

## D1.3.1

# Methodological report and content structure of the stakeholder's interaction and mapping validation

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<b>ABSTRACT</b>	Report defining the methodology, structure, and linear design to be followed in all workshops, the content to be addressed, the objectives, and the target audience
<b>KEYWORDS</b>	Maritime, Transport, Atlantic, Decarbonisation, Network, Emissions, Innovations, Workshop, Stakeholders, Interaction

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# 1. SMARTDEC Background

“*Smart Clusters for Maritime Decarbonisation*”, known as [SMARTDEC](#), is an Interreg Atlantic Area project funded by the European Union. This project aims to create and develop a Network of Atlantic hubs of the maritime transport sector to provide tools, knowledge, and structure needed for an efficient implementation of decarbonisation solutions in maritime transportation.

This objective will be reached with a quintuple helix approach in which research & academia, policymakers, society, and the industry will collaborate to develop common strategies to achieve carbon neutrality in the sector in favour of the fifth helix: the environment. SMARTDEC will be implemented through several activities. Firstly, comprehensive research on the waterborne transport sector and its decarbonisation in the Atlantic area, focusing on older initiatives, alongside detailed data and narrative analyses specific to each country, will be conducted. Such efforts are aimed at knowing the status of the sector in terms of pollution levels and decarbonisation, making the identification of key stakeholders crucial for the Atlantic network.

Subsequently, research on innovation and development of emerging technologies will be conducted, leveraging insights collected from the initial activity's findings, stakeholder input, and research facilities. This research will be a summarized consolidation of workshop outcomes and will provide information about technologies that are under development.

The SMARTDEC network will be implemented, and action plans for the stakeholders will be developed. This will pave the way towards setting up and accelerating promising innovations to decarbonize the maritime transport sector. All outputs and results will be available online via an interactive platform.

## 1.1 Relevance of the workshop

The WP1 workshops represent a foundational milestone in the SMARTDEC project. Their primary purpose is to validate and enrich the findings of [D1.1 \(Deep desktop review and state-of-the-art of Atlantic waterborne transportation\)](#) (Domínguez-Chapman et al., 2024) on the current challenges, opportunities in, and governance framework for maritime decarbonisation across the Atlantic Area.

By bringing together representatives from ports, logistics operators, maritime industries, public administrations, infrastructure managers, research bodies, and policymaking entities, these workshops aim to establish a shared understanding of the sector's decarbonisation needs. This collaborative setting is primarily intended to validate the preliminary findings already identified throughout the project and to uncover any relevant insights or gaps that may have been overlooked. In doing so, it will also facilitate the exchange of knowledge and practical experiences, ultimately fostering the emergence of cross-border synergies — particularly in areas such as policy design, funding mechanisms, and technological or operational solutions.

Importantly, the workshops will be held online or in-person in each of the participating countries of the SMARTDEC Atlantic Network — Spain, Portugal, Ireland, and France — following a common and replicable methodology tailored to national contexts while ensuring transnational coherence.

These WP1 workshops may be organised either in a face-to-face or online format, depending on national context, stakeholder availability, and logistical considerations. Both formats follow the same methodological structure, objectives, and expected outputs, ensuring consistency across countries.

In this context, the main objective of the workshops is to validate the data gathered during the mapping phase, specifically regarding:

- **Validate and complement** the current understanding of national and regional frameworks supporting decarbonisation in the maritime transport sector, with a particular focus on **port authorities, shipping companies, and port logistics operators**. This includes policies, funding programs, institutional strategies, and governance dynamics identified during the desktop analysis.
- **Identify and discuss complementary or overlooked initiatives, instruments, or actors** that were not captured through the initial research, with the aim of reinforcing the comprehensiveness and contextual accuracy of the SMARTDEC diagnosis.
- **Revalidate and deepen the assessment of sectoral needs, challenges, gaps and opportunities** related to maritime decarbonisation.

The outcomes of the WP1 workshops will be instrumental for the future direction of SMARTDEC, particularly contributing to the strategic recommendations and actions proposed in WP5. They will also offer a solid evidence base for policymakers, in alignment with the actual needs of maritime stakeholders and the design of future regulatory and financial frameworks aimed at accelerating the decarbonisation of the sector.

