

Deliverable D 2b.2

Guidelines for public participation interventions based on stakeholders' perspectives for the selected use cases

Details

Deliverable number	D 2b.2
Deliverable responsible	Guidelines for public participation interventions based on stakeholders' perspectives for the selected use cases
Work package	WP 2b

Author(s) – in alphabetical order		
Name	Organization	E-mail
Baur Tom	POM West-Flanders, Koning Leopold III-laan 66, 8200 Bruges	tom.baur@pomwvl.be
Cauberghe Veroline	UGent-CJS, Sint-Pietersnieuwstraat 41, Ghent 9000	Veroline.Cauberghe@UGent.be
Couvreur Gijs	VLIZ –Valorisation and Innovation Department, InnovOcean, Jacobsenstraat 1, Ostend 8400, Belgium	Gijs.Couvreur@vliz.be
Depoorter Maxime	Province of West-Flanders, Koning Leopold III-laan 41, 8200 Bruges	Maxime.depoorter@west-vlaanderen.be
Devriese Lisa I	VLIZ –Valorisation and Innovation Department, InnovOcean, Jacobsenstraat 1, Ostend 8400, Belgium	Lisa.devriese@vliz.be
De Wilde Koen	POM West-Flanders, Koning Leopold III-laan 66, 8200 Bruges	koen.dewilde@pomwvl.be
De Zutter Margot	Province of West-Flanders, Koning Leopold III-laan 41, 8200 Bruges	margot.dezutter@west-vlaanderen.be
Lardinois Ira	POM West-Flanders, Koning Leopold III-laan 66, 8200 Bruges	ira.lardinois@pomwvl.be
Maelfait Hannelore	Province of West-Flanders, Koning Leopold III-laan 41, 8200 Bruges	Hannelore.maelfait@west-vlaanderen.be
Pirlet Hans,	VLIZ –Valorisation and Innovation Department, InnovOcean, Jacobsenstraat 1, Ostend 8400, Belgium	Hans.pirlet@vliz.be
Schmid Marylise	UGent-CJS, Sint-Pietersnieuwstraat 41, Ghent 9000	Marylise.Schmid@UGent.be
Vandamme Sara	Marine@UGent, BlueBridge, Ostend Science Park, Wetenschapspark 1, Ostend 8400	Sara.Vandamme@UGent.be
Vazquez Estefanya	VLIZ –Valorisation and Innovation Department, InnovOcean, Jacobsenstraat 1, Ostend 8400, Belgium	Estefanya.vazquez@vliz.be
Vermeulen Catho	UGent-CJS, Sint- Pietersnieuwstraat 41, Ghent 9000	Catho.Vermeulen@UGent.be

Document revision history			
Version	Date	Modifications introduced	
		Modification reason	Modified by
V.01	31.05.2025	First draft by VLIZ	VLIZ, POM West-Flanders, Province of West-Flanders
V.02	31.07.2025	Integration of comments VLIZ, POM West-Flanders, Province of West-Flanders (Couvreur et al. 2025)	Gijs Couvreur, Lisa Devriese (VLIZ)
V.03	24.11.2025	Final version based on input Ugent (Marine@UGent, UGent-CEPEC)	Estefanya Vazquez, Lisa Devriese (VLIZ)

Authors: Vazquez Estefanya, Couvreur Gijs, Baur Tom, De Wilde Koen, De Zutter Margot, Depoorter Maxime, Lardinois Ira, Maelfait Hannelore, Schmid Marylise, Vermeulen Catho, Pirllet Hans, Vandamme Sara, Cauberghe Veroline, Devriese Lisa I.

Citation: Vazquez E., Couvreur G., Baur T., De Wilde K., De Zutter M., Depoorter M., Lardinois I., Maelfait H., Schmid M., Vermeulen C., Pirllet H., Vandamme S., Cauberghe V., Devriese L.I. (2025) Blue BALANCE - Deliverable D 2b.2: Guidelines for public participation interventions based on stakeholders' perspectives for the selected use cases



Contents

Details	1
Description	4
1. Introduction	4
2. The VLIZ stakeholder engagement blueprint	4
3. Stakeholder identification and mapping	5
Stakeholder identification	5
Why stakeholder mapping matters	6
4. Stakeholder assessment at the Belgian coast for the Blue Economy	7
Insights from expert interviews	7
Engagement patterns at the Belgian Coast	8
5. Stakeholder engagement methods	10
Levels of stakeholder engagement	10
Resources	16
6. Tailoring engagement for the Belgian coast	20
Insight from public perceptions of coastal projects	20
Implications for engagement	21
Considerations for public participation	24
7. Application to use cases	26
Use Case 1: Blue Food	26
Use Case 2: Coastal Protection	30
8. Key lessons: Essential practices for inclusive engagement	33
References	34



Description

1. Introduction

Coastal regions are at the frontline of global sustainability challenges, ranging from sea-level rise and biodiversity loss to increasing competition over marine space and resources. As these pressures intensify, transitions toward more resilient and sustainable coastal futures requires more than technical innovation and policy reform. It demands inclusive, context-sensitive, and participatory approaches that actively involve society in shaping solutions. Stakeholder engagement is no longer a procedural checkbox; it is a cornerstone of legitimate, effective, and equitable sustainability transitions (Reed, 2008; Newig & Fritsch, 2009; Celliers et al., 2024). This recognition is reflected in both academic literature and international policy frameworks. The United Nations [Sustainable Development Goals](#) (SDGs) highlight inclusive decision-making as a key driver of sustainability, with SDG 16.7 calling for participatory governance at all levels, and SDG 14 emphasizing the role of diverse marine actors in protecting ocean ecosystems (Gilek et al., 2021; Celliers et al., 2024). At the European level, this imperative is echoed in the European Green Deal (COM/2019/640), which positions stakeholder involvement as central to a just and climate-neutral transition. The Zero Pollution Action Plan (COM/2021/240) and the EU Mission “Restore our Ocean and Waters by 2030” (European Commission, 2021) further reinforce the need for inclusive governance, co-creation, and community-driven innovation to achieve environmental goals.

Yet, despite strong policy momentum, many coastal initiatives continue to struggle with how to engage stakeholders in ways that are meaningful, efficient, and adapted to local realities. Coastal systems are inherently complex, characterized by overlapping interests, contested values, and asymmetrical power relations. This complexity is particularly pronounced in regions like Flanders, where the Blue Economy is both economically vital and spatially constrained. This guide, adapted from Couvreur et al. (2025), responds to that challenge. Drawing on insights from the [Blue Balance](#)-project (funded by VLAIO through the Blue Cluster), it offers a practical and evidence-based framework to support practitioners in designing context-sensitive stakeholder engagement strategies. Through decision-support tools and tailored guidance, the guide helps align engagement methods with project goals, stakeholder profiles, and available resources, contributing to more inclusive and impactful coastal governance.

2. The VLIZ stakeholder engagement blueprint

Within the Blue Balance-project, a stakeholder engagement blueprint was developed within the tasks of work package WP2b (Couvreur et al., 2023). This engagement blueprint is based on the main insights concerning participatory projects within the specific context of the Flemish Blue Economy. These were collected using a mixed-method approach in which a narrative review of relevant literature was combined with (semi-) structured expert interviews (Couvreur et al., 2024). This approach made it possible to develop a user-driven blueprint in which the key barriers and best practices that respectively prevent or enable a successful stakeholder participation trajectory are incorporated (cf. Figure 1). The blueprint is structured around ‘stepping stones’, subdivided into three

overarching phases: the preparatory phase (1-2), which involves setting objectives and assessing stakeholder landscapes; the stakeholder assessment phase (3-5), focusing on stakeholder identification and mapping, and creating custom engagement plans; and the implementation phase (6-7), emphasising flexible execution and iterative feedback through monitoring and evaluation.



Figure 1 Stakeholder engagement blueprint from Blue Balance-project (Couvreur et al., (2023) & Couvreur et al., submitted)

The VLIZ stakeholder engagement blueprint is structured around three overarching phases:

- **Preparation:** This phase lays the groundwork by defining the project context, goals, and boundary conditions. It includes an initial scan of the stakeholder landscape and relevant policy environment.
- **Stakeholder Assessment:** Focuses on identifying, profiling, and grouping stakeholders based on attributes such as role, expertise, and interest. This informs the design of a tailored engagement plan.
- **Implementation:** Covers the execution of the engagement plan, with built-in flexibility for adaptation. It includes continuous monitoring and evaluation to ensure relevance and responsiveness.

For a detailed description of the blueprint, including methods and templates, we refer to **Milestone Report M2b.2 of the Blue Balance project**.

3. Stakeholder identification and mapping

Stakeholder identification

Effective stakeholder mapping is a cornerstone of meaningful public participation. Traditional approaches often prioritize actors with formal authority or financial power, focusing on their ability to influence decisions. However, for public participation guidelines, the objective is fundamentally different: to **rebalance influence by creating opportunities for those most affected (such as citizens and local communities) to shape decisions** (Figueiredo et al., 2016; Matti et al., 2022). This means moving beyond static notions of power and considering how engagement can empower stakeholders who historically have limited voice in decision-making.

Stakeholder mapping should therefore address not only **who is involved**, but also **why, when, and how** they should participate. It should clarify roles within the engagement process and identify the knowledge, perspectives, and



values each group brings. This approach ensures that decisions reflect both technical evidence and the lived experiences of those who will bear the consequences.

A stakeholder profile considers several dimensions:

- **Group composition:** Includes diversity (heterogeneity) and size. Diverse groups bring rich perspectives but require careful facilitation to manage complexity and ensure inclusivity. Mapping should also consider whether stakeholders represent a community of practice (e.g., industry, government, research) or a community of place (e.g., residents, tourists, civil society).
- **Expertise:** Stakeholders may hold technical, professional, or experiential knowledge. Engagement methods should match their capacity and literacy levels. For example, technical experts may contribute to co-design workshops, while residents may engage through storytelling or participatory mapping.
- **Role in the engagement system:** Instead of defining influence solely as existing power, roles should reflect desired participation and empowerment potential. Policymakers may execute recommendations, researchers provide evidence, and citizens contribute local knowledge and values. The goal is to design processes where these roles complement each other, ensuring fairness and legitimacy.
- **Impact and empowerment potential:** Stakeholders most affected by decisions deserve meaningful inclusion, even if they lack formal authority. Mapping should identify where engagement can increase their influence; particularly for groups traditionally sidelined in planning processes.

