

# Stakeholder Engagement in Marine and Coastal Restoration

A pocket guide based on experience  
from restoration demonstration sites



CLIMAREST



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# CONTENTS



	<b>Introduction</b>	<b>5</b>
	How the guidelines work	5
	Where the information comes from	5
	Scope of the guidelines	5
	Target audience	5
	Stakeholder engagement in Ecological Restoration	6
	<b>Before you begin: Key information on stakeholders in these guidelines</b>	<b>7</b>
	Why engage stakeholders?	8
	Before starting	9
	Engagement principles	9
	Cross-cutting factors that influence engagement	10
	Data management	11
	<b>The engagement wheel: Stakeholder engagement step-by-step</b>	<b>12</b>
	<b>STEP 1: CONTEXT</b>	<b>14</b>
	How to define context	14
	Examples for and from practice	16
	Factors that influence context	17
	Case 1: Defining the context for canopy-forming macroalgae	18
	<b>STEP 2: SCOPE</b>	<b>20</b>
	How to define scope	20
	Examples for and from practice	21
	Factors that influence scope	23
	Case 2: Defining scope for a social campaign to reduce sewage pollution in the Arctic	24
	<b>STEP 3: STAKEHOLDER ANALYSIS</b>	<b>26</b>
	How to identify, categorize, and prioritize stakeholders	26
	Examples for and from practice	28
	Factors that influence stakeholder analysis	29
	Case 3: Example of stakeholder analysis	30



## **STEP 4: ENGAGEMENT PREPARATION**

**32**

How to prepare for engagement	32
Examples for and from practice	34
Factors that influence engagement preparation	35
Case 4: Examples of engagement preparation	36



## **STEP 5: ENGAGEMENT**

**38**

How to engage	38
Examples for and from practice	40
Factors that influence engagement	41
Case 5: Examples of engagement	42



## **STEP 6: ENGAGEMENT EVALUATION**

**44**

How to evaluate engagement	44
Examples for and from practice	45
Factors that influence engagement	45
Case 6: Example of evaluating engagement in schools	46

## **References**

**48**

## **Annexes**

**50**

Annex I. Stakeholder analysis supplementary material	51
Annex II. Engagement preparation supplementary material	52
Annex III. Example of participatory sign-in sheet	53
Annex IV. Factsheet of Arctic fjord ecosystems – Svalbard, Norway	54
Annex V. Factsheet of Seagrass ecosystems – Galway Bay, Killala Bay and Tralee Bay, Ireland	56
Annex VI. Factsheet of Oyster reef ecosystems – Brittany, France	58
Annex VII. Factsheet of Sedimentary soft bed ecosystems – Vigo, Spain	60
Annex VIII. Factsheet of Rocky subtidal ecosystems – Madeira, Portugal	62



# Introduction

## HOW THE GUIDELINES WORK

These practical guidelines are **designed to assist with planning stakeholder engagement in marine and coastal restoration projects, with a specific focus on Research and Innovation (R&I) initiatives.**

They offer step-by-step guidance through the stakeholder engagement process, providing real world lessons learned and examples that illustrate different ways of engaging stakeholders in marine and coastal restoration initiatives.

## WHERE THE INFORMATION COMES FROM

These guidelines draw on scientific literature and personal experience. They provide practical examples from the stakeholder engagement processes in the CLIMAREST project. As part of the European Union Mission Restore our Ocean and Waters, the CLIMAREST project developed and demonstrated restoration tools and activities in five demonstration sites across Europe, ranging from Svalbard (79°N) in the High Arctic to Madeira (33°N) in the North Atlantic (see Annex IV.

up to Annex VIII. for case factsheets). Lessons from the demonstration sites are generalized into decision points and checklists to support knowledge transfer across geographies and habitat types.

## SCOPE OF THE GUIDELINES

These guidelines apply to marine and coastal restoration initiatives, but they are not designed to be site-specific or target particular ecosystems (e.g., seagrass restoration in Ireland). They tailor the stakeholder engagement process to marine and coastal restoration while working to align with other existing guidelines from BiodivERsA ([BiodivERsA Stakeholder Engagement Handbook](#)) and PREP4BLUE ([Stakeholder engagement guidelines including tool kit](#)).

## TARGET AUDIENCE

The target audience for these guidelines is restoration practitioners, researchers, and marine and coastal managers. However, these guidelines may also be applicable to others working with stakeholder engagement within marine and coastal restoration.

# Stakeholder engagement in Ecological Restoration

Ecological restoration is

*“...the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed.”*<sup>1</sup>(p. S7)

Restoration is interdisciplinary; it draws on disciplines such as biology, engineering, social sciences, and economics.<sup>2</sup>

Stakeholder engagement is essential for marine and coastal restoration. According to the Society for Ecological Restoration (SER),

*“Stakeholders can make or break a project.”*<sup>1</sup>(p. S9)

If done right, stakeholder engagement will benefit not only the restoration project but also the stakeholders who take part.<sup>1</sup>



Photo credit: S. Schäfer

# Before you begin: Key information on stakeholders in these guidelines



A **stakeholder** is a group or individual who can affect or is affected by the achievement of a restoration project's objectives.<sup>3</sup>

Project governance plays a decisive role in shaping how stakeholder engagement is understood and implemented. In R&I projects, stakeholders are often defined as external to the project. However, leaders and research partners often have dual roles – leaders and research partners are themselves stakeholders, with interests, values and dependencies linked to the marine ecosystems in question. For future upscaling and replication, it is important to consider these dual

roles, potentially rearranging from research-centered governance to inclusive-governance.

In CLIMAREST, there was a stakeholder engagement work package (leaders) that coordinated engagement activities across the project's demonstration sites (project partners). With support from the stakeholder engagement work package, demonstration site leaders engaged stakeholders.

Hereafter, in these Guidelines, we refer to these different parties as: 'Leaders', 'Project partners', and 'Stakeholders'.

## WHY ENGAGE STAKEHOLDERS?

Table 1: Potential benefits of stakeholder engagement and the realization of benefits in CLIMAREST.



Potential benefits as described by Reed <sup>4</sup>	
<b>Increased trust and perceived fairness of decision-making</b>	 <p><u>Sedimentary soft beds (Spain)</u>: Building on established relationships with local fishers' guilds, recaptures of tagged European lobsters were reported and safely returned at the capture site, evidencing shared stewardship and strengthening confidence in the fairness of project decisions.</p>
<b>Increased capacity of stakeholders to use knowledge generated in the project</b>	 <p><u>Seagrass (Ireland)</u>: Through shoreline surveys and field days with volunteers, the team explained what seagrass is, how to identify it, and how to record sightings. This outreach expanded the network of trained observers across Ireland, increased public knowledge of seagrass, led to the discovery of additional seagrass meadows and prompted more regular monitoring of previously known beds by local groups—directly turning project knowledge into action.</p>
<b>Interventions and technologies more suitably adapted to socio-cultural and environmental conditions</b>	 <p><u>Rocky subtidals (Madeira)</u>: The creation of an app allowed stakeholders to actively collect data and assess the success of the restoration process, ensuring engagement and long-term monitoring after the lifetime of the project.</p>
<b>More robust research outcomes</b>	 <p><u>Oyster reefs (France)</u>: The objective of extending the interest in project results to stakeholders other than those in the oyster farming industry led to developing specific research actions. Modelling of restoration effects on erosion control enabled the team to capture the interest of local municipalities and monitoring of the restoration effect on biodiversity enabled the team to capture the interest of the Natura 2000 site manager.</p>
<b>Higher quality decisions</b>	 <p><u>Oyster reefs (France)</u>: Integration of practical knowledge and experience acquired by oyster farmers on mortality of seeded oysters and predation control enabled a better design of the restoration trials, supporting decisions to exclude or develop certain techniques. Additionally, the larval monitoring results provided by oyster farmers supported a more effective deployment of restoration solutions.</p>
<b>Decreased conflict</b>	 <p><u>Sedimentary soft beds (Spain)</u>: An initial in-person meeting with mussel farmers, showing photos of the planned setup and discussing it on-site, secured consent to use their bateas (mussel rafts) for acoustic receiver installation and pre-empted opposition to deployment.</p>
<b>Increased sense of ownership over the process and outcomes</b>	 <p><u>Arctic fjords (Svalbard)</u>: Stickers to raise awareness of what should and should not be flushed down the toilet (and thereby reduce wastewater pollution) were designed in collaboration with hotels on Svalbard, increasing their ownership of the end-product.</p>
<b>Long-term support</b>	 <p><u>Oyster reefs (France)</u>: Development of a shared restoration roadmap between oyster farmers, municipalities and nature conservation institutions was key for long-term planning and division of restoration efforts.</p>

## BEFORE STARTING

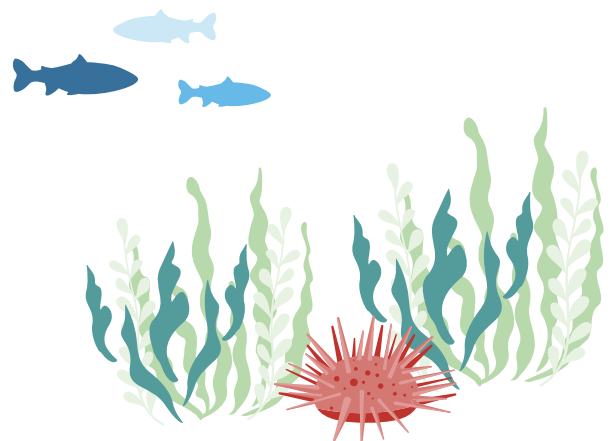
Before starting, it is important to reflect on internal factors that might influence the engagement process. According to Olmos-Vega et al (2023)<sup>5</sup>, some important factors are Personal, Interpersonal, and Methodological (Table 2).

Table 2: Factors to consider and questions to ask yourself for reflexive analysis, taken from Olmos-Vega et al. (2023).<sup>5</sup>

Factor	 Ask yourself...	 Considerations based on learnings from CLIMAREST
Personal	<i>“How are our unique perspectives influencing the research.”<sup>5</sup></i>	Consider any previous experiences. How will these shape stakeholder engagement?
Interpersonal	<i>“What relationships exist and how they are influencing the research and the people involved? What power dynamics are at play?”<sup>5</sup></i>	Consider the relationships you have (or lack) with different stakeholders as well as relationships between team members. Ask yourselves, “How will this impact the engagement process?”
Methodological	<i>“How are we making methodological decisions and what are their implications?”<sup>5</sup></i>	Map out your competences in Social Sciences and do not underestimate the need for expertise in this field. If needed, search for advice or hire experts to help you.

