelines and objectives to their local activities and support them in translating high-level goals into concrete, context-relevant goals and impact indicators.
- **Good practices:** develop resources that enable policy makers to learn from impact-driven projects, thanks to impact assessment tools that provide high-quality findings, context-sensitive comparative analysis and convincing visualizations.
- **Capacity building:** provide hands-on and online workshops to facilitate collaboration strategies and group learning about impact assessment from a qualitative perspective.
- **Funding strategies:** expand on the knowledge gained through the BoS impact assessment to collaborate with existing and new partners in academia and practice and to contribute to new European and other funding calls (Horizon Europe applications, collaboration with NGOs such as OnePlanet Port or academic centres such as PortCityFutures).

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This section lists the key references cited in the deliverable that underpin the concepts presented in Figure 5. Full bibliographic details are provided in the reference list below.

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