Tailoring engagement methods to these attributes enhances dialogue quality, equity, and legitimacy. For example, high-impact but low-power stakeholders (such as local communities) should be prioritized for involve or collaborate approaches, while high-power actors may require targeted consultation to align strategic objectives. Rather than reinforcing hierarchies, mapping should highlight opportunities to shift influence through engagement, ensuring that those most affected by decisions have a voice in shaping them.

Why stakeholder mapping matters

Stakeholder mapping is not only about power and expertise; it is about understanding the full implementation chain and identifying gaps in participation. Combining traditional tools (interest–influence matrices, social network analysis) with gap analysis ensures that engagement strategies include those most affected by decisions, not just those with influence or technical knowledge. Stakeholder mapping is a critical step in any engagement process. It provides a structured way to understand who is involved, who should be involved, and how they relate to each other.

Different mapping approaches serve different purposes. Choosing the right one depends on the engagement goal and the concepts to emphasize.

Table 1 Stakeholder mapping types including concepts and limitations

Mapping type	Concepts	Limitations
INTEREST–INFLUENCE MATRIX	Interest (stake) & Influence (power): Prioritize stakeholders for communication & involvement	May overlook actors with low influence but high vulnerability
SOCIAL NETWORK ANALYSIS (SNA)	Relationships & connectivity: Reveal hubs, alliances, and informal influence	Requires detailed data and technical expertise
ROLE-BASED MAPPING	Formal roles in governance: Clarify responsibilities and decision-making pathways	Lacks informal actors and community voices
IMPACT MAPPING	Degree of exposure to outcomes: Include those most affected by decisions	Needs clear criteria for assessing impact
GAP ANALYSIS MAPPING (RECOMMENDED)	Current vs. desired involvement: Identify missing voices and guide outreach	Requires baseline stakeholder list

4. Stakeholder assessment at the Belgian coast for the Blue Economy

Insights from expert interviews

Stakeholder engagement along the Belgian coast has traditionally focused on technical and regulatory actors, government agencies, industry representatives, and research institutions. While these groups form a strong *community of practice*, recent policy trends and sustainability goals emphasize the need to also involve a *community of place*, including local residents, tourists, and civil society organizations. This shift reflects growing recognition that public acceptance and participation are critical for the legitimacy and success of coastal adaptation and blue economy initiatives.

Interviews with stakeholders (cf. Couvreur et al., 2023) revealed persistent barriers to effective engagement. Limited attention is often given to mapping the stakeholder landscape before defining engagement strategies. Knowledge gaps regarding social innovation, high costs, and short timeframes further constrain participatory processes. These challenges underscore the need for structured guidelines that help practitioners select appropriate methods and allocate resources efficiently. Table 2 illustrates how common barriers identified in interviews can be addressed through strategic preparatory actions. For a detailed description of the coastal stakeholder mapping and expert interviews on participation, we refer to **Milestone Report M2b.2 of the Blue Balance project** (see Couvreur et al., 2023).

Table 2 Barriers identified via expert interviews and recommendations

Barrier	Underlying Issue	Recommendation
Limited stakeholder mapping before engagement	Engagement starts without clear understanding of roles and priorities	Implement systematic stakeholder mapping early in project design; use tools like power-interest mapping adapted for empowerment; define roles and engagement levels.
Lack of knowledge on social innovation	No structured framework for participation; reliance on ad hoc methods	Provide training or outsourcing of participatory methods and social innovation; develop internal guidelines and templates for engagement planning.
High costs and resource constraints	SMEs and smaller actors lack capacity for intensive engagement	Design scalable engagement models (e.g., hybrid formats, digital tools); allocate dedicated resources in project budgets; consider shared platforms for multi-stakeholder engagement.
Limited timeframes and political pressure	Short-term mandates conflict with participatory processes	Adopt phased engagement strategies; integrate quick-win activities (inform/consult) early while planning deeper involvement for later stages.

Despite these challenges, interviewees recognized that stakeholder engagement is the method of choice for tackling complex problems. They identified best practices, drivers of effective participation:

- Bilateral exploration meetings which align expectations and build trust.
- Reference and ambition frameworks to define measurable criteria for evaluation.
- Scenario thinking as a method to explore alternative futures collaboratively.

Engagement patterns at the Belgian Coast

An evaluation of existing projects highlights uneven patterns of citizen involvement (cf. Figure 2). Across the Coastal Backbone, 41% of projects engaged citizens individually, 17% collectively, while 42% did not involve citizens at all. Thematic clusters show stark contrasts: literacy and citizen science projects scored highest on participation, whereas blue food and tourism scored lowest (for further details see Couvreur et al., 2023). In the blue food cluster, 85% of projects did not involve citizens, and only 15% engaged them collectively. Tourism projects performed even worse, with no examples of high-intensity participation. These gaps represent opportunities to rethink engagement strategies for sectors where citizen involvement is minimal yet essential for legitimacy and success.

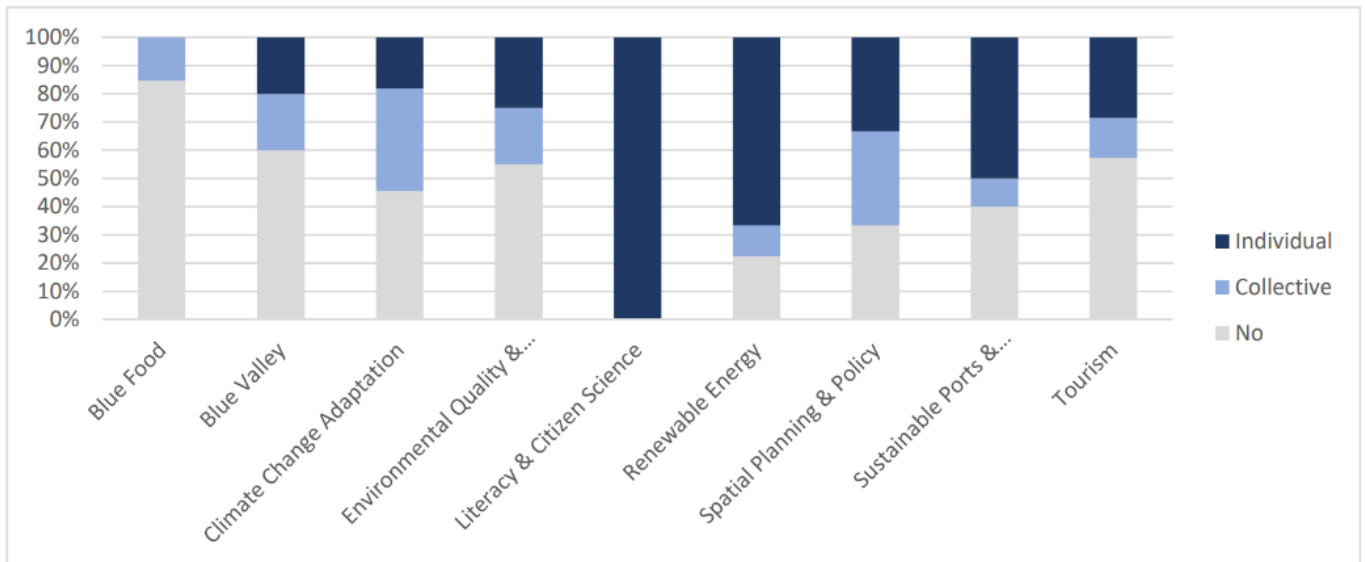


Figure 2 Distribution of citizen involvement scores for the thematic cluster (retrieved from Couvreur et al., 2023)

The level of engagement also varies widely (cf. Figure 3). While some projects achieved co-creation or empowerment, 20% involved no participation, and 16% were limited to information-sharing. Spatial planning and policy projects demonstrated the most intensive participatory approaches, whereas tourism projects consistently ranked lowest. This suggests that sectors with high environmental and social sensitivity (such as tourism) require more deliberate and innovative engagement strategies. For a detailed description of the available information on participatory stakeholder processes for the Belgian coast, we refer to **Milestone Report Milestone M2b.1 of the Blue Balance project** (see Couvreur et al., 2023).

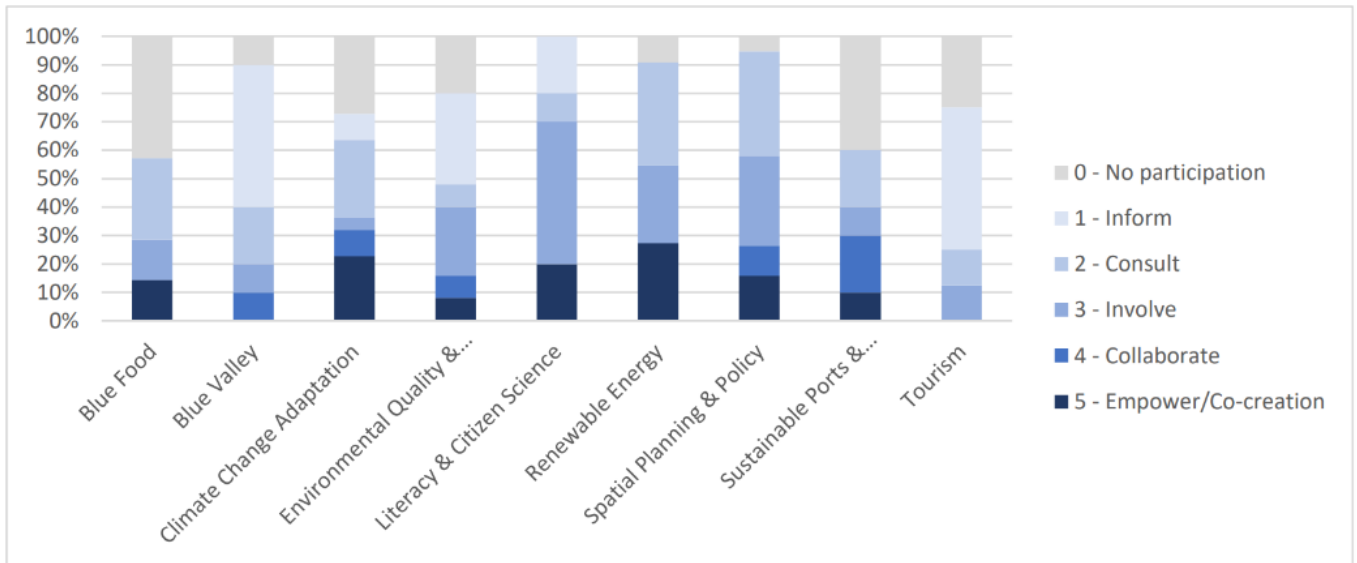


Figure 3 Distribution of level of engagement scores for all entries per thematic cluster (retrieved from Couvreur t al., 2023)

5. Stakeholder engagement methods

Stakeholder mapping provides the foundation for any participatory process. By identifying who is involved, who should be involved, and where gaps exist, mapping ensures that engagement strategies are grounded in reality rather than assumptions. However, mapping alone does not guarantee meaningful participation. The next step is to translate this understanding into action; designing and implementing engagement processes that are inclusive, effective, and aligned with project objectives.