## 1.2 Objectives

The WP1 workshop serves multiple strategic objectives that align with the broader vision of the SMARTDEC project. These objectives are not only focused on information dissemination but also on strengthening stakeholder engagement, enriching the analytical groundwork, and fostering collaboration for long-term impact in the Atlantic maritime sector. The specific objectives are as follows:

- A. To present SMARTDEC's value proposition:** the workshop will provide participants with a comprehensive overview of the SMARTDEC project, highlighting its main goals, expected outcomes, key activities, and the long-term benefits for stakeholders across the Atlantic Area. Emphasis will be placed on how SMARTDEC can support stakeholders at both national and regional levels through knowledge transfer, networking, and targeted action planning.
- B. To refine and deepen the analysis of existing findings:** building on the research and conclusions presented in [D1.1 \(Deep desktop review and state-of-the-art of Atlantic waterborne transportation\)](#). The workshop will serve as a platform to validate, expand, and contextualize key findings related to existing needs, structural gaps, challenges, and opportunities. This exercise is particularly important to ensure that the evidence base reflects country-specific realities and informs the next steps of the project in a meaningful and grounded way.
- C. To identify additional needs, gaps, challenges, and opportunities:** the workshop helps uncover emerging or underrepresented issues not fully captured in previous analyses through guided discussions and participatory methods. In particular, the workshop will

explore four strategic dimensions that have surfaced as especially relevant across the Atlantic Area:

- **The financial dimension**, addressing limited access to dedicated funding instruments for decarbonisation, especially affecting SMEs and port authorities.
- **The collaboration dimension** refers to fragmented interactions among technology developers, end-users, policy-makers, and research institutions, and the need to reinforce coordination across national and regional levels.
- **The policy and regulatory dimension** focuses on the need for clearer regulatory frameworks, streamlined permitting, and effective incentive mechanisms to support decarbonisation pathways.
- **The technological and infrastructural dimension**, which concerns the uneven readiness of ports and vessels to implement green and digital solutions, and the need to address technical barriers and accelerate innovation uptake.

**D. To promote stakeholder interaction and transnational collaboration:** the key added value of this workshop format lies in its capacity to promote networking and collaboration among a broad spectrum of stakeholders, providing a structured open environment for dialogue and mutual learning and helping to build trust and stimulate cross-sectoral interactions. This, in turn, can lay the groundwork for sustained cooperation and the consolidation of a strong SMARTDEC stakeholder community — potentially extending collaboration beyond the lifetime of the project.

### 1.3 Target Audience

The effectiveness of these workshops relies on the active engagement of a diverse and strategically selected group of stakeholders who are either directly involved in or have a significant influence over maritime decarbonisation in the Atlantic Area. Their expertise, insights, and practical experience are essential to validate existing findings, uncover critical gaps, and co-design actionable, context-relevant solutions.

The workshop is designed to engage the following target groups:

- **Ports authorities and operators**
- **Logistics and maritime transport:** Shipping companies, shipbuilding and repair, shipyards.
- **Infrastructure providers:** Onshore power supply and cold ironing providers.
- **Policymakers:** Local, national, and European authorities & regulatory bodies.
- **Research and development centers:** national, regional & local universities and R&D centers.
- Other relevant stakeholders in the maritime sector. (e.g., digitalization)

### 1.4 KPIs and Impact Measurement

No distinction is made between online and face-to-face workshops in terms of analytical value. All stakeholder inputs are processed through the same validation logic, qualitative analysis criteria, and synthesis procedures, ensuring robustness, replicability, and consistency across partner countries.

Established KPIs (Key Performance Indicators) are intended to track progress and identify areas for improvement. By measuring impact, we aim to evaluate the long-term results of the project. With both data we will achieve an overall view of the workshop's performance and effectiveness. Those are:

- **Minimum attendance:** each workshop will aim to gather a minimum of 15 to 20 participants, ensuring a representative and diverse group of stakeholders from relevant maritime sectors, including ports, logistics, industry, policy, and academia.
- **New challenges identified:** through the validation and discussion phases, the workshop is expected to identify at least 5 additional needs, gaps, challenges, and opportunities that were not previously captured in D1.1. This ensures that emerging context-specific issues are included in the final analysis.
- **Integrated feedback:** a minimum of 80% of stakeholder comments collected during the workshops will be reviewed and integrated into the updated deliverables and recommendations. This KPI ensures that the final output reflects the voice of the stakeholders involved.
- **SMARTDEC network expansion:** one of the goals of the workshops is to broaden the stakeholders base of the SMARTDEC Network to at least 10 new stakeholders (not previously involved in each country).

## 2. Methodology

The workshops will be held online or in-person, with one session organized in each participating country (Spain, Portugal, Ireland, and France). The participatory setting or face-to-face format selected per country is designed to foster direct exchange, active participation, and meaningful engagement among stakeholders.

