



BlueGreen
Governance

Guidance on the development of a cocreative governance framework

Blue Green Governance Deliverable 2.1



This guidance was produced by:

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In the project BlueGreen Governance we are developing innovative land-sea governance schemes. Why? Because the current management of oceans, seas and coasts is fragmented across multiple institutional layers and policy areas and based on past experience. The project responds to the need for better-informed decision-making processes, social engagement and digital innovation.

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1 INTRODUCTION

Coastal and marine governance systems face a range of institutional and operational barriers that undermine their effectiveness, such as unclear roles and responsibilities, fragmented data, or conflicting stakeholder interests. In the BGG project we categorized these challenges along five dimensions and discussed the main barriers and enablers in a policy report (see Fobé et al., 2024). In this report, we use the insights about those dimensions **to develop a comprehensive framework for co-creative governance**.

Co-creation refers to the **active engagement of multiple actors** in different processes of governance, ranging from the identification of policy issues, visioning, strategic planning, policy design, implementation and evaluation. It denotes the increasing dependence of and interactions between the state on the one hand and stakeholders on the other hand.

Governments can no longer solve complex problems on their own. They require the **input and knowledge** that stakeholders (scientific communities, individual citizens and societal stakeholders, businesses and industry) possess to identify problems and their solutions (Brandsen et al., 2018). Co-creation can increase the problem-solving capacity of governments and promote shared understandings of problems and solutions (Jaspers & Steen, 2020).

In order to define possible solutions to the current problems in multi-layered marine and coastal governance, the BGG project develops in this report a co-creation framework for innovative governance. It draws on the insights generated in other work packages, i.e. WP1 (barriers and enablers for effective governance), WP3 (evaluation and monitoring) and WP5 (stakeholder identification). Next to this, the report uses scientific and grey **literature** on co-creative governance and **deliberative and participatory methods** to develop the framework. Key stakeholders in marine and coastal governance provided input via a focus group discussion on 13 December 2024. Additional insights on the framework were also sought from experts on marine and coastal governance within the BGG project, such as the Case Study leaders (CS leaders). Collecting such feedback and drawing on expert knowledge helped improve the quality, relevance and usefulness of the framework. After all, this framework is meant as **a tool offering guidance on (how to achieve) co-creative governance**.

- › We offer **guidance** for co-creation of governance schemes in coastal and marine areas.
- › We build on a thorough **review** of the scientific literature and the **findings** from BGG's policy report and scientific review report on "Institutional barriers and enablers for a better marine governance" under WP1.
- › We refine the framework through the feedback collected from relevant stakeholders.
- › The direct **target audience** is BGG's case study leaders. Indirect audiences include actors who are responsible for establishing or maintaining co-creative governance.



The framework in this report is structured as follows:

- › **Chapter 2** presents the main building blocks and components of the framework.
- › **Chapter 3** details how the first main component in the framework can be achieved.
- › **Chapter 4** details how the second main component in the framework can be achieved, and identifies conditions for success.
- › **Chapter 5** concludes the framework document with a short checklist to ensure successful co-creation processes.

2 FRAMEWORK STRUCTURE

Figure 1 depicts the framework for co-creation of governance schemes in coastal and marine areas. It includes **two central components**: a pre-co-creative governance process and a co-creative process.

The **pre-co-creation** process involves important ‘house-keeping’ phases that organizations or collective groups of individuals have to go through before establishing the actual co-creative governance processes. This includes understanding the multi-level context of the governance process, and identifying the stakeholders within that context. The actual **co-creative governance process**, in turn, can take place at different stages of the policy cycle, for instance when identifying problems, designing collaboration types and assessing solutions, or while putting into effect policies and actions.

This framework is to be considered as a tool to guide actors in the organization of co-creative governance processes. We explain the main structure of the framework in the paragraphs below. We first present the two main components in the co-creation framework, then we discuss other elements in it, and lastly we identify and describe the key conditions for success. The next chapter elaborates on this and presents in detail the composition of the framework and how the key conditions for success can be achieved.

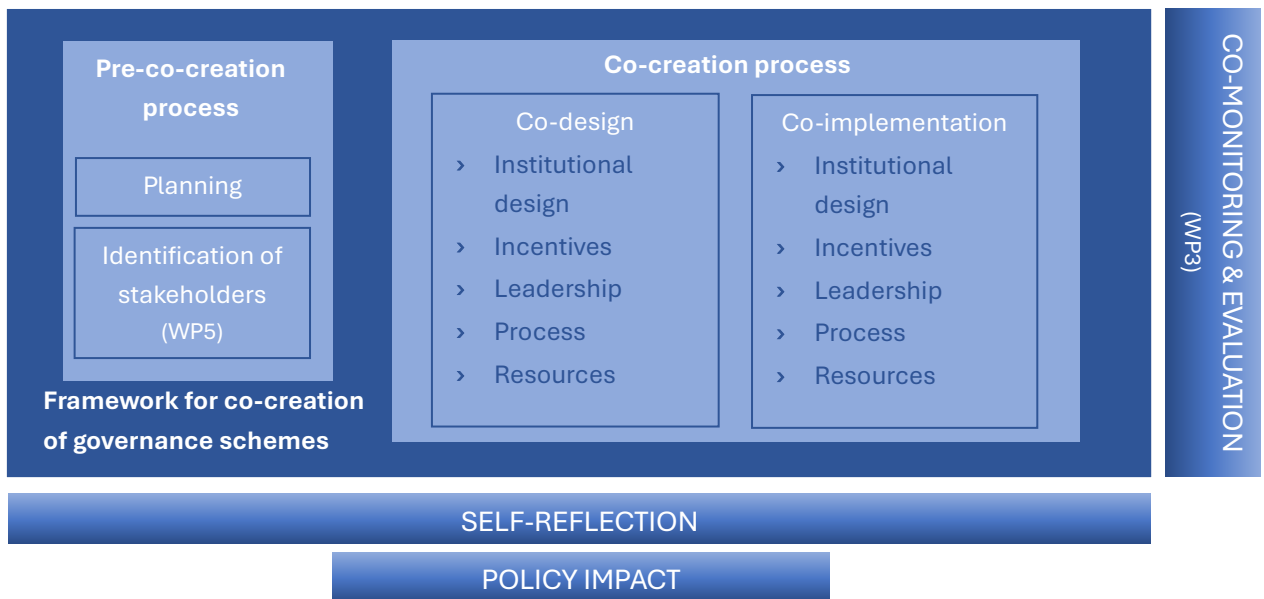


Figure 1. Framework for the co-creation of governance schemes

2.1 Core components of the framework

The **pre-co-creation process** involves important ‘house-keeping’ phases to set up stakeholder engagement and co-creation processes more effectively. This includes planning and stakeholder identification (Anderson et al., 2023).