Engagement is not a single event but a continuum of interactions that can range from informing stakeholders to collaborating on decisions. Choosing the right level of engagement depends on factors such as decision complexity, stakeholder influence, and desired legitimacy. This stage requires careful planning, resource allocation, and the ability to anticipate barriers identified earlier, such as time constraints, knowledge gaps, and costs.

Levels of stakeholder engagement

The purpose of stakeholder engagement determines the appropriate method and level of involvement. These levels range from minimal interaction to full decision-making authority:

Table 3 Summary of the level of stakeholder engagement

Engagement Level	Description	Stakeholder role
INFORM	One-way communication to provide stakeholders with objective information. Common in early policy stages or risk communication.	Passive recipients of information (no feedback expected)



CONSULT	Stakeholders provide feedback on plans or decisions (via surveys, interviews, or hearings).	Advisory role with limited influence (the input informs the process)
INVOLVE	Stakeholders engage in two-way dialogue to shape decisions (but they do not make them). Fostering co-learning and mutual understanding.	Active contributors to framing and analysis
COLLABORATE/ EMPOWER	Stakeholders co-create solutions and may hold decision-making power. This approach builds long-term legitimacy and is relevant for communities seeking autonomy.	Partners or decisionmakers

The stakeholder engagement methods are organised according to the purpose of the engagement process. These purposes reflect the desired level of stakeholder involvement and are based on the well-established public participation spectrum: Inform, Consult, Involve, and Collaborate/Co-Create. Each level represents a different commitment to stakeholders, ranging from simply providing information to fully partnering in decision-making processes.

Table 4 outlines common engagement methods used at each level, including a brief description of the intent and typical activities associated with each method. This structure helps to ensure that engagement is fit for purpose and aligned with both the goals of the project and the expectations of stakeholders.

Table 4 The engagement methods discussed, according to the theoretic levels of engagement

Level of Engagement	Goal of the engagement	Commitment to Stakeholders	Example Methods
INFORM	To provide stakeholders with balanced and objective information to help them understand the problem, alternatives, opportunities, or solutions.	To keep informed, maintain transparency and increase awareness.	<ul style="list-style-type: none"> - Newsletter - Social media outreach - Open house - Webinar - Policy briefs
CONSULT	To obtain feedback on analysis, alternatives, and/or decisions.	Besides providing information, stakeholders are listened to (acknowledging concerns and aspirations), as well as providing feedback on how public input influenced the decision.	<ul style="list-style-type: none"> - Questionnaires - (Expert) Interviews - Bilateral meetings - Focus groups - Public hearing/consultations

INVOLVE	To work directly with stakeholders to ensure that their concerns and aspirations are consistently understood and considered.	Working together to ensure that concerns and aspirations are reflected in the alternatives. Feedback is expected from the stakeholders. Where their recommendations are incorporated to the maximum extent possible. And communicating on how the input influenced the decision.	<ul style="list-style-type: none"> - Round table talks - World café - Serious games - Storytelling
COLLABORATE / CO- CREATE	To partner with stakeholders in each aspect of the decision-making process, including development of alternatives and identification of the preferred solution.	Together, different stakeholders identify opportunities and simultaneously develop and prototype interventions together. The outcome is co-constructed and decided by everyone involved.	<ul style="list-style-type: none"> - Hackathon - Foresight (future) workshop - Deliberative mapping - Role playing - Consensus workshop - Delphi method

Inform

- **Newsletter:** Newsletters are a one-way communication tool used to inform stakeholders about project developments, opportunities, and outcomes. Typically distributed via email or print, newsletters aim to provide clear and accessible updates to maintain awareness and transparency among stakeholders. As part of the "inform" level of engagement, this method does not involve two-way interaction but focuses on delivering objective, factual content. Newsletters are especially useful in the early stages of a project or for keeping a broader audience informed over time without requiring their active participation (International Association for Public Participation (IAP2), 2018).
- **Social media outreach:** Social media outreach involves using platforms such as Twitter/X, Bluesky, LinkedIn, Facebook, and Instagram to disseminate information, raise awareness, and maintain visibility among stakeholders. It supports one-way or lightly interactive communication, allowing organisations to keep stakeholders informed and occasionally receive informal feedback. As an "inform" method, it is particularly effective for reaching broad, diverse audiences and for communicating quickly and frequently. According to the International Association for Public Participation (IAP2, 2018), social media tools can complement broader participatory strategies by supporting information sharing and early-stage engagement.
- **Open House:** Open houses are informal public events designed to share information and interact with a broad group of stakeholders in a low-pressure, accessible setting. Unlike formal meetings, open houses allow participants to drop in, review materials at their own pace, and engage in one-on-one or small-group discussions with project representatives. The main objective is to increase transparency and awareness, especially in the early stages of a project or when broad community exposure is needed. Open houses are typically classified under the "inform" level of engagement but may offer limited opportunities for informal consultation depending on setup (International Association for Public Participation [IAP2], 2018).



- **Webinar:** Webinars are virtual seminars or presentations conducted online, allowing stakeholders to receive information and, depending on format, interact through Q&A sessions, polls, or breakout discussions. Webinars are commonly used to inform and consult stakeholders across geographic distances in a cost-effective and scalable way. They are particularly valuable when visual content (e.g., slides, maps, data) is central to the message. Webinars can support both "inform" and "consult" levels of engagement, depending on whether participants are invited to ask questions or give input (IAP2, 2018).
- **Policy briefs:** Policy briefs are concise, targeted documents that synthesize key information on a specific issue, often with the intent to inform policy decisions. They are typically used to communicate complex research findings or stakeholder concerns to decision-makers in a structured and accessible format. Policy briefs aim to inform or advice stakeholders – particularly policymakers and high-level actors – by presenting evidence-based analysis, policy options, and recommendations. While there is no expectation of dialogue, they can indirectly influence decision-making and agenda-setting (IAP2, 2018).

Consult

- **Questionnaires:** Structured questionnaires are designed to collect quantitative and/or qualitative data from stakeholders on specific topics, preferences, concerns, or experiences. They are commonly used to consult stakeholders by gathering feedback that can inform planning, decision-making, or evaluation processes. Surveys can be administered online, by phone, or in person, and are particularly useful for reaching larger or geographically dispersed groups. While interaction is limited, surveys allow stakeholders to express views in a standardized and often anonymous format (IAP2, 2018).
- **(Expert) Interviews:** Interviews are structured or semi-structured conversations conducted one-on-one to gather in-depth insights from stakeholders, particularly those with specialized knowledge or unique perspectives. When targeting experts or key informants, interviews aim to elicit detailed information, contextual understanding, and professional judgments that might not emerge in group settings. This method is typically used in the consultation phase of stakeholder engagement, offering high-quality qualitative input that can inform planning or evaluation processes. Interviews are especially valuable when discretion, depth, or individualized feedback is required (IAP2, 2018).
- **Bilateral meetings:** Bilateral stakeholder meetings are private, face-to-face or virtual conversations between project organisers and individual stakeholders or stakeholder organisations. These meetings are used to build relationships, gather nuanced perspectives, clarify sensitive issues, and explore alignment or disagreement in a confidential setting. Bilateral meetings are especially useful when working with key stakeholders who hold significant influence, unique expertise, or specific concerns. They align with the consult or involve level of engagement, depending on the nature of the dialogue and the degree of influence given to the stakeholder (IAP2, 2018).



- **Focus groups:** Focus groups are moderated group discussions involving a small number of participants brought together to share views, reactions, and experiences related to a specific topic. They are designed to collect rich, qualitative data by facilitating interaction among participants and allowing them to build on each other's input (Krueger & Casey, 2015). The method is commonly used to consult stakeholders, but can also support involve-level engagement when the feedback is integrated into decision-making processes. Focus groups are especially effective for uncovering social dynamics, revealing areas of consensus or conflict, and exploring how people think and feel about an issue (Bryson et al., 2013; Stewart & Shamdasani, 2015).
- **Public hearing/consultations:** Public hearings are formal, often legally mandated meetings in which members of the public are invited to provide comments or testimonies on a policy proposal, development plan, or regulatory issue. Typically organised by public authorities, hearings are used to consult stakeholders—offering them the opportunity to voice support, concerns, or objections before decisions are finalized (Rowe & Frewer, 2005). Although public hearings are intended to support transparency and democratic accountability, they often involve limited two-way communication and are structured around formal speaking time, rather than dialogue or deliberation (Fung, 2006; Nabatchi, 2012).

