

D 3.1.1 - Funding map /Center for funding; web page integration

Summary

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I. Executive Summary: Strategic Pathways for Innovablue

The analysis of the European funding landscape reveals a robust and interconnected ecosystem of opportunities for the Innovablue project, particularly in supporting blue and green maritime technologies. These opportunities span multiple stages of technological development, from early-stage research through to commercial deployment.

Primary Funding Pathways

For research and transnational pilot projects at early to mid-stage Technology Readiness Levels (TRL 3-7), **Horizon Europe** represents the most substantial grant-based source, particularly through the Mission to Restore our Ocean and Waters and the Sustainable Blue Economy Partnership (SBEP). Complementing these EU-wide initiatives, the **Interreg IPA ADRIAN** and **Interreg Euro-MED** programs are indispensable for financing cross-border pilot actions and fostering the regional partnerships that serve as stepping stones to larger European endeavors.

As projects mature and require significant capital for commercial scale-up and market entry (TRL 7-9), the funding landscape shifts toward financial instruments rather than grants. The **InvestEU program** provides essential leverage through loans, guarantees, and equity investments, requiring a more business-oriented approach than traditional grant applications. Additionally, the **European Maritime, Fisheries and Aquaculture Fund (EMFAF)** serves as a key national channel for sector-specific support, though its availability and implementation vary significantly across member states.

Strategic Funding Approach

A multi-stage funding strategy maximizes the probability of success by building progressively on validated results and established partnerships. A typical pathway begins with regional pilots funded through Interreg or targeted LIFE Programme

calls, which allow consortia to validate technologies and build transnational collaboration frameworks. The technical data, partnership networks, and proof-of-concept outcomes from these initial phases then strengthen applications for larger, more competitive demonstration projects under Horizon Europe. Finally, once technologies achieve commercial readiness, entities can transition to blended finance through the **European Innovation Council (EIC) Accelerator** or secure long-term capital from the **European Investment Bank (EIB)** under InvestEU. This strategic "stacking" of funds creates a continuous pathway from concept validation to market commercialization.

Objectives and Methodology of D.3.1.1

This deliverable (D.3.1.1) aims to comprehensively identify potential and adequate funding opportunities for the Blue Economy, with particular emphasis on blue and green maritime technologies and innovative solutions. Its primary purpose is to facilitate access to funding for enterprises and start-ups across the IPA ADRION Programme area, thereby accelerating innovation and economic development in the maritime sector.

The analysis draws upon multiple sources: desk research examining existing funding mechanisms, questionnaires distributed to project partners to capture national perspectives, and targeted stakeholder meetings conducted within the INNOVABLUE project framework. This multi-method approach ensures comprehensive coverage of available instruments while grounding the analysis in practical stakeholder experience. The resulting mapping supports innovation actors in identifying appropriate financial instruments at each stage of the innovation cycle, from fundamental research through market deployment.

Regional Variations and Persistent Gaps

Significant differences emerge among participating countries in terms of thematic coverage, financial scale, and accessibility to funding instruments. EU Member States generally benefit from consolidated national programmes closely aligned with EU structural and investment funds, providing relatively stable and predictable

financing pathways. In contrast, non-EU countries in the region tend to rely more heavily on international financial institutions, bilateral donors, and project-based schemes, resulting in less predictable and often more fragmented funding landscapes.

Despite these differences, stakeholders across all contexts consistently highlight persistent gaps in financing for demonstration, piloting, and first market deployment of maritime technologies—the critical "valley of death" between laboratory validation and commercial viability. This gap is particularly acute for capital-intensive maritime technologies requiring real-world testing environments and extended validation periods. Addressing these financing gaps represents a key priority for enhancing the region's capacity to translate research into market-ready innovations.

II. Horizon Europe: Clusters, Missions, and Partnerships for Maritime Technologies

Horizon Europe, with a budget of over **€93.5 billion**, is the EU's flagship program for research and innovation and a major source of funding for maritime technologies.² Within it, several Clusters and their associated Destinations are useful for advancing maritime technologies and the Blue Economy, such as:

- **Cluster 3 (Civil Security for Society)**: through all its Destinations pertaining to maritime security, protection, and response. Key areas include funding for crisis response at sea, developing advanced surveillance systems, and enhancing general maritime safety and security.
- **Cluster 4 (Digital, Industry and Space)**: This Cluster provides crucial support for the integration of digital and green technologies into the maritime industrial base, encompassing innovation in autonomous systems, advanced sensors, IoT, and Digital Twins tailored for maritime infrastructure (Destinations 1, 2, 4, and 6). They also support the green manufacturing of ship components and the adoption of digital and emerging technologies for enhanced competitiveness and the Green Deal objectives.

- **Cluster 5 (Climate, Energy and Mobility):** The fifth cluster's focus is on emission reduction in shipping, the deployment of clean fuels and hybrid propulsion systems, port electrification, and the development of marine renewable energy technologies (Destinations 1, 2, 3, 4, 5, and 6). Additionally, funding is available for climate science and adaptation measures concerning coastal infrastructure. The existence of the ERRIN Blue Economy Working Group within the "**Natural Resources & Adaptation Cluster**" confirms this thematic dispersal and suggests that proactive networking within such professional groups can be an effective method for discovering non-obvious yet highly relevant funding calls and forging new partnerships.⁷

For projects aligned with the blue and green maritime economy, three specific avenues are of particular relevance.

The Mission to Restore our Ocean and Waters

This Mission is the most directly aligned and strategically important component of Horizon Europe for the Innovablue project. Its overarching objective is to **restore the health of the ocean, seas, and inland waters by 2030**.³ It takes a systemic approach to protect ecosystems, prevent pollution, and enhance biodiversity.³ A crucial part of the Mission's implementation is the creation of **area-based "lighthouses"** in major sea basins, which function as living labs to demonstrate and scale up solutions.³ The Mediterranean Sea basin is one of these key lighthouses, making it a perfect fit for a project focused on the Adriatic-Ionian region.³

A significant initiative supporting the Mission is the development of a "**Digital Twin Ocean**," a virtual representation that integrates vast data sets to simulate ecosystem effects and predict future scenarios.³ This component directly relates to the digital and data-driven aspects of modern maritime technologies.

The Sustainable Blue Economy Partnership (SBEP)

The SBEP is a Horizon Europe co-funded partnership that represents a large-scale,

pan-European effort to align and pool **research and innovation investments**.⁴ The partnership includes 74 institutions from 30 countries, and notably, it is led by Italy's Ministry of University and Research (MUR).¹ With planned investments of **€450** million over seven years, the SBEP funds joint transnational calls for research and innovation.⁴

The intervention areas for the upcoming 2025 calls directly overlap with the Mission's objectives, including topics such as "**Digital Twins of the Ocean**" "**Blue Economy Sectors**," "**Managing Sea-Uses**" "**Blue Bioresources**" and "**Resilient Coastal Communities & Businesses**".⁵ This programmatic synergy is not coincidental; it reflects a coordinated EU policy framework where the Mission sets the high-level policy goals and the SBEP provides the collaborative research funding to address them.

Cluster 6 and Other Relevant Areas

While the Mission and SBEP are the most direct means of financing, projects should also explore opportunities within the broader Horizon Europe framework. The Marine Institute, for instance, explicitly notes that marine-related topics can be found across all pillars, with a specific focus on **Cluster 6**: Food, Bioeconomy, Natural Resources, Agriculture and Environment.² Topics related to bioeconomy, resource management, and natural environment protection are housed here, offering additional avenues for projects involving, for example, marine biotechnology or new bio-based materials.

III. INTERREG Programs: Transnational and Cross-Border Opportunities in the Adriatic

Interreg IPA ADRION Programme

This is the central transnational cooperation program for the Adriatic and Ionian region.⁸ It includes eight Partner States: Albania, Bosnia and Herzegovina, Croatia, Greece, Italy, Montenegro, Serbia, and Slovenia.⁸ This unique composition, combining both EU Member States and non-EU countries, makes it an essential tool for building

regional collaborations. With a budget of **€160 million**, the program invests in regional innovation systems, environmental resilience, and sustainable transport, with a specific focus on the needs of the **Adriatic and Ionian region**.⁹

The program offers a clear pathway for "**proof-of-concept pilots with regional partners**".¹ A previous call under the program specifically targeted a "**Smart Specialisation Strategy (S3) on Blue Growth**," with the objective of improving the capacity of public actors to promote blue growth through innovation policies.⁸ This demonstrates a clear historical alignment with the project's goals. Projects can be co-financed up to 85%, which is a substantial financial incentive for regional entities.¹⁰ The inclusive nature of the program, which extends to non-EU partners like Albania and Montenegro, is a crucial detail. For these countries, which are not eligible for national EMFAF funding, Interreg IPA ADRION is a critical gateway for accessing EU funds and participating in regional blue economy initiatives.