## ENGAGEMENT PRINCIPLES

Stakeholder engagement in marine restoration should be grounded in the values of **empowerment, equity, trust, and learning**<sup>4</sup>. Stakeholder engagement should be **inclusive** and avoid symbolism, as problems can arise when key stakeholders are excluded<sup>6</sup>, processes lack transparency, or stakeholders’ interests are overlooked. Better transparency throughout the stakeholder engagement process builds trust, improves satisfaction, and supports more successful restoration outcomes.<sup>7</sup>



## CROSS-CUTTING FACTORS THAT INFLUENCE ENGAGEMENT

**EXPERTISE:** People may lack experience in planning and executing stakeholder engagement,<sup>6</sup> and stakeholder engagement often requires skilled facilitators.<sup>8</sup>



**Lesson learned from CLIMAREST:** *It is important to have someone with experience working with stakeholder engagement. Moreover, it is important to consider and include the demonstration site leader's knowledge into the engagement plan.*

**Consider if you have the required expertise in-house (e.g., to facilitate workshops, design a survey)**

**INTERDISCIPLINARITY:** Ecological restoration draws on a wide range of knowledge – from restoration ecology, to the human and natural sciences, politics, technologies, etc.<sup>2</sup> This poses challenges in terms of communication across disciplines and backgrounds, different views of what is important, and different working styles.



**Lesson learned from CLIMAREST:** *Many partners were primarily focused on the technical and ecological dimensions of restoration. The leaders of the stakeholder engagement process, thus, worked to ensure that stakeholder engagement was not forgotten amidst technical activities and that partners understood what was meant by 'stakeholder engagement'.*

**Consider if you need to define common concepts and methodologies (e.g., set up a project glossary with key words related to stakeholder engagement, hold a webinar, etc.)**

**RELATIONSHIPS:** It is important to understand social dynamics and to effectively manage communication.<sup>6</sup>



**Lesson learned from CLIMAREST:** *Early relationship-mapping (who listens to whom) and engaging trusted connectors first (e.g., respected local operators/authorities) helped CLIMAREST reach wider groups. Where conflicts existed, the project worked to have early conversations, employ neutral facilitation, and share written summaries before holding mixed sessions. The project also worked to be transparent about outcomes, even when they did not meet all stakeholders' desired needs. This reduced friction and kept communication credible.*

**Consider how your relationships with stakeholders and the relationships between stakeholders will impact your work**

**DUAL ROLES:** Dual roles may arise in restoration projects.



**Lesson learned from CLIMAREST:** *In small communities, it is common for individuals to hold dual roles (for example, being both a member of the municipal council and a business owner, or part of a local association while also owning land or property). These overlapping identities may create unique forms of synergies or conflict and shape specific relationship dynamics.*

**Consider and map the dual roles of stakeholders participating in restoration projects**


Having a data management plan has become increasingly important in recent years. Ensuring the privacy and security of sensitive information is crucial in stakeholder engagement processes.

PERSONAL DATA

*“Personal data is any information that relates to an identified or identifiable person”*  
 – European Commission<sup>9</sup>

Table 3: Key concepts for processing personal data, including relevant articles (Art.) from the General Data Protection Regulation (GDPR) of the EU.

Concept and articles (Art.)	Description
<b>Categories of Personal Data: Identifiers (Art. 4)</b>	<p><b>Direct identifiers</b> – information that can be directly tied to a person (i.e. Name, phone number, IP addresses, pictures, recording, etc.)</p> <p><b>Indirect identifiers</b> – information that can point to an individual when combined with other data (gender, socioeconomic data, for example occupation or education, general geographic indicators, etc.)</p>
<b>Personal Data handling roles (Art. 4)</b>	<p><b>Data controller</b> is the role of the organization that determines the purpose behind the data collection and how the data will be processed.</p> <p><b>Data processor</b> is the role of the organization that processes personal data on behalf of the data controller.</p>
<b>Use of Artificial Intelligence (AI) (Art. 22)</b>	Right that participants have to not be subject to personal data processing using AI.
<b>Data management plan (DMP)</b>	Document that outlines how research data and personal data will be managed from project start to end. It should cover which types of personal data you collect and how it will be stored, analysed, and shared (if shared at all). A DMP is often a formal requirement (e.g., in Horizon Europe programs).
<b>Sources of personal data</b>	Sources that might generate personal data during the engagement process include: Interviews with stakeholders, surveys, workshops, pictures, etc.
<b>Anonymization methods</b>	Among others: redaction and pseudonymization, suppression, generalization, etc.

 Before starting the stakeholder engagement process...

1. **Get familiar with the GDPR**
2. **Check your national regulations for processing personal data**
3. **Check your organization’s policies for processing personal data and ethics**

# The engagement wheel: Stakeholder engagement step-by-step

The stakeholder engagement process can be seen as taking place over six steps (see Figure 1). These steps include:

1. Defining the context in which the engagement will take place
2. Identifying the desired scope of engagement
3. Analysing stakeholders
4. Planning the engagement
5. Executing the engagement
6. Evaluating the engagement

The wheel was designed and used for training purposes to highlight what should be considered when planning a stakeholder engagement process. In reality, these six steps are dynamic and iterative rather than linear. Often, you must return to a previous step or complete two steps simultaneously.

For example, the CLIMAREST project ran Steps 1 to 3 in parallel by interviewing and deploying a survey among partners to gather information about context, scope, and relevant stakeholders in each demo site where restoration took place.

Figure 1: Stepwise process of stakeholder engagement (Source authors/design Think Things).





# Step 1: Context



**Who completes this step?**  
Leaders & project partners

## Define the socio-environmental context, including environmental issues that need to be addressed, restoration experiences, previous stakeholder engagement processes, and context-related risks.

In our experience, defining the socio-environmental context is the first step towards creating a tailored stakeholder engagement process. This involves identifying ecological pressures and threats affecting marine and coastal ecosystems, understanding the causes of degradation, assessing habitat conservation status, and determining necessary restoration target(s) and possible solution(s).

### HOW TO DEFINE CONTEXT

There are several methods that can be employed to understand the context. Some methods include:


- **Workshop**, data collection through organized and guided sessions where participants actively engage in learning, problem-solving, and developing new ideas to achieve pre-defined goals and gain understanding of a particular topic<sup>10</sup>
- **Focus group**, data collection through guided group discussion among selected participants, where interaction is actively used to generate data on a designated topic<sup>11</sup>
- **Interview**, data collection through interviewer(s) asking the interviewee(s) questions on a particular topic or issue<sup>12</sup>
- **Survey**, standardized data collection about a sample that is obtained from a specified larger population<sup>13 (p. 143)</sup>
- **Literature review**, data collection and synthesis of documents<sup>14 (p. 333)</sup>
- **Informal information gathering**, unsystematic collection of information from multiple, easily accessible sources including media coverage, personal networks, etc.

The combination of methods employed will depend on project needs, time and resources, and the level of controversy.



Record the methods used and maintain a brief method log (who/what/when/where/tool/consent) to support transparency and later evaluation.

Table 4: Comparison of general methods for gathering information.

	 <b>Workshop/ Focus group</b>	 <b>Interview</b>	 <b>Survey</b>	 <b>Literature review</b>	 <b>Informal information gathering</b>	
<b>METHOD</b>	<b>Types of approach</b>	Many possible approaches, singularly or in combination	Structured, semi-structured, unstructured <sup>12</sup>	Open- and close-ended	Systematic / semi-systematic/ integrative <sup>14</sup>	Informal personal interaction, media scan
	<b>Information gathered</b>	Mostly qualitative	Qualitative	Mostly quantitative	Depends on approach	Qualitative
<b>RESOURCES NEEDED</b>	<b>Design expertise</b>	+++	+++	+++	++*	+
	<b>Analytical Expertise</b>	++	++	+*	++*	+
	<b>Tools needed</b>	Depends on method	Recording or note-taking	Online platform/ printed/phone	Subscription to journals, access to databases	Internet access, local knowledge
	<b>Participants</b>	Yes	Yes	Yes	No	Maybe
	<b>Cost</b>	Depending if in-person or online	Depending if in-person, over the phone or online	Depending on sample and length of survey	Depending on sample/access to journals	Generally low cost
<b>TIME</b>	<b>Preparation<sup>1</sup></b>	+++	+++	+++	+*	+
	<b>Implementation<sup>2</sup></b>	+	++	++	+++	++

\*General assessment for the purpose of defining the context for stakeholder engagement but will depend heavily on chosen approach. / <sup>1</sup> Set up questions and tool; the more expertise you have, generally the less preparation time is necessary. / <sup>2</sup> Get and analyse responses or review publication. / Note: This comparison of methods is applicable to other steps of the engagement (e.g., Scope, Stakeholder Analysis, and Engagement Preparation).

## EXAMPLES FOR AND FROM PRACTICE

These are examples of questions used to characterize the context and the restoration areas in the CLIMAREST project:

### Questions

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- *Who has tenure/ ownership/ management responsibility of the marine space?*
- *Who has tenure/ ownership of the adjacent land?*
- *Who currently has marine resource access rights (such as permits, quotas, etc.) within the area of intervention?*
- *Will the intervention result in restrictions or changes to access and resource use?*
- *What other activities (e.g. recreational) are currently conducted within the area of intervention?*
- *Will the intervention result in restrictions or changes to these activities?*
- *Have there been any conflicts over resource use, conservation, or restoration at this site before?*
- *Are any of the methods that you plan to use controversial? In what way/why? If so, which stakeholders have been involved?*

*These questions were fielded to partners in the CLIMAREST project via an online survey, which is publicly available at <https://zenodo.org/records/17710251>.*

*NOTE: One questionnaire with 18 questions was fielded. Some of the questions pertain to Context, some to Scope, and some to Stakeholder Analysis.*

Table 5: Lessons learned from the stakeholder survey in CLIMAREST.