Involve

- **Round table talks:** Round table talks are structured yet informal multi-stakeholder discussions where participants are invited to exchange perspectives, deliberate on shared concerns, and explore potential solutions. The format emphasizes equality among participants and open dialogue, often avoiding rigid agendas or hierarchical structures. Round table discussions are particularly effective in multi-actor settings where relationship-building, trust, and mutual understanding are important (Innes & Booher, 2004). Round tables can foster co-learning, reveal conflicting assumptions, and prepare the ground for future collaboration (Bryson et al., 2013).
- **World café:** The world café is a structured conversational process designed to facilitate open and creative dialogue among diverse stakeholders in a relaxed, café-style setting. Participants move between small tables in several rounds of discussion, each focusing on a guiding question or theme. Ideas are recorded on tablecloths or flipcharts, and knowledge is gradually cross-pollinated across the room. This method supports co-learning, collective sense-making, and surfacing of common ground, often aligning with the involve level of engagement (Brown & Isaacs, 2005). It is especially effective when engaging larger, mixed groups in brainstorming or visioning exercises without requiring formal decision-making.
- **Serious games:** Serious games are interactive, game-based activities designed for purposes beyond entertainment – such as stakeholder engagement, education, decision support, or policy exploration. In participatory settings, serious games create simulated environments where stakeholders can explore scenarios, negotiate trade-offs, and better understand complex systems (Mayer, 2009). These games are especially useful for involving stakeholders, as they encourage participants to experiment, reflect, and make



decisions in a risk-free, immersive context. When well-designed, they enhance mutual understanding and co-learning among diverse stakeholder groups (Reed et al., 2013; Voinov & Bousquet, 2010).

- **Storytelling:** is a qualitative, narrative-based engagement method situated at the "involve" level of participation. It allows stakeholders—particularly community members, frontline actors, or marginalized groups – to share personal stories that reflect their lived experiences, cultural values, and local knowledge. In practice, storytelling sessions are typically facilitated in small groups or one-on-one settings, where participants are invited to describe real-life experiences related to a particular issue, such as environmental change, coastal use, or community impact. These narratives are then documented, sometimes transcribed or recorded, and analysed for themes that can inform planning, problem framing, or decision-making. As an involvement tool, storytelling creates two-way dialogue by helping organisers understand how stakeholders perceive and experience the issue at hand. Unlike extractive interviews or surveys, storytelling values emotional, contextual, and relational insights. When thoughtfully integrated into participatory processes, it fosters empathy, builds trust, and enhances the legitimacy of decisions by making underrepresented perspectives visible and meaningful (Cornwall, 2008; Dodge et al., 2005; Escobar, 2011). It is particularly useful in settings where technical data alone fails to capture the full complexity of stakeholder realities.

Collaborate / co-create

- **Hackathon:** Hackathons are time-bound, intensive collaboration events where participants co-create solutions to specific challenges, often using digital tools, open data, or rapid prototyping methods. Originating in the tech world, hackathons have expanded into public sector and multi-stakeholder domains as a way to engage diverse actors in open innovation and problem-solving. In participatory governance and co-design contexts, hackathons support collaborate or co-create levels of engagement by fostering creativity, interdisciplinary exchange, and concrete output development under time pressure (Briscoe & Mulligan, 2014; Gama, 2017).

- **Foresight (future) workshop:** Foresight workshops—often referred to as Future Workshops – are participatory processes designed to help stakeholders explore future scenarios, articulate visions, and generate innovative ideas for action. These workshops typically follow a three-phase structure: a critique phase (identifying current challenges), a creative or visioning phase (imagining desirable futures), and an implementation phase (developing strategies to realize change) (Jungk & Müllert, 1987). Foresight workshops are used to support collaboration, as they encourage co-learning, creativity, and forward-looking thinking among diverse stakeholder groups (van der Helm, 2007; Vervoort et al., 2015).

- **Deliberative mapping:** Deliberative mapping (DM) is a participatory multi-criteria appraisal method that combines expert analysis with citizen deliberation to evaluate policy options or technological alternatives in complex decision-making contexts. It integrates quantitative and qualitative assessment by involving both specialists and lay stakeholders in parallel processes of option appraisal, which are later compared and synthesized. The method is designed to democratize expert-based evaluations by grounding them in public



values, supporting collaborate or even co-create levels of engagement (Burgess et al., 2007; Stirling et al., 2007). Deliberative mapping is particularly suited for science-policy interfaces and presupposing controversies such as climate policy, energy transitions, or health technology assessment.

- **Role playing:** Role playing is a participatory method in which stakeholders adopt specific roles—real or hypothetical—to simulate scenarios, test assumptions, or explore the implications of decisions from multiple perspectives. Often used in policy development, conflict resolution, and systems learning, role playing encourages participants to "step into someone else's shoes," revealing values, power dynamics, and unintended consequences. The method supports collaborate levels of engagement and can be used on its own or as part of larger deliberative or simulation processes (Barreteau et al., 2007; van der Heijden, 2005). Role playing is particularly useful when the goal is to foster empathy, challenge biases, or co-develop solutions in multi-actor settings.
- **Consensus workshop:** Consensus workshops are structured, participatory sessions designed to help diverse stakeholders collaboratively identify shared goals, develop mutual understanding, and arrive at collective decisions or recommendations. Facilitated through multiple steps—including idea generation, clustering, discussion, and prioritization – the process emphasizes co-creation and deliberation (Stanfield, 2002). Consensus workshops are typically used at the collaborate level of engagement, especially when working with cross-sector groups who may hold differing perspectives but need to reach common ground. They are valued for building trust, increasing ownership of outcomes, and surfacing actionable agreements (Bryson et al., 2013; Kaner, 2014).
- **Delphi method:** The Delphi Method is a structured, iterative engagement process used to gather and refine expert opinions through multiple rounds of anonymous surveys or questionnaires. Between each round, a facilitator provides controlled feedback, allowing participants to reconsider their views in light of group trends. The goal is to build consensus or clarify areas of disagreement among informed stakeholders on complex or uncertain issues. Delphi is particularly useful in foresight, policy evaluation, and strategic planning, typically aligning with the collaborative levels of engagement (Linstone & Turoff, 2002; Rowe & Wright, 1999). Its anonymity feature reduces the influence of dominant voices and promotes honest responses.

Resources

The choice of engagement method is often constrained or enabled by the availability of resources, including time, budget, human capacity, and technological infrastructure. Resource assessment is therefore a critical step in designing realistic and sustainable participatory processes (Rowe & Frewer, 2005). Methods vary widely in terms of cost, required facilitation skills, time commitment, and material needs. An approach that is too resource-intensive can compromise implementation quality, while under-resourcing can lead to tokenistic or ineffective participation (Nelson & Wright, 1995). Aligning engagement strategies with available resources ensures feasibility while maintaining the integrity and inclusiveness of the process.



- **Budget:** Financial resources set clear boundaries for which engagement methods are possible. Low-cost methods are typically easy to implement and can reach a broad audience with limited investment. Mid-range options, like focus groups (see 4.2.), may require modest facilitation and logistical support. High-cost methods such as multi-day workshops demand a more significant financial commitment (OECD, 2020; Rowe & Frewer, 2005).
- **Time:** The amount of time available – both in terms of overall project timelines and stakeholder availability has a significant impact on which methods can be used. If the decision-making process is time-sensitive, quick-turnaround methods such as interviews may be most appropriate. When time allows for more extended engagement, more iterative and collaborative methods can be employed, such as co-creation workshops (Bryson et al., 2013). It's also important to consider the timing of engagement relative to stakeholder schedules, seasonal availability, or cultural calendars (Reed, 2008). Organising actors should be mindful of using stakeholders' time efficiently to avoid fatigue. This means aligning engagement moments with key decision points, combining objectives where possible, and only involving stakeholders when their input is essential. Clear communication about the purpose and expected impact of participation also helps sustain commitment and trust (Reed, 2008; Rowe & Frewer, 2005; Bryson et al., 2013).
- **Staff:** The skills and availability of staff responsible for facilitating engagement are another key resource consideration. With limited internal capacity, simpler methods like surveys may be the most practical choice. However, if the project team includes trained facilitators, or if external experts can be brought in, more complex and interactive methods become viable (Fung, 2006; OECD, 2020).

Operationalisation

To enable a systematic comparison and selection of stakeholder engagement methods, the report introduces a guide for the selection of engagement methods (cf. Figure 4). The decision tree considers factors such as project objectives, stakeholder characteristics, and resource availability, helping practitioners choose approaches that balance inclusiveness with feasibility. It serves as a practical tool for translating strategic considerations into concrete actions.

Why preparation matters

In the context of the BLUE BALANCE project, citizen engagement *is highly prioritized given the growing importance of engaging public stakeholders, and in particular citizens, to establish and support sustainable transitions* (Huttunen et al., 2022).

Experience and literature show that meaningful engagement does not begin at the first public meeting (Matti et al., 2022). Once the stakeholder assessment has taken place, the engagement planning requires careful preparation to create an environment where contributions are valued and feasible. This includes mapping stakeholders strategically, building capacity, aligning resources and timelines, and establishing trust. Skipping these steps often leads to common challenges such as unclear roles, limited participation, and unrealistic expectations; issues that were echoed in interviews conducted for this report.

	Focus/aim	Operationalization
Before (backstage preparation)	Design for engagement	<ul style="list-style-type: none"> ❑ Stakeholder mapping: Identify actors, roles, and empowerment potential (not just power). ❑ Capacity building: Train project teams and partners in participatory methods and social innovation. ❑ Resource planning: Allocate budget, staff, and time for engagement activities. ❑ Expectation setting: Align timelines with political and funding constraints; communicate realistic goals. ❑ Method selection: Choose engagement formats tailored to stakeholder diversity and literacy.
During (frontstage activities)	Inclusive and iterative participation	<ul style="list-style-type: none"> ❑ Inform and consult: Share clear, accessible information; gather feedback through surveys, focus groups. ❑ Involve and collaborate: Facilitate co-design workshops, storytelling sessions, and consensus-building exercises. <p>!! Considerations:</p> <p>Transparency: Show how input influences decisions; maintain open communication channels.</p> <p>Conflict management: Use facilitation techniques to address power imbalances and divergent interests.</p>
After (integration)	Sustain and embed outcomes	<ul style="list-style-type: none"> ❑ Evaluation: Assess process effectiveness and stakeholder satisfaction. ❑ Feedback loop: Communicate results and next steps to all participants. ❑ Institutionalization: Embed co-created solutions into policy frameworks and operational plans. ❑ Relationship building: Maintain networks for future collaboration and trust.