The workshop employs a participatory and collaborative approach combining informative presentations, data validation, and open discussions:

- **Structured Session:** Four structured parts are designed:
  - **Session A:** Presentation and contextual Introduction (15')
  - **Session B:** Stakeholder Validation –Needs, Gaps, Challenges, and Opportunities (45')
  - **Session C:** Stakeholder Inspiration- Best Practices and Strategic Perspectives (20')
  - **Session D<sup>1</sup>:** Plenary Q&A and Closing Reflection (10')

### 2.1 Timeline and Logistics

The date will be selected by each country and will be between the first and second quarter of 2026 (January - June 2026). **The deadline will be 30 June 2026.**

- **The event will have an estimated duration of 1 h 45 minutes**

15' – Presentation and Contextual Introduction

45' – Stakeholder's validation: Needs, Gaps, Challenges, and Opportunities

20' – Stakeholder Inspiration – Best Practices and Strategic Perspective

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<sup>1</sup> *We should include at least 2 minutes in the presentation to explain the platform and display the QR code so that participants can easily access it. Additionally, we could add it to the quality survey and encourage attendees to register on the platforms*

10' – Plenary Q&A and Closing Reflection

15' – Welcome registration, informal networking / coffee break or technical buffer

- **Location:** If the workshop will be held online, we could use VEVOX or SLIDO; in case this workshop is held face-to-face, the venue of the event will be determined by each country.
- **Format:** 4 workshops (one per country)

## 2.2 Registration form template

A standardised Email template ([5.1 Email invitation](#)) provided in advance to all partners, however you can find a first version in Annex. This template may be adapted as necessary to reflect the specific details of each national workshop, including the date, time, location, and any relevant logistical or contextual information. The objective is to ensure a coherent and consistent communication approach across all participating countries, while allowing for appropriate customisation to reflect local circumstances.

This email will include a link to the registration form to ensure the participation of all attendees. We have prepared a draft registration form, which can be found at [5.2 Registration form template](#)

## 2.3 Workshop Structure

The WP1 stakeholder workshops may be delivered either online or in person, depending on the national context and logistical considerations. Regardless of the delivery format, all workshops follow the same methodological framework, tools, and analytical structure, ensuring full comparability and equivalent methodological value of results across countries.

The workshop will be structured around four thematic discussion groups, (implemented as breakout rooms in online workshops or as moderated thematic tables in face-to-face workshops) each addressing a key strategic dimension relevant to the decarbonisation of maritime transport in the Atlantic Area. These dimensions are aligned with the preliminary findings from the desktop research phase (Deliverable D1.1) and constitute the basis for structured stakeholder dialogue and validation, regardless of the workshop format.

Participants will be allocated to one thematic group according to their professional background, sectoral expertise, or expressed interest during the registration process. Depending on the selected format, these groups will operate either as **thematic tables** (*face-to-face workshops: physical tables organised by topic*) or as **virtual breakout rooms** (*online workshops: breakout rooms within the online platform*). This approach ensures a balanced mix of perspectives within each group while enabling focused and in-depth discussions on the selected topic areas.

Each thematic group will be supported by a designated moderator responsible for guiding the discussion through a predefined set of questions aimed at identifying needs, gaps, challenges, and opportunities (*face-to-face: in-person facilitation; online: virtual moderation*). In addition, a rapporteur will be appointed for each group to systematically capture the main discussion points, highlight areas of consensus or divergence, and ensure full traceability of stakeholder contributions (*face-to-face: structured note-taking and digital templates; online: shared digital boards and collaborative tools*).

Inputs will be collected using standardised reporting templates (*face-to-face: completed digitally after the session; online: completed in real time through collaborative platforms*), ensuring consistency and comparability of results across all workshops.

### **Session A: Presentation and Contextual Introduction (15 min)**

The workshop will begin with a **plenary opening session** aimed at welcoming participants, introducing the overall project framework, and setting the context for the collaborative discussions that will follow. The presentation will be delivered in plenary (*face-to-face: in-person presentation with slides; online: presentation via screen sharing*), ensuring that all participants can follow the project overview, the key findings from Deliverable D1.1, and the explanation of the workshop methodology.

This session will provide a **comprehensive overview of the SMARTDEC project**, its strategic objectives within the Atlantic Area, and the role of the WP1 stakeholder workshops as defined in Deliverable D1.3. Particular emphasis will be placed on the results of **Deliverable D1.1** ([Deep Desktop Review and State-of-the-Art of Atlantic Waterborne Transportation](#)), which identified critical challenges, thematic gaps, needs, and opportunities across the maritime decarbonisation landscape. These findings constitute the **analytical foundation** for the subsequent group discussions and validation exercises.

A concise explanation of the workshop structure and methodology will also be provided, outlining the four structured sessions and clarifying how participants' contributions will directly feed into the refinement of SMARTDEC's stakeholder engagement model and the development of future project deliverables (*face-to-face and online formats following the same methodological logic*).

### **Session B: Stakeholder Validation – Needs, Gaps and Challenges (45 min)**

Participants will be divided into four thematic discussion groups (*face-to-face: thematic tables; online: virtual breakout rooms*). Each group will focus on validating and further elaborating the findings of the desktop research, sharing practical experiences from their respective contexts, and proposing potential pathways to address the identified needs, gaps, and challenges.

