AQUAWIND

Innovative multi-use prototype combining offshore renewable energy and aquaculture in the Atlantic Basin

D1.9 PROGRESS REPORT VER. 4

WP1 SETTING LEGAL AND SOCIAL CONDITIONS

Grant Agreement nº. 101077600

Co-funded by the European Union

Version History

Ver.	Date	Comments/Changes	Author/Reviewer
0.1	19/02/2025	Initial version shared with the Steering Committee members	Nicola Lombardi, Mónica Quesada, Adelina de la Jara, Elba Bueno (CMC)
0.2	26/02/2025	Draft reviewed by the Coordinator and consortium	Project partners
1.0	27/02/2025	Final version for submission	Nicola Lombardi, Mónica Quesada, Adelina de la Jara, Elba Bueno (CMC)

Deliverable Information

Project Acronym	AquaWind	
Project Title	Innovative multi-use prototype combining offshore renewable energy and aquaculture in the Atlantic Basin	
Call	EMFAF-2021-PIA-FLAGSHIP	
Type of action	EMFAF-PJG EMFAF Project Grants	
Granting authority	The European Climate, Infrastructure and Environment Executive Agency (CINEA)	
Project Start Date	01/09/2022	
Project Duration	36 months	
Work Package	WP1 – Setting legal and social conditions	
Deliverable	D1.9 Progress Report ver. 4	
Due Date	28/02/2025	
Submission Date	27/02/2025	
Dissemination Level [1]	PU	
Deliverable Responsible	CMC	
Type	Document, report	
Version	0	
Status	Final	
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[1] PU= Public, SEN=Sensitive

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Executive summary

The aim of AquaWind is to perform a demonstration test of a multi-use (MU) integrated and co-located solution. This would consist of joining an existing marine renewable energy production Wind to Power (W2Power) prototype with an innovative finfish aquaculture solution. AquaWind joins efforts of a multidisciplinary stakeholders' consortia including research & development (R&D) centres, companies, a regional authority, and a maritime cluster from three EU members states (FR, ES, PT) in the Atlantic basin. In addition to that, **AquaWind will involve a wide network of stakeholder throughout all the project phases to propitiate social acceptance.**

As detailed in the Stakeholder Engagement Plan, corresponding to deliverable D1.3, the AquaWind project aims to involve stakeholders of the quadruple helix, mainly through consultation actions, to have at the end of the project, available data on the appreciation of this type of combined and co-located technologies.

To collect information from this participation, progress reports will be periodically carried out to update the status and progress of the activities with stakeholders.

This report details, after a brief introduction, the actions carried out at AquaWind in the past 6 months of implementation, in accordance with the stakeholder engagement plan.

Introduction

Overview of stakeholder engagement process

The process of stakeholder engagement is voluntary, open, and active dialog, that identifies current position of all parties included, outlines objectives and outcomes, and identifies how to achieve them. One of AquaWind's objectives is the implementation of an inclusive process, by engaging stakeholders at regional, national, and European level, prioritizing public administrations, academia, business sector comprising the supply chain at local level, as well as social agents such as business associations, fishermen and civil society.

Stakeholders are being involved mainly through consultative processes, public surveys, and in some cases through sector-specific surveys (as is the case for the artisanal fisheries sector, among others). These surveys will be made available to stakeholders through an online form that will be made available to stakeholders in two rounds of consultation ((one before the installation of the device at sea and one once the device is installed on the PLOCAN test bed). It has been decided to do this because, according to consultations carried out mainly on offshore wind devices, the visual and environmental impact is usually the one that raises the most doubts, even though these devices have very rigorous environmental impact assessments.

AquaWind has a special feature: although it involves three different countries (ES, FR and PT), the actions will be carried out mainly in Spain and specifically in the Canary Islands, so the mapping of actors has had a strong regional character. However, since the main objective of AquaWind is to carry out a demonstration test of an integrated and co-localised MU solution between two devices, one for wind energy generation and one for fish farming, public and private actors related to these two sectors at national and EU level are considered in the stakeholder involvement plan.

During the past 6 months of AquaWind implementation, **5 main stakeholder engagement actions** have been carried out in cooperation with WP7. The actions are listed below:

- **BlueUp Blue Economy Event**, which took place on 4 October 2024 at Work in Cholas, in Las Palmas de Gran Canaria, Gran Canaria Island.

- **III Offshore Wind Congress**, held between 7 and 8 November at the Palacio de Congresos, Cádiz.
- **Wavec Seminar 2024**, took place on December 3rd at Museu do Oriente, in Lisbon.
- **III Offshore Wind Energy Roundtable**, held on 09 December at the Canarian Government place, in Gran Canaria.
- **A Smart Specialisation strategy, the extended RIS3, for the Blue Economy of the Canaries**, took place on 9 December at PLOCAN, Gran Canaria.