Figure 5 Timeline for engagement planning and execution



To strengthen engagement processes and address the challenges identified, Figure 5 illustrates that engagement is not a single event but a continuous process, where preparation, implementation, and follow-up are equally important. Applying these principles to the Belgian coastal context can help ensure that participation is meaningful and leads to actionable, socially robust outcomes. The accompanying figures (Figure 4 and Figure 5) provide a visual overview of this process. It highlights the key activities that should occur before engagement begins, the practices that enable inclusive participation during the process, and the steps needed after engagement to sustain results and build trust. This timeline serves as a practical reference for stakeholders when planning or evaluating participatory initiatives.

Public participation is not a one-size-fits-all process. Choosing the right engagement approach is critical because the complexity of coastal challenges requires strategies that are both inclusive and adaptive. Different stakeholders (ranging from industry and government to local communities and visitors) bring diverse perspectives and resources. Involving them at appropriate levels creates the capacity to design actionable solutions and fosters shared responsibility for implementation. Moreover, as highlighted by Figueiredo Do Nascimento et al. (2016), involving citizens throughout the decision-making process improves trust, ownership, and policy legitimacy. Citizens are not passive recipients but active contributors to knowledge and solutions. Depending on strategic objectives, engagement may combine multiple participatory methods to ensure that decisions are informed, legitimate, and socially robust.

6. Tailoring engagement for the Belgian coast

Insight from public perceptions of coastal projects

As highlighted in the interviews, stakeholders consistently emphasized that successful coastal initiatives require engaging not only a community of practice (including industry, government, and research actors) but also a community of place, composed of local residents and visitors. This dual approach ensures that projects are grounded in the local context and reflects the values and expectations of those most affected.

The primary motive for involving the public is to build support and consensus around proposed interventions. Stakeholder engagement is also used to clarify misperceptions between different actors, incorporate local knowledge into project design, and test the commercial and industrial feasibility of innovations. In some cases, engagement serves a pragmatic purpose: reducing implementation barriers and preventing appeals that could delay progress.

To better understand this community of place, the project examined various psychological factors among Flemish coastal residents and tourists, such as their personal and group values, their beliefs, their attachment to the coastal region, which types of projects they already accept, and so on (see Schmid et al., 2024; Vermeulen et al., 2025). This approach helped identify potential motivators and barriers, providing a strong foundation for designing communication strategies and guidelines that promote effective public participation.

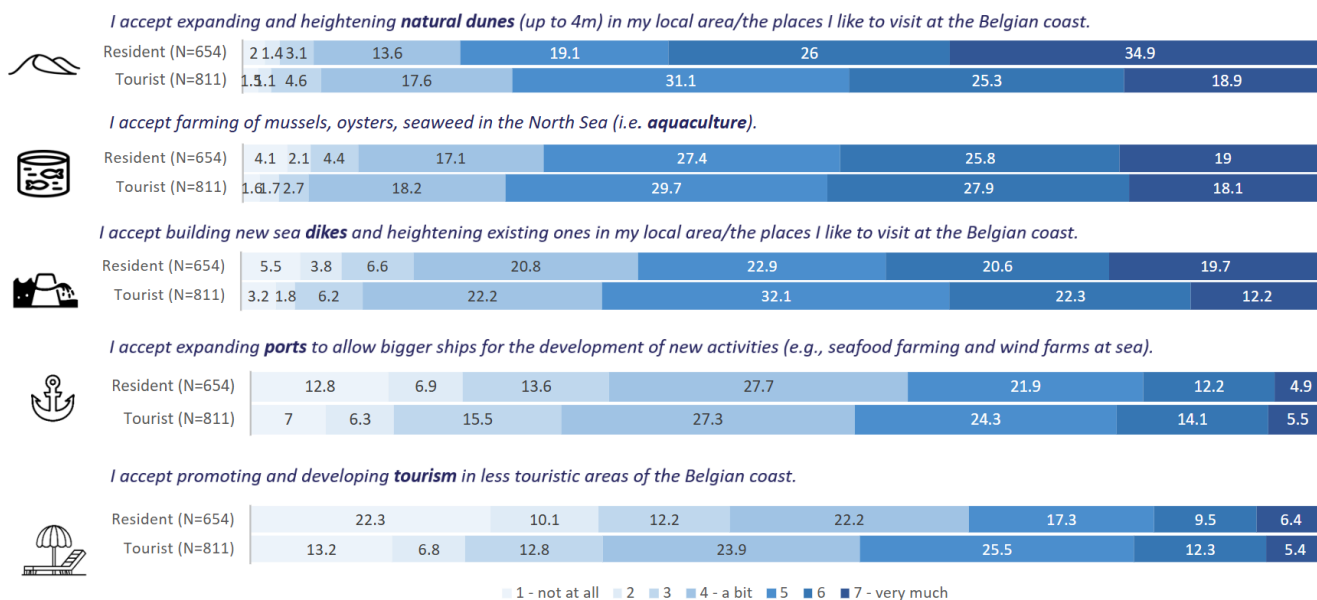


Figure 6 Public acceptability of projects per thematic cluster (retrieved from Schmid et al., 2024)

Research conducted under WP1 provides further insight into public perceptions of coastal projects. Acceptance levels differ markedly across interventions (see Figure 6 for acceptance distribution): Natural dune expansion enjoys the highest support, with approximately 80% of residents expressing approval. Aquaculture follows with 72.2% in favor, while dike construction is moderately accepted at 63.2%. In contrast, port expansion and tourism development face considerable resistance: only 39% of respondents favor port projects, and just 33.8% support tourism development, with two-thirds opposing it. These findings underscore the need for differentiated engagement strategies. Projects with high acceptance, such as dunes and aquaculture, may require lighter engagement focused on informing and consulting, whereas controversial projects like tourism demand deeper involvement and co-creation (cf. Table 5). For a detailed description of the public perceptions, please refer to **Milestone Report M2b.2 and Deliverable V 1.2 of the Blue Balance project**; see Schmid et al., 2024; Vermeulen et al., 2025)

Implications for engagement

These insights have practical implications for designing engagement strategies. For coastal protection projects, where acceptance is high, efforts should focus on maintaining trust and transparency, particularly regarding potential impacts on daily life. For tourism development, which faces lower acceptance, communication must explain the different projects (e.g., sustainable tourism, spread of tourists across location) and the necessity of such projects, highlight sustainability measures, and engagement must go beyond information-sharing to address



concerns about environmental impact and cultural identity. Across all projects, engagement intensity should align with project sensitivity and public interest to avoid stakeholder fatigue. As shown in Table 5, different recommendations are suggested based on evidence of the acceptability of different project clusters.

Table 5 Description of acceptance and drivers of acceptance for projects per thematic cluster

Acceptability of Coastal Protection (Dunes & Dikes)

Acceptance of coastal protection projects is generally high, particularly among individuals familiar with the Belgian coast. This strong support reflects a widespread understanding of the need to safeguard the coastal region against sea level rise. Dunes are more accepted than dikes, which may be explained by their perceived environmental benefits and alignment with natural landscape features. However, acceptance can decrease if people believe that these projects will negatively affect their daily lives or limit access to valued coastal spaces.

Drivers of acceptance

Familiarity with the Belgian coast, heightened risk perception of sea level rise, and strong place identity are key factors influencing support for these projects. Individuals who feel emotionally connected to the coast and perceive high flood risks tend to favor protective measures.

Engagement recommendations

Engagement strategies should emphasize place identity and the protective role of these projects.

- **Inform:** Use policy briefs, webinars, and social media campaigns to highlight risk reduction and co-benefits, such as protecting property and lives along the coast.
- **Consult:** Conduct surveys and focus groups to confirm perceptions and address concerns about personal impacts.
- **Involve:** For dike projects in sensitive areas, organize round tables with local communities to discuss design and mitigation measures.

Additional considerations

For dunes, communication should explain how these projects can coexist with other coastal activities, countering perceptions that dunes act as barriers to recreation or economic uses. For dikes, address potential negative associations with environmental responsibility by demonstrating how dikes contribute to the overall health and resilience of the coastal ecosystem.

Acceptability of Aquaculture

Aquaculture projects are generally well accepted, similar to coastal protection measures. Acceptance levels do not differ significantly between residents and tourists. However, perceived negative impact and emotional responses play a relatively strong role in shaping attitudes. The absence of other strong predictors suggests that awareness and knowledge about aquaculture remain limited, indicating that many people have not yet formed clear opinions on these projects.

Drivers of acceptance

Low awareness and perceived barriers to existing activities (e.g. fishing activities) are the main factors influencing acceptance. This creates an opportunity to shape perceptions through early and targeted communication.

Engagement recommendations

- **Inform:** As an opportunity to increase awareness, organize open houses and webinars to educate the public about aquaculture processes, benefits, and sustainability.
- **Consult:** Use focus groups to explore concerns about coexistence with other coastal activities and address misconceptions.
- **Involve:** If resistance emerges, consider participatory approaches such as co-design workshops or serious games to plan multi-use spaces.

Additional considerations

Communication should strengthen positive beliefs about aquaculture's environmental and economic benefits, highlight its compatibility with other coastal uses, and

position aquaculture as part of the Belgian coastal identity.

Acceptability of Ports

Port expansion is generally more accepted than tourism development, though concerns persist among communities located near ports. Impact perception and emotional responses are strong predictors of acceptance, while risk perception related to economic decline plays only a minor role. Ports are widely perceived as vital for the coastal economy but less directly relevant to individuals, which may explain why objections are less intense compared to tourism projects.

Drivers of acceptance

Localized concerns, emotional responses, and place dependence influence attitudes toward port expansion.

Engagement recommendations

- **Inform:** Provide targeted communication to neighboring communities through policy briefs and local outreach, emphasizing sustainability and economic benefits.
- **Consult:** Conduct bilateral meetings and public hearings with directly affected groups to address specific concerns.
- **Collaborate:** In high-impact zones, co-design multi-use solutions that balance port development with community needs and environmental considerations.

Additional considerations

Careful framing of port expansion as a sustainable initiative is essential. Communication should demonstrate how negative impacts will be minimized and highlight co-benefits for local communities and the environment.