Interreg Euro-MED Programme

The Interreg Euro-MED program covers the broader Mediterranean region and supports projects related to climate change, the environment, and a sustainable economy, with a budget of nearly 294 million euros.¹¹ It has a mission-oriented approach, which aligns well with the themes of Horizon Europe.¹¹ Its "**Innovative Sustainable Economy**" mission includes a focus area on "**Marine Resources**" which covers economic activities such as aquaculture, fisheries, blue biotechnologies, and marine renewable energy.¹² The program provides funding for projects like BLUE ECOSYSTEM, which focuses on the blue economy, and BLUE MISSION MED, which serves as the Mediterranean Lighthouse for the Horizon Europe Mission Ocean.¹³

The connection between the Interreg Euro-MED project BLUE MISSION MED and the Horizon Europe Mission Ocean demonstrates a crucial synergy between different funding instruments. It shows that a project can strategically leverage an Interreg pilot to build the foundation for a larger-scale Mission-based project. This inter-programmatic connection is a key point for the Innovablue team to consider

when planning its long-term funding strategy, as it allows a project to grow from a regional pilot to a pan-European flagship initiative.

Italy-Croatia Cross-Border Cooperation Programme (Interreg VI-A Italy-Croatia 2021-2027)

Particularly relevant for the Blue Economy in the Adriatic Sea (with the participation of Croatia) is the Italy-Croatia Cross-Border Cooperation Programme (Interreg VI-A Italy-Croatia 2021-2027) which involves Croatian and Italian regions situated along the Adriatic coast. Main thematic priorities of the programme include marine environment protection, sustainable use of marine resources & resilience strengthening (including adaptation to climate change, biodiversity, marine pollution); maritime transport (cross-border, multimodal); sustainable tourism & cultural heritage, creation of innovative education and training frameworks necessary for the Sustainable Blue Economy etc.

Other Interreg Programmes

Also relevant (although smaller in scale and somewhat less focused on the Blue Economy) are the cooperation programme between Slovenia and Croatia (**Interreg Slovenia-Croatia**) and the trilateral cooperation programme between Croatia, Bosnia and Herzegovina and Montenegro (**Interreg IPA Croatia - Bosnia and Herzegovina - Montenegro**).

IV. LIFE Programme: Specific Calls for the Marine Environment

The LIFE Programme is a key EU financial instrument dedicated to environment and climate action.¹⁴ With a budget of **€5.45 billion** for the 2021-2027 period, it provides a strong avenue for projects focused on **marine environmental protection and climate adaptation**.¹⁴

The program is structured around four sub-programmes, with the "**Nature and Biodiversity**" and "**Circular Economy and Quality of Life**" sub-programmes being the most pertinent for maritime technologies.¹⁵

A crucial element is that the LIFE program actively supports "the development and demonstration of innovative technologies, implementation, monitoring and evaluation" of EU environmental policies.¹⁷ It specifically looks for technologies and solutions that are "ready to be implemented in close-to-market conditions, at industrial or commercial scale" during the project duration.¹⁷

This makes the LIFE Programme a powerful tool for a project at TRL 6-8, where a technological solution needs to be proven at a larger scale in a real-world environment. For example, a project on a new water pollution control technology or a method for waste treatment in ports could find substantial support through a LIFE grant. The high co-funding rates, which can go up to 75% for projects targeting priority habitats, make it a financially attractive option.¹⁷ This is not simply an environmental fund; it is a critical funding mechanism for the technological solutions that address environmental challenges.

V. InvestEU: Financial Instruments for the Blue Economy

InvestEU represents a paradigm shift from traditional grant funding to strategic financial instruments designed to mobilize significant private investment.²⁰ It leverages a **€26.2 billion** EU budget guarantee to **generate over €372 billion in investment** across four key policy windows, including "**Sustainable infrastructure**" and "**Research, innovation and digitisation**".²¹

Project promoters do not apply for funding directly from InvestEU itself. Instead, they must work with the program's "implementing partners," with the European Investment Bank (EIB) Group being the primary one.²² The EIB and its subsidiary, the European Investment Fund (EIF), provide direct and intermediated financing solutions such as loans, guarantees, venture debt, and equity investments.²² For a small or medium-sized company (SME), the EIF often works with local financial intermediaries to provide financing.²¹ The program's core purpose is to address

market failures and de-risk investments that are economically viable but too complex or capital-intensive for conventional financing.²⁴

Eligible Blue Economy activities, based on available informations under the InvestEU programme, are:

- **Aquaculture:** Financing covers all forms of aquaculture (e.g., finfish, shellfish, seaweed) with a strong emphasis on sustainable and clean technologies for production.
- **Blue bioeconomy:** Support is provided for activities related to marine biotechnology, the utilisation of algae, and the development of innovative marine biomaterials.
- **Offshore Energy and Ports:** This includes the development of marine renewable energy (MRE) technologies such as floating wind, tidal, and wave energy systems.
- **Shipping:** Investments are relevant for the maritime transport sector, particularly for projects focused on innovation and decarbonisation of vessels and operations.
- **Marine Ecosystem Restoration:** Funding targets projects designed to restore marine ecosystems, reduce pollution, and generally improve the environmental performance of marine-based industries and coastal activities..

The EIB has a specific focus on the blue economy, having invested **€10.6 billion in sustainable blue economy operations** between 2020 and 2024, mobilizing €43 billion.²³ Its support covers a wide range of projects, from low-carbon solutions and coastal climate resilience to research and innovation and ocean conservation.²³ The EIB's dedicated "**Blue Champions Initiative**" and "**Blue Mediterranean Partnership**" directly signal its commitment to the sector.²³

Furthermore, a dedicated Blue Economy Instrument has been established to provide equity and risk-finance to the sector. This instrument strategically combines resources from the European Maritime, Fisheries and Aquaculture Fund (EMFAF) and

the broader InvestEU budget, alongside funds from the European Investment Bank (EIB) and the European Investment Fund (EIF). The primary objective is to support innovative, sustainable Blue Economy SMEs and start-ups through all stages of their development. This financing mechanism targets activities spanning research, development, demonstration, commercialisation, and the scaling-up of blue and green maritime technologies and solutions.

Some examples on this topic are:

- **Blue Revolution Fund:** EIF + InvestEU supported fund, with ~€20 million from InvestEU, focusing on early-stage aquaculture enterprises, sustainable technologies, seaweed, etc. It helps fill gaps in financing in the sector.
- **Growth Blue Fund I:** This is perhaps the best example of a national/regional blue economy instrument under InvestEU. Launched in Portugal (supported by Portuguese national public resources via Fundo Azul + InvestEU Blue Economy instrument). It focuses on mature blue economy companies (SMEs, small mid-caps) with innovation & growth potential, in sectors like aquaculture, blue bioeconomy, offshore energy, shipping, ports, and marine biotechnology.

Finally, particularly noteworthy is the **BlueInvest initiative**, a platform and a support mechanism (for coaching, matchmaking, investment readiness, visibility etc.) for start-ups/scale-ups/SMEs in the Blue Economy (marine, coastal, aquatic sectors).

VI. Other Key Financial Instruments for Innovation and Scale-up

Beyond the grant-based and traditional investment funding streams, other key instruments are essential for supporting the full project lifecycle, particularly for innovation-driven ventures and large-scale, capital-intensive projects.

The European Innovation Council (EIC) Accelerator

The EIC Accelerator provides blended grant and equity financing for breakthrough, market-creating innovations that are ready for commercial scale-up and market entry (through Pathfinder/Transition/Accelerator initiatives). It is highly suitable for individual start-ups and SMEs with ambitious, high-risk projects that aim to achieve significant growth and internationalisation. The EIC also runs targeted challenge calls, providing an excellent avenue for innovators who have already proven their technology and are seeking to push it to the market. It is particularly suitable for technology developers, start-ups seeking funding/grants (EIC Accelerator), universities and SMEs engaged in collaborative research and innovation activities in the marine sector, and projects in line with the mission.

The Innovation Fund

The Innovation Fund is one of the world's largest funding programs for demonstrating innovative low-carbon technologies, with a budget of nearly 40 billion euros for 2021-2030. This fund is specifically designed for large-scale, capital-intensive projects that can significantly reduce greenhouse gas emissions. It is an ideal instrument for projects at TRL 7-9, such as those related to hydrogen for shipping or other large renewable energy pilots.

Digital Europe / Connecting Europe Facility (CEF)

The Digital Europe Programme and the Connecting Europe Facility (CEF) are more specialised funding streams that can offer complementary or combined financing opportunities, specifically targeting the digitalisation of maritime services, port connectivity, and the development of robust trans-European digital and transport networks.

VII. EMFAF: Implementation Status in ADRION Partner Countries

The European Maritime, Fisheries and Aquaculture Fund (EMFAF) is a crucial funding stream, but its application is highly national in scope.²⁷

Access to the European Maritime, Fisheries and Aquaculture Fund (EMFAF) is

generally limited for Pre-Accession/Candidate/Potential Candidate Countries (PPS), as the fund is primarily reserved for EU Member States. PPS countries therefore typically do not have full access to EMFAF through the adoption of an operational programme or shared-management funds.