Each thematic group will be supported by a designated moderator responsible for guiding the discussion and capturing key inputs (*face-to-face: structured note-taking; online: digital facilitation tools*). A rapporteur will be assigned to each group to consolidate the discussion outcomes and report back during the plenary feedback session (*face-to-face: oral feedback supported by slides or notes; online: plenary reporting via online platform*).

All groups will address the following four thematic areas identified through Deliverable D1.1 and previous stakeholder feedback:

THEMATIC TABLE	GAPS	NEEDS	CHALLENGES	OPPORTUNITIES
<b>1. FINANCIAL ECOSYSTEM FROM GREEN MARITIME TRANSITION</b>	What specific limitations prevent Atlantic stakeholders from accessing available funding for clean technologies?	What features should financial instruments or funding schemes have to effectively address the needs of SMEs and port authorities during the green transition?	How can smaller stakeholders overcome concerns related to high upfront investment costs without compromising their competitiveness?	Which innovative financial models (e.g. pay-per-use schemes, green leasing, micro-crowdfunding) could help catalyse investment in maritime decarbonisation?
<b>2. COLLABORATION FOR LOCALISED INNOVATION AND IMPACT</b>	Why is the representation of Atlantic ports and operators in EU R&D projects on decarbonisation currently limited?	What types of networks or platforms could support the development of solutions tailored to the specific characteristics of the Atlantic ecosystem?	How can collaboration move beyond declarative commitments to deliver tangible results in innovation and sustainability?	What role can territorial consortia or regional living labs play in accelerating co-creation and the piloting of new solutions?
<b>3. REGULATORY AND POLICY ALIGNMENT FOR DECARBONISATION</b>	What regulatory gaps are currently hindering the integration of green technologies in Atlantic ports and fleets?	Which regulatory frameworks are required to support the standardisation of KPIs for measuring environmental performance in the maritime sector?	How can fragmentation between regional, national, and European policies be addressed to provide the sector with a clear and coherent decarbonisation pathway?	What fiscal incentives, fast-tracked permitting procedures, or green clauses could accelerate sustainable investment in port infrastructure?
<b>4. TECHNOLOGY &amp; DIGITAL READINESS FOR A LOW-CARBON MARITIME SECTOR</b>	Which key technologies (e.g. OPS, alternative fuels, sensors) are not yet being implemented due to technical, regulatory, or structural constraints?	What infrastructure and technological services are urgently required by the Atlantic port ecosystem to advance sustainability?	What difficulties do ports and operators face when attempting to digitalise their operations efficiently and sustainably?	How can ports and vessels be transformed into “living labs” for testing and integrating green and digital solutions?

Table 1: Organisation of tables and questions according to the respective sections

## ***Session C: Stakeholder Inspiration – Best Practices and Strategic Perspectives (20 min)***

This session will feature **one invited expert or stakeholder from the host country**, selected based on their direct involvement in maritime decarbonisation initiatives and practical experience. The invited speaker may correspond to one of the following profiles:

- Public official involved in sustainable maritime policy or port strategy
- Port authority or company leading a decarbonisation project
- Innovator or project coordinator of cross-sector pilot initiative
- Representative of a cluster or platform that facilitates stakeholders' cooperation

The invited speaker will present a **concrete case study or strategic approach** (*face-to-face: in-person presentation; online: presentation via online platform*), addressing the following elements:

- **Context and motivation:** What local or regional challenge triggered the initiative?
- **Strategy and solution:** What measures were implemented (e.g. policy innovation, funding structure, partnership model)?
- **Actors involved:** How were multiple sectors or stakeholders aligned and coordinated? Results and lessons learned: What impacts were achieved and which barriers had to be overcome?
- **Scalability and transferability:** To what extent could the initiative be replicated in other regions or contexts?

This session serves as a **practical bridge** between the analytical findings of the SMARTDEC project and the real-world experiences of stakeholders. It enables participants to:

- Understand how identified gaps and challenges can be addressed through concrete actions
- Observe multi-actor collaboration in practice
- Draw inspiration for future policy recommendations, investment strategies, or pilot initiatives

Following the presentation, the moderator may open the floor to **one or two short clarification questions** (*face-to-face: plenary questions; online: moderated Q&A via chat or audio*) to deepen understanding and feed into the subsequent discussion phases.

## ***Session D: Plenary Q&A and Closing Reflection (10 min)***

The final session of the workshop will provide an open and inclusive space for participants to share final observations, raise outstanding questions, and reflect on the insights generated throughout the workshop. This session aims not only to consolidate the workshop outcomes but also to collect feedback on the methodology and gather constructive suggestions for the next phases of the SMARTDEC project (*applicable to both online and face-to-face formats*).