Acceptability of Tourism

Tourism development faces the lowest acceptance among all project types, particularly among residents with strong place identity. While tourism is recognized as important for the coastal economy, it is often associated with negative environmental impacts and perceived misalignment with sustainability goals. These perceptions make tourism projects highly sensitive and require robust engagement strategies.

Drivers of acceptance

Depending on the project, environmental concerns, perceived threats to coastal identity, and skepticism about sustainability are key barriers to acceptance.

Engagement recommendations

- **Consult:** Begin with focus groups and interviews to understand objections and identify potential co-benefits.
- **Involve:** Use participatory formats such as World Café or storytelling sessions to rebuild trust and co-create visions for sustainable tourism.
- **Collaborate:** For long-term planning, involve civil society and local businesses in co-designing tourism strategies that align with sustainability principles.

Additional considerations

Communication should reframe tourism as sustainable and beneficial for both communities and the environment. Highlighting minimal environmental impact and positive contributions to local livelihoods will be critical for gaining support.

Note: Insights and results retrieved from Schmid et al. (2024).

Further considerations: Socio-demographic factors introduce nuances but do not alter the overall trend: strong support for coastal protection measures and low support for tourism development. Regular visitors favor dune expansion but are less supportive of aquaculture, ports, and tourism. Sector professionals tend to endorse dunes



while opposing tourism. Older respondents show greater acceptance of coastal protective measures, and men are slightly more supportive of dunes and ports than women. Higher education correlates with stronger support for dunes and lower acceptance of tourism, while income has only a marginal effect. These variations should inform targeted communication but do not negate the need for differentiated engagement strategies.

Considerations for public participation

Based on the body of work of WP1, two overarching guidelines emerged (cf. Figure 7 for summarized guidelines developed in V 1.2; see complete guidelines in Vermeulen et al., 2025). First, leverage cultural heritage and normalize change by using localized historical narratives and immersive visuals to show that adaptation is part of the coastal identity. Second, appeal to multiple values and make the coastal region personal by engaging through emotional connection, shared responsibility, and enjoyable activities that foster a sense of collective efficacy. Namely:

1. Leveraging cultural heritage & normalizing change

Use of historical narratives and localized stories **to show that change is natural and necessary.**

→ **Why It Works:**

- Counters “climax thinking” (belief that landscapes should never change).
- Increases risk perception and fosters acceptance of adaptation projects.
- Strengthens place attachment and place-protective behaviour (including willingness to engage in co-creation of adaptation measures).

→ **Key Strategies:**

- Visualize past and future changes** using AR/VR or exhibitions.
- Combine doom scenarios** with **solution-oriented** messages to avoid fatalism.
- Tailor narratives to **local context and project type.**
- Highlight **parallels** with **past adaptations** and **cultural heritage.**

2. Appealing to multiple values & making nature personal

Engage people based on **what they value: nature, community, enjoyment;** not just information.

→ **Why It Works:**

- Biospheric and altruistic values predict responsibility for marine health.
- Emotional connection drives action; enjoyment can motivate participation.
- Social norms matter, people act when they see others care.

→ **Key Strategies:**

- Emphasize **intrinsic and nature-relational values** (beauty, vulnerability).

- Show **what is at stake for instrumental values** (resources, tourism).
- Make caring **enjoyable** (fun activities, social events).
- Highlight **group norms and collective identity**.
- Strengthen **hope and efficacy** in messaging.

Cross-cutting communication strategies



Combine problem and solution framing

Highlight risks but also empower people with solutions



Strengthen hope and efficacy

Show that individual and collective actions matter



Address group norms

Communicate that others care about nature to foster collective responsibility



Scrutinize what people want and value

Acknowledge different group values and potential misperceptions



Use visuals and immersive experiences

AR/VR for past and future scenarios



Make engagement enjoyable

Organize fun, social activities
(e.g., clean-ups, community events)

Figure 7 Overview of guidelines on how to approach coastal residents and tourists to increase social support for sustainable coastal developments (retrieved from Vermeulen et al., 2025)



7. Application to use cases

Use Case 1: Blue Food

The Belgian coastal region has a rich maritime tradition, with fisheries and aquaculture as important pillars of the Blue Economy. At the same time, this sector is under pressure due to ecological challenges, market volatility, and changing regulations. Feedback from the Advisory Board meetings in February 2024 and April 2025 has been integral in shaping the understanding of these dynamics. These consultations highlighted the essential role of inclusive stakeholder participation in achieving sustainable sectoral transitions, emphasizing the importance of integrating local knowledge, addressing seasonal consumption patterns, and ensuring social justice. The Advisory Board underscored the necessity of equitable governance, balancing economic development with ecological sustainability to support resilient coastal communities and foster long-term viability of the Blue Economy.

Stakeholderlandscape

Important stakeholder groups include:

- local residents and citizen initiatives (living environment, safety, heritage);
- nature organizations and ecologists (biodiversity, ecosystem services);
- policymakers and spatial planners (coastal safety, permits);
- scientists and engineers (modeling, monitoring);
- tourism sector and entrepreneurs (landscape experience, infrastructure); and
- educational institutions and youth (future vision, awareness).

These groups collectively contribute to integrated coastal management by addressing environmental, social, regulatory, economic, and educational dimensions vital for sustainable coastal development. Their collaboration ensures a balanced approach respecting ecological integrity, community interests, policy frameworks, ongoing research, tourism impact, and the engagement of future generations.

Participation challenges

The participation challenges in Blue Food are multifaceted and require a comprehensive, inclusive approach. The target audience predominantly consists of both tourists and residents, necessitating communication that resonates across diverse groups. Economically, the focus lies in promoting local products, enhancing awareness of Blue Food, supporting emerging opportunities like the first Belgian commercial sea farm, and positioning aquaculture as a key component of local short supply chains. Ecological priorities emphasize the importance of local production, sustainable fisheries transitions, ecosystem conservation, and innovation in aquaculture practices.

Public messaging must elevate understanding of how food choices impact health and the environment, encouraging the consumption of local, seasonal products and reinforcing the link between sustainability and well-

being. Supporting local producers, prioritizing product quality, and educating consumers regarding blue proteins' lower ecological footprint compared to traditional animal proteins are critical. Yet, participation is hindered by unequal power dynamics and limited access to decision-making, seasonal availability constraints, and pervasive low ocean literacy among the public. Moreover, tensions between ecological integrity and economic interests demand balanced governance frameworks.

Ultimately, advancing Blue Food participation requires equitable stakeholder engagement that empowers traditionally marginalized actors, improves scientific and ocean literacy, and fosters collaborative governance. Such efforts are essential to harmonize environmental sustainability with socio-economic development, ensuring resilient coastal communities and sustainable blue economies.

Key insights from WP1 relevant to Blue food

- Acceptance is **generally positive but awareness is low**.
- Lack of strong predictors suggests people have **less formalized views** → **opportunity for shaping perceptions early**.
- Concerns may arise **around coexistence with other activities** and place identity.
- **Values matter**: biospheric and altruistic values predict responsibility; hedonic values can be leveraged through enjoyable engagement.

Recommendations

- ✓ **Educate early**: Provide clear, accessible information about aquaculture benefits and sustainability.
- ✓ **Integrate cultural identity**: Position aquaculture as part of the Belgian coastal heritage and future.
- ✓ **Appeal to values**:
 - Emphasize intrinsic and nature-relational values (beauty, biodiversity).
 - Show what's at stake for instrumental values (food security, local economy).
 - Make caring enjoyable (community tastings, interactive events).
- ✓ **Address group norms**: Highlight that others support sustainable aquaculture to strengthen social norms and collective responsibility.
- ✓ **Strengthen efficacy and hope**: Use combined problem-solution framing to motivate participation in awareness events.

Practical recommendations for stakeholder engagement in Blue Food

As part of the Blue BALANCE project, a serious game was developed based on the results of the Blue BALANCE survey, which explored the importance of eco-labels in seafood purchasing decisions. The game also incorporated feedback from the Advisory Board meeting held in February 2024. Its objectives are to:

- Encourage more sustainable seafood choices
- Increase knowledge about fisheries



- Raise awareness about local and seasonal seafood consumption

The game was developed in collaboration with students using the Convai programming platform, with a focus on user-friendliness and interactivity. It was selected as a finalist for the 'Best Hobby Game' award due to its innovative approach. Discussions are currently underway with a software developer for upscaling. A key milestone is the pretesting phase (qualitative) during the 'Oostende Voor Anker' and 'Dag van de wetenschap' events where a short survey was conducted to obtain player feedback.

Valorization potential discussion:

- Diversify game mechanics: Introduce more character and task diversity onboard, including roles that reflect modern fisheries (e.g., fishers using digital tools).
- Clarify game objectives: Define whether the main goal is awareness (e.g., knowledge about sustainable fish) or behavioral change (e.g., impact on purchasing decisions). This will help target the right audience (schools, consumers, fishers).
- Collaborate with NAVIGO Fisheries Museum: Link the game to the museum's collection through an educational module on the evolution and sustainability of fisheries.
- Integrate data from ILVO and/or VLIZ projects: Include simulations of innovations such as fuel-efficient vessels or bridge simulators in Zeebrugge.
- Target audience and sector support: Focus the game on schools (education) and the sector (fleet modernization, job attractiveness).

Other options to support stakeholder engagement in the Blue Food sector include, but are not limited to:

Inform:

1. *Ensure inclusive communication*
Objective: Reach citizens with low ocean literacy.
Actions:
 - Develop visual formats such as infographics, animations, interactive maps.
 - Make clear communication in restaurants about fish species that are local and seasonal.
 - Use accessible language and multilingual communication.

Consult:

1. *Organize seasonal participation moments*
Objective: Increase relevance and availability of stakeholders.
Actions:
 - Plan workshops and consultations around fishing seasons
 - Link participation to local fish days or harbor festivals.
3. *Monitor and evaluate the participation process iteratively*
Objective: Improve quality and adaptability of the process.
Actions:



- Use feedback tools such as surveys, interviews, participation logs.
- Document through process reports and lessons learned.