Unlike Horizon Europe or Interreg, which are managed at a centralized or transnational level, 87% of the EMFAF budget is co-financed through national operational programs.²⁷ This means that for a project to receive EMFAF funding, it must align with a specific country's approved plan and priorities.²⁸ The fund primarily supports traditional sectors of the blue economy, such as fisheries and aquaculture, with a goal of promoting sustainable, low-carbon, and resilient practices.²⁹

Implementation Status in Key ADRION Countries

Candidate countries are actively working towards future EMFAF eligibility by aligning their legal, administrative, and regulatory frameworks with the EU's Common Fisheries Policy (CFP). Some examples in this case, regards legislative reforms that are being advanced in areas such as fisheries and aquaculture law, market organisation, and structural measures (e.g., in Montenegro). These necessary preparatory actions—including capacity building, administrative system upgrades, and improved data collection, monitoring, control, and enforcement systems—are often supported by other EU instruments, such as the Instrument for Pre-accession Assistance (IPA).

Following, the state of the implementation per national context is presented:

- **Italy:** The Italian EMFAF program for 2021-2027 was officially approved by the European Commission on November 4, 2022.³¹ The program is managed at the national level by the Ministry of Agricultural Food and Forestry Policies.¹
- **Croatia:** Croatia's EMFAF program was approved on November 23, 2022.³²
- **Slovenia:** The Slovenian program was approved on December 2, 2022.²⁸ The program is notable for its specific budgetary allocations, with a significant 38% of its funds dedicated to the "sustainable blue economy" and nearly 30% to sustainable aquaculture and processing.²⁸ This level of detail provides a clear

roadmap for projects seeking to align with Slovenia's national priorities.

- **Albania and Montenegro:** A crucial finding is that the research material contains no information on approved EMFAF operational programs for Albania or Montenegro.³² While these countries are part of the Interreg IPA ADRION program, which is specifically designed for both EU and non-EU countries, they are not EU Member States and are therefore not eligible for the national operational programs under EMFAF.

Currently, the engagement of PPS countries with EMFAF-related objectives is primarily achieved through:

- Direct Management Grants
- Sea-basin Policy Actions
- Technical Assistance
- Cooperation under Regional and International Programmes

The major constraint to faster implementation and readiness for full EMFAF participation remains the development of a robust enabling environment, including comprehensive legal alignment, effective data collection systems, and strong control and enforcement capabilities.

VIII. Integrated Recommendations and Strategic Pathways

The analysis of the funding landscape reveals a complex but navigable system that can be strategically leveraged by the Innovablue project team. A successful funding strategy is not about choosing a single fund but about building a coherent pathway that links different funding instruments to a project's stage of development.

A strategic "stacking" model is recommended, where each funding phase prepares the project for the next:

- I. **Pilot Phase (TRL 3-6):** The initial pilot and proof-of-concept projects should target grant-based opportunities. The Interreg IPA ADRION program is the ideal starting point for regional, cross-border projects, particularly those involving

non-EU countries like Albania and Montenegro. The program's high co-financing rate (up to 85%) and focus on regional pilots make it a strong entry point.¹ Simultaneously, the LIFE Programme should be explored for small-scale, environment-focused pilots, especially for technologies ready for close-to-market demonstration.¹⁷

- II. **Demonstration Phase (TRL 6-8):** With a proven pilot and a regional consortium in place, the project should aim for larger-scale demonstration funding. Horizon Europe is the primary vehicle for this phase. The Mission Ocean and SBEP are the most relevant avenues, offering multi-million euro grants for transnational consortia.³ Proposing the project as a contributor to a Mission Ocean Lighthouse or as a solution within an SBEP call is a highly effective way to frame a proposal and increase its chances of success.
- III. **Commercialisation & Scale-up (TRL 8-9):** For capital-intensive projects that are ready for market entry, the focus must shift from grants to financial instruments. InvestEU, through its implementing partners like the EIB Group, is the key to unlocking this private and public investment.²¹ Innovablue and its portfolio companies must develop a strong business case and approach these partners for tailored financial solutions, such as loans, venture debt, or equity, rather than applying for a grant.²³ The EIB's specific focus on the blue economy and its "Blue Mediterranean Partnership" should be leveraged.²³

Regardless of the funding stream, a project's alignment with broader EU policy goals is a significant factor in evaluation. The Innovablue team should explicitly connect its work to the European Green Deal, the EU Biodiversity Strategy 2030, and relevant national or macro-regional strategies, such as the EU Strategy for the Adriatic and Ionian Region (EUSAIR).¹ Such alignment demonstrates the project's policy relevance and long-term impact, which evaluators value highly.

IX. National and Regional Overview

CROATIA

Croatia presents a comprehensive and evolving funding landscape for blue innovations and maritime technologies. The funding ecosystem encompasses substantial EU and national public funding (EMFAF, Recovery and Resilience Plan, Cohesion Policy), progressive tax incentives for investments in modernization and green technologies, cross-border collaboration programs fostering innovation and SME development, emerging private venture capital interest in marine technologies, and alternative financing mechanisms including crowdfunding for sustainable maritime projects.

The Croatian funding landscape demonstrates particular strength in programs supporting cross-border collaboration, digital transformation, and the green transition in maritime activities. However, opportunities exist for expansion of funding toward emerging and technologically advanced areas beyond traditional fisheries and aquaculture sectors, and for strengthening the connection between research institutions, innovative SMEs, and available financing mechanisms through innovation hubs such as DIH Innovamare.

1. National R&D Programs and Public Funding

1.1 Core National Programs

The Republic of Croatia has established a comprehensive framework of national programs to support research, development, and innovation in the maritime sector, with particular emphasis on sustainability and digital transformation, mainly due to the importance that the maritime sector and all the activities related to it have on the economy of the country.

European Maritime, Fisheries and Aquaculture Fund (EMFAF) 2021-2027 represents the primary funding instrument for the sector, with €243.6 million allocated to Croatia. Implemented by the Ministry of Agriculture in collaboration with the Ministry of the Sea, Transport, and Infrastructure, the program focuses on

sustainable use of natural resources, protection and restoration of aquatic biodiversity, low-carbon aquaculture, and green and digital transformation in the maritime sector. The program is currently operational and actively supporting sustainable maritime activities and innovation.

Croatian Agency for Small Businesses and Investments (HAMAG-BICRO) provides crucial financial support to small and medium-sized enterprises (SMEs) through various funding schemes, including grants and loans. The agency's focus areas encompass technological development, commercialization of research outputs, and the introduction of new products or services to the market, fostering innovation and competitiveness across the maritime sector.

Recovery and Resilience Plan (RRP) allocates €542 million to support businesses in their green transition and energy efficiency efforts. The program targets investment in green technologies, sustainable tourism, and support for businesses contributing to the green economy, with significant applicability to the maritime industry.

1.2 Green-Blue Transition Funding Instruments

Croatia has mobilized substantial resources specifically dedicated to accelerating the green and blue transition in the maritime sector through multiple complementary funding streams.

The **Green Transition Programme** and **Green and Blue Business Innovation Programme**, both funded through EEA and Norway Grants, allocate €21.6 million and €22 million respectively to Croatia for 2021-2028. These programs focus on accelerating the transition towards a more sustainable society, fostering innovation in green and blue business, and promoting the implementation of sustainable practices in the maritime industry.

The **EU Cohesion Policy instrument (2021-2027)** represents the largest single funding source, with €9 billion allocated to Croatia. This instrument supports infrastructure projects and innovations contributing to the green and digital transition in the maritime sector, addressing economic, social, and territorial cohesion objectives.

1.3 Tax Incentives and Financial Support Mechanisms

Croatia has implemented a progressive system of fiscal incentives to promote investment in clean maritime technologies and broader green transition initiatives. Under the Act on Investment Promotion, companies investing in modernizing their production processes, including those in the maritime sector, benefit from substantial **Corporate Income Tax (CIT)** reductions structured as follows:

- **€0.5-1 million investment:** 50% CIT reduction for up to 5 years
- **€1-3 million investment:** 75% CIT reduction for up to 10 years
- **Over €3 million investment:** 100% CIT reduction for up to 10 years

These incentives apply to investments in high-tech equipment, automation, digitization, and other modernizations that enhance productivity and environmental performance. Additionally, companies can access non-refundable subsidies covering up to 20% of eligible capital expenditures for new machinery and equipment, plus up to €9,000 per new job created. These grants are particularly advantageous for projects located in regions with higher unemployment rates, such as eastern Croatia.

While Croatia does not currently offer direct tax incentives exclusively for green maritime technologies, the government is expected to launch targeted funding calls relevant to zero-emission mobility, which may include maritime applications.

2. Programs Supporting Innovation and SMEs in the Green-Blue Sector

2.1 Cross-Border and International Collaboration Programs

Croatia participates in several programs and initiatives designed to support startups and innovative SMEs in the blue sector, with strong emphasis on fostering innovation, sustainability, and cross-border collaboration.