The closing segment is structured around these components:

- **Rapporteur feedback**

Moderators or rapporteurs from each thematic discussion group will briefly summarise the key points discussed during **Session B** (*face-to-face: oral reporting supported by notes or slides; online: plenary feedback via online platform*). These summaries will highlight:

- The main needs, gaps, challenges, and opportunities identified
- Areas of consensus or divergence among participants
- Any critical issues or questions requiring further exploration

This step ensures that workshop findings are **systematically captured, traceable, and comparable** across groups and partner countries.

- **Open floor for Q&A and comments**

Participants will be invited to share additional remarks or reflections that may not have been fully addressed in earlier sessions. This open exchange provides an opportunity to:

- Raise cross-cutting or strategic concerns
- Suggest topics, actions, or stakeholder groups to be addressed in future activities
- Provide real-time feedback on the relevance, clarity, and usefulness of the workshop structure and content (*face-to-face: open floor discussion; online: moderated Q&A using audio and chat functions*)

- **Facilitators closing reflection**

To conclude the workshop, the session facilitator will deliver a brief closing statement summarising:

- The overall added value of the stakeholder exchanges
- How the inputs collected will contribute to the refinement of the SMARTDEC methodology, stakeholder mapping, and network-building activities
- The link between the workshop outcomes and upcoming work packages  
An expression of appreciation for participants' active engagement and valuable contributions.

The use of harmonised facilitation methods, reporting templates, and consolidation procedures ensures that conclusions drawn from online and face-to-face workshops are fully aligned, comparable, and suitable for integration into subsequent SMARTDEC deliverables and policy-oriented outputs.

## 2.4 Key Findings and Supporting Information for Questions Development

### *Needs*

To achieve greenhouse gas (GHG) reduction targets, the maritime sector in the Atlantic Area must prioritise the transition towards low-carbon and zero-carbon technologies, fuels, and infrastructure. The adoption of alternative fuels such as hydrogen, ammonia, and LNG is essential to progressively replace conventional fossil fuels and reduce emissions across maritime operations. In parallel, the retrofitting of existing vessels and port equipment is required to improve energy efficiency, including the integration of hybrid systems, energy-saving devices, and alternative energy technologies that reduce fuel consumption and carbon footprints.

Ports play a critical role in this transition and must develop adequate infrastructure to support the uptake of alternative fuels. The deployment of refuelling and bunkering infrastructure for clean fuels is necessary to enable vessels to operate safely and efficiently using sustainable energy sources. In addition, the integration of renewable energy sources—such as solar, wind, or tidal energy—within port operations is needed to ensure that ports themselves operate in an environmentally sustainable manner.

Maritime decarbonisation must be addressed as a transversal and multi-sectoral priority, implemented through phased and coordinated approaches. The deployment of digital solutions, including Internet of Things (IoT) sensors, digital twins, and advanced data analytics, enables real-time monitoring of emissions, energy consumption, and operational efficiency. These tools support data-driven decision-making and enhance the sector's capacity to track and improve environmental performance. To this end, the development and adoption of harmonised Key Performance Indicators (KPIs) is essential to consistently measure progress and benchmark decarbonisation efforts across the sector.

Finally, the transition towards a green maritime sector requires a systemic shift in policies, innovation ecosystems, and workforce development. Supportive policy frameworks are needed to incentivise the adoption of clean technologies and foster cross-sector collaboration. At the same time, reskilling and upskilling initiatives are required to ensure that the workforce is adequately prepared to operate, maintain, and manage advanced low-carbon and digital technologies.

### *Gaps*

Several structural gaps continue to hinder progress towards maritime decarbonisation in the Atlantic Area. One significant gap is the relatively low level of participation of Atlantic stakeholders in European projects focused on zero-emission shipping. This limited engagement restricts access to critical funding opportunities, technical expertise, and collaborative networks that are essential to accelerate innovation and deployment.

Another key gap lies in the limited transferability of solutions developed in other regions. Technologies, regulatory approaches, or business models implemented elsewhere may not be fully applicable to the

Atlantic context due to differences in vessel typologies, fuel availability, operational conditions, or port infrastructure. As a result, the Atlantic Area requires tailored solutions that respond to its specific characteristics and constraints.

Infrastructural gaps also remain a major barrier. Many ports in the Atlantic Area lack essential facilities to support decarbonisation, such as Onshore Power Supply (OPS) systems, alternative fuel bunkering infrastructure, and adequate energy distribution networks. The absence of this foundational infrastructure limits the ability of ports to accommodate greener vessels and delays the large-scale adoption of low-carbon technologies.