Target groups

Previous deliverables and desk research conducted within WP1 and WP7 have defined the main target groups of stakeholder engagement activities including the survey. The defined groups have been the target of WP1 and WP7 actions implemented so far. These are described below.

Tabla 1. Target Groups Description

Target group	Description
Research community (researchers, PhD students)	Science stakeholders include a diverse network of actors managing, coordinating, or conducting scientific research related to marine activities. This group includes the research community, science managers as well students and PhD scientists. The science category includes actors at local, national, intergovernmental, and European levels as well as representatives of other EU projects.
Industry Representatives, Investors	This category includes representatives of the fishery sector, aquaculture, renewable energy but also maritime transport. In particular companies willing to commercialize the products and services developed in the demo work packages will require robust exploitation plans, risk and benefit assessments, which will be produced under WP5. They will also benefit from the networking opportunities and communication activities offered under WP7.
Societal Actors (citizens, public, civil society organisations)	This category includes both citizens and organizations which operate in the marine field and are affected by marine related activities and citizens who have no specific knowledge of MUP and are not affected by marine activities in their everyday life. The general public will receive awareness-raising materials to trigger their interest, improve their literacy on renewable energy and aquaculture needs and their relevance for climate change mitigation and food production.
Fisheries communities	The fisheries communities are part of the societal actors but are also a key target group on its own. Due to the nature of the project, combining not only offshore wind energy that might interfere with fisheries space and the fishes itself but with the aquaculture part that might pose a threat to the artisanal ways of fishing in the islands. For this reason, most of the activities for WP1, task 1.3 and task 1.4 consider this target group in specific. Efforts are made to understand their conception and opinion on AquaWind and on organizing events and webinars to inform about the project, their job prospects and circumstances that will not damage this sector but increase their activity in any case.
Policy and decision-makers	This group will require short and concise recommendations and visual documentation facilitating the understanding of how MUP can impact on a broader policy sector and how policy can support or hamper the installations of MUPs. Policymakers at regional, national and EU level will be targeted. At EU level several Directorates-General will be reached (RTD, CLIMA, ENER, ENV, MARE), the JRC, European Climate, Infrastructure and Environment Executive Agency; the European Parliament (intergroups, committees, MEPs), international Ocean governance initiatives, OECD Ocean Economy working group.

Stakeholder engagement actions

This section describes the Stakeholder Engagement actions that have been carried out in the fourth 6-month period of the AquaWind project.

1. BlueUp Blue Economy Event

Figure 1. BlueUp Event Economy Event Banner

BlueUp, in its seventh edition, has established itself as the leading competition for innovative projects in the Blue Economy in Spain. This free event, organized by the Socioeconomic Association Factoría de Cohesión Ciudad Puerto, targets young individuals aged 18 to 40 who are passionate about entrepreneurship, technology, and innovation in the maritime-port sector. Over several days, participants, grouped into multidisciplinary teams, develop creative solutions to real-world challenges related to the Sustainable Development Goals (SDGs) and the Blue Economy.

The program includes activities across various islands, such as Fuerteventura, Gran Canaria, and Tenerife, featuring training dynamics, mentoring sessions with experts, site visits, and project presentations. Participants also benefit from covered expenses for transportation, meals, and accommodation, enabling them to fully dedicate themselves to crafting innovative ideas that contribute to a more sustainable future.

During the BlueUp event in Las Palmas de Gran Canaria, Michelle Perello, CEO of Consulta Europa, presented the AquaWind project as a pioneering example of integrating offshore renewable energy with aquaculture. This initiative captivated young talents eager to contribute to the Blue Economy in the Canary Islands. Perello emphasized how AquaWind's combination of offshore wind energy and sustainable aquaculture opens new opportunities for the maritime and energy sectors at both regional and European levels. This presentation inspired attendees to develop their own innovative Blue Economy ideas for the BlueUp competition.

1.1 Blue Up 4 October Program

4 OCTUBRE 10:00 AM - 6:00 PM. **WORK IN CHOLAS LA MINILLA**

- **9:30.** Participación de la Autoridad Portuaria de Las Palmas
- **10:00.** Ponencia de Michelle Perello
- **11:00.** Presentación de los retos de Wedge Global
- **11:30.** Ponencia de Aridane González
- **12:00.** Taller Generación de ideas creativas de Natalia R. Valls
- **13:00.** Trabajo en equipo y mentoring
- **14:00.** Almuerzo
- **15:00.** Trabajo en equipo y mentoring
- **16:30.** Ponencia sobre Business Model Canvas

1.2 Blue Up 4 October Photographic Dossier

Figure 2. BlueUp Event Economy Event Photographic dossier

2. III Offshore Wind Congress

Figure 3. III Offshore Wind Congress Banner

The III Offshore Wind Congress, held from November 6 to 8, 2024, established Cádiz as a key hub for floating wind energy technology. Organized by the Spanish Wind Energy Association (AEE), the Andalusian Renewable Energy Association (CLANER), and the Cádiz Maritime Naval Cluster, the event brought together over 400 experts at the city's Congress Center. The primary focus was to explore the challenges and opportunities in deploying offshore wind power in Spain, a country aiming to install 3,000 megawatts of floating wind capacity by 2030, as outlined in its National Integrated Energy and Climate Plan. This initiative has the potential to create up to 7,500 new jobs, driving growth in sectors such as shipbuilding, maritime auxiliary industries, and civil engineering.