ESCO – Driving Green Innovation for a Sustainable Blue and Green Economy, funded by the EEA and Norway Grants, supports green tech startups in Croatia and Norway. The project provides targeted assistance to refine business models, access funding, and scale impact in the blue economy through an accelerator program operated by IRIC and NORBAN, connecting innovation ecosystems of both countries

through transnational workshops and collaborative projects.

BEST4.0 Interreg Italy-Croatia programme targets over 150 SMEs in coastal regions, offering training and mentoring activities to adopt sustainable and innovative practices, voucher schemes through two calls allowing SMEs to access specialized services for innovation, growth, and internationalization, and networking events to facilitate business collaborations. The project aims to support SMEs in creating new jobs and expanding into new markets.

CoE MARBLE (Centre of Excellence in Maritime Robotics and Technologies for Sustainable Blue Economy) focuses on stimulating reforms in Croatian research and innovation, promoting collaboration among academia, industry, and public institutions, and enhancing technological capabilities in maritime robotics and related fields. The project is expected to contribute significantly to the development of sustainable and innovative solutions in the maritime sector.

2.2 Innovation Hubs and Support Infrastructure

AgriFood Croatia serves as an innovation hub bringing together research, business, and public stakeholders for digital transformations in aquaculture, agriculture, and food-related sectors, while also supporting projects like BEST4.0 that aid blue economy SMEs in digital transformation.

DIH Innovamare connects companies, institutions, researchers, and experts to jointly tackle challenges related to the Blue Economy, offering services to foster collaboration among key stakeholders, including innovative blue SMEs, with particular emphasis on innovation and digital transformation in the marine sector. This innovation-driven approach has resulted in notable achievements such as the development of the Faust V autonomous vessel.

3. Regional and Local Funding Opportunities

3.1 Sector-Specific Support Programs

At the regional and local level, several funding opportunities are available for SMEs operating in the blue sector, although some remain limited in scope and require expansion.

The **Support Program for Fisheries and Mariculture** offers measures including small-value grants and subsidies for SMEs in aquaculture, fish farming, and related value-chain activities. Financial resources can cover the costs of installing or purchasing floating platforms, nets, protective equipment, monitoring equipment, and solar or off-grid power for farms. However, the program is currently limited to traditional sectors of the Blue Economy, highlighting the need for expansion towards emerging and technologically advanced areas.

County Environmental/Nature Protection Funding provides public tenders for NGOs and other actors in the environmental and sustainable development sphere. SMEs may partner with NGOs or apply independently if their projects qualify, particularly useful for marine environment protection and stewardship components of business operations.

3.2 EU-Funded Regional Projects

BLUEQ (Interreg IPA-ADRION) focuses on environmental and ecosystem monitoring, including coastal habitat mapping and blue carbon capture. SMEs providing environmental services, remote sensing, satellite work, and marine ecology consulting can participate as contractors or partners.

ROBONETCBC aims to establish an innovation network for blue technology, specifically robotics and sensors for monitoring marine and freshwater pollution. This represents a valuable opportunity for SMEs and tech start-ups focused on sensors, robotics, and environmental technology to apply as project partners.

3.3 Maritime Innovation Infrastructure

The **Maritime Innovation Center (iNavis)**, based in Šibenik, was established with support from Norwegian sources, European funds, and local/regional sources. The center has implemented projects such as MATIN (Croatia-Norway Marine Technology Innovation Network) and currently functions as both a cluster and an incubator, bringing together SMEs, research, tech innovation, and assisting startups. Alongside DIH AgriFood Croatia and DIH Innovamare, iNavis is positioned to become a key reference point for innovative marine technologies, technology transfer, and

cross-border cooperation in the Blue Economy.

4. Port Development and Infrastructure Programs

4.1 Local Port Modernization Projects

Šibenik-Knin County hosts two significant port development projects with strong sustainability components:

The **Modernisation of the Cruise Port of Šibenik** (total value: €14.4 million) includes reconstruction and modernization of the town's cruise port, specifically the construction of the connecting quay between the Dobrika quay and Rogač shore. The project addresses safety, functional and technical modernization with attention to sustainable design, resilience, and improved operational efficiency.

The **Construction of a Passenger Terminal and accompanying infrastructure in Šibenik** is co-financed by cohesion funds and includes sustainability components such as better passenger experience, weather protection, new sanitary facilities, improved utilities, reduced congestion, and energy usage efficiency.

4.2 Cross-Border Port Development Initiatives

The **Framework Initiative Fostering the Sustainable Development of Adriatic Small Ports (INTERREG V-A Italy-Croatia, 2014-2020)** laid foundations for integrated and sustainable development of smaller ports through pilot activities, prioritization of locally relevant topics, and a bottom-up approach ensuring stakeholder involvement.

Sustainable Ports – SUSPORT (Interreg V-A Italy-Croatia 2014-2020) created joint methodologies for environmental planning and energy efficiency, shared best practices, and implemented pilot actions aimed at long-term governance and reduction of environmental impact and greenhouse gas emissions.

The EMFAF 2021-2027 program offers additional opportunities for local implementation through port projects and accompanying infrastructure, with explicit support for investments in fishing port infrastructure, decarbonization, energy efficiency, and modernization of fishing ports. Portuary and maritime actors

in Šibenik-Knin County can apply under EMFAF for port modernization and environmental improvements.

5. Public-Private Partnerships

The Croatian maritime sector demonstrates active engagement in public-private partnerships, with several notable examples:

The **Port of Šibenik – Yilport/Luka Šibenik concession** involves Turkish company Yilport Holding's operations at the Port of Šibenik. Under the concession, Yilport plans to modernize the terminal by increasing storage capacity, installing additional mobile harbour cranes, dredging to deeper draft (-13 m) to accommodate larger vessels, and expanding services including container operations.

Project Šibenik encompasses several sub-projects including hotels, a marina for megayachts, yacht club, and other tourism and nautical infrastructure at the former Kulin military complex/Mandalina area. The city signed an agreement with private company NCP Remontno brodogradilište Šibenik to build hotels, villas, and a marina with approximately 400 berths, with terms including construction rights, operating rights (some via concession or right of use/building), and revenue sharing with local authorities.

The **Port Authority of Šibenik-Knin County** utilizes a concession regime under Croatian law for various port activities, including basic and ancillary port services (berthing, passenger services, cargo). This framework provides the mechanism by which private operators can be contracted to provide services or operate parts of port infrastructure.

6. Private Funding and Venture Capital

6.1 Private Investment Funds

Beyond European funds and national/regional programs, several private investment funds are active in Croatia's maritime and blue economy sectors:

Vesna Deep Tech Venture Fund focuses on research-institution spinouts, deep tech, and technology transfer in Croatia and Slovenia, backed by EIF and national

development banks in both countries. While not exclusively focused on blue economy, its deep-tech mandate encompasses marine biotech, marine sensors, and related technologies.

Regional **private equity/growth capital funds** active in the former Yugoslav countries and Croatia invest in SMEs with strong growth potential, sometimes taking controlling stakes. While not exclusively focused on blue economy, these funds could co-invest in maritime sector companies demonstrating growth potential.

Croatian Venture Capital and Impact Funds include entities such as SC Ventures and AYMO Ventures, along with impact and circular economy-focused funds that occasionally back marine-oriented and blue economy projects, particularly in marine tech, environmental tech, and IoT at sea. Sentinel Marine Solutions, a Croatian marine-tech startup, exemplifies VC interest in the sector, having previously raised capital from SC Ventures and other investors.

6.2 Maritime Innovation Clusters and Networks

Several hybrid public-private initiatives operate in close coordination with scientific bodies, NGOs, and private entities to ensure impact and visibility:

- **Maritime Innovation Cluster** (established by private entities and the University of Rijeka)
- **Marine Technology Innovation Network** (established through Croatian-Norwegian cooperation)
- **SeaTechHub** (ongoing joint Croatian-Cypriot initiative)
- **DIH Innovamare** and its recently established spin-off **Innovamare Technologies**

6.3 Blue Economy-Specific Venture Programs

Croatian Venture Capital Initiative 2 (CVCi 2), an €80 million fund program launched in September 2023 by the European Investment Fund (EIF) in partnership with Croatia's Ministry of Regional Development and EU Funds, focuses on investments in innovative Croatian SMEs with high growth potential. The fund

supports sectors aligned with Croatia's strategic priorities, including maritime technologies. Importantly, CVCi 2 does not invest directly in startups but partners with selected private fund managers who raise additional capital from other investors.

BlueInvest, an EU initiative designed to boost innovation in sustainable technologies for the Blue Economy, is enabled by the European Maritime and Fisheries Fund and structured as a European Fund for Strategic Investments (EFSI). The initiative provides investment readiness and access to finance for early-stage businesses, SMEs, and scale-ups, along with technical assistance, visibility, matchmaking, and opportunity-building for investors and companies, plus guidance for investors to specialize their strategies into Blue Economy-related areas.

BlueInvest Fund serves as a platform and accelerator fostering innovation and investment in sustainable Blue Economy technologies. The first BlueInvest Fund agreements have secured €45 million for two funds dedicated to the Blue Economy across Europe.