## *Challenges*

The maritime sector faces multiple challenges in advancing its decarbonisation efforts. One of the most critical challenges is the high upfront cost associated with green technologies. For many operators—particularly small and medium-sized enterprises—the investment required for vessel retrofitting, port infrastructure upgrades, and alternative fuel deployment can be economically prohibitive, raising concerns about financial viability and return on investment.

Regulatory fragmentation represents another significant challenge. The lack of harmonised regulatory frameworks across regions and countries creates uncertainty and complexity for operators, who must navigate differing requirements depending on their operational scope. This fragmentation complicates planning and slows the scaling-up of decarbonisation solutions.

Access to finance remains a persistent challenge, as the transition to low-carbon maritime transport requires substantial and sustained investment. At the same time, the sector faces strong competitive pressures and increasing demand for shipping services. Stakeholders must therefore balance decarbonisation objectives with economic competitiveness, which can generate resistance to change or delays in implementation.

Finally, infrastructure upgrades pose both financial and technical challenges. Many ports lack the resources, technical capacity, or investment readiness to deploy critical systems such as OPS, alternative fuel refuelling stations, and energy-efficient equipment, further slowing the pace of transformation.

## *Impact*

The decarbonisation of the maritime sector offers significant environmental, technological, and socio-economic benefits. The most immediate impact will be a substantial reduction in GHG emissions, contributing directly to climate change mitigation and improving the environmental sustainability of maritime transport. This progress will support both public and private stakeholders in meeting national, European, and international climate commitments.

Beyond environmental benefits, decarbonisation initiatives are expected to strengthen collaboration across the maritime ecosystem. By fostering networks, partnerships, and knowledge exchange, stakeholders can share best practices, reduce risks, and accelerate innovation. Initiatives such as

SMARTDEC aim to address existing gaps by providing a structured collaborative framework that enables stakeholders to jointly develop solutions, enhance capacity, and drive the long-term transformation of the Atlantic maritime sector.

### 3. Expected outcomes

One of the primary outcomes of the WP1 stakeholder workshops is the development of a comprehensive stakeholder mapping database covering relevant actors across the Atlantic Area. This database will feed directly into [D 1.2 - Stakeholders' mapping and assessment of sector priorities](#) (Domínguez-Chapman et al., 2025), serving as a foundational reference for subsequent project activities and ensuring targeted stakeholder engagement throughout the SMARTDEC project lifecycle.

The main expected outcomes include:

- A clear and evidence-based prioritisation of needs, gaps, challenges, and opportunities within the maritime decarbonisation sector.
- The establishment and strengthening of strategic partnerships among key public and private actors across the Atlantic Area.
- The creation of a structured and searchable database of stakeholders, including information on:
  - Port authorities and port operators
  - Maritime and logistics infrastructures
  - Technological maturity and innovation readiness
  - Shipping companies' decarbonisation strategies and operational status
  - Sectoral needs and investment priorities
  - Intermodality capacities and service providers
- The compilation of dissemination outputs generated through the workshops, including press releases, social media content, and communication materials, contributing to the visibility and outreach of the SMARTDEC project.

## 4. Bibliography

Domínguez-Chapman, Seco-Martín, Florido-Esteban and Brewster . (2024). [Deep desktop review and state of the art of Atlantic waterborne transportation](#). CMMA & IMDO, *Deep desktop review and state of the art of Atlantic waterborne transportation* (pg. 53). Málaga.

Domínguez-Chapman, Seco-Martín, Florido-Esteban and Brewster. (2025). [Stakeholders' mapping and assessment of sector priorities](#). CMMA & IMDO, *Stakeholders' mapping and assessment of sector priorities* (pg. 40). Málaga.

## 5. Annexes

### 5.1 Email invitation

Dear **[Name]**,

I hope this email finds you well,

We are pleased to invite you to take part in the upcoming **SMARTDEC Stakeholder Workshop**, organised by **[Name of your organisation]**, as part of the European project **SMARTDEC – Smart Clusters for Maritime Decarbonisation**, co-funded by the **Interreg Atlantic Area Programme**.

The event will take place **online or in person** on **[Day, Month, Time]** in **[City, Country]**, depending on the selected format.

The SMARTDEC project brings together key actors from Ireland, France, Portugal, and Spain in a collaborative network based on a quintuple helix model, engaging academia, public authorities, industry, civil society, and innovation ecosystems. Together, we aim to accelerate the adoption of validated technological solutions that can effectively support the transition towards a more sustainable and competitive blue economy.

**Workshop highlights include:**

- Presentation of the SMARTDEC project and preliminary findings
- Interactive breakout discussions on barriers, needs, and opportunities for decarbonisation
- Consolidation of conclusions and strategic inputs to inform future SMARTDEC activities

You will find the agenda attached. Kindly confirm your participation and register [**here** – [insert link for the registration form](#)]. The registration deadline is **[Date]**, and a reminder will be sent prior to the event.