### What worked?

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- ✓ *Easy to distribute*
- ✓ *Easy-to-analyse output (Microsoft Excel file)*
- ✓ *Easy to compare between sites*

### What did not work?

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- ✗ *Respondents often did not fill in all the information*
- ✗ *Additional meetings were needed to clarify or expand content*
- ✗ *Should have asked about previous engagement processes (including previous conflicts with stakeholders)*



## FACTORS THAT INFLUENCE CONTEXT

There are several contextual factors that may influence your project.

**VISIBILITY:** Restoration installations that are not visible may require extra communication.



**Lesson learned from CLIMAREST:** *In oyster reef restoration (France), each individual reef was marked due to collision hazard with the foils of kite surfers, as the area is very popular for wind sports.*

**Consider how visible your restoration action is and implications of its (un)visibility**

**WORK UNDER WATER & DISTANCE FROM SHORE:** Technical characteristics of restoration and safety may influence stakeholder engagement. Sub-marine work will likely limit which stakeholders can be involved.



**Lesson learned from CLIMAREST:** *In seagrass restoration (Ireland), distance from shore reduced engagement: offshore sites (>500 m) created legal/insurance hurdles and were logistically hard even for the team, while some near-shore rocky sites posed slip/fall risks that limited participation—especially for school groups and older adults—so most surveys had to run in safe, easily accessible intertidal areas. These constraints shaped who could take part and how.*

**Consider whether distance from shore & work under water will constrain who you involve**

**OWNERSHIP:** It is important to consider who owns the area in which restoration will take place.<sup>15</sup>



**Lesson learned from CLIMAREST:** *In oyster reef restoration (France), the team worked within a marine plot entrusted to the local shellfish farming committee for the preservation of flat oyster stocks. This plot partly coincides with the historical footprint of the former oyster bed. Thus, carrying out restoration at this location required engaging with shellfish farmers. In the long term, another plot could / should be developed to carry out restoration outside this perimeter, which is already managed by oyster farmers to “open up” restoration options and management practices to better include views and objectives of other important stakeholders.*

**Consider who owns the lands/waters around your restoration action**

**AREA COMPETITION :** Coastal waters often have multiple uses and therefore can be contested spaces<sup>16 (p. 6)</sup>.



**Lesson learned from CLIMAREST:** *In oyster reef restoration (France), a lot of area is already entrusted to local farmers. Thus, there is limited area left to develop new plots for other activities and management practices.*

**Consider how area competition may impact your project**

# CASE 1



## DEFINING THE CONTEXT FOR CANOPY-FORMING MACROALGAE



Photo credit: S. Schäfer

CLIMAREST demonstration and replication sites in Madeira and Cyprus focused on restoring canopy-forming macroalgae that once were common in shallow rocky bottoms. In both geographic locations, compounding pressures such as construction, coastal development, pollution and high densities of grazer such as the long spined sea urchins from the *Diadema* genus have contributed to major phase shifts and to the persistence of urchin barrens. Restoration efforts within CLIMAREST planned to act in two dimensions: control urchin densities and promote algae recruitment.

Given this complex context, success depends on strategically managing both ecological and human pressures, but also in selecting locations where restoration is most feasible and scalable. Engagement activities have been designed to address such issues and promote interaction, knowledge exchange and active participation of key stakeholders. In Madeira, workshops and close collaboration with local dive operators and authorities enabled the selection of sites with different protection levels, the development of bespoke digital tools (i.e. Dive Reporter app) for citizen science

and active collaboration in monitoring and in urchin control. Building upon the lessons learned in Madeira, the project trained local divers and dive centres to contribute to Dive Reporter app after being tailored to Cyprus' conditions. In addition, dive teams were prepared and trained for targeted *Diadema* removals under the oversight of competent authorities. In both cases, to ensure relevance and buy-in into restoration efforts, short questionnaires addressed to stakeholders were used to prioritize species and indicators for customization of the app, while workshops helped communicate the impacts of anchoring and other human activities on benthic habitats. As a result, dive operators and the local dive community have actively supported monitoring efforts, providing valuable data on invasive herbivores and post-removal outcomes. This context-aware approach has enabled CLIMAREST to align restoration priorities with local realities, building trust and cooperation among stakeholders-including site managers and local operators-to protect and restore vulnerable marine ecosystems.



Photo credit: S. Schäfer

# Step 2: Scope



**Who completes this step?**  
Leaders & project partners (if relevant)

**Define the aim(s) and identify the desired outcome(s) of the engagement process, the level of stakeholder engagement, the long-term impact of stakeholder engagement, indicators for success, and benefits and costs for stakeholders.**

Defining the scope of your work creates boundaries for what can and cannot be achieved considering the desired outcomes and available resources. By setting too wide a scope, you may overpromise and underdeliver, potentially damaging relationships with stakeholders. On the other hand, by setting too narrow a scope, you may ignore potentially important stakeholders and phenomena. There are several things to consider when defining a realistic scope (see Table 6). These considerations draw from our – the authors – own knowledge and experience.

Table 6: Things to consider when designing a realistic scope.

Factor	Things to consider...	Recommendation
<b>Aims of engagement</b>	Internal resources, stakeholder fatigue, desired outcomes	Define measurable or trackable aims
Level of stakeholder engagement (see Figure 2)	Different degrees of involvement for different stakeholder groups	Where relevant/possible, include stakeholders in decision-making. Power delegation to stakeholders is shown to improve environmental outcomes <sup>17</sup>
<b>What 'success' means</b> for the engagement process	Benefits and costs for stakeholders, including short-term and long-term impacts of being involved in the restoration process	Map out a path to success with minimal negative impacts for stakeholders while maximizing short and long-term positive impacts in the restoration process

## HOW TO DEFINE SCOPE

To define the scope of engagement, you can use multiple methods (see Table 4 for an overview of different methods). Focus groups or even informal information gathering could be relevant, especially if the leadership team is centrally located. Importantly, regardless of the method you use, how you define aims for engagement, the level

of stakeholder influence over decision-making, and success should be documented.

Different projects may have varying definitions of engagement aims and success indicators, but stakeholders' influence on decision-making is typically cat-

egorized into four levels: inform, consult, involve, and collaborate.<sup>18</sup> According to the BiodivERsA Stakeholder Engagement Handbook<sup>18</sup>, the most basic level is 'inform', where information is simply shared with stakeholders. At the 'consult' level, stakeholders are asked specific questions, but there is minimal opportunity for discussion or interaction. The 'involve' level allows for more discussion and interaction. Finally, at the 'collaborate' level, stakeholders are fully engaged and participate directly in the decision-making process.

Figure 2 depicts these four levels of engagement in terms of information flows, highlighting how information flows between the leaders of the engagement process and the stakeholders participating in the engagement process. At the levels of 'inform' and 'consult', there are mainly one-way information flows. At the levels of 'involve' and 'collaborate', there are opportunities for discussion and active participation and there are two-way information flows. Importantly, dialogue-based processes are often associated with positive outcomes.<sup>19</sup>

### EXAMPLES FOR AND FROM PRACTICE

Figure 2: Levels of engagement.




## EXAMPLES FOR AND FROM PRACTICE

Table 7 presents a list of questions that can be relevant to Scope, based on the authors' experience. Answers to the questions should be recorded and can be used to evaluate the engagement process.

Table 7: Questions to help define 'scope' and the purpose of the questions. These questions are inspired by the BiodivERsA Stakeholder Engagement Handbook.<sup>18</sup>

Question	Purpose
<b>What is the aim of stakeholder engagement? Is this realistic given the available resources?</b>	Goals and limitations
<b>What are 1-5 things that will help stakeholder engagement to run smoothly?</b>	Indicators for success
<b>What are a few stakeholder categories that could be engaged? Why?</b>	Potential stakeholder categories / reasoning
<b>How involved should stakeholders be in decision-making? Why?</b>	Level of engagement / reasoning
<b>Should some stakeholder groups be more involved than others? Why?</b>	Level of engagement / reasoning
<b>What are 1-5 benefits for stakeholders who are engaged?</b>	Benefits for stakeholders
<b>What are 1-5 costs for stakeholders who engage? Can these be minimized?</b>	Costs for stakeholders
<b>Will you or someone else continue engagement after the project's end?</b>	Long-term impact

Table 8: Lessons learned from scope evaluation in the CLIMAREST project.

What worked?	What did not work?
 <b>Had tailored aims for different stakeholder groups</b>	 <b>Lacked clear indicators for success, making evaluation challenging</b>
 <b>Engaged some stakeholders in project decision-making</b>	

## FACTORS THAT INFLUENCE CONTEXT

Below we present several context factors that may influence your project.

**RESOURCES:** Stakeholder engagement, like every other part of a project, is constrained by the available resources.



**Lesson learned from CLIMAREST:** *Not all the stakeholder engagement activities were outlined in the proposal. Sometimes the demonstration site leaders, those who execute engagement, lacked a budget for engagement activities. Moreover, sometimes there were multiple activities starting at once, meaning that the time partners had for each activity decreased.*

**Consider the budget for stakeholder engagement in the proposal stage as well as when in the project activities will take place**

**STAKEHOLDER FATIGUE:** In some areas, stakeholders are frequently invited to take part in various projects, which can lead to fatigue and a reluctance to participate.



**Lesson learned from CLIMAREST:** *The project operated in small communities—such as Longyearbyen in the high Arctic. Residents of Longyearbyen are often asked to participate in research and can thus experience stakeholder fatigue. To address this, the project team prioritized building local support from the proposal stage. This early endorsement, coupled with the project's clear relevance to community priorities, helped reduce fatigue.*

**Consider if there is stakeholder fatigue in the area in which you work and if your work will benefit the stakeholders**



# CASE 2



## DEFINING SCOPE FOR A SOCIAL CAMPAIGN TO REDUCE SEWAGE POLLUTION IN THE ARCTIC



*Photo Credit: S. Stevenson-Jones, A. Bødal, and stakeholders*

On the Norwegian archipelago of Svalbard in the Arctic, what is flushed down the toilet could end up in the fjord. Items such as wet wipes are flushed down the toilet, polluting the marine environment. To address this issue, the CLIMAREST project co-created a social campaign with locals. First, the project worked to define a clear aim; to reduce sewage pollution by raising awareness of what should be flushed down the toilet (pee, poo, and toilet paper!). Next, the project worked to identify a target audience, which was important given the resources. Discussions with the local municipality

highlighted a need to target the campaign towards tourists, and further discussions with the local tourist office highlighted a need to further target the campaign towards hotels. This significantly narrowed the initial scope of the campaign. Finally, the project contacted hotels to identify if this was indeed a feasible scope for the campaign, providing enough benefits to the hotels that they would 'get onboard'. This initial scoping was key to the eventual implementation of the social campaign to hotels on Svalbard.