- › **The planning phase** allows actors who want to develop co-creative governance schemes to conduct a baseline assessment or similar of the local context (i.e. political, socio-economic, cultural, historical, and other relevant factors) and multi-level nature of the case at hand. By better understanding this policy context and its complex nature, actors can develop plans to systematically obtain essential knowledge and information, and build capacity for the co-creation process later on.
- › The phase for **identification of stakeholders** prepares the organizers of co-creative governance to engage with stakeholders. This requires comprehensive mapping of the actors involved in or influenced by coastal and marine policies. Knowing who those stakeholders are and at which levels of government they are located is crucial for understanding their needs and interests and mobilizing their inputs during the co-creative stages itself. This first step is crucial to ensure sustained and effective engagement later on.

The pre-co-creation process is an important stepping-stone or building-block towards co-creative governance, yet the central component of the framework is the **co-creation process** itself. Co-creation with stakeholders can take place at different stages of the policy-making cycle. **The framework develops guidance on two important stages of the policy cycle.**



- › During **co-design**, stakeholder engagement is focused around the collective diagnosis of existing problems in coastal and marine areas and the co-design of solutions to those problems. Various tools and methods can be drawn on to co-design with stakeholders.
- › During **co-implementation**, stakeholders are engaged in the collaborative execution of governance actions and policies. There are various conditions under which successful co-implementation can be achieved.

Co-creative governance has several advantages. Co-creation can increase the quality of policies as well as their support and legitimacy (Jaspers & Steen, 2021). Firstly, it is worth noting that the *co-design* stage acts as a bridge between stakeholders and policy makers. It could strengthen the consideration of various perspectives in policy decisions, including those of local communities, policy actors, researchers, and private sector organizations. In this way, co-creative processes help build trust and enhance community ownership, which not only strengthens the legitimacy of decisions but also fosters long-term commitment to sustainable outcomes (Anderson et al., 2023). Furthermore, involving stakeholders in the *co-implementation* of policies helps identify practical challenges and tailor the implementation of solutions to specific contexts, enhancing their feasibility and impact. Studies show that citizens are more interested and willing to comply with and implement policies when they are developed through a co-creative process (Acar et al., 2023).

2.2 Other components in the framework

The framework focuses on the two stages of design and implementation and the involvement of stakeholders therein. It does not cover other stages of the policy cycle. We explain this shortly here. Next to this, we highlight additional elements that are of relevance to understanding the framework (marked in grey in the Figure 1) but that are not fully developed in this framework because they are part of other work packages in the project.

Firstly, we note that the framework **does not address the policy decision-making** stage of the policy cycle. This is the stage where decisions are actually made and it takes place after the design of policies and before they are implemented. Policy decisions are taken by a very select group of actors who are legally mandated to do so. Stakeholders are usually excluded from the decision-making stage, although they can try to influence it through various activities and strategies (e.g. Binderkrantz, 2005). It is not the main focus of this framework to cover those activities, however, it does offer some guidance on how to impact on the decision-making stage *via* co-creative governance processes.

Secondly, we emphasize that the role of **Monitoring and Evaluation** (M&E) is highly significant to building and refining policies. However, the development of an M&E system for coastal and marine governance is a separate task in the BGG project (WP3) and is not covered in this framework as such. It should be highlighted that at this stage of the policy cycle, it is equally relevant to regularly engage stakeholders. The co-monitoring and co-evaluation of the



governance process can provide valuable information and feedback, and improve the effectiveness of coastal and marine governance.

Lastly, the framework recognizes the **importance of sustained co-creation through self-reflection**. Ensuring the long-term sustainability of the co-creation process is crucial. One could argue that next to the pre-co-creation process and the co-creation process, there is also a ‘post’ phase for co-creation which evaluates the co-creation process itself. Evaluating and regularly reflecting on the components for successful co-creative governance in the framework can help actors better understand strengths and weaknesses in existing governance capacities, resources and knowledge, and aid in addressing capability gaps. Whether co-creation is sustainable in the long term depends not only on maintaining its continued implementation by capacity building among stakeholders for engaging in collaboration, but also on the sustainability of co-creation outcomes (Jasper & Steen, 2020; Steen & Brandsen, 2020; McMullin, 2024). It is important, for instance, to ensure that the participants have sufficient resources, capacity, and the willingness to commit their participation in collaboration. Jaspers and Steen (2020) highlight that long-term collaboration, supported by flexible institutional structures and stakeholder empowerment, contributes to maintaining co-creation and sustainable results even after a project ends.

In sum, reflection on co-creation itself is an activity that can help improve the effectiveness of co-creative marine and ocean governance frameworks. What is more, the process and results of such reflections can and should ideally be shared or conducted together with stakeholders in view of trust building, motivation, and empowerment, as well as sustainable collaboration.