Involve:

4. *Use storytelling and local ambassadors*
Objective: Strengthen social legitimacy and ocean literacy.
Actions:
 - Organize storytelling workshops with fishers and aquaculture producers.
 - Develop short video portraits or podcasts featuring local ambassadors.
 - Apply storytelling at market events or seafood festivals.
1. *Integrate participation into policy development*
Objective: Strengthen policy relevance and stakeholder support.
Actions:
 - Involve stakeholders early in the drafting of fisheries and aquaculture policies.
 - Organize bilateral meetings between policymakers and fishers.
2. *Strengthen networks through quadruple helix approach*
Objective: Anchor participation in structural collaboration.
Actions:
 - Facilitate dialogue between government, science, industry, and citizens.
 - Organize networking events, round tables, and cross-sector workshops.

Co-create:

7. *Apply co-creation formats such as consensus workshops or hackathons*
Objective: Develop shared solutions for bycatch, labelling, and short supply chains.
Actions:
 - Organize hackathons on innovative processing of bycatch.
 - Facilitate consensus workshops on labelling and traceability.
8. *Use participation as a bridge between ecology and economy*
Objective: Support trade-offs and joint decision-making.
Actions:
 - Apply deliberative mapping to explore interests and values.
 - Develop serious games on fisheries management and ecological impact.

Strategic Role of OVIS, Zeebonk and VLAM in Supporting Stakeholder Engagement

Both OVIS and Zeebonk offer valuable platforms to operationalize stakeholder engagement in the Blue Food sector. OVIS, with its focus on valorization and sustainable fish consumption, can act as a facilitator and funder of participatory formats, ranging from storytelling and co-creation workshops to policy consultations. Zeebonk, as a branding and community-building initiative, can amplify stakeholder voices, foster dialogue, and connect actors across the quadruple helix. Their activities align closely with the mission of VLAM (Flemish Centre for Agricultural and Fisheries Marketing), which promotes local and seasonal products through targeted campaigns. By integrating



participatory approaches into VLAM's promotional strategies, such as consumer education, market events, and storytelling, OVIS and Zeebonk can help bridge the gap between producers, policymakers, and the public, while reinforcing the legitimacy and impact of sustainable Blue Food transitions.

Use Case 2: Coastal Protection

The Belgian coastline is increasingly vulnerable to the impacts of sea level rise, storm surges, and erosion. Traditional hard infrastructure such as dikes is now often supplemented or replaced by natural coastal defenses including dune restoration, sandy beach nourishment, and vegetation management. Feedback from the Advisory Board meetings in February 2024 and April 2025 has highlighted the critical need for broad societal involvement in these efforts, as interventions affect public spaces, local communities, and ecological systems. This integrated approach aims to balance effective coastal protection with environmental sustainability and social considerations, reflecting recent adaptive management strategies and coastal safety plans implemented in Flanders. These strategies incorporate innovative, nature-based solutions and long-term visions to safeguard the coast against rising sea levels beyond 2050 while maintaining the quality of life and economic potential of coastal regions.

Stakeholderlandscape

Important stakeholder groups include:

- Local residents and citizen initiatives (living environment, safety, heritage)
- Nature organizations and ecologists (biodiversity, ecosystem services)
- Policymakers and spatial planners (coastal safety, permits, e.g., Kustvisie)
- Scientists and engineers (modeling, monitoring)
- Tourism sector and entrepreneurs (landscape experience, infrastructure)
- Educational institutions and youth (future vision, awareness)

These diverse stakeholders collectively contribute to integrated coastal management by addressing ecological, social, regulatory, economic, and educational dimensions crucial for sustainable coastal development.

Participation challenges

The participation challenges in coastal protection are multifaceted and demand a context-sensitive, inclusive approach. The target audience includes both residents and tourists, requiring communication strategies that resonate across different user groups and seasonal dynamics. Economically, the focus lies in safeguarding infrastructure, enabling multifunctional use of the coastline, and exploring nature-based solutions as drivers of tourism and local development. Stakeholders emphasize the importance of robust sea defenses, accessible coastal landscapes, and the integration of ecological value into spatial planning.

Ecological priorities center on preserving dune systems, promoting biodiversity, and implementing nature-based coastal protection that complement technical solutions. There is strong support for greening the coastline, limiting



new construction, and adopting a dispersed tourism model to reduce pressure on sensitive areas. Stakeholders advocate for conservation, regeneration, and the recognition of ecosystem services provided by coastal habitats.

Public messaging must raise awareness of the urgency of coastal protection, emphasizing that inaction is not an option. Citizens should be engaged as active protectors of the coast, with tools that visualize risks and interventions, such as serious games and simulations. Participation is challenged by limited public understanding of natural processes, legal and technical complexity, and spatial conflicts. Moreover, tensions between ecological integrity and economic development require balanced governance frameworks.

Ultimately, advancing participation in coastal protection requires collaborative engagement formats that empower citizens, integrate scientific knowledge, and foster co-creation. Such efforts are essential to align ecological resilience with socio-economic opportunity, ensuring a safe, vibrant, and sustainable future for coastal communities.

Key insights from WP1 relevant to costal protection

- High acceptance overall, especially for dunes, but can drop if perceived personal impacts are high.
- Risk perception and place attachment strongly influence acceptance.
- Historical narratives and doom scenarios increase risk perception and normalize change.
- Optimists are more open to change; pessimists resist unless benefits are clear.
- Biospheric and altruistic values predict responsibility; hedonic values can motivate action if linked to enjoyment and connection with the coastal region.

Recommendations

- ✓ **Leverage cultural heritage:** Use localized historical narratives to show adaptation as part of coastal identity.
- ✓ **Normalize change:** Visualize past and future changes (AR/VR, exhibitions) to make change expected and necessary.
- ✓ **Balance fear and hope:** Combine doom scenarios with solution-oriented messages to avoid fatalism.
- ✓ **Appeal to different values, underscoring different standpoints:**
 - Highlight diverse values by emphasizing the multiple co-benefits that new dikes and dunes can offer to different groups of people (as illustrated in the video of kustvisie).
- ✓ **Address group norms:** Highlight that others also value nature to strengthen social norms and collective responsibility.
- ✓ **Strengthen efficacy and hope:** Frame messages around what people can do and the collective impact of actions.

Practical recommendations for stakeholder engagement in Coastal Protection

Inform:

1. *Make complex interventions tangible through 3D models, VR, or interactive maps*
Objective: The Spioenkop test case demonstrates how historical and future landscape changes can be



visualized using Photoshop and AI editing and immersive 3D environments. These visuals help citizens visualise past changes and imagine scenarios such as “doom” (doing nothing) versus “hopeful” (dunes, dikes) for the future. Can be showcased in-situ for maximum effect (easier to imagine; tap into sense of place) or presented remotely to reach a wider public. QR codes on physical signage can be used to collect public feedback.

2. *Ensure transparent communication about risks and choices*

Objective: Use webinars, info packs, and open houses to build trust.

Actions: Science communication through expos, podcasts, and festivals (e.g. Nerdland, Love Tomorrow) is recommended. Collaborations with CERA, Colruyt Academy, and VITOPOLIS can support thematic sessions on climate adaptation.

3. *Engage youth through educational formats*

Objective: Build long-term support via schools and youth organizations.

Actions: A school campaign on coastal dynamics is proposed, linked to the Mapathon 1571 and sea classes. Educational materials can combine historical maps with current climate challenges.

Consult:

4. *Organize participatory walks and site visits*

Objective: Let stakeholders experience and discuss the physical space.

Actions: Experience-based routes and coastal cycling trails (in collaboration with Westtoer and the City of Ostend) can integrate Spioenkop narratives. These routes connect historical insights with current coastal vision and stimulate place-based dialogue.

5. *Apply storytelling and heritage narrative*

Objective: Connect coastal protection to local identity and history.

Actions: Narratives about terps, shifting dunes, and historical flood management practices (e.g. Roman period, 16th century) increase awareness of landscape dynamics and challenge “Climax Thinking”—the belief that landscapes are static. This fosters acceptance of future interventions.

Involve:

6. *Use serious games for scenario exploration*

Objective: Enable stakeholders to explore choices around coastal safety and ecology.

Actions: Gamification is recommended to engage youth and explore future scenarios.

7. *Integrate citizen science for monitoring*

Objective: Involve residents in data collection on vegetation, erosion, or biodiversity.

Actions: Citizen science can be linked to visual storytelling and education. For example, using VR viewers to show dune development, or symbolic dune adoption through cooperative funds (“birth dune”).

Co-create:

8. *Facilitate consensus workshops for spatial conflicts*

Objective: Bring diverse interests together around dune restoration or beach management.

Actions: Consensus-building is essential when balancing economic and ecological interests. The AB emphasized the importance of combining realistic risks (e.g. flood simulations) with feasible solutions



(nature-based protection).

8. Key lessons: Essential practices for inclusive engagement

Stakeholder engagement is a dynamic process that extends beyond a single event. It requires strategic thinking across multiple stages, from understanding the stakeholder landscape to designing participatory approaches that are both inclusive and effective. The seven-step framework presented in this report offers a useful structure, but experience shows that success depends on more than following steps—it relies on clarity of purpose, adaptability, and continuous learning.

Mapping for inclusion, not just influence

Stakeholder mapping is more than a technical exercise. It is a diagnostic tool that helps uncover roles, relationships, and gaps across governance levels. In the Belgian coastal context, mapping revealed a strong presence of government agencies, industry actors, and research institutions, but limited direct engagement of local communities. This imbalance creates barriers to legitimacy but also opportunities for targeted engagement. For example, involving civil society groups in tourism planning or integrating residents' perspectives in blue food initiatives.

Preparation as an ongoing process

Preparation is not confined to the start of a project. It recurs before mapping and before engagement itself. Early actions (such as clarifying objectives, securing relevant expertise, and anticipating barriers) shape the quality of participation.

Choosing the right engagement level

Engagement is not one-size-fits-all. Deciding whether to inform, consult, involve, or collaborate depends on decision complexity, stakeholder influence, and legitimacy needs. Other factors such as resources and the stage of the project implementation also play a key role restricting the extent of engagement for stakeholders.

Implementation and follow-up matter

Execution and monitoring sustain credibility. Documenting decisions transparently, evaluating participation quality, and maintaining relationships after formal engagement are critical for long-term trust and learning.