The **Croatian Private Equity and Venture Capital Association (CVCA)** serves as the central meeting place for all members of the private equity and venture capital industry in Croatia, facilitating the creation of a conducive environment for private equity and venture capital investments in Croatia and the region.

7. Alternative Financing: Crowdfunding

Croatia offers several crowdfunding mechanisms tailored to sustainable maritime projects within the Blue Economy sector, supporting initiatives ranging from marine conservation and coral research to innovative maritime technologies:

ReefQuest – Coral Conservation on the Island of Iž, launched by the Dalmatian Islands Environment Foundation (DIEF), focuses on studying and protecting coral health around the island of Iž. This initiative combines scientific research with community engagement to assess the impact of climate change and human activities on coral ecosystems, with public donations being matched to enhance the project's impact.

Blue Crowdfunding Project by Crowdpolicy, under the Interreg MED 2014-2020 program, aimed to improve the skills of stakeholders in the Blue Economy sector across the Mediterranean region by promoting participatory funding. The project focuses on developing the skills of SMEs in the Blue Economy sector and creating a transnational cluster with participatory funding services.

Additional crowdfunding platforms in Croatia, such as **CrowdSpace** and **CrowdInform**, could potentially support business undertakings related to maritime projects and the sustainable Blue Economy as a whole.

ITALY

Italy presents a comprehensive and sophisticated funding landscape for blue innovations and maritime technologies, characterized by substantial scale, strategic coordination, and strong alignment with European sustainability objectives. The funding ecosystem encompasses major EU and national public funding through programs such as the Sustainable Blue Economy Partnership (€500 million), EMFAF, and the National Recovery and Resilience Plan (nearly €200 billion), progressive regional funding mechanisms leveraging ERDF and Transition 4.0 initiatives with particular focus on southern Italy, specialized acceleration programs and dedicated financial instruments including the Blue Economy Debt Fund, diverse private investment options ranging from thematic funds (Arca Blue Leaders, Anima SGR) to major infrastructure investors (F2i, CDP Equity), and innovative alternative financing mechanisms including cascade funding and crowdfunding platforms.

The Italian funding landscape demonstrates particular strength in cross-border collaboration programs, strategic public-private partnerships, and integration of maritime sustainability within broader national recovery and green transition initiatives. Italy's approach is characterized by coordination through national and regional maritime clusters (CLUSTER B.I.G., Maritime Technology Cluster FVG), strategic alignment between research excellence (CNR, leading universities) and industrial application, and explicit integration of blue economy within national strategic priorities and European Green Deal objectives.

Opportunities for further development include strengthening domestic venture capital specialized in the blue economy, expanding targeted support for emerging maritime technologies beyond traditional sectors, and enhancing coordination between diverse funding mechanisms to create clearer pathways for enterprises at different development stages. The Italian blue economy funding ecosystem reflects the country's recognition of maritime sustainability as both an environmental imperative and an economic opportunity, positioning Italy as a significant player in the European and Mediterranean blue economy landscape.

1. National R&D Programs and Public Funding

1.1 Core National and European Programs

Italy has established a comprehensive ecosystem of research and development programs dedicated to the maritime sector, operating at both national and European levels with substantial financial commitments and strategic coordination.

Sustainable Blue Economy Partnership (SBEP) – Horizon Europe represents Italy's flagship European partnership for sustainable blue economy, coordinated by the Ministry of University and Research (MUR). With a total budget of approximately €500 million over seven years, including around €73 million plus €23 million in additional funding for the Italian component, the program finances joint research and innovation calls in key thematic areas encompassing offshore platforms, marine spatial planning, sustainable aquaculture, and marine bio-resources. Italian partners include leading research institutions such as CNR (National Research Council), Stazione Zoologica Anton Dohrn, INGV (National Institute of Geophysics and Volcanology), and OGS (National Institute of Oceanography and Applied Geophysics). Multiple calls have been launched since early 2023, demonstrating the program's operational momentum and sustained commitment to advancing blue economy research and innovation.

MUR National Call: Ocean Digital Twins & Blue Bioresources allocates €3.5 million for targeted research focusing on digital twins of the oceans, multi-use marine infrastructure, marine spatial planning, and blue bioresources. Funding per Italian-coordinated project reaches up to €500,000, or €350,000 for projects coordinated from outside Italy. The program employs differentiated funding rates according to project type, providing up to 70% for basic and applied research and 25% for experimental development activities, thereby supporting the full spectrum of research and innovation maturity levels.

National Research Council (CNR) & MUR Programs form the backbone of Italy's scientific and applied research capacity in maritime technologies. As Italy's primary research body, CNR supports national strategic R&D programs in close coordination

with MUR initiatives, ensuring alignment between research excellence and national maritime priorities.

European Maritime, Fisheries and Aquaculture Fund (EMFAF) 2021-2027

constitutes the fundamental instrument for direct sectoral support in Italy. Managed nationally by the competent Ministries, typically MiPAAF (Ministry of Agriculture, Food Sovereignty and Forestry) and MiTE (Ministry of Ecological Transition), in cooperation with Regional Authorities, EMFAF provides critical financing for enterprises operating in the maritime and fishing sectors. The strategic objectives encompass promoting sustainable fishing and protecting marine biological resources, ensuring European food security through competitive and sustainable aquaculture practices, fostering sustainable blue economy growth, and enhancing international ocean governance. Critically, EMFAF objectives are explicitly aligned with the green transition, committing support to strategies focused on clean, sustainable, and green ocean management. This makes the fund the most direct source for sectoral ecological modernization efforts, including fleet renewal and energy efficiency improvements. The fund operates within the broader EU policy framework, notably the "Restore Our Ocean and Waters by 2030" Mission, which drives significant investment with over €400 million already committed and a further €120 million marked for scaling promising pilots by 2025 towards three strategic pillars: Protect & Restore Ecosystems, Prevent & Eliminate Pollution, and advancing a Climate-Neutral Circular Blue Economy.

Interreg Italy-Croatia – Blue Innovation Programme represents a cross-border ERDF initiative with approximately €24 million budget under the Italy-Croatia cooperation programme for the 2014-2020 programming period. The program supports research and innovation investments in blue growth sectors, including eco-innovation, product development, technology transfer, pilot actions, and SME clusters in tourism, fisheries, shipbuilding, and aquaculture, fostering transnational collaboration and knowledge exchange.

Investimenti Sostenibili 4.0 operates under the National Research and Innovation Programme (PN RIC 2021-2027) and is managed by Invitalia. This incentive

specifically reinforces the sustainable growth and competitiveness of SMEs located in Italy's less developed regions, including Molise, Basilicata, Calabria, Campania, Puglia, Sicilia, and Sardegna. The program offers a combination of capital grants and subsidized loans capable of covering up to 75% of eligible expenses, addressing regional economic disparities while promoting industrial modernization and sustainability in maritime sectors.

1.2 Green-Blue Transition Funding Instruments

Italy has dedicated substantial resources specifically targeting environmental sustainability and green transition in maritime activities through multiple complementary mechanisms.

Next Generation EU / PNRR (Piano Nazionale di Ripresa e Resilienza) delivers nearly €200 billion in grants and loans to Italy through 2026 as part of the Italian Recovery and Resilience Plan. While not exclusively blue economy-specific, the plan includes substantial investments in energy transition, innovation, and digitalization—sectors that directly underpin blue tech deployment and maritime sustainability. The MER (Marine Ecosystem Restoration) component specifically addresses marine ecosystem restoration initiatives, demonstrating explicit commitment to ocean health and coastal resilience within the broader national recovery framework.

Green & Blue Financing Framework provides structured financial instruments specifically designed to support sustainable projects in the maritime sector. Italy has established dedicated frameworks that channel investment toward environmental transition initiatives, offering enterprises clear pathways to access capital for green and blue technology adoption and implementation.

Fund for Sustainable Tourism, managed by the Ministry of Tourism, supports sustainable tourism development including coastal and maritime tourism activities that align with environmental protection and green transition objectives. This fund recognizes the critical intersection between tourism, coastal management, and maritime sustainability, providing targeted support for projects that balance

economic development with environmental stewardship.

WestMED Initiative & National Hub facilitates stakeholder access, both public and private, to blue economy funding, networking opportunities, events, and project development support. The Italian National Hub of the WestMED Initiative underpins the national "Piano del Mare" (Plan of the Sea), which integrates sustainability considerations into maritime policy and funding allocation. This initiative provides a coordinated approach to maritime green transition at the Mediterranean regional level, ensuring Italian actors benefit from transnational cooperation and knowledge sharing.

1.3 Tax Incentives and Financial Support Mechanisms

Italy has implemented specific fiscal measures and incentive schemes to support the adoption of clean technologies in the maritime sector, with particular attention to the nautical and yachting industry.

The **"Made in Italy" Law – Recreational Boating Fund** establishes a dedicated fund of €3 million specifically designed to support the ecological transition of the recreational boating sector. This initiative incentivizes investments in clean maritime technologies and sustainable practices within the nautical industry, promoting environmental innovation and the adoption of green solutions in yacht and recreational vessel construction and operation. The fund represents concrete governmental commitment to facilitating the green transition in the maritime domain, designed to reduce financial barriers associated with adopting environmentally sustainable technologies and practices.