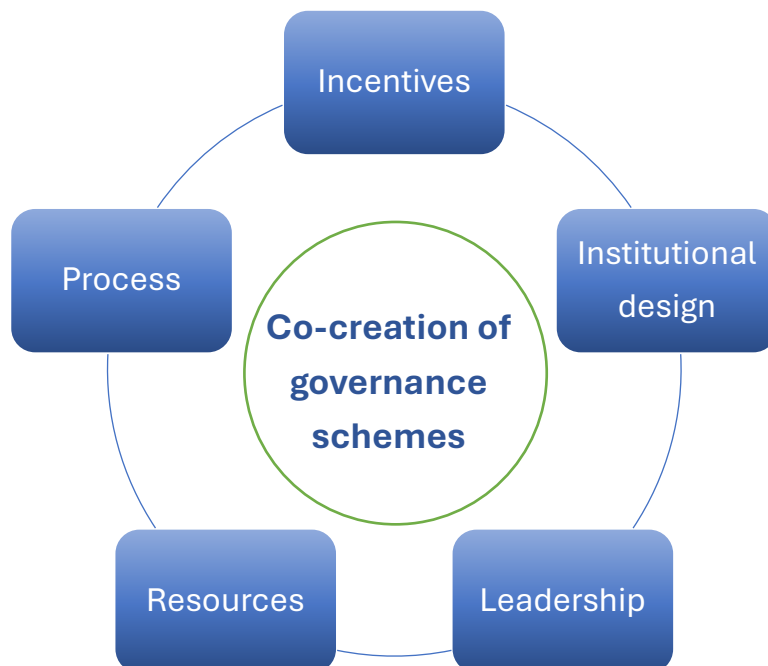


Figure 2. Factors for successful collaborative governance (Based on Kurkela et al., 2023; Douglas et al., 2019; Sicilia et al., 2019; Ansell & Gash, 2008)



Figure 2 provides an illustration of **five key factors for co-creative design and implementation**. We describe these key factors in more detail hereafter.

- › **Incentives:** In co-creative governance, incentives play a significant role in motivating stakeholders to participate. They provide the first condition to initiate, and later sustain an interest in collaborating. Stakeholders are more likely to participate if they perceive that the collaboration will yield meaningful outcomes. A ‘meaningful outcome’, even if small, can foster empowerment and become a driver of change, as long as progress is made. Conversely, stakeholders who feel that their input is only symbolic may lack the motivation to collaborate. Therefore, incentives are fundamental to the success of co-creative governance.
- › **Institutional design:** A well-structured institutional framework is essential for co-governance. An institutional design should include clear locations and structures of engagement with high level of access and transparency to help build trust and ensure that co-creation is considered equitable and legitimate. Effective designs should also be able to adapt to emerging challenges in the governance process and embrace innovative approaches for stakeholder engagement (such as digital platforms).
- › **Leadership:** Leaders play a key role in guiding, directing, and overseeing the co-creation process. They engage stakeholders, supervise the process, resolve conflicts, and maintain a shared focus on common goals. To promote inclusiveness, leaders must remain neutral, empower less influential participants, and ensure that all voices are heard. Strong leadership may compensate for limitations in other conditions and still lead to successful co-creation.
- › **Process:** This condition for success refers to the ‘rules of engagement’ in the co-creative governance process during the dialogues, shared decision-making process, and problem-solving actions. Clear and fair rules for engagement lead to trust and mutual understanding among stakeholders. For effective co-creation, emphasis is placed on open communication, feedback mechanisms, negotiation, as well as mechanisms to address power imbalances and maintain transparency.
- › **Resources:** Adequate resources are essential for effective co-creation. This includes financial resources to fund participatory initiatives, human resources in the form of trained staff, expertise and technical tools to design and implement participation methods (especially, but not only limited to digital tools). Resource availability and equitable allocation significantly influence collaborative outcomes. Resource disparities, in turn, can hinder inclusivity.

Working to activate and foster the above factors in a positive manner significantly enhances the likelihood of achieving success in co-creative governance processes. The ability to do so will also depend on the type of actor who is responsible for setting up co-creative governance schemes: actors outside of the public sphere might be more limited in the degrees to which they can influence the availability of *resources* for co-creative governance, for instance. The other conditions for success appear to lie more within their range of abilities.



In the following sections of this report, we discuss in detail the **core components** of our co-creation framework, the anticipated challenges therein, and how the above factors could be activated to enhance successful co-creation.

3 FRAMEWORK: PRE-CO-CREATION¹

STEP 1: Planning

It is recommended that organizations seeking to create co-governance first conduct a baseline assessment to understand the local context (i.e., political, socio-economic, cultural, historical, and other relevant factors) and get a view on existing knowledge of the governance topic. As governance systems are shaped by historical legacies, it is important to inherit and adopt past and current aspects of the governance system.

BOX 1: Planning

- › Identify existing policies, regulations, and governance structures and understanding how they have taken shape.
- › Identify land-sea governance in integrated planning process and relevant levels of government.

The process starts by reviewing current governance systems to understand the existing policies, rules, and structures. It also identifies connections, gaps, and areas where marine and land-based policies might overlap. The questions in Table 1 below enable this preparatory stage of the co-creation of governance. This list can be expanded depending on local contexts and the goals of the co-creation process.

Table 1. Questions for baseline assessment in planning

- 1 What are the existing policies, rules and regulations on coastal and marine governance?
- 2 How is governance currently structured and how does decision-making processes on marine resource use and management take place? Is there already a mechanism for co-creation or collaborative governance in place?
- 3 Do we understand the cultural and historical significance of coastal and marine areas?

¹ This chapter is based on Kurkela et al., 2023; Douglas et al., 2019; Sicilia et al., 2019; Ansell & Gash, 2008; Voorberg et al., 2018; Jaspers & Steen 2020, 2021; Letki & Steen, 2021, complemented by insights from additional data collection strategies.



- 4 What are the economic and social activities relying on marine resources and have their impacts been assessed?
Are necessary qualifications and expertise present to meet the needs of
- 5 marine co-governance and integrated planning, and what are training needs or professional development opportunities?
- 6 Are there existing databases, or if not, is information accessible and which comprehensive data is available on local marine ecosystems?

The outcome of this planning stage will help organizations understand the general picture of the current context and what available knowledge and resources exist for the co-creation process. Table 2 highlights the expected challenges at this preparatory phase of the co-creation process. It should be noted that the organizers of a co-creative governance process will not in all instances be able to address all of these challenges. Nevertheless, we identify some measures to overcome the challenges in successfully conducting the integrated planning phase for co-creation of marine governance.