To learn more about the project, please visit: <https://smartdec.eu>

To know more about us: <https://cmma.eu> | <https://www.bilbaoport.eus>

We look forward to your valuable contribution.

Warm regards,

**[Your signature]**

**[Your contact details]**

### 5.1.1 Official invitation mock-up



Figure 1: Official invitation mock-up

### 5.2 Registration form template

**GUIDANCE:** This is to be prepared by each country's workshop responsible organization in an online or in-person format to link to the communication materials of the workshops.

**Description:**

SMARTDEC - Smart Clusters for Maritime Decarbonisation  
Stakeholders Workshop: Methodological report and content structure of the stakeholders international and mapping validation.

SMARTDEC kindly invites you to participate in a workshop aimed at validating the gaps, needs, challenges, and opportunities identified in “Methodological report and content structure of the stakeholders international & mapping validation”.

We look forward to your valuable participation.

SMARTDEC is a European Project that aims to create and develop an Atlantic network of the maritime transport sector to provide the tools, knowledge, and structure needed to rapidly meet the challenge of reducing the pollutant emissions of the waterborne transportation in the Atlantic Area (AA).

This joint initiative gathers key actors from different regions in Ireland, France, Portugal & Spain that will be organised as hubs with a quintuple helix approach in which research & academia, policy makers, society, and the industry (clusters, SMEs & start-ups) will collaborate to develop common strategies to achieve the decarbonisation of the maritime transport sector. SMARTDEC will boost the innovation capacity of decarbonisation of the maritime transport sector by promoting the adoption of promising technological solutions currently available and validated to match with relevant end-users.

#### **General Data Protection Regulation (GDPR) Notice:**

In accordance with Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (General Data Protection Regulation), the personal data provided via this form will be processed solely for the purpose of managing participation in the SMARTDEC WP1 national workshop series. The data will be handled with the utmost confidentiality and stored securely. No data will be shared with third parties. Participants have the right to access, rectify, restrict, erase, and object to the processing of their personal data at any time. For any data-related inquiries, or if you do not consent to the use of your image for dissemination purposes (e.g., event photography), please contact: [smartdec@polemer-ba.com](mailto:smartdec@polemer-ba.com).

By completing this form, you confirm that you have read and understood this policy and consent to the stated terms.

- a. Name
- b. Organisation
- c. E-mail address

Please answer the following questions to facilitate the organisation of the event:

1. What type of organisation do you work for?
  - a) SME/Startup/Spinoff
  - b) Large Industry/Company (>250 employees)
  - c) Academic/R&D
  - d) NGO or civil society organisation
  - e) Public Administration
  - f) Public Company
  - g) Maritime transport operator

- h) Port authority
  - i) Private company
  - j) Other
2. If you reply otherwise, please specify. (Open question)
3. Which thematic area best matches your expertise and contribution to the workshop discussions? *(This information will be used to assign participants to the thematic working groups.)*
- a) Financial Ecosystem from Green Maritime Transition
  - b) Collaboration for Localised Innovation and Impact
  - c) Regulatory and Policy Alignment for Decarbonisation
  - d) Technology & Digital reading for a Low-Carbon Maritime Sector
  - e) Other
4. If you reply other, please specify. (Open question)

### 5.2.1 Registration form mock-up

Figure 2: Registration form mock-up

### 5.3 PowerPoint Presentation

As part of the SMARTDEC project (*Smart Clusters for Maritime Decarbonisation*), this session focused on presenting the **methodological report and content structure for stakeholder interaction and mapping validation**, designed to actively involve key stakeholders in the validation of preliminary findings related to needs, gaps, challenges, and opportunities in maritime decarbonisation.

The presentation highlighted SMARTDEC’s overarching mission: to promote a sustainable and competitive blue economy by accelerating the decarbonisation of maritime transport across the Atlantic Area. It provided a clear overview of the structured and participatory methodological approach adopted to gather, validate, and consolidate stakeholder inputs at national and transnational levels.

Key insights were shared, outlining the main challenges, gaps, needs, and opportunities identified through the desktop analysis and stakeholder engagement activities. These findings constitute a critical evidence base to ensure that future project actions, policy recommendations, and pilot initiatives are closely aligned with real operational conditions and stakeholder priorities.

The audience comprised a diverse and strategic group of participants, including port authorities, maritime and logistics operators, public administrations, research organisations, and innovation bodies. All participants shared a common objective: contributing to the reduction of greenhouse gas emissions in shipping and port-related activities through coordinated and evidence-based action.