While specific comprehensive tax incentive schemes dedicated exclusively to clean maritime technologies may vary by subsector and evolve over time, the "Made in Italy" fund demonstrates the policy direction toward targeted sectoral support. Stakeholders interested in accessing tax incentives or financial support for clean maritime technologies are advised to consult with relevant ministries, including the Ministry of Economy and Finance and the Ministry of Sustainable Infrastructures and Mobility, as well as industry associations for the most current information on

available fiscal measures, eligibility criteria, and application procedures.

2. Programs Supporting Innovation and SMEs in the Green-Blue Sector

2.1 Acceleration and Development Programs

Italy offers several specialized programs and initiatives designed to support startups and innovative SMEs operating in the blue economy sector, providing comprehensive acceleration, financing, and development opportunities.

FAROS – Blue Economy Acceleration Program represents a dedicated acceleration program specifically targeting blue economy startups and innovative enterprises. Now in its fourth edition, FAROS provides comprehensive support including mentorship, networking opportunities, access to investors, and business development resources. The program is designed to help blue economy ventures scale their operations and bring sustainable maritime technologies and solutions to market, addressing the specific challenges and opportunities inherent in the maritime sector.

Blue Economy Ocean Accelerator focuses on supporting innovative companies developing solutions for ocean sustainability and blue economy challenges. The initiative provides startups and SMEs with targeted acceleration services, including technical expertise, market access support, and connections to the broader blue economy ecosystem. This accelerator recognizes the multifaceted nature of blue economy challenges, offering specialized support that extends beyond generic startup acceleration to address maritime-specific technical, regulatory, and market dynamics.

Blue Economy Debt Fund represents Italy's first investment fund specifically dedicated to blue economy enterprises. The fund provides debt financing to support the growth and development of startups and SMEs operating in maritime and ocean-related sectors. This financial instrument addresses the specific capital needs of blue economy companies, offering an alternative or complementary financing solution to traditional equity investment. The availability of dedicated debt financing is particularly significant for maritime enterprises that may require capital for asset

acquisition, infrastructure development, or scaling operations without equity dilution.

These initiatives collectively address multiple needs of blue economy startups and SMEs through acceleration and mentorship providing technical and business guidance tailored to maritime sector challenges, access to capital through both equity-oriented acceleration programs and dedicated debt financing, networking and partnerships connecting participants to industry players, research institutions, and potential clients, and market development support in commercializing innovative blue technologies and services. The availability of sector-specific acceleration programs and dedicated financing instruments demonstrates Italy's strategic commitment to fostering innovation and entrepreneurship in the blue economy, recognizing its potential for sustainable economic growth and environmental stewardship.

3. Regional and Local Funding Opportunities

3.1 Regional Development Funds and Innovation Support

Italian regions and local authorities provide a diverse range of funding opportunities, support mechanisms, and strategic initiatives tailored to blue economy development, leveraging both national and European resources.

European Regional Development Funds (ERDF) – Regional Calls enable Italian regions to launch targeted calls supporting SMEs and startups developing high-tech and prototypic solutions in the maritime sector. Grant coverage ranges from 10% to 70% of project costs, depending on the specific region, project type, and beneficiary characteristics. These funds are instrumental in fostering technological innovation and competitiveness in the blue economy, with regional authorities tailoring calls to address specific local maritime challenges and opportunities.

Sustainable Investments 4.0 (Southern Italy Focus) provides substantial support specifically for innovative and sustainable investments in southern Italian regions, including Basilicata, Calabria, Campania, Molise, Puglia, Sicily, and Sardinia, under the Transition 4.0 Plan. Financial support includes grants up to 50% for micro and small

SMEs, grants up to 40% for medium-sized enterprises, and interest-free loans to complement grant funding. This initiative addresses regional economic disparities while promoting industrial modernization and sustainability in maritime sectors, recognizing the particular importance of blue economy development for southern Italy's economic growth and employment.

3.2 Regional Green-Blue Economy Platforms and Initiatives

Friuli Venezia Giulia (FVG) – Blue Economy Platform has established a dedicated coordination mechanism to unite stakeholders, promote collaboration, and facilitate access to funding opportunities. The platform promotes EU funding opportunities through projects such as IN4BLUE and coordinates maritime innovation activities strategically. This regional initiative demonstrates how dedicated institutional structures can enhance funding access and project development capacity for local maritime actors.

Maritime Technology Cluster FVG – Communities of Decarbonisation and Innovation Ecosystem brings together industry players, research institutions, and public authorities to advance sustainable maritime technologies and practices. The cluster focuses specifically on decarbonization and innovation ecosystem development, providing a structured framework for collaborative projects and knowledge exchange. This thematic focus addresses one of the most pressing challenges in the maritime sector while creating opportunities for technological innovation and business development.

Emilia-Romagna Regional Initiatives encompass comprehensive blue economy strategies and programs, coordinating multiple stakeholders and funding mechanisms to support maritime innovation and sustainability. The region has developed integrated approaches that connect research, industry, and policy to create an enabling environment for blue economy development, with particular attention to sustainable tourism, fisheries, and coastal management.

Genoa – Local Innovation Challenges demonstrates municipal-level commitment to blue economy innovation through targeted calls. The 2022 "Call for Innovation – Lo

sport nella blue economy" exemplifies this approach, offering €50,000 in total funding alongside mentoring and business development support. This initiative specifically targeted SMEs and startups focusing on marine sustainability, smart materials, and green propulsion technologies, demonstrating how local authorities can directly stimulate maritime innovation through focused, thematic challenges.

In particular, the **Veneto Region** has developed an integrated set of regional initiatives and coordination mechanisms supporting the green and blue transition of coastal and maritime activities in the Northern Adriatic. Central to this approach are regional governance and planning frameworks, including **Maritime Spatial Planning (MSP)** and lagoon management policies coordinated by the Region with the technical support of **ARPA Veneto** and research institutions. These frameworks provide a stable platform for projects addressing coastal resilience, environmental monitoring, sustainable aquaculture, port-lagoon interaction and climate adaptation, facilitating access to ERDF, EMFAF and national funding instruments.

Complementing these governance tools, regional clusters, innovation networks and the **Northern Adriatic Ports System Authority (Venice-Chioggia)** act as operational platforms for green-blue innovation. They support collaboration between SMEs, ports, universities and public authorities through project incubation, matchmaking and funding orientation, and enable concrete investments in port electrification, environmental sustainability, smart infrastructure and emission reduction, financed through blended regional, national and European resources. Together, these elements form a coherent regional ecosystem that lowers barriers to funding access and supports the implementation of sustainable maritime projects in Veneto.

3.3 Transnational and European Programs Accessible from Italy

Interreg, Interreg Europe & NEXT MED programs provide Italian regions and entities access to cross-border cooperation funding supporting blue economy development themes including clean energy and renewable offshore energy, circular economy in maritime sectors, port logistics and sustainable maritime transport, and SME competitiveness and innovation clusters. These programs facilitate international collaboration, knowledge exchange, and joint project development across

Mediterranean and European maritime regions. Interreg Euro-MED's 4th call with a budget of €44 million is currently open for blue economy projects, while the Next MED programme funds Mediterranean cooperation projects across multiple thematic areas. Interreg Europe also accepts blue economy projects under broader innovation and sustainability themes, providing Italian actors with multiple pathways to access transnational funding.

4. Maritime Clusters with Dedicated Funding

Italy has established both regional and national maritime clusters that serve as strategic coordination platforms, bringing together industry stakeholders, research institutions, and public authorities to advance maritime innovation and competitiveness. Several clusters have access to dedicated funding mechanisms and serve as facilitators for member organizations seeking financial support.

Maritime Technology Cluster FVG (MAREFVG) in the Friuli Venezia Giulia region coordinates maritime sector stakeholders and facilitates access to regional, national, and European funding opportunities. The cluster focuses on technological innovation, decarbonization, and sustainable maritime development, providing a structured platform for collaborative projects and knowledge exchange among its members. MAREFVG serves as an important regional hub connecting local maritime actors with broader funding ecosystems.

In the **Veneto Region**, although there isn't a singular dedicated *maritime cluster* formally named like MAREFVG, the region actively fosters a coordinated maritime and blue economy ecosystem through strategic initiatives, cross-sectoral collaboration platforms, and participation in transnational innovation projects. A key example is the **IN4BLUE project**, implemented under the Interreg Italy-Croatia Programme, which fosters innovation in maritime transport and coastal tourism. The initiative creates collaborative spaces for SMEs and other stakeholders to access support services, build partnerships, and develop competitive proposals for European funding. In addition, Veneto's regional programs and blue economy observatories facilitate knowledge exchange, project development, and alignment with EU priorities, helping local actors tap into regional, national, and European

funding mechanisms.