Photo credit: I. B. Overjordet

# Step 3: Stakeholder analysis



**Who completes this step?**  
Leaders & project partners (if relevant)

## Identify, categorize, and prioritize stakeholders.

Stakeholder analysis is the process of analyzing, in a systematic fashion, who can be affected by, or affect an issue, intervention, project, process or decision.<sup>20</sup>

In our experience, analyzing stakeholders in marine and coastal restoration projects can be challenging, as it is not always clear who uses a marine space. While stakeholder analysis often happens at the outset of a project, it is likely that other stakeholders will be included as the restoration project progresses. Thus, **stakeholder analysis should be seen as an ongoing process**<sup>21</sup>. Importantly, the leader of the engagement process should record and make transparent the method used to analyze stakeholders.

### HOW TO IDENTIFY, CATEGORIZE, AND PRIORITIZE STAKEHOLDERS

In this sub-section, we discuss what information to gather during stakeholder analysis, methods to use, stages of analysis, how to choose your stakeholders, available resources, and who should participate in the process.

#### **What information should you gather in a stakeholder analysis?**

Below, we provide a list of information that may be pertinent to gather based on analysis of templates for stakeholder engagement from the BiodivERsA Stakeholder Engagement Handbook<sup>18</sup>. We also add 'impact' in addition to 'interest' and 'influence' as proposed by Reed et al. 2025<sup>20</sup>.

Define <b>Who</b> to engage	Define <b>Why</b> to engage	Define <b>What</b> to know prior to engagement
<ul style="list-style-type: none"> <li>• What category/ies of stakeholders (e.g., Environmental NGO)?</li> <li>• What people (i.e., representative of stakeholder group)?</li> </ul>	<ul style="list-style-type: none"> <li>• Stakeholders' interest in the project</li> <li>• Stakeholders' influence on the project</li> <li>• The impact of the project on stakeholders</li> <li>• Capacity to engage</li> <li>• Willingness &amp; desire to engage</li> </ul>	<ul style="list-style-type: none"> <li>• Previous conflict</li> <li>• Stakeholders' knowledge of the project &amp; views of the project</li> <li>• Personal relationships among stakeholders</li> <li>• Best mode of contact (e.g., email)</li> </ul>

## How to choose your stakeholders?

Generally, the process of stakeholder analysis starts broad, with all relevant stakeholders identified, and is narrowed to a list of prioritized stakeholders.<sup>18</sup> However, you can also do these stages in parallel, as was done in the CLIMAREST project. As you will likely not be able to engage every stakeholder, prioritization is necessary. Understanding stakeholders' interest in the project and influence over the project can help with the process of prioritization. For example, it may be easy and productive to engage with stakeholders who have both a high interest in the project and a high influence over the project. However, it is also important to consider other stakeholders, e.g., marginalized groups. Thus, Reed et al. (2025)<sup>20</sup> suggested evaluating 'impact'. In other words, evaluating who will benefit from or be negatively impacted by the project. By assessing stakeholders' interests and influence in addition to the project's impact on stakeholders and their capacity and willingness to engage, you can tailor various engagement strategies. For additional information, see Annex I. Stakeholder analysis supplementary material.



We find the survey and workshop resources proposed by Reed et al. 2025<sup>20</sup> especially helpful for [inclusive stakeholder analysis](#).

## How can information be gathered for stakeholder analysis?

There are a variety of methods that can be utilized to identify, categorize, and prioritize stakeholders. These methods include:<sup>20</sup>

1. **Workshops/focus groups**, which facilitate shared learning
2. **Interviews**, which provide in-depth information
3. **Mixed-method surveys**, which obtain information from a wide range of people

Importantly, you should record your method(s) to analyze stakeholders.



**Revisit Table 4 in Step 1:**  
Context for methods descriptions

## Who participates in stakeholder analysis?

Generally, there are two approaches:<sup>18 (p. 37)</sup>.



### Ex-ante/top down

Secondary information (e.g., expertise, location) helps leaders identify stakeholders



### Ad hoc/bottom up

Secondary information (e.g., expertise, location) helps leaders identify *initial* stakeholders who then help leaders identify other relevant stakeholders. This process is generally iterative.

## EXAMPLES FOR AND FROM PRACTICE

The following table presents a list of questions that were used to do the stakeholder analysis in the CLIMAREST project.

Table 9: Questions used in the CLIMAREST project to perform the stakeholder analyses.

<b>1. Name of stakeholder*</b>							
<b>2. Type of stakeholder (list the categories)</b>							
<b>3. Role of stakeholder in the intervention area</b>							
<b>4. Type of previous engagement</b>							
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
They received information	They contributed to research or monitoring	They were actively engaged in restoration activity	They were involved in consultation and discussions	There was active conflict mediation with them	None	Other	
<b>5. How will the restoration activity affect this stakeholder (mechanism and extent, negative or positive effect)?</b>							
<b>6. How will this group affect the restoration activity (mechanism and extent, negative or positive effect)?</b>							
<b>7. Rank the level of interest this stakeholder has in the restoration activity</b>							
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>				
No interest	Slight interest	Strong interest	Not sure				
<b>8. Rank the level of influence this stakeholder has for the success of the restoration activity</b>							
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>				
No influence	Slight influence	Strong influence	Not sure				
<b>9. Rank the level of trust between leading organization and this stakeholder**</b>							
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>		
Very low	Low	Medium	High	Very high	I don't know		
<b>10. To what extent would you suggest we prioritise contact with this stakeholder?</b>							
<b>1</b>	<b>2</b>	<b>3</b>					
Low priority	Medium priority	High priority					
<b>11. How can we best engage with this stakeholder group?</b>							
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
Individual interviews	Taking part in focus group interviews (i.e. to learn about their perspectives)	Online questionnaires	Just send them information	Involve them in group workshops to discuss management options (involve them in planning objectives)	Involve them in citizen science	Involve them in the restoration activities	Not sure

## FACTORS THAT INFLUENCE STAKEHOLDER ANALYSIS

**INCLUSIVITY:** It can be important to include 'unusual suspects', stakeholders whose voices are often not considered (e.g., artists).



**Lesson learned from CLIMAREST:** *In oyster reef restoration (France), native oyster conservation management has gone from a state in which it was exclusively managed by oyster farmers and the species was only considered as a resource to a state where nature conservationists are progressively being included in the process. Thus, the process has become more inclusive.*

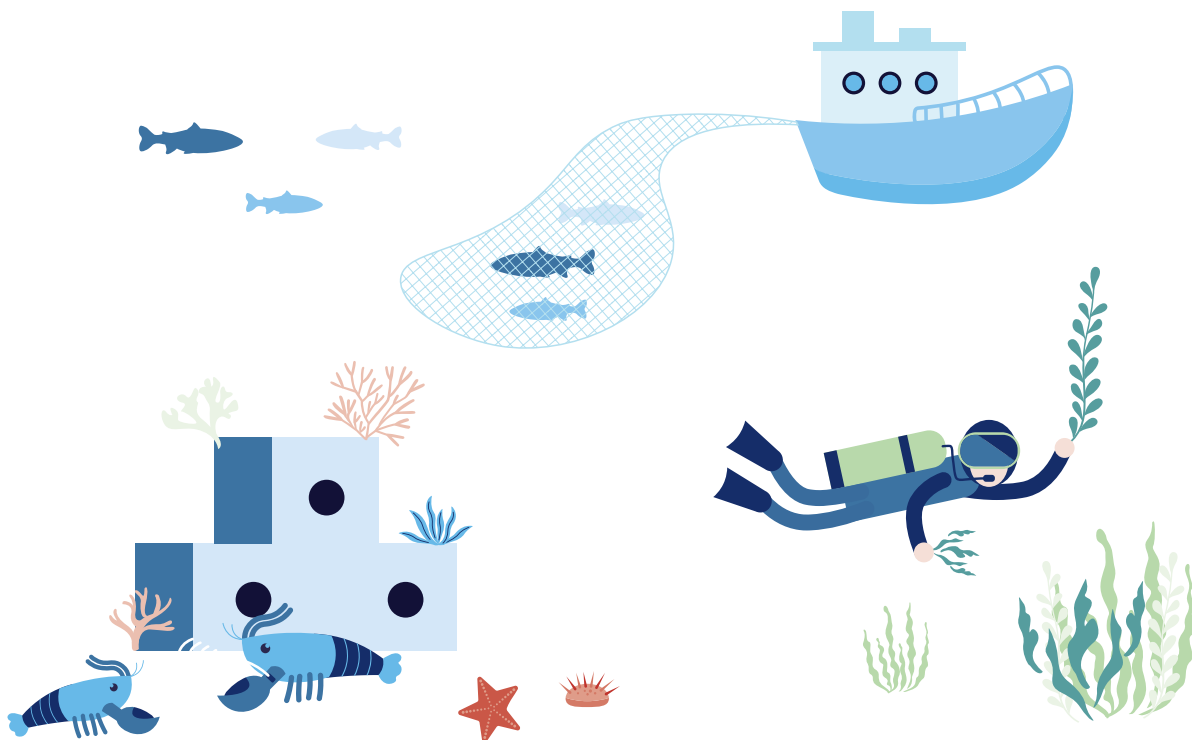
**Consider who you will engage and thereby who you are excluding**

**TYPE OF APPROACH:** Ex-ante and ad-hoc approaches to stakeholder identification can produce different results. A risk with ex-ante approaches is the selection of the same people again and again, e.g., due to being visible in the media, having relationships with project leaders, etc. A risk with ad-hoc approaches, such as snowballing, is the selection of like-minded individuals.