Finally, the session aimed to lay the groundwork for enhanced transnational cooperation and the development of **replicable, impact-oriented solutions**, reinforcing the role of SMARTDEC as a facilitating platform for collaboration and knowledge exchange within the Atlantic maritime ecosystem.

### 5.3.1 Power Point mock-up



Figure 3: PowerPoint Mock-up

## 5.4 Quality Survey & Thank you email

Thank you for taking the time to complete this short survey. Your feedback is essential to help us assess the quality, relevance, and effectiveness of the SMARTDEC stakeholder workshops and to continuously improve future activities.

The survey will take approximately 3–5 minutes to complete. Responses will be treated confidentially and analysed in an aggregated form.

Once completed, participants will receive a summary of the main findings from the workshop, as well as a selection of photos from the session (where applicable).

We warmly welcome your participation and valuable contributions to this important initiative.

Learn more about SMARTDEC: <https://smartdec.eu>

- a. Name
  - b. Organisation
  - c. E-mail address
1. What type of organisation do you represent?
    - a) Port authority
    - b) Maritime transport operator
    - c) Public administration
    - d) Research or academic institution
    - e) NGO or civil society organisation
    - f) Private Company
    - g) Other
  2. Country / Region
  3. How clear and relevant was the presentation of the needs, gaps, challenges and opportunities?
    - a) Not at all clear
    - b) Slightly clear
    - c) Moderately clear
    - d) Very clear
    - e) Extremely clear
  4. Did the thematic discussions (financial, collaboration, policy, and others) help to identify the key obstacles and enablers for decarbonisation?
    - a) Not at all useful
    - b) Slightly useful
    - c) Moderately useful
    - d) Very useful

- e) Extremely useful
5. Based on your experience, what are the main financial barriers (gaps or challenges) hindering maritime decarbonisation in your context?
  6. What needs or opportunities do you see for improving collaboration between technology providers, end-users, policymakers, and researchers?
  7. What policy measures (incentives, regulation, permitting, etc.) are most urgently required to accelerate progress?
  8. In your opinion, what type of actions, partnerships or funding mechanisms would be most effective to close the existing gaps?
  9. What would you suggest for improving future SMARTDEC activities or workshops?
  10. Would you like to stay informed about the SMARTDEC project and upcoming activities? If yes, please confirm your email address below: \_\_\_\_\_
  11. Would you like to join the [SMARTDEC online platform](#) to connect with other stakeholders and follow project updates?
    - a) Yes, please include me
    - b) No, thank you

***5.4.1 Email: “Thank you for joining the SMARTDEC workshop! Share your feedback and join the platform”***

Dear **[Name]**,

Thank you very much for taking part in the “Technological pathways for the decarbonisation of the maritime transport sector in the Atlantic Area” workshop, held on **[Day, Month, Time]**, **[online / in person]**.

Your contribution was essential in helping us identify the key gaps, needs, challenges, and opportunities related to maritime decarbonisation across the Atlantic Area. It was a pleasure to share this space with such an engaged and knowledgeable group of professionals from across the region.

To support the continuous improvement of SMARTDEC activities, we kindly invite you to complete this short feedback survey (approximately 3–5 minutes): [\[Survey link\]](#)

We also encourage you to join the [SMARTDEC collaborative platform](#), a space where you can connect with other key stakeholders, follow the project’s progress, and take part in upcoming initiatives.

Thank you again for your time, participation, and valuable input.  
We look forward to staying in touch!

Warm regards,  
**[Your signature]**  
**[Your contact details]**  
[smartdec.eu](http://smartdec.eu)

### 5.4.2 Quality Survey Mock-Up

**SMARTDEC STAKEHOLDER WORKSHOP**

SMARTDEC  
Smart Clusters for Maritime Decarbonisation

Interreg Atlantic Area  
Co-funded by the European Union

**SMARTDEC\_Methodological report and content structure of the stakeholders interaction and mapping validation-Workshops\_ Quality survey**

Thank you for taking the time to complete this short survey. Your feedback is essential to help us assess the quality, relevance, and effectiveness of the SMARTDEC stakeholder workshops and to continuously improve future activities.

The survey will take approximately 3–5 minutes to complete. Responses will be treated confidentially and analysed in an aggregated form.

Once completed, participants will receive a summary of the main findings from the workshop, as well as a selection of photos from the session (where applicable).

We warmly welcome your participation and valuable contributions to this important initiative.

Learn more about SMARTDEC: <https://smartdec.eu>

Correo \*  
Correo válido

1. What type of organisation do you represent? \*

- Port authority
- Maritime transport operator
- Public administration
- Research or academic institution
- NGO or civil society organisation
- Private company
- Other (please specify): \_\_\_\_\_

If you reply other, please specify. (Open question)

Descripción (opcional)

Country / Region: \*

Texto de respuesta corta

Figure 4: Quality Survey Mock-up