This approach aligns with the European Union's long-term vision for 2050, which seeks to achieve green and digital objectives inclusively, leaving no one behind. The EU emphasizes social fairness, citizen empowerment, and policy coherence across sectors such as industry, education, employment, and research. Public participation is therefore not only a democratic imperative but also a practical necessity for delivering sustainable coastal transitions.

References

- Barreteau, O., Le Page, C., & Perez, P. (2007). Contribution of simulation and gaming to natural resource management issues: An introduction. *Simulation & Gaming*, 38(2), 185–194. <https://doi.org/10.1177/1046878107300660>
- Briscoe, G., & Mulligan, C. (2014). *Digital innovation: The hackathon phenomenon* (Working Paper). Queen Mary University of London. <https://doi.org/10.2139/ssrn.2705646>
- Brown, J., & Isaacs, D. (2005). *The World Café: Shaping our futures through conversations that matter*. Berrett-Koehler.
- Bryson, J. M., Quick, K. S., Slotterback, C. S., & Crosby, B. C. (2013). *Designing public participation processes*. *Public Administration Review*, 73(1), 23–34. <https://doi.org/10.1111/j.1540-6210.2012.02678.x>
- Burgess, J., A. Stirling, A. Clark, G. Davies, M. Eames, K. Staley, and S. Williamson. 2007. “Deliberative Mapping: A Novel Analytic-deliberative Methodology to Support Contested Science-policy Decisions.” *Public Understanding of Science* 16 (3): 299-322.
- Celliers, L., Jozaei, J., & Pörtner, H.-O. (2024). Assessing collaboration, knowledge exchange, and stakeholder agency in coastal governance to enhance climate resilience. *Regional Environmental Change*, 24(6). <https://doi.org/10.1007/s10113-023-02163-7>
- Cornwall, A. (2008). Unpacking 'Participation': Models, meanings and practices. *Community Development Journal*, 43(3), 269–283. <https://doi.org/10.1093/cdj/bsn010>
- Couvreur G., Devriese, L.I., Asselman J., Cauberghe V., Dauwe S., Depoorter M., Janssen C., Maelfait H., Vandamme S. (2023). Blue Balance: Milestone M2b.1 'Compilation of the available information on participatory stakeholder processes for the Belgian coast' 26pp
- Couvreur, Gijs, Lisa Devriese, Verolien Cauberghe, Maxime Depoorter, Hannelore Maelfait, and Sara Vandamme. (2023). “Blue Balance: Milestone M2b.2 ‘Coastal Stakeholder Mapping and Expert Interviews on Participation’ 28 Pp.
- Couvreur G., Devriese, L.I., Cauberghe V., Dauwe S., Depoorter, Maelfait H., Vandamme S. (2024). Blue Balance: Deliverable D2b.1 ‘Blueprint for stakeholders: Launching participatory processes for coastal sustainability transitions’ 52 pp.
- Couvreur, G., Koedooder, C., Withouck, I., Cauberghe, V., Vandamme, S., & Devriese, L. I. (submitted). Building Bridges for a Sustainable Blue Economy: A framework for participatory stakeholder engagement. *Npj Ocean Sustainability*.



Couvreur G., Baur T., De Wilde K., De Zutter M., Depoorter M., Devriese L.I., Lardinois I., Maelfait H., Pirlet H. (2025). Practical guide on engaging stakeholders in coastal sustainability transitions. Flanders Marine Institute (VLIZ): Ostend, 29 pp.

Dodge, J., Ospina, S. M., & Foldy, E. G. (2005). Integrating rigor and relevance in public administration scholarship: The contribution of narrative inquiry. *Public Administration Review*, 65(3), 286–300. <https://doi.org/10.1111/j.1540-6210.2005.00454.x>

Escobar, A. (2011). Encountering development: The making and unmaking of the Third World. *Princeton University Press*.

European Commission. (2021). *Mission Restore our Ocean and Waters by 2030: Implementation plan*. Directorate-General for Research and Innovation. https://ec.europa.eu/info/publications/mission-restore-our-ocean-and-waters_en

Figueiredo Do Nascimento S; Cuccillato E; Schade S; Martinho Guimaraes Pires Pereira A. (2016) Citizen Engagement in Science and Policy-Making. EUR 28328 EN. Luxembourg (Luxembourg): Publications Office of the European Union. JRC105004 <https://publications.jrc.ec.europa.eu/repository/handle/JRC105004>

Fung, A. (2006). Varieties of participation in complex governance. *Public Administration Review*, 66(s1), 66–75. <https://doi.org/10.1111/j.1540-6210.2006.00667.x>

Gama, K. (2017). Hackathons for civic engagement and innovation. In G. Misuraca, & D. P. Osimo (Eds.), *Exploring Digital Government: Platforms, Applications, and Innovation* (pp. 101–121). Springer.

Gilek, M., Armoškaitė, A., Gee, K., & Zaucha, J. (2021). In search of social sustainability in marine spatial planning: A review of scientific literature published 2005–2020. *Ocean & Coastal Management*, 209, 105606. <https://doi.org/10.1016/j.ocecoaman.2021.105606>

Innes, J. E., & Booher, D. E. (2004). Reframing public participation: Strategies for the 21st century. *Planning Theory & Practice*, 5(4), 419–436. <https://doi.org/10.1080/1464935042000293170>

IAP2 - International Association for Public Participation. (2018). *IAP2 Spectrum of Public Participation*. <https://iap2.org.au/resources/spectrum/>

Jungk, R., & Müllert, N. R. (1987). *Future workshops: How to create desirable futures*. Institute for Social Inventions.

Kaner, S. (2014). *Facilitator's guide to participatory decision-making* (3rd ed.). Jossey-Bass.

Linstone, H. A., & Turoff, M. (Eds.). (2002). *The Delphi method: Techniques and applications* (Revised ed.). Addison-Wesley. Retrieved from <https://web.njit.edu/~turoff/pubs/delphibook/>

Matti, C., Rissola, G., Martinez, P., Bontoux, L., Joval, J., Spalazzi, A. and Fernandez, D., Co-creation for policy: Participatory methodologies to structure multi-stakeholder policymaking processes, Matti, C. and Rissola, G.



editor(s), EUR 31056 EN, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-52215-7, doi:10.2760/211431, JRC128771. <https://publications.jrc.ec.europa.eu/repository/handle/JRC128771>

Mayer, I. (2009). The gaming of policy and the politics of gaming: A review. *Simulation & Gaming*, 40(6), 825–862. <https://doi.org/10.1177/1046878109346456>

Nabatchi, T. (2012). *A manager's guide to evaluating citizen participation*. IBM Center for the Business of Government.

Nelson, N., & Wright, S. (1995). *Power and participatory development: Theory and practice*. London: Intermediate Technology Publications.

Newig, J., & Fritsch, O. (2009). Environmental governance: Participatory, collaborative and deliberative approaches. *Environmental Policy and Governance*, 19(3), 197–214. <https://doi.org/10.1002/eet.509>

OECD. (2020). *Innovative citizen participation and new democratic institutions: Catching the deliberative wave*. OECD Publishing. <https://doi.org/10.1787/339306da-en>

Reed, M. S. (2008). Stakeholder participation for environmental management: A literature review. *Biological Conservation*, 141(10), 2417–2431. <https://doi.org/10.1016/j.biocon.2008.07.014>

Reed, M. S., Evely, A. C., Cundill, G., et al. (2013). Facilitating knowledge exchange to support adaptive management: Insights from a structured literature review. *Ecology and Society*, 18(4), 30. <https://doi.org/10.5751/ES-05613-180430>

Rowe, G., & Wright, G. (1999). The Delphi technique as a forecasting tool: Issues and analysis. *International Journal of Forecasting*, 15(4), 353–375. [https://doi.org/10.1016/S0169-2070\(99\)00018-7](https://doi.org/10.1016/S0169-2070(99)00018-7)

Rowe, G., & Frewer, L. J. (2005). *A typology of public engagement mechanisms*. Science, Technology, & Human Values, 30(2), 251–290. <https://doi.org/10.1177/0162243904271724>

Schmid, M., Vermeulen C., Cauberghe, V., Bouman, T. & Vandamme, S. (2024). Report on the influence of key motivators, inhibitors and place attachment on sustainable coastal development support among coastal residents and tourists. Research report. <https://www.ugent.be/marine/en/partnerships/bluebalance/blueb-full-report>

Stanfield, R. B. (2002). *The workshop book: From individual creativity to group action*. ICA Associates.

Stirling, A., Leach, M., Mehta, L., Scoones, I., Smith, A., Stagl, S., Thompson, J., 2007. Empowering Designs: towards more progressive appraisal of sustainability, STEPS Working Paper 3. STEPS Centre, Brighton.

United Nations. (n.d.-a). *Goal 16: Promote just, peaceful and inclusive societies*. United Nations Sustainable Development Goals. <https://sdgs.un.org/goals/goal16>

United Nations. (n.d.-b). *Goal 14: Conserve and sustainably use the oceans, seas and marine resources*. United Nations Sustainable Development Goals. <https://sdgs.un.org/goals/goal14>



van der Heijden, K. (2005). *Scenarios: The art of strategic conversation* (2nd ed.). Wiley.

van der Helm, R. (2007). Ten insolvable dilemmas of participation and why foresight has to deal with them. *Foresight*, 9(3), 3–17. <https://doi.org/10.1108/14636680710754126>

Vermeulen, C., Schmid M., Vandamme S., Bouman T., Cauberghe V. (2025) Blue BALANCE - Deliverable V 1.2: Guidelines on how to approach coastal residents and tourists to increase social support of sustainable coastal developments.

Vervoort, J. M., Bendor, R., Kelliher, A., Strik, O., & Helfgott, A. (2015). Scenarios and the art of worldmaking. *Futures*, 74, 62–70. <https://doi.org/10.1016/j.futures.2015.08.009>

Voinov, A., & Bousquet, F. (2010). Modelling with stakeholders. *Environmental Modelling & Software*, 25(11), 1268–1281. <https://doi.org/10.1016/j.envsoft.2010.03.007>