**Lesson learned from CLIMAREST:** *A top-down ex-ante approach worked to identify relevant stakeholders. However, it was challenging to find times to meet, given busy schedules.*

**Consider the pros and cons of top-down ex-ante vs. bottom-up ad hoc approaches. Moreover, especially in larger projects, allocate additional time for coordination**



# CASE 3



## EXAMPLE OF STAKEHOLDER ANALYSIS



Photo: I. B. Øverjordet

A well-structured stakeholder analysis is essential for effective engagement and restoration planning. To support this, a core group of CLIMAREST partners developed a targeted survey to help demonstration site leaders identify and categorize relevant actors. The survey prompted leaders to list stakeholders involved in:

- 1) Regulation, administration, management, enforcement, or resource harvesting;
- 2) Commercial and professional users of the seascape/landscape;
- 3) Recreational users of the seascape/landscapes.

During this process, it became clear that a fourth category was needed to capture key contributors to restoration efforts:

- 4) Education, schools, research institutions, and NGOs, including CLIMAREST partners themselves.

Each identified actor was then assessed based on their potential interest in and influence over restoration actions, as well as how those actions might affect their activities. We also considered the feasibility of engagement, including preferred contact methods and accessibility, to develop tailored strategies for initial outreach. As the project evolved, a fifth stakeholder category emerged as critical for long-term impact and scalability:

- 5) Funding agencies, donors, financial institutions, investors, and benefactors. This iterative stakeholder analysis process allowed us to refine our understanding of “who matters, when, and why”, recognizing that stakeholder relevance can shift depending on the stage of restoration, leadership dynamics, and scale of intervention. The result was a prioritized stakeholder list for each demonstration site, along with engagement strategies that are both context-sensitive and adaptable.



Photo credit: L. Leyva

# Step 4: Engagement preparation



**Who completes this step?**

Leaders & project partners (if relevant)

**Define the most suitable form and method of engagement given the context, scope, and stakeholder analysis.**

Preparing for engagement is often more time-consuming than executing the strategy itself. It is important to recognize this during the project design and planning phase and allocate enough time accordingly.

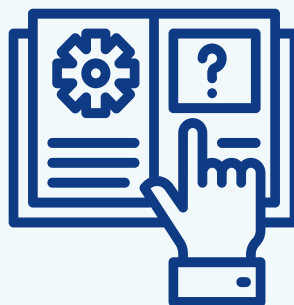
## HOW TO PREPARE FOR ENGAGEMENT

In this sub-section, we break down how to prepare for engagement. Specifically, we will walk you through what information you should consider when preparing for engagement, different ways to engage stakeholders, and when to engage stakeholders.

### ***What information should you consider when preparing for engagement?***

Engagement Preparation comes after defining the Context, Scope, and Stakeholder Analysis. Make sure that you have taken time to consider:

- 1. AIM OF THE ENGAGEMENT:** What you want to achieve together with stakeholders?
- 2. LEVEL OF THE ENGAGEMENT:** What degree of stakeholder involvement do you foresee?
- 3. CATEGORY OF STAKEHOLDERS:** What categories of stakeholders are included? What people?
- 4. WHY TO ENGAGE:** What is stakeholders' interest and influence in the project? What is the impact of the project on stakeholders?
- 5. WHAT TO KNOW PRIOR TO ENGAGEMENT:** Are there specific characteristics of the stakeholder groups (e.g., conflict, knowledge, relationships, mode of contact)?



## What are different approaches for engaging stakeholders?

After considering these aspects, you will need to determine whether you want to gather collective or individual perspectives. If you want stakeholders to be able to exchange ideas, be influenced by each other or get collective understanding, you should turn to collective approaches to engagement (e.g., workshops). On the other hand, if you do not want stakeholders to be influenced by each other or it is important to get individual opinions, you should turn to individual approaches to engagement (e.g., interviews).

A variety of engagement approaches are used in marine and coastal restoration. Here, we divide these approaches into the categories 'collective' and 'individual'.



**Collective**  
Meetings  
Workshops  
Focus groups  
Events



**Collective/ Individual**  
(depending on the method)  
Public comment periods/forums  
On-site participation



**Individual**  
Information dissemination  
Interviews  
Surveys

One or more of the above-mentioned approaches (or others) may be appropriate. Regardless of the approach you choose, it will involve a **specific method** – a defined process or way of carrying out the engagement (e.g., semi-structured interview). It is important to think through and thoroughly document your engagement method.

Stakeholder engagement generates data. When preparing for engagement, it is important to consider how you will analyze this data whether it be quantitative, numerical data or qualitative, text-based data. Data analysis, like engagement, requires specific training.



Revisit [Table 3](#) for processing of personal data and [Table 4](#) for comparison of methods

## When to engage?





Several scholars working within marine and coastal restoration emphasize the importance of engaging stakeholders early in the process. Early engagement can help set expectations around project outcomes and impacts<sup>15(p. 14)</sup> and avoid complications that can arise when stakeholders' goals are not addressed<sup>22(p. 3)</sup>. When stakeholders are involved only after project approval, misaligned values can create tension, though such tensions can be minimized by inclusive practices and ongoing interaction<sup>23(p. 481)</sup>.

## EXAMPLES FOR AND FROM PRACTICE

In the CLIMAREST project, demonstration sites had different aims for engagement, desired levels of engagement, and stakeholder characteristics. Thus, they also employed different engagement strategies.

Table 10: Examples of some considerations influencing chosen approaches in the CLIMAREST project.

Note: Demonstrators also evaluated interest, influence, and impact, which are not presented in this table.

	Aim of engagement	Level of engagement	Stakeholder category	What to know	Approach
 <p><b>Oyster reef (France)</b></p>	Reef co-design	Collaborate	Regulation, administration, enforcement; Commercial/professional users; Research, NGOs	Need for dialogue due to e.g., regulatory complexity	1:1 meetings & workshops
 <p><b>Rocky subtidal (Madeira)</b></p>	To select species for monitoring & adapt DiveReporter App	Involve	Commercial / professional user of the seascape	Stakeholders should possess knowledge about the selected species	Workshop
 <p><b>Sedimentary soft bed (Spain)</b></p>	To identify synergies and co-benefits	Consult/Involve	Production sector	High regional dependency on fishing and aquaculture (mussel producers) sector	Phone interviews, in-person visits, field activities, workshop
 <p><b>Arctic Fjords (Svalbard)</b></p>	To raise awareness of sewage pollution	Inform	Public	Activities for children - many frequented the event	Stand at event
 <p><b>Seagrasses (Ireland &amp; Málaga)</b></p>	To increase public awareness of seagrass meadows	Involve	Public	Lack of awareness of the vital role of seagrass meadows	Meetings & workshops

## FACTORS THAT INFLUENCE CONTEXT

**ETHICS:** In Europe, the processing of personal data must comply with GDPR as well as applicable national regulations. In certain cases, additional approval from the institution may be required.



**Lesson learned from CLIMAREST:** *Many partners were not fully aware that activities such as workshops or surveys may involve the collection of personal data protected under the GDPR. In some cases, conducting such studies also requires prior approval from an institutional ethics committee. Clear guidance on data protection and ethical requirements should be provided early in the project to ensure compliance.*  
*Note: Obtaining ethical approval may take longer than expected, so this step should be factored into the project timeline from the beginning.*

**Consider if you are processing personal data and, if so, ensure processing is in line with GDPR and national regulations**

**STRATEGIC PLANNING:** Different things need to be considered simultaneously.



**Lesson learned from CLIMAREST:** *It was not always easy to plan activities —challenges include logistics, designing materials, ensuring GDPR, ethical compliance, engaging with project partners and stakeholders—within the project and local agendas.*

**A comprehensive plan that includes all these multiple dimensions is needed to ensure a smooth engagement**

**OVERLAPPING ACTIVITIES:** Activities, such as permitting processes, public consultations, and political agenda, may impact engagement preparation.



**Lesson learned from CLIMAREST:** *The project held a workshop on Svalbard on wastewater management. However, the local government was unable to attend due to a pressing problem that needed to be addressed.*

**Consider the timing of other activities that may impact or overlap with your activities when preparing for the engagement**

# CASE 4



## EXAMPLES OF ENGAGEMENT PREPARATION



Photo credit: I. B. Øverjordet

To support meaningful engagement at CLIMAREST demonstration sites, we undertook a comprehensive multi-country survey to explore local perspectives on marine environments and restoration. The survey targeted communities in Svalbard, Ireland, Brittany, Vigo, Málaga, and Madeira, and was carefully designed to capture both site-specific insights and cross-site comparisons. Preparing for this engagement required significant coordination and attention to detail. To ensure accessibility the survey was translated into five languages; Norwegian, English, French, Spanish and Portuguese. For each location, we tailored outreach strategies to reach diverse target groups and secure sufficient responses. In most locations we could rely on a survey company to collect responses for us. On Svalbard, we had to recruit the respondents ourselves. There we advertised the survey using local media, social media, and direct contact through community networks. We also hired two students to collect responses for us.

Over 20 consortium members invested approximately 300 hours in refining the survey content, identifying target audiences, crafting questions, and coordinating with two professional survey companies. This included translation checks, platform testing, and final formatting. In total, we allocated €28,779 for survey implementation across sites, including contracting local support in Svalbard where a mixed-method approach was used—combining digital outreach with door-to-door engagement by hired students. Data collection spanned about one month across most sites, with Svalbard extending to five months due to logistical challenges. Post-survey, merging, translating, and cleaning the data took around 60 hours, followed by 500 hours of analysis and reporting by 21 members of the consortium. This extensive preparation laid a strong foundation for informed and inclusive engagement, ensuring that local voices were heard and integrated into the project's restoration strategies.



#REALDIVING

EMERGENCY N°  
N° DE EMERGENCIA  
NOTRUFNUMMER  
APPEL D'URGENCE



OUTPRO

STAFF  
CIPREIA

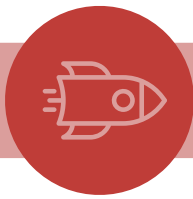
SAFE & FUN



STAFF  
CIPREIA CLUB

Photo credit: S. Schäfer

# Step 5: Engagement



Who completes this step?

Leaders & project partners (if relevant)

## Conduct stakeholder engagement and ensure continual monitoring.

### HOW TO ENGAGE

In this section, we highlight five tasks that are common to most of the engagement process. The tasks are presented chronologically from setting up the engagement to documenting and reporting the activities. Note that some activities will be more relevant to certain engagement approaches than others.

#### 1 Set up

This task refers to the practical preparations needed to ensure a successful engagement. While it is closely connected to Engagement Preparation (Step 4), the focus here is on on-the-ground actions that take place closer to the actual engagement.