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Table 2. *Challenges in achieving integrated planning for co-creation of marine governance*
(Based on Fobé et al., 2024)

Challenges	Measures
Lack of institutional clarity Overlapping mandates and unclear roles lead to inefficiencies and conflicts between stakeholders and governance levels.	<ul style="list-style-type: none">› Clear assignment of roles and mandates, responsibilities, and decision-making authority among institutions.› Develop comprehensive strategies and management plans to facilitate the integration process.
Inadequate resources Limited financial, technical, and human resources constrain the system's ability to develop and implement integrated efforts.	<ul style="list-style-type: none">› Secure dedicated government funding or through public-private partnerships to support governance structures.› Invest in training and building capacity for staff.



Inadequate access to reliable information

can hinder evidence-based decision-making, while **fragmented knowledge systems** can hamper policy coherence.

Data systems are often incomplete, inaccessible, or not (yet) harmonized across sectors and regions.

- › Actively promote shared and accessible data through knowledge platforms to reduce fragmentation and enhance coordination, transparency, and aligned expectations.
- › Develop centralized data platforms to facilitate data sharing across sectors and regions.
- › Standardize data collection and dissemination practices to ensure consistency and accessibility

STEP 2: Identification of Stakeholders

Stakeholder identification is a key building-block for co-creation of marine governance, as it ensures that decision-making is inclusive, equitable, and effective.

Stakeholders, including local communities, government agencies, industry representatives, researchers, and NGOs, all bring unique perspectives, knowledge, and interests that influence the sustainable management of land and water resources. Recognizing and engaging these diverse voices helps co-creation foster collaborative solutions that balance environmental conservation with economic, social, and political priorities. Equally, involving public actors such as regulators in the co-creation process can facilitate the identification of important regulatory barriers to innovative governance.

In all, **early identification of relevant and broad sets of stakeholders** builds trust and creates shared ownership of policy solutions in the governance system, thereby improving the prospects for sustainability in addressing complex governance challenges.

BOX 2: Stakeholder identification

- › Identify all relevant stakeholders, including government agencies, local communities, NGOs, private sector organizations, academic institutions, etc.
- › Use stakeholder mapping tools to systematically assess and map stakeholders, their roles, interests and activities.
- › Ensure up-to-date information on stakeholders and their views and positions.
- › Create stakeholder network and communication mechanisms, ensuring all voices are heard.

Systematic mapping of stakeholders allows identifying and understanding the diverse actors involved in marine and coastal governance. Stakeholders include public actors and entities, local communities, NGOs, private sector organizations, and academic institutions. The stakeholders can be categorized according to their location, differentiating between a governmental arena (e.g. decision-makers, ministerial advisers) and a private for profit and not for profit arena where academia or research institutions and societal actors such as NGOs or



business associations are located. Stakeholders can equally be categorized according to the roles they take up in marine and coastal governance or the knowledge they bring to the table (i.e. policy-makers vs. target groups or affected groups vs. knowledge providers vs. interest groups). Stakeholder mapping practices should ensure the inclusion of a wide range of stakeholders. This includes in particular vulnerable communities who are often affected, yet rarely included in policy-making processes. In addition, it is important continuously gather, review, and consider the most current perspectives, opinions, and interests of all key stakeholders involved in the co-creation of governance process. This can be achieved by maintaining open communication and staying informed about stakeholder's evolving positions. Additionally, stakeholder analysis tools, such as power-interest grids, can be used to evaluate power dynamics, influence levels, and relationships. This facilitates the mapping of dependencies and identification of potential conflicts. Direct engagement through interviews, surveys, and workshops further enriches the understanding of stakeholder perspectives, leveraging community-based consultations to integrate local knowledge.

Building a network of stakeholders and establishing communication mechanisms play a fundamental role in promoting cooperation and ensuring effective dialogue between participants. During the stakeholder mapping process, a dynamic directory can be developed. This directory should provide detailed and updated information on the contacts, roles, and interests of each stakeholder. This directory can be updated regularly to accommodate inclusion of new stakeholders and changes in their roles and responsibilities. The 'snowballing method' can be useful in this regard, allowing a first group of stakeholders to suggest other potential candidates, extending the network beyond the 'usual suspects' that projects are already in contact with.

The identification of stakeholders faces several challenges which are presented in table 3 below. We identify measures to overcome those challenges, but again note that these may not lie within the powers of all actors responsible for setting up co-creative governance.

Table 3. Challenges in identifying stakeholders

Challenges	Measures
Inadequate inclusivity Not all relevant stakeholders have been identified, because they are difficult to locate or have historically not been involved.	<ul style="list-style-type: none">› Adopt a holistic definition of 'stakeholder', allowing all relevant actors to be identified and engaged in the co-creation process, and including responsibility for implementation.› Design participatory approaches that prioritize inclusivity, ensuring vulnerable communities have a voice in governance processes. Use methods such as anonymous feedback tools



and public disclosure of agendas and outcomes to ensure all voices are heard and valued.

Insufficient understanding of local contexts

Identifying stakeholders should include actions to understand them better.

- › Incorporate stakeholders' insights, perceptions, and values into governance strategies via regular formal and informal dialogues

Ineffective communication

Building a network and establishing a good view on relevant stakeholders should also include outreach activities and tailored communication

- › Tailor messages to resonate with local audiences, using common language and narratives that align with stakeholders' values and experiences.
- › Emphasize transparency and clarity to enhance trust and credibility of governance initiatives.

Stakeholder fatigue

This can happen even before the co-creation process, when local actors are involved in (too) many projects and cannot commit to yet another initiative

- › Align and coordinate with other research projects to have joint reference groups and workshops.
- › Request towards stakeholders should include a meaningful and clear message on what they can gain/benefit from participation

We note two additional factors that are of importance for the mapping of stakeholders. These factors also play a role during the actual co-creation stage (see next chapter): The first factor is to establish mechanisms to coordinate with and among stakeholders after they have been identified, while the second is to provide support and resources to maintain stakeholder involvement, even when co-creation activities are at a low.

Coordination between stakeholders can be promoted through the establishment of multi-sectoral committees or working groups, or by leveraging existing networks such as local councils or environmental forums to enhance participation and cooperation.

