

Welcome to our official fourth newsletter!

MARINNONET approaches the final stages of its 36-month journey as the benchmark ecosystem for technology transfer and innovation in the Atlantic Area's Blue Biotechnology sector. Through our collaborative 'quadruple helix' framework, the network has successfully bridged the gap between scientific laboratories and commercial maritime markets.

The Three Transnational Priority Areas

- 1 Sustainable Aquaculture:** Non-invasive welfare diagnostic tools, automated feeding metrics, and offshore seaweed scaling.
- 2 Omics & Observation:** Automated optical surveillance, PlanktoScope imaging, and harmful algal bloom (HABs) tracking.
- 3 Marine Bio-based Products:** High-value biomolecules for agricultural soil remediation, biosecurity, and animal nutrition.

Driving Tangible Atlantic Transformation

With **16 transnational pilot demonstrations (TRL 4–7)** successfully deployed and four strategic commercial exploitation plans currently in progress, this edition reviews our latest breakthroughs in marine bioactives and smart aquaculture, celebrating our project closure at the Plentzia Marine Station and BIOSPAIN 2026. The final exploitation roadmaps will be officially unveiled in the last edition of our newsletter.

Backed by a total budget of **2.32 Million Euros** (with 1.74M€ from the European Regional Development Fund - ERDF), MARINNONET has surpassed all initial operational milestones.

- ✓ **4 Atlantic Member States:** Spain, Portugal, France, and Ireland actively collaborating.
- ✓ **30+ Partner Organizations:** Leading marine universities, technology institutes, regional development agencies, and maritime clusters.
- ✓ **100+ Commercial Stakeholders:** Engaged in technology audits, collaborative piloting, and technology licensing dialogues.

[📄 About the project • Learn more](#)

☰ INDEX

[MARINNONET Project Overview & Mission – Page 1](#)[2026 Outcomes & Technical Achievements – Page 2](#)[2026 Latest Breakthroughs & Pilot Features – Page 3](#)[2026 Network Impact & Next Steps – Page 4](#)[Blue Biotech Agenda & Resources – Page 5](#)

Plentzia Marine Station (PiE-UPV/EHU), host venue of the Final Consortium Meeting.



On-farm rainbow trout welfare scoring & automated vision monitoring pilots.

Photos courtesy of consortium partners.

2026 Outcomes & Technical Achievements

SMARTER AQUACULTURE WELFARE AND FISH STOCK MONITORING

Seafood Quality & Circular Aquaculture (LEPIDOSSEL & COAST)

Addressing critical challenges in Atlantic shellfish farming and processing by connecting marine research institutes with food industry leaders:

- **LEPIDOSSEL** (Mussel Physiology & Processing Quality): In collaboration with IEO-CSIC, PiE-UPV/EHU, and canned seafood producer Jealsa Foods, this pilot investigates how blooms of the non-toxic dinoflagellate *Lepidodinium* impact mussel physiology and alter the organoleptic and sensory qualities of processed canned mussel products, protecting brand value and market assurance.
- **COAST** (Shell By-product Valorisation): Led by University of Galway, PiE-UPV/EHU, and Teahan Shellfish Ltd., this initiative converts oyster shell waste from Atlantic aquaculture into high-value bio-calcium, agricultural lime, soil conditioners, and circular construction materials.

Stock Assessment & Automated Surveillance (TO-MOST-FISH & AI-BIODiv)

Deploying cutting-edge molecular tools and optical observation to safeguard marine biodiversity and wild/farmed stocks:

- **TO-MOST-FISH** (Molecular Tuna Fisheries Stock Assessment): Developed between the Marine Station of UPV/EHU (PiE), CIM-Uvigo, and AZTI, this pilot develops ribo-tools and molecular markers to assess female reproductive capability in marine teleosts, transforming stock assessment models for commercial tune fisheries and ecotoxicological screening.
- **AI-BIODiv** (Automated Coastal Biodiversity Surveillance): Partnering Station Biologique de Roscoff, CNIEO-CSIC, and FairScope, this pilot deploys automated imaging sensors (*PlanktoScope*) and machine-learning vision to detect and classify plankton species and harmful algal blooms (HABs) in real time.

[Read more](#)



Photo courtesy of MARINNONET consortium partners.

From Lab Prototypes to Commercial Exploitation

In close coordination with technology transfer partner **BioAzul**, the network finalized dedicated exploitation sessions and 4 formal business plans for strategic pilot projects.

This structured framework secures intellectual property (IP), supports licensing to aquaculture and maritime operators, and ensures sustainable long-term capitalization across Spain, Portugal, France, and Ireland.

2026 Latest Breakthroughs & Pilot Features

HARNESSING THE OCEAN'S NATURAL POTENTIAL: MARINE BIOACTIVE BREAKTHROUGHS

SUSTAINABLE AQUAFEEDS

FUNCTIONALGAE at the XX Spanish Aquaculture Congress

MARINNONET presented key technical results at the XX Spanish National Aquaculture Congress through research conducted by the **PhytoFish Group** (CIM-Uvigo):

- Oral Presentation: Optimisation of plant-based diets in rainbow trout. 'Effects of CEAMSEA on growth, metabolism, and feed intake regulation' (by Cristina Fernández Maestú).
- Poster Presentation: 'Effect of CEAMSEA supplementation in plant diets on welfare indicators and behaviour in rainbow trout juveniles (*Oncorhynchus mykiss*)' (by Marta Conde).

Both studies stem from the **FUNCTIONALGAE** pilot project, testing the inclusion of CEAMSEA's macroalgae-based functional ingredient (CEAMSEA) to enhance sustainability, health, and feed efficiency in commercial aquaculture diets. In addition, Carlota Freiria showcased the network's multi-actor methodology in the poster 'Boosting Blue Biotech Innovation in the Atlantic Area through Multi-actor Pilot Projects and Multiregional Collaboration'.