**CONTEXT OF THE ENGAGEMENT:** It is important to understand whether the engagement is part of an ongoing initiative or a starting point. Knowing its place in the broader process helps shape the approach and how you address participants. For example, is it a standalone workshop or part of a series? This influences expectations, tone, and depth of content.



**ANNOUNCEMENT OR INVITATION:** Make sure to send out the announcement or invitation well in advance. Consider which communication channels are most effective for reaching your target stakeholders. Timely planning of invitations and reminders increases the likelihood of participation. If sending personal invitations, remember to request confirmation. Ensure the message is clear and communicates the purpose of the engagement.



**LOCATION:** Consider how the venue will shape outcomes. If there is a previous conflict, consider a neutral venue. The location and timing should suit participants—consider public transport access, working hours, and potential conflicts with other events (e.g., conferences, holidays). Pay attention to the room layout and available resources (e.g., Can materials be taped to walls? Is there space for breakout groups?)



**GIVING INFORMATION IN ADVANCE:** For participatory activities like workshops, consider whether participants need to familiarize themselves with the topic or project beforehand. Sharing relevant information ahead of time may save valuable time during the session and improve the quality of contributions. However, it may also place participants on unequal footing (e.g., if some participants have not had time to review materials, etc.).



**PERSONAL DATA:** When conducting participatory activities (e.g., interviews, workshops), personal data is often collected (e.g., pictures, names, etc.). In that case, you need to be aware to follow GDPR.

**Informed consent:** Participants must give explicit consent to take part in the activity. The recommended approach is to provide written information and obtain signed consent forms. Relying solely on oral consent is discouraged, as GDPR and ethical standards typically require documented proof of consent. Obtain separate consents for attendance, audio, and photos; provide a clear opt-out for images.

**Note:** Legal or institutional requirements for informed consent differ from country to country, so standard online templates should be used with care. You should check what legal requirements apply and whether your institution has requirements, templates, or guidelines for gathering informed consent.



**SIGN-IN SHEET:** For workshops and other on-site activities, we strongly advise using a sign-in sheet (See Annex III. Example of participatory sign-in sheet). It provides a record of participants that will not only help to assess representation across stakeholder groups, but also be useful for reporting, evaluation, and follow-up communication.

### 3 **Facilitation**



**EXPERTISE:** Engaging skilled facilitators or interviewers is strongly advised to ensure smooth and effective interactions. If possible, allocate budget or seek collaboration with organizations that can provide experienced personnel for this role.



**DISTRIBUTION OF PARTICIPANTS:** Consider whether participants should be divided into smaller groups and plan the number of facilitators accordingly. This task is particularly important for managing large groups, minimizing power dynamics, and ensuring traceability (e.g., to be able to attribute specific inputs to certain groups).



**TIME MANAGEMENT AND DISTRIBUTION:** Make sure the schedule allows enough time for the selected method and include breaks and flexibility in the schedule to accommodate potential delays.

### 4 **Document**



**SCRIPT:** Scripts are a valuable tool for standardizing engagement methods, making them replicable across multiple cases and enabling meaningful comparison of results. They also help clarify the expected outputs of each session—for example, the type of information to be collected—and support effective time management throughout the activity.



**RECORDING/TRANSCRIPTION:** Keeping an audio recording or transcription of workshops and interviews is highly valuable. It ensures that participants' contributions are captured accurately and transparently, preserving the content for analysis and reporting.



**PHOTOS:** Consider taking photos during the activity to visually document the process. These images can help illustrate the engagement and support communication materials. However, remember that it is essential to obtain explicit consent from participants before taking or using any photos. Consent should clearly explain how the images will be used, and participants must have the option to decline without any consequences.

5

Return



**FEEDBACK TO PARTICIPANTS:** Providing feedback to participants after the process is key. Knowing how their contributions influenced the project or sharing the outcomes of e.g., interviews or surveys can help to build trust and enhance future collaborations. On the other hand, not knowing how your contributions influenced the project or not seeing them reflected in the result might generate disappointment or even anger.

## EXAMPLES FOR AND FROM PRACTICE

### Underestimated tasks

- ✘ **Time & resources needed for handling personal data** (e.g., having a clear plan, knowing how to document consent and anonymize the data, etc.)
- ✘ **Expertise & resources needed for facilitation and surveys**, which may include multiple steps (e.g., testing, translating - if relevant, piloting, fielding, data cleaning, anonymization, and analyzing)

### Forgotten things

- ✘ **Sign-in sheets and good documentation of workshops** (e.g., scripts) are commonly forgotten things. These are important steps to ensure transparency and traceability of the process
- ✘ **Report back to stakeholders/ participants** after the engagement process/ participatory activity

## FACTORS THAT INFLUENCE ENGAGEMENT

**POWER DYNAMICS:** Power influences relationships and interactions among participants in a group.



**Lesson learned from CLIMAREST:** *In the project's participatory activities, we acknowledged power dynamics, working to actively integrate e.g., young researchers' voices.*

**Acknowledge that age, culture, background, experience, gender, etc. may influence people's willingness to participate and shape interactions.**

**STRUCTURAL SUPPORT:** Stakeholder engagement activities should be well-integrated into the project's structure.



**Lesson learned from CLIMAREST:** *In the project we had a dedicated work package to design and monitor the engagement. This work package offered social science support to all demonstration and replication sites to plan and execute stakeholder engagement.*

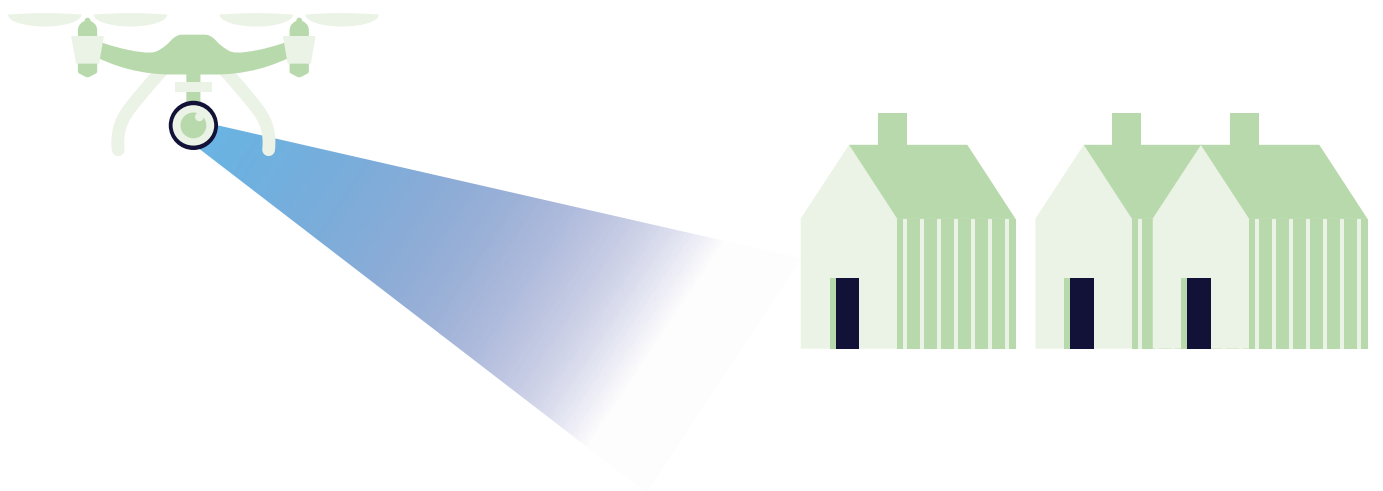
**Consider carefully the work package design as well as the time and resources allocated to execute the engagement by work packages and partners.**

**LANGUAGE BARRIERS & CULTURAL DIFFERENCES:** Communication and engagement strategies must be tailored to different geographical, cultural, and socio-economic contexts. For instance, the geographical diversity in European R&I projects may pose a challenge when it comes to the diversity of languages.



**Lesson learned from CLIMAREST:** *An external company was hired to distribute a survey in five countries with different languages.*

**Allocate enough time to translate the engagement material and coordinate well in advance with the locals who will do the engagement on-site.**



# CASE 5



## EXAMPLES OF ENGAGEMENT



*Photo credit: J.Lugilde Yáñez*

In Ireland, the CLIMAREST project has led efforts to raise awareness about seagrass meadows through collaboration and community engagement. To increase public understanding of seagrass and its ecological importance, a series of social science-based activities was carried out. The project worked closely with local communities, NGOs, and working groups, such as the Galway City Council and the Irish Ocean Literacy Network, to share knowledge about seagrass and its vital role in coastal ecosystems. As part of these outreach efforts, the team also collaborated with the environmental NGO Zero Waste Alliance Ireland to record a documentary on seagrass restoration highlighting the ecological value of these habitats and the importance of community-led conservation. Through public talks, conferences, posters, and cooperation with European networks like the Seagrass Restoration Alliance, awareness of seagrass habitats significantly increased. These activities not only helped communicate the importance of protecting seagrass meadows but also strengthened local stewardship to improve the overall ecological health of coastal communities. As a result

of this stakeholder engagement, seagrass has been included in local protection and management plans, and messages have been shared with governmental bodies to promote stronger conservation measures. This collaborative approach has been key to enhancing both public awareness and policy support for seagrass protection in Ireland.

In Cyprus, the CLIMAREST project aimed to prepare divers and coastal users for roles in monitoring and low-impact restoration tasks. This was achieved through a half-day session held at a local venue with short briefings (safety, roles, data standards), small group demonstrations (e.g., photoquadrats), and a sign-up to a citizen science workflow. What helped was using local hosts (e.g., dive centres), scheduling outside peak hours, providing laminated quick guides, and confirming consent for photos/data. To follow up, a one-page summary of “what we heard/next steps” was sent within two weeks, with links to materials and contact points.



Photo credit: Marine and Environmental Research (MER) Lab

# Step 6: Engagement evaluation



**Who completes this step?**

Leaders & project partners (if relevant)

**Evaluate the stakeholder engagement process based on pre-defined indicators.**

## HOW TO ENGAGE

R&I projects are often designed so that actions lead to short-term, medium-term, and long-term scientific, societal, economic, and technological impacts.<sup>24</sup>

With regards to stakeholder engagement, in our – the authors’ – experience, there are two primary ways to evaluate processes: (1) performance-based evaluation and (2) outcomes/impacts-based evaluation. Performance-based evaluation focuses on how engagement is carried out. An indicator, for example, could be the number of participants at an event. Outcomes/impact-based evaluation moves beyond performance-based measures to assess how engagement has contributed to meeting the project’s mid-to-long-term goals and/or its impact on stakeholders and their activities. An indicator, for example, could be a network that continues after the project’s duration.