- › Effective communication mechanisms can be established using designated channels such as newsletters, virtual platforms, local community centers or other digital tools.
- › Communication materials themselves, need to be designed in an accessible way, including translation into local languages, to ensure inclusivity for all audiences.
- › Regular interactions, such as scheduled meetings, workshops, and forums, keep stakeholders informed and involved. Such activities provide opportunities to give updates and gather feedback throughout the co-creation of governance initiatives – even when core activities are at a low.

Allocating resources (financial, technical), training and building capacity for stakeholder engagement are essential to empower participants and ensure their effective involvement in marine and coastal co-governance initiatives. A dedicated funding can be secured for



stakeholder activities while exploring partnerships with funding institutions and private sectors for sustainable financing.

- › Targeted training programs using participatory methods are organized to raise awareness on marine governance, policy frameworks, and how they can contribute to co-creation of resource management in their areas.
- › Continuous evaluation of training effectiveness, combined with adaptable program designs, ensures responsiveness to emerging needs.
- › Empowering local leadership by identifying and training community champions fosters grassroots engagement and long-term sustainability, strengthening the collective capacity to address governance challenges effectively.

4 FRAMEWORK: CO-CREATION PROCESS²

4.1 Co-Design

Importance

The co-design phase is a foundational component of co-creation of coastal and marine governance. It emphasizes inclusivity, fostering shared understanding among diverse stakeholders by incorporating their values, needs and aspirations into the stage where **identification of policy problems and their solutions** is central. The process of co-diagnosing existing problems and co-creating governance solutions aims at addressing the multidimensional challenges facing marine ecosystems and coastal communities. A collaborative approach brings together stakeholders, identified in the previous step to systematically identify and analyze underlying issues affecting the marine environment. This stage facilitates the alignment of governance priorities with stakeholder needs and environmental goals. By ensuring inclusivity and transparency, co-diagnosis can also build trust among stakeholders, reduce conflict, and create a common ground for developing policies and strategies. Ultimately, it strengthens the resilience and sustainability of marine governance frameworks, allowing them to adapt to changing challenges while balancing conservation and resource exploitation.

² This chapter is based on Ansell & Gash, 2008; Madeira et al., 2013; Kurkela et al., 2023; Douglas et al., 2019; Sicilia et al., 2019; Voorberg et al., 2018; Jaspers & Steen 2020, 2021; Letki & Steen, 2021; Lorentzen, 2021, and the information gained through complementary data collection strategies.



Actions

BOX 3: Co-diagnosis of existing problems and co-design of governance solutions

- › Organize participatory workshops, brainstorming sessions, surveys, or public consultations together with the stakeholders, to understand where knowledge gaps are situated and how they can be filled (as this otherwise may impede the planning process). Such events can help identify governance issues, priorities, and proposed solutions.
- › Encourage the use of evidence-based scientific knowledge and best practices.
- › Establish a centralized repository for data, ensuring accessibility for all stakeholders.
- › Frequently collaborate with research institutions to get an update on relevant scientific data, creating synergies between researchers and other actors.
- › Develop user-friendly channels (e.g. digital platforms) for information sharing, stakeholder engagement, and decision-making processes.

This component in the framework involves two activities that are related to each other: **co-diagnosis of existing problems** and **co-design of governance solutions**. Both should build on diverse knowledge systems, such as scientific data and traditional ecological knowledge, thus promoting a comprehensive understanding of ecological, social, and economic impacts.

The co-creation process at the design stage emphasizes mutual learning, equalizing power dynamics, and employing suitable tools to facilitate inclusive participation. Laying the groundwork involves creating an environment that facilitates open communication, trust and mutual respect. Tools such as workshops, focus groups and participatory mapping are often used to facilitate engagement and generate meaningful inputs from participants. Similarly, such input can be sought to identify key knowledge gaps and priorities which further shape the planning process, and help define additional areas for research and assessment to develop better solutions (and implement them during the co-implementation stage). Attention to these elements is key to fostering collaboration and generating contextually relevant knowledge. As the co-creation process requires **time and resources**, co-diagnosis relies on **building trust**, sustaining participation, and motivating stakeholders through recognition and support. Empowering participants to confidently share ideas and take actions is critical, with visioning and scenario development aligning community aspirations with governance goals. This also helps stakeholders realize that they have more knowledge than they actually think, and become proactive in sharing.

We summarize these elements in the table below and structure them along the five broad conditions for success.

Table 4. How to enhance factors for successful co-design process



Incentives

- › Provide economic or other incentives to engage local communities in co-creative processes (e.g., attendance fees, fishing quotas). However, a precautionary approach must be taken when using direct financial rewards as this can sometimes be counter-productive and may not foster effective citizen involvement (Voorberg et al., 2018)
- › Acknowledge stakeholders' contributions through awards or public recognition, fostering a sense of value and appreciation. Tailoring approaches to the specific norms and traditions of communities, e.g., community attachment, helps enhance citizen engagement (Letki & Steen, 2021).
- › Provide training, capacity building for stakeholder can also be an incentive to motivate them and empower them throughout the design process.
- › Clearly communicate at the start of the co-creation process about the procedure and what the stakeholders can expect in terms of their input being heard, which helps increase their willingness to participate in the co-creation process.
- › Communicate regularly and via a tailored-made approach, keeping stakeholders informed about processes and outcomes to maintain their interests in the co-creation process

Institutional design

- › Develop integrated data-sharing platforms to facilitate co-diagnosis.
- › Establish collaborative structures that facilitate stakeholder engagement across sectors and disciplines.
- › Implement flexible structures that can evolve with the nature of stakeholders' inputs and with changing conditions (socio-economic, environmental, political...). This can include interactive platforms for on-site, in person dialogues as well as feedback using digital tools.

Leadership

- › Appoint neutral facilitators to mediate stakeholder discussions.
- › Create a stakeholder-led governance committee.
- › Leaders should cultivate trust among stakeholders to encourage open dialogue and collaboration.
- › Address disputes impartially to maintain cooperative relationships among stakeholders
- › Promote and foster engagements during and after actual moments of stakeholder engagement

Process

- › Define the rules and norms for stakeholder engagement activities to manage expectations and maintain momentum, also to prevent stakeholder's fatigue.
- › Define and clarify stakeholder roles within the co-creation processes to prevent overlaps and ensure accountability.