3rd IRS FORUM GALICIA

Strategies to Connect Research with Industry in Aquaculture

Held within the framework of the XX Spanish National Aquaculture Congress, the **PhytoFish Research Group** hosted the Galicia edition of the 3rd **Innovation Regional Forum** (IRS Forum). Under the title 'Strategies to connect research with industry in aquaculture: focus on Galicia – North Portugal', the session gathered academic and commercial leaders –including Cristina Velasco Rubial and João Rito– to exchange perspectives on cross-border technology transfer. The forums also highlighted practical Atlantic solutions through the showcase of the **FUNCTIONALGAE** and **ULVACEL** pilot projects.

[Read more](#)



AGRICULTURE & CIRCULAR BIOECONOMY

POLYSAL: Mitigating Soil Salinisation

The **POLYSAL** pilot leverages marine macroalgal polysaccharides to combat one of the Atlantic and Mediterranean regions' gravest environmental challenges: agricultural soil salinisation.

Applied as bio-stimulants, these seaweed extracts restore soil structure, enhance soil water retention, and foster microbial diversity, significantly improving crop survival in salinized soils.

MARINE BIOPRODUCTS & HEALTH

Microalgal Biopolymers & Safety

Consortium pilots deliver high-value functional compounds derived from Atlantic marine biomass:

- **MiTOXin**: Certified reference standards and neutralisation protocols against emerging microalgae biotoxins.
- **POLYMEX**: High-purity exopolysaccharides synthesized from cyanobacteria for tissue regeneration and biomedical use.
- **KelPet**: Prebiotic brown seaweed extracts developed to strengthen companion pet vitality and gut health.

[Read more](#)

2026 Network Impact & Next Steps

MILESTONES TOWARDS PROJECT CLOSURE AND COMMUNITY LEGACY

 **Monday, 28th September 2026**

Final Project Consortium Meeting • Plentzia Marine Station

Venue: Plentzia Marine Station (PiE - UPV/EHU), Areatza 47, 48620 Plentzia, Bizkaia, Spain.

The full international consortium gathers at PiE-UPV/EHU to review all final project deliverables, audit pilot KPIs, inspect the station's coastal experimental facilities, and formally ratify the long-term Atlantic Blue Biotechnology Collaboration Agreement to ensure post-closure network sustainability.

 **Wednesday, 30th September 2026 • 11:30 AM**

Oral & Round Table Session • BIOSPAIN 2026 (Bilbao)

Venue: Bilbao Exhibition Centre (BEC), Official BIOSPAIN Agenda, Bilbao, Spain.

MARINNONET takes center stage at southern Europe's flagship biotechnology event. The session "*Translating Blue Biotech Innovations into Atlantic Market Solutions*" presents the four prioritized business models before multinational pharmaceutical, cosmetic, and aquaculture stakeholders.

6th – 8th October 2026

Concluding IRS Forum at Sea Tech Week (Brest, France)

Following dynamic regional innovation forums in Porto and the Canary Islands, the 3rd Innovation Regional Stakeholders (IRS) series finishes at Sea Tech Week, embedding pilot roadmaps into international maritime clusters.



Bilbao Exhibition Centre (BEC), hosting BIOSPAIN 2026 and the MARINNONET oral session.



PiE-UPV/EHU, hosting the project's final consortium assembly on 28th September.

Blue Biotech Agenda & Resources

GLOBAL EVENTS, STRATEGIC RESEARCH CALLS & OPEN OPPORTUNITIES

📅 Key Agenda Dates (Autumn 2026)

22 SEPT 2026	Interreg Cooperation Day 2026 Auditorium of FEUGA (Santiago de Compostela, Galicia, Spain)
28 SEPT 2026	MARINNONET Final Consortium Assembly Plentzia Marine Station (PiE-UPV/EHU, Vizcaya, Spain)
29 SEP – 01 OCT	BIOSPAIN 2026 Exhibition & Partnering High-level commercial partnering meetings (Bilbao, Vizcaya, Spain)
06 – 08 OCT 2026	Sea Tech Week 2026 Concluding Atlantic IRS Innovation Forum (Brest, France)
12 – 14 OCT 2026	EURegionsWeek 2026 Bring together stakeholders from cities and regions across Europe (Brussels, Belgium)
19 – 22 OCT 2026	Aquaculture Europe 2026 Marine welfare & sustainable aquafeed sessions (Valencia, Spain)
10 – 12 NOV 2026	Annual Spanish Event – Europa se siente 2026 Spain's annual EU funds event (Alicante, Spain)

🇪🇺 Horizon Europe • Cluster 6 Work Programme

Upcoming information days and calls under Cluster 6 (Circular Bioeconomy, Aquatic Resources & Healthy Oceans) for transnational blue bioeconomy consortia.

👤 MSCA Postdoctoral Fellowships & Talent Calls

Funding opportunities for international researcher mobility, predoctoral contracts (FPI), and postdoctoral recruitment in marine biotechnology.

🌐 Looking for International Funding? (OPI UVigo)

The OPI Research Area (Universidade de Vigo) provides comprehensive guidance for Horizon Europe, INTERREG, and European marine biotech partnerships. Get in touch at opi@uvigo.gal | Visit opi.uvigo.gal.

Join our community!

Explore all 16 pilot profiles, booklets, and project outputs:



Thank You for Joining Our Journey!

Though MARINNONET concludes its Interreg grant cycle, our transnational Blue Biotechnology network continues through bilateral pilot commercialisation and shared research infrastructure.