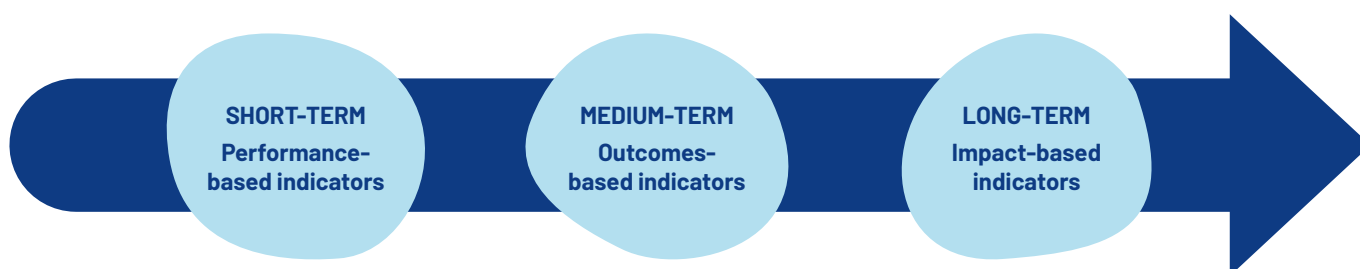
It may be beneficial to consider evaluation from different perspectives (i.e., stakeholder and partner perspectives). Asking the same questions to project partners and stakeholders may produce different outcomes. For example, consider a hypothetical workshop where project partners ask stakeholders for feedback on a tool designed in the project. The project partners may, in evaluating the workshop, state that it was highly valuable – they were able to improve the tool based on stakeholder feedback. However, the stakeholders may, in evaluating the workshop, reflect that they did not get much out of it, at least in the short term. Importantly, evaluating engagement from the stakeholders’ perspectives can help ensure that engagement is mutually beneficial rather than exploitative.



In these Guidelines, we do not provide a prescriptive recipe for how to evaluate engagement – more research is needed on this topic. Rather, we provide the following recommendations:

1. **Document decisions (e.g., related to Steps 1-5 of these Guidelines)**
2. **Consider different types of evaluation (performance-based vs. impacts/outcomes-based)**
3. **Consider different perspectives (project partners vs. stakeholders)**

Figure 3: Impact and types of evaluation.



## EXAMPLES FOR AND FROM PRACTICE

Performance based-evaluation indicators considered in CLIMAREST	Additional impact/outcomes-based evaluation indicators for future consideration	Additional performance-based evaluation indicators for future consideration
Number of activities (workshops, meetings, ...)	Uptake beyond the project: Knowledge/innovation leading to co-creation (S, P)	The transparency (clear decision-making, accessible information, etc.) of the process (S)
Number of participants	Degree to which innovations are used by end-users (S)	
Number of collaborations with other initiatives	Behavior and/or perspective change in stakeholders (S)	
Number of stakeholder categories	Continued partnerships (S, P)	
Gender		
<i>NOTE: 'S' denotes 'stakeholders' and 'P' partners.</i>		

## FACTORS THAT INFLUENCE ENGAGEMENT

**PROJECT TIMELINE:** If stakeholder engagement activities end the same month as the project, there might be little time to evaluate engagement.



**Lesson learned from CLIMAREST:** *While stakeholder engagement activities generally did not end the same month as the project, people were busy finishing up other activities and were thus unlikely to have time for extensive evaluation of the mid-to-long term impacts of engagement.*

**Consider the project timeline when planning engagement evaluation. Consider a deliverable on engagement evaluation due at the end of the project.**

**FUNDING SCHEMES:** Funding duration may impact the timeframe of stakeholder engagement evaluation.



**Lesson learned from CLIMAREST:** *Short-term project funding may limit ability to evaluate the mid-to-long term impact/outcomes of stakeholder engagement.*

**Consider if collaboration can be made with ongoing initiatives that will continue after the project's end or proxy measures.**

# CASE 6



## EXAMPLE OF EVALUATING ENGAGEMENT IN SCHOOLS



Photo credit: P. Parretti and MarDive

Madeira's shallow rocky reefs have undergone a significant phase shift toward sea urchin barrens, largely due to increased grazing pressure and human-induced stressors. Within the CLIMAREST project, stakeholder engagement was a key strategy to address these challenges, with activities designed to (i) involve SCUBA divers in underwater monitoring and (ii) raise public awareness about the ecological importance of macroalgae.

This case study highlights an engagement initiative implemented with students on Madeira Island and demonstrates how to evaluate the effectiveness of such actions. In November 2024, 117 students from five public schools (8th and 10th grades) participated in the activity. To measure its impact, an evaluation framework was applied using a pre- and post-event questionnaire consisting of eight closed-ended questions (e.g., "I agree with this statement" / "I don't agree"). The questions were tailored to the session content and aligned with Ocean Literacy principles.

Data collection followed school protocols: students completed surveys via Google Forms, parental consent

was obtained, and anonymity was ensured through unique identification codes that allowed comparison of responses before and after the activity. The engagement was structured as a progressive learning experience, starting with a broad overview of global marine threats (pollution, habitat degradation, climate change), then narrowing to Madeira's benthic ecology and the decline of macroalgae due to grazing and stressors. Students learned about CLIMAREST restoration measures and explored macroalgae in detail, covering classification, structural diversity, and ecological roles. The session concluded with an immersive Virtual Reality SCUBA dive, enabling students to "experience" Madeira's underwater ecosystems first hand.

Evaluation results: Post activity responses revealed a measurable improvement in students' knowledge and awareness, confirming the effectiveness of the engagement in fostering positive attitudes toward marine restoration. This evidence-based approach demonstrates how structured evaluation can validate the impact of stakeholder engagement and inform future outreach strategies.



Photo credit: L. Setsaas

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# Annexes



# Annex I. Stakeholder analysis supplementary material

Stage 1 : Identification, which addresses <b>Who</b> to engage	Stage 2: Assessment, analysis, and prioritization, which addresses <b>Why</b> to engage and <b>What</b> to know prior to engagement	Stages <b>1&amp;2</b> combined
<ul style="list-style-type: none"> <li>• Template for stakeholder identification and categorization - <a href="#">The BiodivERsA Stakeholder Engagement Handbook</a><sup>18</sup></li> <li>• List of potentially relevant categories of stakeholders to include in marine and coastal restoration - <a href="#">Gaspers et al. (2025)</a><sup>25</sup> &amp; <a href="#">The BiodivERsA Stakeholder Engagement Handbook</a><sup>18</sup> pg. 37</li> </ul>	<ul style="list-style-type: none"> <li>• Template for evaluating stakeholders' interest and influence (<i>mostly answers 'Why to engage' and does NOT include evaluation of 'impact'</i>) - <a href="#">The BiodivERsA Stakeholder Engagement Handbook</a><sup>18</sup></li> <li>• Template for evaluating stakeholders' interest, influence, and impact (<i>mostly answers 'Why to engage' and includes evaluation of 'impact'</i>) - Reed et al. 2025<sup>20</sup> (section 3.1)</li> <li>• Workshop methods for identifying stakeholders and addressing their interest, influence, and impact (<i>mostly answers 'Why to engage'</i>) - Reed et al. 2025<sup>20</sup> (section 3.1)</li> <li>• Template for understanding your stakeholders (<i>mostly answers 'What to know'</i>) - <a href="#">The BiodivERsA Stakeholder Engagement Handbook</a><sup>18</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Survey questions for identifying stakeholders and addressing their interest, influence, and impact and reasons for participating (answers '<i>Who to engage'</i>', '<i>Why to engage'</i>' and '<i>What to know'</i>') - Reed et al. 2025<sup>20</sup> (section 3.2 &amp; supplementary materials)</li> </ul>

# Annex II. Engagement preparation supplementary material



## Workshops

The BiodivERsA Stakeholder Engagement Handbook (pages 62-64) provides information about [specific techniques](#) and the Handbook's Practical Method Notes provides information about [facilitation](#) and [organization](#).



## Focus groups

The University of Kansas' Community Tool Box provides a [Toolkit for Conducting Focus Groups](#) and the University of Reading provides a [Methods Guide](#).



## Interviews

The BiodivERsA Stakeholder Engagement Handbook's Practical Method Note provides information on [interviewing stakeholders](#).







## Surveys

The Harvard University Program on Survey Research provides a [Tip Sheet](#) with information on how to write survey questions.



# Annex III. Example of participatory sign-in sheet

<hr/> <b>Name &amp; Surname</b> <hr/>	
<hr/> <b>Organization / Affiliation</b> <hr/>	
<hr/> <b>Role in Project/Organization</b> <hr/>	
<hr/> <b>Gender</b>	<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/> <input type="checkbox"/>  <input type="checkbox"/>
<hr/> <b>Have you signed the consent form?</b>	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
<hr/> <b>Email Address</b> <hr/>	
<hr/> <b>Signature</b> <hr/> <hr/>	

# Annex IV. Factsheet of Arctic fjord ecosystems – Svalbard, Norway



## CONTEXT

Arctic fjord ecosystems face multiple challenges due to global warming and local anthropogenic disturbances. Their location at the interface between land and ocean, combined with polar climate and high seasonality, makes them vulnerable to stressors like pollution, fishing, tourism and the establishment of non-native species.

In the Arctic, erosion is the main process shaping permafrost coastlines. Climate change intensifies this through increased extreme weather events, rising air

and sea temperatures, longer open-water periods, and, in some cases, thawing permafrost. Erosion rates have increased by 80–160% across monitoring sites, leading to land loss, pollutant release, and impacts on flora, fauna, infrastructure, and human activity. Wastewater pollution has also contributed to changed species diversity in Arctic fjord systems. Measures to reduce climate and pollution pressures are needed to support ecosystem resilience and sustainable development of Arctic communities.





## AIM OF THE ENGAGEMENT

To co-develop nature-based solutions for erosion control and a social campaign to increase awareness of wastewater pollution with local stakeholders.