- › Establish protocols to ensure the incorporation of different types of knowledge and evidence, ranging from scientific data and findings to local communities' views and worries.
- › Develop adaptive plans providing room for further assessment and knowledge building as necessary during the co-implementation phase.
- › Draw on innovative and flexible methods to assess problems and solutions and include strategic foresight as a means to create insights into the longer-term impacts and developments.
- ›

Resources

- › Secure funding for sustained engagement with stakeholders through various possible platforms.
- › Secure funding for community training programs to empower local actors, ensuring their meaningful participation in the co-diagnosis process.
- › Distribute resources fairly to prevent power imbalances among stakeholders.
- › Allocate dedicated personnel, e.g., engagement experts, which ensures the systematic integration of citizen participation into governance processes, or provide capacity building opportunities to develop the skills and competencies among dedicated staff: skills for engaging with stakeholders, skills for co-designing problems and solutions. These can be located in different actors.

Above we have operationalized the actions that can be taken to promote the five factors for success of the co-creation process. It should be noted that co-creative processes are often led by academic or non-state actors. These actors have limited resources at their disposal and are often dependent on external funding to ensure adequate resources to set up a co-creation process. In other words: non-state actors may not have a good grasp on this particular condition for success. However, the other factors for success can be equally important and are within the range of all actors who aim to set up co-creative governance processes. For instance, an effective and champion facilitator of the co-design process (leadership) can trigger or create sufficient incentives to obtain participation and commitment of stakeholders and achieve success in discussing problems and solutions.

In sum, the combination of factors for success is important. For instance, the combination of both 'incentives and strong leadership' or 'incentives with strong institutional design', have been found to significantly contribute to effective co-creation of governance, especially within dynamic or complex policy contexts and problem-settings (Douglas et al., 2020).



Challenges

In Table 5 we present some challenges that actors may encounter during the stage of problem co-diagnosis and co-creation of governance solutions.

Table 5. Challenges in co-design of marine governance

Challenges	Measures
Diverse and conflicting stakeholder interests Stakeholders in marine governance often represent diverse sectors with conflicting priorities and values. Balancing ecological sustainability with economic or social interests can create tensions and disagreements, which may hinder consensus and collaborative decision-making.	<ul style="list-style-type: none">› Create formal and informal communication platforms that bring together stakeholders from various sectors and foster dialogues that enhance knowledge sharing and understanding among different actors.› These platforms enable dialogues, ensure representation, knowledge sharing and understanding among different actors, which may provide opportunities to address conflicting priorities in transparent manner.
Power imbalances Unequal power dynamics can marginalize the voices of vulnerable groups, such as small-scale fishers, Indigenous communities, or women. Dominant stakeholders may control the agenda, resulting in inequitable governance priorities.	<ul style="list-style-type: none">› Use participatory forums and advisory committees that ensure all voices are heard. Particularly, meetings held on site (e.g. villages) can empower the less powerful local communities.› Reform institutional structures to reduce the dominance of more powerful entities, for example, use rotating leadership roles or shared chairmanships to distribute authority equitably.› Ensure balanced representation from different sectors, including government, NGOs, and private stakeholders.
Lack of trust Historical context, lack of transparency, or perceived biases in governance processes can erode trust among stakeholders and lead to disengagement or resistance to collaborative efforts.	<ul style="list-style-type: none">› Building trust through transparent and open processes with regular dialogues and opportunities for all stakeholders to provide input and address their concerns about new governance structures.› Using a combination of on-site activities (e.g., networking events & team building activities, informal ‘coffee talks’, field visit, participating in local events) and digital tools (e.g., dashboard, online polls, survey).



Stakeholder fatigue

Due to prolonged involvement without perceivable progress or outcomes, resulting in reduced engagement and enthusiasm.

- › Clearly defines roles and responsibilities, clear and early communication to SHs in advance (before the co-creation process) on what stages they are expected to participate... adopt in their working schedule.
- › Clearly and timely communicating the progress, outcomes and deliverables of the co-creation, particularly what is achieved based on SH inputs (to maintain trust and motivation).

Knowledge and data gaps

Scientific knowledge may be inaccessible, fragmented, or poorly communicated, while traditional or local knowledge remains undervalued.

- › Develop centralized data platforms to facilitate data sharing across sectors and regions.
- › Standardize data collection and dissemination practices to ensure consistency and accessibility.
- › Integrating interdisciplinary and transdisciplinary insights can bridge the gap between scientific and experiential knowledge.
- › Synergies between different evidence types, supported by innovative tools and communication strategies, to ensure that scientific findings are relevant, accessible, and actionable.

No involvement or interest from decision-makers

This can lead to disappointment and fatigue among other stakeholders, both with the co-creative governance process itself, as with the policies that have been decided upon

- ›
- › Establish links early-on in the process and create open channels of communication
- › Include decision-makers, or those who can advise decision-makers in the process. Or keep these actors in the loop about the process and its outcomes.
- › Adjust messages and communication to provide tailor-made and clear advice resulting from the co-creative design stage.
- › Use diverse strategies for communication and dissemination to influence decision-making. Including direct contacts with executive and parliamentary actors, as well as indirect means of influence such as media attention.

We address the final two challenges in the table separately to highlight their importance.



Firstly, the use of **scientific knowledge is a fundamental** component in the co-creation of marine and coastal governance and is of particular significance for this co-design stage. After all, scientific knowledge:

- › plays a crucial role in identifying risks, understanding policy challenges, and developing solutions;
- › allows for the monitoring, evaluation, and prediction of complex socio-ecological systems, aiding in the management of marine and coastal environments;
- › provides insights into long-term developments (e.g., forecast and scenarios)
- › enables policymakers to make informed decisions that harmonize ecological, social, and economic priorities.