CLUSTER B.I.G. (Blue Italian Growth) represents Italy's primary maritime cluster at the national level, aggregating stakeholders from across the country's blue economy sectors. The cluster plays a strategic role in coordinating research and innovation activities, facilitating access to national and European funding programs, promoting technological development and industrial competitiveness, supporting collaborative projects among cluster members, and advocating for maritime sector interests at the policy level. CLUSTER B.I.G. serves as an important interface between industry needs and funding opportunities, helping members navigate the complex landscape of blue economy support mechanisms.

These maritime clusters typically provide members with direct funding access through coordination of dedicated funds for member projects, project facilitation support in developing collaborative R&D projects eligible for regional, national, and EU funding, networking opportunities connecting potential partners for consortium-based funding applications, strategic intelligence on upcoming calls and funding opportunities relevant to maritime technologies, and technical support in proposal development and project management. The cluster model has proven particularly effective in Italy's maritime sector, enabling smaller enterprises and research organizations to participate in larger-scale innovation initiatives and access funding mechanisms that might otherwise be difficult to navigate independently.

5. Port Development and Infrastructure Programs

5.1 Cross-Border and Regional Port Sustainability Programs

Italy has implemented several port development programs that explicitly incorporate sustainability and environmental innovation components, ranging from cross-border initiatives to region-specific projects demonstrating the country's commitment to green port transformation.

Interreg SUSPORT represents a cross-border cooperation project focusing on sustainable port development and operations. The initiative addresses environmental challenges in port areas, promotes green technologies, and supports

the implementation of sustainable practices in port management and logistics. The project involves multiple partners working collaboratively to advance port sustainability standards and operational efficiency, facilitating knowledge transfer and best practice sharing across participating ports.

Port Grid Trieste – PNRR Implementation represents a strategic investment as part of Italy's National Recovery and Resilience Plan implementation. This project focuses on sustainable port infrastructure development, energy transition and grid modernization, integration of renewable energy systems, and enhancement of port operational efficiency with reduced environmental impact. Port Grid Trieste positions the port as a leader in sustainable maritime logistics, aligning port infrastructure transformation with decarbonization objectives and European Green Deal targets. The project demonstrates how major port infrastructure can be fundamentally reimaged to serve as energy hubs and catalysts for broader maritime sector sustainability.

In the **Veneto Region**, the **ports of Venice and Chioggia** have also advanced sustainable infrastructure through PNRR and European-supported initiatives. Investments target electrification of quays, energy-efficient cargo handling, and improved rail and road connections to strengthen multimodal logistics. Complementary programs, such as the **Green Ports initiative**, support renewable energy installations, hydrogen pilot projects, and electrification of port equipment, reducing CO₂ emissions and promoting greener operations. Together, these efforts position Veneto's port system as a key hub for sustainable maritime transport and innovation, integrating infrastructure modernization with environmental objectives.

5.2 Coastal and Maritime Innovation Hubs

Emilia-Romagna – Rimini Blue Lab represents an innovative regional initiative addressing broader coastal and maritime sustainability challenges beyond port infrastructure alone. The Blue Lab serves as an experimentation platform for sustainable tourism and maritime activities, a coordination hub for blue economy innovation projects, and a demonstration site for coastal resilience and environmental protection solutions. This initiative exemplifies the integrated

approach to coastal zone management that connects port activities with broader blue economy development and sustainability objectives, recognizing that maritime sustainability requires holistic approaches encompassing multiple sectors and stakeholder groups.

In the **Veneto Region**, coastal and maritime innovation is supported through interdisciplinary research and strategic regional frameworks that connect academia, industry, and public authorities. A notable example is the **Polo dell'Acqua / Venice Water Lab** at the *Università Iuav di Venezia*, an international hub for research, education, and innovation focused on the blue economy, environmental sustainability, and coastal resilience. This centre collaborates with partners such as the National Research Council and the Italian Navy's Institute of Maritime Studies to develop solutions for sustainable marine and coastal systems, train future professionals, and foster cross-sectoral projects. Complementing this research ecosystem, strategic frameworks like **Bluegate** enhance sustainable logistics and regional development across the Venice–Rovigo–Chioggia corridor, integrating maritime innovation with broader blue economy objectives.

These port development programs reflect several key trends in Italian maritime policy, including PNRR integration where major port infrastructure projects are increasingly aligned with national recovery plan objectives and sustainability targets, cross-border cooperation through Interreg and other transnational programs enabling ports to share best practices and implement joint sustainability initiatives, energy transition focus prioritizing port electrification, renewable energy integration, and grid modernization, and holistic approaches recognizing that port sustainability extends beyond terminal operations to encompass broader coastal zone management and blue economy development. Italian ports are increasingly positioning themselves as "green ports" and energy hubs, integrating cold ironing facilities, renewable energy production, circular economy practices, and smart logistics systems as part of comprehensive sustainability strategies supported by these dedicated programs.

6. Public-Private Partnerships

6.1 Regional Public-Private Partnership Initiatives

Italy has established public-private partnership frameworks in the maritime sector that facilitate collaboration between governmental entities, research institutions, and private industry to advance sustainable blue economy objectives.

Emilia-Romagna – Sustainable Blue Economy Partnership represents a comprehensive regional public-private partnership focused on sustainable blue bioeconomy development. Operating within the European Commission's Smart Specialisation Strategy (S3) framework, this partnership brings together private sector companies and industry associations, public authorities, and research and innovation institutions. The partnership aims to coordinate investments, align research and innovation priorities, foster collaborative projects, and accelerate the transition toward a sustainable blue economy. It serves as a strategic platform for identifying common challenges, sharing resources, and developing joint solutions that address both economic competitiveness and environmental sustainability in maritime sectors.

At the regional level, **Veneto Region** promotes public-private collaboration to advance sustainable blue economy development. A notable example is **Bluegate – the Zona Logistica Semplificata (ZLS)** spanning Venice, Rovigo and Chioggia, which brings together regional authorities, port institutions, private investors and logistics operators to redevelop port and logistics infrastructure with a strong sustainability and innovation focus. This PPP framework attracts investment in green logistics and energy-efficient supply chains, supporting integrated economic and environmental objectives. In addition, structured cooperation projects such as **DIH Innovamare**, involving research institutions, industry partners and Unioncamere del Veneto under Interreg programmes, foster innovation and technology transfer in maritime sectors, creating collaborative ecosystems that bridge public policy and private sector capacity for sustainable maritime growth.

Public-private partnerships in Italy's maritime sector typically feature co-investment mechanisms with shared financial commitment between public and private partners to reduce individual risk and leverage complementary resources,

knowledge transfer bridging the gap between academic research and industrial application through collaborative R&D projects, infrastructure development through joint investments in port facilities, testing centers, and demonstration sites, regulatory dialogue providing structured engagement between industry and policymakers to ensure regulations support innovation while protecting environmental and social interests, and skills development through coordinated training and education programs addressing maritime sector workforce needs.

These partnerships align with broader European and national strategies, including the European Green Deal and Blue Economy Action Plan, Italy's National Recovery and Resilience Plan (PNRR), Regional Smart Specialisation Strategies (S3), and the EU's Sustainable Blue Economy Partnership under Horizon Europe. The public-private partnership model has proven particularly effective in the maritime sector, where capital-intensive infrastructure, complex regulatory environments, and long-term investment horizons benefit from coordinated action between public authorities and private enterprise.

7. Private Funding and Venture Capital

7.1 Specialized Blue Economy Investment Funds

Italy hosts a diverse ecosystem of investment funds and financial vehicles actively supporting blue economy development, ranging from specialized thematic funds to large-scale infrastructure investors and EU-backed platforms.

Arca Blue Leaders, established by Arca Fondi, represents a dedicated investment fund focused on blue economy leaders and sustainable maritime activities. This thematic fund specifically targets companies and projects that demonstrate leadership in ocean sustainability, marine conservation, and responsible blue economy practices, providing investors with exposure to the growing sustainable maritime sector while channeling capital toward enterprises advancing environmental stewardship.

Anima SGR – Patrimonio Globale Blue Economy 2027 offers a specialized investment product dedicated to blue economy opportunities with a defined

investment horizon through 2027. This fund provides targeted exposure to global blue economy assets while addressing Italian and European investor demand for sustainable maritime investment opportunities, demonstrating the growing institutional recognition of blue economy as a distinct investment theme with attractive risk-return characteristics.

7.2 Infrastructure and Strategic Investors

F2i – Infrastructure Investment Fund represents Italy's largest independent infrastructure fund manager with approximately €7 billion in assets under management. F2i invests substantially in sustainable infrastructure, circular economy, and energy transition sectors, with portfolio investments potentially including maritime infrastructure such as ports, logistics facilities, and renewable energy systems supporting maritime operations. F2i represents a major source of patient capital for large-scale blue economy infrastructure development, bringing institutional investment discipline and long-term commitment to transformative maritime projects.