## SCOPE (LEVEL OF ENGAGEMENT)

Stakeholders are engaged through co-design and collaboration, contributing to planning, technical feedback, monitoring, and shaping restoration plans, infrastructure, and outreach strategies.

## STAKEHOLDERS INCLUDED

Regulation, administration, enforcement	Commercial / professional users	Recreational users	Education, Research, NGOs
The Governor of Svalbard	Visit Svalbard	Active in the Outdoors	University Centre in Svalbard
Longyearbyen Community Council: Area Planning and Development	Svalbard Business Association	Sport clubs (diving, kayaking)	Kindergartens and schools
Longyearbyen Community Council: Port of Longyearbyen	Store Norske Spitsbergen Kulkompani AS	Year-round residents	Svalbard Museum
Directorate for Cultural Heritage	Logistics operators	Tourists	International scientists
Ministry of Trade, Industry and Fisheries (landowner)	Engineering consultancies		Students
	Svalbard Airport		
	Coop		
	Service providers (plumbers)		
	Commercial fisheries		
	Association of Arctic Expedition Cruise Operators		

## ENGAGEMENT (WHAT ACTIVITIES)

A co-design workshop was held to develop erosion control prototypes, and stakeholder meetings were conducted to plan wastewater awareness campaigns. **Input was provided on technical design, social needs, and citizen science-based monitoring strategies.**

Outreach activities were conducted targeting local schools (8th - 11th grades).

# Annex V. Factsheet of Seagrass ecosystems – Galway Bay, Killala Bay and Tralee Bay, Ireland



## CONTEXT

Seagrass meadows are among the most valuable ecosystems on Earth, densely colonizing sediment bottoms and providing essential services such as carbon and nutrient sequestration, nursery and biodiversity support, and coastal protection. These habitats play a key role in climate regulation and shoreline stability through sediment trapping and enhanced nutrient cycling.

A range of human pressures, including eutrophication from intensified agriculture, habitat destruction,

global warming and urban waste effluence, has led to accelerated global loss throughout the 20th century. In Europe, environmental conditions have improved following the implementation of the EU Water Framework Directive, but recovery remains slow. Restoration is a key nature-based solution to enhance ecosystem services, restore ecological functions, and mitigate habitat degradation.





### AIM OF THE ENGAGEMENT

To involve stakeholders in the restoration and monitoring of seagrass meadows and promote awareness of their ecological value.



### SCOPE (LEVEL OF ENGAGEMENT)

Stakeholders are engaged through consultation and collaboration, participating in restoration planning, permissions, planting, monitoring, and outreach to support long-term stewardship.

### STAKEHOLDERS INCLUDED

Regulation, administration, enforcement	Commercial / professional users	Recreational users	Education, Research, NGOs
Galway City Council	Farmers	Beach users	Blue Ocean Watch
Dublin and Fingal City Council	Wastewater managers	Surfers	ZERO Waste Alliance
Galway County Council	Windsurfing school	Horseback riders	Irish Marine Institute
Mayo County Council	Horse-riding school	Galway Atlantaquaria	University of Galway
Department of Housing	Scallop and oyster fishermen	Friends of Barna Woods and Rusheen Bay	Coast Watch Ireland
Local Government and Heritage	Tralee Oyster Fishery Society	Maharees Conservation Association	Munster Technological University
National Park and Wildlife Service	Maharees Seagrass Hatchery		Irish Elasmobranch Group
Irish Environmental Protection Agency	Seaweed Harvesters		
Sustainable Water Network	Tralee Bay Sea Angling Club		
Local Authority Water Programme	European Seagrass Restoration Alliance		
	Society for Ecological Restoration		
	Irish Ocean Literacy Network		

### ENGAGEMENT (WHAT ACTIVITIES)

Workshops and meetings were held to inform stakeholders and involve them in seagrass planting, monitoring, and outreach. **Agreements were made with fishers and local actors to support restoration and protect experimental sites.**

# Annex VI. Factsheet of Oyster reef ecosystems – Brittany, France



## CONTEXT

Oyster reef ecosystems once covered large areas of the European seabed, with the native flat oyster (*Ostrea edulis*) forming dense reefs that supported biodiversity and provided important ecological functions. By the late 1800s, overfishing had severely damaged populations. Diseases, parasites, predators, and human-induced stressors caused further decline up to functional extinction.

Today, the species has disappeared from many regions and is listed as threatened under OSPAR. Remaining populations are sparse and no longer form functional reef habitats. Recovery is limited by lack of hard substrate, high predation, and parasite pressure, along with coastal development and pollution. Restoration has become a key nature-based solution to rebuild reef structures, restore ecosystem services, and improve coastal resilience.





### AIM OF THE ENGAGEMENT

To collaborate with stakeholders in restoring oyster reefs and integrating restoration into local marine management.



### SCOPE (LEVEL OF ENGAGEMENT)

Stakeholders are engaged through co-design and collaboration, contributing to restoration planning, field implementation, regulatory alignment, and future upscaling strategies.

### STAKEHOLDERS INCLUDED

Regulation, administration, enforcement	Commercial / professional users	Recreational users	Education, Research, NGOs
French Biodiversity Agency	Oyster farmers	Recreational fishermen	SEABOOST
Directorate of Maritime Affairs	Comité Régional de Conchyliculture	Shellfish gatherers	French Research Institute for Exploitation of the Sea
Natura 2000 site managers	Syndicat Ostréicole de la Baie de Quiberon	Beach users	European Institute for Marine Studies
Local municipalities	Equipment producers	Coastal residents	Cochet Environment
	Dredging fishermen	Tourists	Brest Oceanopolis Aquarium
	Sailing and kite surfing schools		Ostreapolis Museum, Aires Marines Éducatives
			Local schools

### ENGAGEMENT (WHAT ACTIVITIES)

One-on-one meetings and workshops engaged oyster farmers, government agencies, and NGOs in reef design and deployment. Activities also included planning for **outreach, citizen science, and future upscaling through schools and aquariums.**

# Annex VII. Factsheet of Sedimentary soft bed ecosystems – Vigo, Spain



## CONTEXT

Sedimentary soft bed ecosystems in the Galician rias of Vigo are shaped by mudflats, sandbanks, and seagrass meadows that support diverse marine life, including invertebrates, crustaceans, fish, and migratory birds. These estuarine systems are influenced by the Canary Current upwelling, resulting in high primary productivity and making the region one of the world's leading areas for shellfish production.

Mussel aquaculture, deeply rooted in local tradition, modifies the seabed through organic enrichment and sedimentation beneath mussel rafts. These changes affect benthic communities and nutrient cycling. Restoration has become a practical nature-based solution to improve benthic habitat complexity, support invertebrate and fish populations, and enhance ecosystem resilience while balancing ecological and economic needs.





### AIM OF THE ENGAGEMENT

To develop integrated aquaculture solutions that enhance biodiversity and support lobster recovery through stakeholder collaboration.



### SCOPE (LEVEL OF ENGAGEMENT)

Stakeholders are engaged through collaboration and co-implementation, participating in reef deployment, lobster tagging, monitoring, and outreach while balancing ecological and economic interests.

### STAKEHOLDERS INCLUDED

Regulation, administration, enforcement	Commercial / professional users	Recreational users	Education, Research, NGOs
Port of Vigo	Mussel farmers	Recreational fishers	University of Vigo
Ministry of the Sea	Galician Mussel Regulatory Board	SCUBA divers	University of Alicante
National Park of the Atlantic Islands of Galicia	Mejilloneras Cons de Udra	Nautical Cluster of the Ria of Vigo	Institute for Marine Research
	BlueStructures	Tourist guide associations	Norwegian Institute for Nature Research
	Fishers' associations (Cangas, Moaña, Redondela)		Galician Institute of Aquaculture Training
	Fundación para la Pesca y el Marisqueo		Asociación para a Defensa Ecolóxica de Galicia
	Mariscos Comesaña		Ecoloxistas en Acción
			Plataforma Defensa Ría de Vigo

### ENGAGEMENT (WHAT ACTIVITIES)

Stakeholders participated in meetings and interviews to support **lobster tagging, reef deployment, and monitoring under mussel farms**. Restoration activities were coordinated with local institutions and complemented by citizen science and outreach efforts.

# Annex VIII. Factsheet of Rocky subtidal ecosystems – Madeira, Portugal



## CONTEXT

Macroalgae-dominated marine habitats are thriving ecosystems, commonly found in shallow coastal areas and composed of diverse seaweed communities. These marine forests offer shelter and sustenance to a wide range of marine species, creating complex habitats that support biodiversity and ecosystem functioning. They also help maintain water quality by absorbing nutrients and producing oxygen through photosynthesis, serving as indicators of ecosystem health and resilience.

However, large parts of Madeira's shallow rocky reefs have undergone a phase shift towards sea urchin barrens, driven by increased grazing pressure and human-induced stressors such as overfishing, pollution, and habitat destruction. This shift has led to a major ecological loss, reducing biodiversity and weakening ecosystem stability. Restoration has become a key nature-based solution, aiming to promote macroalgae recovery, control grazing, and rebuild ecosystem functions to support the long-term sustainability of coastal communities.





### AIM OF THE ENGAGEMENT

To restore macroalgae habitats through stakeholder-supported monitoring and citizen science.



### SCOPE (LEVEL OF ENGAGEMENT)

Stakeholders are engaged through collaboration in monitoring and citizen science, contributing to biodiversity data collection, restoration support, and public awareness through tourism and education.

### STAKEHOLDERS INCLUDED

Regulation, administration, enforcement	Commercial / professional users	Recreational users	Education, Research, NGOs
Regional Directorate of the Sea	SCUBA diving centers	Recreational fishers	Marine and Environmental Sciences Centre
Institute of Forest and Nature Conservation	Frente Mar Funchal	Tourists	University of Madeira
Regional Directorate of Environment and Climate Change	Hotels	SCUBA diving clients	Students (ages 6-18)

### ENGAGEMENT (WHAT ACTIVITIES)

Workshops and interviews were conducted with SCUBA diving centers to support **biodiversity monitoring and restoration planning**. Tablets and kiosks with the Dive Reporter App were distributed to enable citizen science and data collection.

Outreach activities were conducted targeting local schools (8th - 11th grades).



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