To make better use of scientific evidence in co-governance systems, it is essential to:

- › Create opportunities for researchers, local communities, and policymakers to work together, (i.e. through regular interactions on knowledge-sharing platforms or digital platforms). This helps incorporate scientific knowledge with local perspectives into governance processes.
- › Build expertise in research methods and tools that bridge science and community needs, enabling the generation of new knowledge and keeping existing information current.
- › Explore innovative approaches, like foresight studies and digital tools, to enhance the effectiveness and sustainability of the outputs at the co-design stage.
- › Make scientific evidence available in formats that align with policymaking, translating scientific priorities into policy-relevant perspectives for policymakers or resource managers.
- › Strengthen the links between science and policy to address any skepticism or hesitation toward scientific findings, for instance by fostering and funding research networks and research platforms where science and policy can meet and interact regularly.

Secondly, the involvement of direct policy makers, or those actors working in relevant policy areas in the co-creative governance process is an important challenge. While policymakers are often crucial stakeholders, they are at the same time overlooked when setting up co-creative governance processes. As a consequence, they can be very limitedly involved, (too) late or not at all. While it remains difficult to effectively mobilize and engage decision-makers in the actual co-creation process, it is important to involve or inform them at an early stage of problem co-diagnosis as this can foster political commitment towards the results of these co-creative processes. Political support can be crucial to achieve impact and create sustained effects from co-creative governance processes.

Diverse strategies can be deployed to involve decision makers early on such as inviting them to meetings or actively and regularly keeping them informed of progress and results. Similarly,



these strategies can be relied upon to influence the policy decisions made by policy actors and ensure that such decisions are based on or at least informed by the outcomes of the co-creative design stage in the governance process.

4.2 Co-Implementation

Importance

Engaging stakeholders such as local communities or private companies in the implementation of policies is both a challenge and essential element of this co-creative governance framework. After all, the engagement of stakeholders does not or should not end with the definition of problems and their solutions. These actors equally hold relevant insights and possess valuable experiential and on-the-ground knowledge to improve the quality of marine and coastal governance at the implementation stage.

The level of **community involvement must be tailored to the actual context complexity**. For example, in cases where there is a high number of policy measures, it should be clear who is **responsible** for their implementation (Lorentzen, 2021). Successful co-implementation also requires leveraging community resources, providing tools and space, and building stakeholder capacity for effective engagement at the implementation stage. This hands-on engagement of stakeholders **empowers participants** because they take collective responsibility for policies. This, in turn, can foster shared understandings and even strengthen the overall governance process, because of improved social bonds between stakeholders and their environment. At this stage, power imbalances between stakeholders remain important. They can be diffused simply by hosting meetings in the places where the less-powerful groups live, such as in their village hall, a local school, cafe, or community center, and discuss the implementation of measures in marine and coastal governance there rather than at more formal locations such as public offices.

Actions

BOX 4: Co-implementation of actions

- › Develop an action plan that allocates roles and responsibilities as well as resources, and that defines the timelines that are needed for successful implementation.
- › Motivate and empower stakeholders to engage in co-implementing actions.
- › Establish partnerships among stakeholders to leverage sufficient resources and mobilize expertise.
- › Utilize e-governance tools to enhance transparency in decision-making processes, allowing stakeholders to track progress of implementation processes, aid in their improvement and ultimately hold institutions accountable.



We describe the conditions for successful co-implementation processes in more detail in the table below and point to the main elements to achieve those conditions. These elements illustrate how enhancing incentives, optimizing institutional frameworks, fostering leadership, allocating resources, and facilitating collaborative processes can support effective implementation of governance solutions in marine conservation. Based on the specific context, organizations that facilitate co-implementation can rely on these measures and actions to respond to particular challenges they might encounter. With that, the framework underscores the need for adaptive and innovative schemes tailored to specific circumstances, rather than static responses or one-size-fits-all solutions.

Table 6. *How to enhance factors for successful co-implementation of governance solution*

Incentives

- › Incentivize stakeholders by emphasizing intrinsic motivational factors, such as the realization of public goods or recognition as equal partners in policy.
- › Economic incentives for sustained engagement during implementation, such as access to exclusive permits or marketing advantages (e.g. eco-certified business). Conditions can be linked to these incentives, such as the need to implement sustainable practices.
- › Recognize and award stakeholders formally after successful co-implementation (Madeira et al., 2013).
- › Incentivize stakeholders by ensuring involvement at later stages as well, for instance during monitoring and evaluation processes, which can enhance their sense of ownership and responsibility.

Institutional design

- › Create institutional structures that can integrate the intentions and resources of the actors who co-implement, and adapt those institutions over time in response to the inputs from feedback mechanisms or changing conditions.
- › Form committees that include representatives from various sectors to ensure comprehensive oversight and integration during implementation.
- › Use digital tools to ensure oversight and integration at the co-implementation stage.

Leadership

- › Obtain high-level government commitment for sustained co-implementation.
- › Encourage leadership roles to be shared among stakeholders, fostering inclusivity and diverse perspectives.
- › Encourage leadership among local communities specifically to incorporate local customs and knowledge into implementation strategies, making those initiatives more relevant and acceptable to stakeholders.

Process

- › Create processes that allow for regular stakeholder feedback during the implementation process itself, and that enable timely adjustments to that process when needed.



- › Establish rules and norms for feedback on the progress and the quality of implementation, and ensure diverse perspectives are included.
- › Conduct inclusive scenario planning and adopt backcasting methods for adaptive management.
- › Maintain clear records of resource allocation and use, and create transparency, ensuring stakeholders trust the co-implementation process and remain engaged.

Resources

- › Develop funding strategies that ensure long-term support for co-implementation activities, and ensure political buy-in for sustained financing.
- › Secure additional funding for co-implementation through public-private partnership or EU funding.
- › Provide solutions that support and facilitate implementation, such as data collection apps or communication platforms.
- › Empower stakeholders and ensure capacity-building to create sustained engagement for co-implementation.

Challenges

In addition to the factors for successful co-implementation, we discuss in this section also the potential challenges that may arise during co-implementation of marine co-governance solutions.