The program featured a diverse array of activities addressing critical aspects of offshore wind energy in Spain. These included roundtable discussions, keynote speeches, panel debates, and site visits to key facilities such as the Navantia Seanergies shipyard in Puerto Real. Additionally, the agenda incorporated B2B meetings and networking sessions, offering invaluable opportunities for knowledge exchange and fostering synergies among industry professionals.

The AquaWind project also took center stage at the event, with EnerOcean, a sponsor of the congress and a key partner in AquaWind, playing a prominent role. EnerOcean showcased the

project's innovations through an engaging stand that provided attendees with detailed information about AquaWind's objectives and advancements. Furthermore, Pedro Mayorga, CEO of EnerOcean, participated in Session 7: From Engineering to Installation – Strengths of the Spanish Wind Power Value Chain, where he highlighted the project's contributions and the broader potential of Spanish engineering and industrial capabilities in offshore wind energy development.

2.1 III Offshore Wind Congress Program

The event lasted 3 days with an extensive program of specialized presentations, visits and networking sessions, which can be consulted at the following link:

https://www.congresoeolicomarino.com/programa-2024-1

2.2 III Offshore Wind Congress Photographic dossier

Figure 4. III Offshore Wind Congress Photographic dossier

3. Wavec Seminar 2024

Figure 5. Wavec Seminar 2024 Banner

The WavEC Seminar 2024, held on December 3rd at Lisbon's Museu do Oriente, brought together industry leaders to discuss "Portugal and Norway: Fostering Offshore Wind Supply Chain Development." Organized by WavEC Offshore Renewables in collaboration with the Norwegian Embassy in Portugal, Innovation Norway, and Norwegian Offshore Wind, the event provided a platform for professionals to explore collaborative opportunities and advancements in marine renewable energy.

The seminar featured sessions on the current state of the offshore wind industry in Portugal and insights from Norway, value chain development in offshore wind projects, cost-effective innovations, and the critical role of ports and infrastructure in supporting offshore wind expansion. Notable speakers included Marco Alves, CEO of WavEC Offshore Renewables, and Hanne Brusletto, Norwegian Ambassador to Portugal.

AquaWind also played a significant role in the seminar, showcasing its commitment to sustainability and innovation in offshore renewable energy. During the event, AquaWind's project videos were prominently featured during the morning and afternoon breaks, enhancing the project's visibility among the 218 attendees. These efforts underscored AquaWind's contributions to the ongoing dialogue about sustainable energy solutions and cross-sector collaboration.

On December 4th, attendees participated in networking sessions designed to foster connections and explore potential collaborations. AquaWind leveraged this opportunity to engage with other industry leaders, forge strategic alliances, and solidify its position as a key player in marine energy innovation. This active participation highlighted AquaWind's dedication to shaping the

future of renewable energy and its role in driving the development of a sustainable offshore wind energy supply chain.

3.1 Wavec Seminar 2024 Program

The event lasted one day with an extensive program of specialized presentations and networking sessions, which can be consulted at the following link:

https://www.wavec.org/en/media/events/wavec-seminar-2024

4. III Offshore Wind Energy Roundtable

Figure 6. III Offshore Wind Energy Roundtable

On 9 December, the Department of Ecological Transition and Energy of the Government of the Canary Islands, headed by Mariano H. Zapata, held the 3rd Offshore Wind Energy Roundtable. This meeting brought together different agents from the sector to coordinate the promotion of offshore wind energy in the archipelago.

Deputy Minister Julieta Schallenberg highlighted the broad participation in this meeting, underlining the active attendance of representatives of the Ministry for Ecological Transition and the Demographic Challenge. Schallenberg pointed out that the Canary Islands is the only autonomous community to lead an initiative of this type, which has aroused the interest of other regions. He also highlighted the archipelago's potential to host Spain's first offshore wind farm, which would have a significant economic impact on the islands.

During the meeting, key aspects were discussed, such as the Royal Decree approved on 24 September 2024, which regulates the implementation of offshore wind energy, and the Maritime Space Management Plans (POEM) of the Spanish marine demarcations, including that of the Canary Islands. The recent participation of a delegation from the Regional Ministry in the 3rd Offshore Wind Energy Congress in Cadiz was also discussed, where the Canary Islands' leading position in this field was presented.