The table highlights three particular **challenges which can occur as a result of engaging, coordinating and collaborating with diverse groups of stakeholders**, and it outlines measures that can be taken to solve these issues. Below the table, we discuss in more detail some broader challenges relating to the item on resource and capacity constraints

Table 7. Challenges in co-implementation of marine governance solutions

Challenges	Measures
<p>Resource and capacity constraints. Stakeholders, especially from local or vulnerable groups, may lack the financial, technical, or organizational resources to participate fully.</p>	<ul style="list-style-type: none"> › Provide training and workshops to empower under-represented and vulnerable groups. › Allocate financial support or subsidies to enable participation from resource-constrained actors.
<p>Time and process intensity. Co-implementation requires considerable time and effort for engagement, dialogue, and consensus-building, which may conflict with stakeholders' other commitments.</p>	<ul style="list-style-type: none"> › Develop clear and efficient processes to balance stakeholder engagement with other commitments. › Consider digital platforms and tools to enable flexible participation, especially in cases where



This can lead to rushed or superficial processes, reducing their effectiveness.

face to face contact is challenging (e.g., virtual meetings).

- › Allow flexibility in the process to accommodate stakeholders' time constraints.

Exclusive responsibilities

Only public actors are made responsible to the implementation of a project or have the opportunity to take valuable initiatives.

- › Link implementation to a broad definition of stakeholders and allow various actors, including local communities, to implement actions – especially when those actors were also involved at the co-design stage.
- › Tailor and adjust regulatory frameworks and limit administrative costs to facilitate the implementation of small-scale initiatives from non-public actors.

One of the most difficult issues in co-creation of coastal and marine governance, particularly in the co-implementation phase of governance solution, is the overall scarcity of resources, that is to say, dedicated budgets and other capacities for the implementation of actions. When resources for marine governance are scarce, strategic and foresight approaches can help overcome difficulties prioritizing choices. Furthermore, through partnership with private sectors, NGOs, and communities, a 'resources' pool could be established, ensuring more sustained financing by sharing financial burdens. Similarly grants (e.g. EU funding, national research grant), public crowd-funding, and innovative mechanisms such as green bonds or Payments for Ecosystem Services (PES) can provide relevant additional financial support.

Another important challenge lies in the efficient usage of existing resources and adequate capacity building. Firstly, the reliance on advanced technologies (e.g., the use of digital tools for one or more activities) can help reduce administrative and logistical costs, facilitate follow-up and enhance transparency of co-implementation initiatives. Similarly, partnerships can foster learning and build co-implementation capacity on the ground, while data sharing, shared infrastructure and grassroots innovation can further reduce costs and strengthen local capacity and ownership.

5 CHECKLIST

This document presents the **foundations of a co-creative coastal and marine governance framework**. The framework focuses on how to identify stakeholders and engage them in the co-creation process, co-diagnosing problems, co-designing solutions, and co-implementing actions in coastal and marine governance.

The **five key elements for success** identified in the framework include strong incentives, well-structured institutional frameworks, inclusive leadership, adequate resources, and iterative



processes. These allow to build trust among, foster collaboration between, and generate relevant and sustained inputs and engagement from stakeholders. By emphasizing cross-sectoral and multi-level coordination, empowering local stakeholders, and leveraging innovative tools such as digital platforms, this framework promotes sustainable governance across various socio-ecological contexts. It also enhances policy legitimacy, and facilitates alignment of conservation and resource use goals.

With a view to providing guidance on co-creative governance we close the framework document with a short checklist.

The actors responsible for setting up co-creative governance schemes can use this check list and the details in the framework above to ensure success.

Questions		Y/N
<i>Pre-co-creation Stage</i>		
Planning		
1	Have you conducted a baseline assessment of the local governance context (political, socio-economic, cultural, and historical factors)?	
2	Have you reviewed existing policies, regulations, and governance structures related to coastal and marine governance? Is there already a mechanism for co-creative or collaborative governance?	
3	Have you identified potential overlaps and conflicts between marine and land-based policies?	
4	Have you assessed the economic and social activities relying on coastal and marine resources and their impacts?	
5	Have you evaluated the availability of relevant data on local marine and coastal ecosystems?	
6	Are there training and professional development opportunities available for stakeholders involved in co-governance?	
Identification of Stakeholders		
7	Have you conducted a systematic mapping of all relevant stakeholder (e.g., government agencies, local communities, NGOs, private sectors, and academic institutions)?	
8	Have you assessed the roles, interests, and influence levels of the stakeholders and do you keep this information up-to-date?	
9	Have you identified vulnerable groups to be included in the governance process or applied strategies (such as snowballing) to identify them?	
10	Do you have a stakeholder communication mechanism in place (e.g., meetings, online & offline platforms, newsletters)?	
11	Have you established incentives for stakeholder engagement, such as financial support or capacity-building initiatives?	



Co-creation Stage

Co-design

12	Have you created a participatory environment that fosters open communication and mutual learning among stakeholders?	
13	Have you organized co-creative activities (e.g., workshops, brainstorming sessions, consultations) for stakeholders to identify governance issues and solutions, and to identify knowledge gaps?	
14	Are you incorporating both scientific data and traditional/local knowledge into problem analysis and solution design?	
15	Have you appointed neutral facilitators to mediate discussions and resolve conflicts (if any) among stakeholders?	
16	Have you established a structured institutional framework for co-creation, ensuring a participatory decision-making process?	
17	Have you developed suitable mechanisms to address potential power imbalances among stakeholders and ensuring fair representation and leadership?	
18	Are there mechanisms in place for tracking progress, gathering feedback, and ensuring transparency throughout the co-design process?	

Co-implementation

19	Have you developed an action plan that outlines roles, responsibilities, and resources for implementation?	
20	Have you engaged local communities, private companies, and research institutions in the implementation phase?	
21	Are there adequate resources for stakeholders to participate in the implementation (e.g., incentives, capacity, regulatory advantages)?	
22	Have you secured necessary funding for the long-term sustainability of co-implementation efforts?	
23	Are you using digital platforms for stakeholder engagement, data sharing, and monitoring progress to facilitate engagement when other options are limited?	
24	Have you put in place adaptive management strategies to allow flexibility in response to emerging challenges?	
25	Have you established a transparent feedback mechanism for continuous stakeholder engagement and monitoring of implementation?	

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