Among those attending this third meeting were representatives of the Ministry for Ecological Transition and the Demographic Challenge, port authorities and maritime authorities from both provinces, the Canary Islands Maritime Cluster (CMC), the Oceanic Platform of the Canary Islands (PLOCAN), the Canary Islands Technological Institute (ITC) and the Wind Energy Business Association (AEE).

Particularly noteworthy is the participation of Javier Roo, Head of R+D+I Projects of ACIISI, who exposed the AquaWind project defending the potential of the Canary Islands in the development of floating offshore wind energy.

The holding of this round table reinforces the Canary Islands' commitment to the energy transition and its position as a benchmark in the implementation of offshore renewable energies in Spain.

5. A Smart Specialization strategy, the extended RIS3, for the Blue Economy of the Canaries

Figure 7. A Smart Specialization strategy, the extended RIS3, for the Blue Economy of the Canaries event Banner

The event entitled "A smart specialization strategy, the extended RIS3, for the blue economy of the Canary Islands" was held on 9th December at the Canary Islands Oceanic Platform (PLOCAN) in Telde, Gran Canaria, at Professor Dr. Ulf Riebesell Hall. The Canary Islands Agency for Research, Innovation and the Information Society (ACIISI) organized this meeting, which brought together representatives from the public, private and civil society sectors, with the aim of strengthening the blue economy as a key sector for the development of the Canary Islands, based on research, development and innovation (R&D&I).

One of the participants was the AquaWind project, known for its innovative strategy of combining sustainable aquaculture with offshore wind energy. Its existence demonstrated the revolutionary importance of European technologically innovative projects in promoting sustainability and economic progress throughout the archipelago.

According to ISTAC 2022 data for the blue economy sectors in the Canary Islands, they generated 1,351 million euros. This is 15.8 percent more than in the previous year, although the percentage volume was like that of 2021. In terms of employment, the blue economy generated 19,133 jobs, 2.3 per cent of the total in the Canary Islands. To create groundbreaking initiatives to support

the sector, this event aimed to explore new avenues of collaboration between knowledge centers, public authorities and private companies.

The importance of an extended RIS3 strategy as a catalyst for fostering collaboration and designing projects that will establish the Canary Islands as a European leader in the blue economy was highlighted during the conference. AquaWind's involvement demonstrates its commitment to the sustainability and innovation objectives required by the Islands' maritime industry.

5.1 A Smart Specialisation strategy, the extended RIS3, for the Blue Economy of the Canaries Program

Figure 8. A Smart Specialization strategy, the extended RIS3, for the Blue Economy of the Canaries event Program

5.2 A Smart Specialisation strategy, the extended RIS3, for the Blue Economy of the Canaries Photographic dossier

Figure 9. A Smart Specialization strategy, the extended RIS3, for the Blue Economy of the Canaries event Photographic dossier

Next steps

- **Update on Survey Analysis and Post-Demonstration Survey Timeline**

As reported in the previous deliverables, the pre-demonstration survey was developed and disseminated among stakeholders. The survey was also complemented with dedicated interviews and focus groups. A comprehensive analysis of the data collected was included specifically in D1.8, reporting the overall results obtained and the feedback retrieved from different stakeholder groups. To complement this analysis, initially, it was planned to engage a Master's Degree student through the TIDES Institute of the University of Las Palmas de Gran Canaria to conduct a voluntary additional analysis of the survey data, as part of their final degree project. This would have been an extra activity, not foreseen in the Grant Agreement, but still relevant to provide further added value to the elaboration of data collected. Eventually, despite our best efforts, we were unable to secure a faculty advisor to supervise this initiative and the proposed student-led analysis could not materialize.

In parallel, due to schedule delays and adverse weather conditions, the deployment of the AquaWind multi-use prototype has been postponed, and the project has been extended by three months. The development of the post-demonstration survey—designed to collect detailed feedback based on prototype testing results—has consequently been delayed. With the prototype now scheduled for testing around March 2025, initial results will only become available during that period. Following the collection of these results, the survey will be developed and disseminated via digital channels as well as at industry events and conferences, ensuring that we gather comprehensive and valuable insights from our diverse stakeholder community.

- **Showcase Event for AquaWind**

We are currently organizing a Showcase event for AquaWind, scheduled for June in Gran Canaria. This event is being organized under the framework of WP5 Exploitation: Business Plans, Sustainability Plans, and Knowledge Transfer & IP. Focusing exclusively on the AquaWind project, the event will provide an excellent platform to present our progress and facilitate

networking opportunities with potential investors, while promoting industry collaboration and the further development of the project.

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