CDP Equity & GreenIT – Renewable Maritime Energy demonstrates strategic public-private collaboration in maritime energy transition. Cassa Depositi e Prestiti (CDP) Equity, in joint partnership with GreenIT and other strategic partners, is driving significant investments in floating offshore wind and renewable energy projects along the Italian coast. These investments include floating wind farms backed by approximately €1.7 billion in committed capital, representing transformative infrastructure for Italy's maritime energy transition and positioning the country as a leader in floating wind technology. This initiative demonstrates how strategic public investment platforms can catalyze private capital mobilization for capital-intensive maritime energy infrastructure.

7.3 Innovation Support and Investment Readiness Platforms

BlueInvest Platform serves as a European Commission-supported platform specifically designed to connect blue economy startups and SMEs with investors and funding opportunities. The platform provides acceleration and business coaching

services, investment readiness support and preparation, matchmaking between enterprises and potential investors, and access to blue economy investor networks. While operating at the European level, Italian blue economy enterprises can access BlueInvest services to enhance their investment attractiveness and connect with relevant funding sources, benefiting from the platform's extensive network and specialized expertise in blue economy investment dynamics.

SEAFUTURE Event – Startup Exposure and Networking, held in La Spezia, provides a strategic platform for blue economy startups to gain visibility and establish connections with potential investors, partners, and clients. The event offers subsidized or free exhibition opportunities, with approximately €1,000 cost or complimentary access for selected startups, networking opportunities with industry leaders, investors, and public authorities, and demonstration and pitch opportunities. While not providing direct funding, SEAFUTURE serves as an important ecosystem-building event that facilitates subsequent investment discussions and partnership formations, contributing to the development of Italy's blue economy innovation community.

7.4 Alternative Funding Mechanisms

Cascade Funding via EU Projects provides simplified, equity-free micro-grants typically up to €300,000 to SMEs and startups for innovation development. Several Horizon Europe projects incorporate cascade funding mechanisms that Italian entities can access through consortium membership in relevant EU-funded projects. Cascade funding offers streamlined application processes compared to traditional grants, non-dilutive capital that preserves founder equity, technical and mentoring support alongside financial resources, and validation and credibility through association with EU-funded initiatives. This mechanism has proven particularly effective in supporting early-stage blue economy innovation that may not yet be ready for venture capital or traditional grant programs.

8. Specialized Venture Capital Programs

While Italy's domestic venture capital ecosystem for blue economy remains relatively

nascent, Italian startups and enterprises have access to specialized international venture capital programs with dedicated focus on ocean and maritime sustainability.

Katapult Ocean represents a specialized venture capital fund and accelerator exclusively focused on ocean impact and blue economy innovations. The program provides equity investment in early-stage ocean-tech startups, intensive acceleration and mentoring support, access to a global network of ocean industry experts, corporate partners, and impact investors, and technical guidance on scaling ocean sustainability solutions. Italian startups developing innovative solutions in areas such as ocean conservation, sustainable fisheries, marine renewable energy, maritime decarbonization, and coastal resilience can apply to Katapult Ocean's programs. The fund emphasizes both financial returns and measurable ocean impact, aligning with the growing impact investment movement in the blue economy sector.

The venture capital landscape for Italian blue economy enterprises is characterized by limited domestic specialized funds, with Italy currently lacking a robust ecosystem of domestically based venture capital funds exclusively dedicated to blue economy. This creates opportunities for international funds like Katapult Ocean to fill the gap while highlighting the potential for development of domestic specialized funds. Italian startups benefit from increasing integration into pan-European venture capital networks, with several generalist and sustainability-focused VC funds across Europe showing interest in maritime technology and ocean innovation. Given limited dedicated VC options, Italian blue economy startups often combine venture capital with complementary funding sources including grant funding from EU programs such as Horizon Europe and EMFAF, regional innovation funds and ERDF resources, corporate venture arms of maritime industry players, impact investors and family offices with sustainability mandates, and debt financing from specialized funds like the Blue Economy Debt Fund.

The evolution of Italy's blue economy venture capital landscape represents both a challenge and an opportunity, with growing recognition of the sector's potential likely to attract additional specialized investment vehicles in the coming years as the blue economy matures and demonstrates attractive financial returns alongside

environmental impact.

9. Alternative Financing: Crowdfunding

Specialized crowdfunding mechanisms and training platforms have been developed to support sustainable maritime projects, providing alternative financing pathways for blue economy initiatives that may complement traditional funding sources.

Blue Crowdfunding – Training and Capacity Building Tool represents a specialized resource developed within the Interreg Euro-MED programme framework, designed to build capacity and knowledge around crowdfunding mechanisms specifically for blue economy projects. This tool provides educational materials on crowdfunding strategies tailored to maritime and ocean sustainability projects, guidance on campaign design, investor communication, and regulatory compliance, best practices and case studies from successful blue economy crowdfunding initiatives, and technical support for project promoters exploring crowdfunding as a financing option. The tool addresses the specific characteristics of blue economy projects, including longer development timelines, capital intensity, and environmental impact focus, that may require adapted crowdfunding approaches compared to conventional campaigns.

BlueInvest – European Blue Economy Investment Platform, supported by the European Commission's Directorate-General for Maritime Affairs and Fisheries, represents a comprehensive investment facilitation platform for the blue economy that incorporates crowdfunding alongside other financing mechanisms. BlueInvest provides connection between blue economy projects and diverse investor types including retail crowdfunding investors, investment readiness support to prepare projects for various financing pathways, matchmaking events and pitch opportunities where crowdfunding-ready projects can gain visibility, and access to a broader ecosystem of blue economy investors and funding sources. The platform recognizes crowdfunding as part of a diversified financing strategy for sustainable maritime projects, particularly valuable for early-stage ventures, community-based initiatives, and projects with strong public engagement potential.

Crowdfunding mechanisms for sustainable maritime projects offer several distinctive advantages including community engagement and validation, where maritime projects with clear environmental or social benefits can leverage community support, demonstrating market demand and stakeholder buy-in that strengthens subsequent institutional funding applications. Flexible financing structures enable blue economy crowdfunding to encompass various models including reward-based crowdfunding for consumer-facing maritime products or services, equity crowdfunding for startups and growth-stage companies, debt crowdfunding through peer-to-peer lending for revenue-generating maritime operations, and donation-based crowdfunding for conservation and restoration projects. Blended finance opportunities allow crowdfunding to serve as a component of blended finance structures, combining retail investor capital with grants, public funding, and institutional investment to achieve optimal risk-return profiles for complex maritime projects. Additionally, crowdfunding campaigns generate marketing and awareness benefits, building public visibility and stakeholder engagement that extends beyond purely financial objectives while establishing brand recognition and community support for sustainable maritime initiatives.

The availability of specialized training tools and integration within broader platforms like BlueInvest reflects growing recognition of crowdfunding's potential role in democratizing access to blue economy investment opportunities while mobilizing capital for sustainable maritime development.

NORTH MACEDONIA

North Macedonia presents a fundamentally different landscape for blue economy and maritime technology funding compared to coastal nations, reflecting its geographical position as a landlocked country without traditional maritime sectors. The national funding ecosystem is characterized by absence of dedicated maritime or blue economy funding programs at any level, transitional uncertainty in innovation funding frameworks following the closure of FITD and pending operationalization of INOVA, reliance on general environmental protection and water management funding streams not structured to support technology innovation, access to EU pre-accession assistance (IPA III) and international donor programs primarily for infrastructure and environmental compliance rather than innovation, and underdeveloped private investment ecosystem with no sector-specialized funds or tailored financing instruments.

Despite these limitations, North Macedonia maintains significant interests in water resources management, freshwater ecosystem protection (particularly Lakes Ohrid, Prespa, and Dojran), climate adaptation and flood risk management, and compliance with EU environmental directives. These areas create potential demand for water quality monitoring technologies, aquatic ecosystem assessment tools, pollution control solutions, and climate resilience innovations that share technological and conceptual foundations with blue economy applications in coastal and marine contexts.

Opportunities for development in water-related technology funding include establishment of thematic focus areas within INOVA's future programming targeting water and environmental technologies, integration of technology innovation components into EU and donor-funded water infrastructure projects, development of partnerships between North Macedonian water technology companies and blue economy clusters in neighboring coastal countries through cross-border cooperation programs, and recognition of freshwater ecosystem management as a strategic priority with dedicated innovation support mechanisms adapted from blue economy models in coastal regions.

For enterprises working on water technologies or environmental innovations in North Macedonia, the practical approach involves leveraging general innovation support mechanisms and adapting to horizontal funding instruments, pursuing international partnerships and cross-border project participation to access specialized support unavailable domestically, engaging with infrastructure projects and public procurement opportunities as commercialization pathways, and maintaining awareness of evolving EU integration processes and potential alignment of national priorities with broader blue economy concepts as applied to inland water systems.

While North Macedonia cannot replicate the maritime sector funding landscapes of coastal nations, the country's significant water resources and environmental challenges create a contextually appropriate foundation for developing water-focused innovation support that aligns conceptually with blue economy principles of sustainable aquatic resource management and ecosystem protection.

1. National Context and Water-Related Funding

1.1 Maritime Sector Context

North Macedonia does not have national R&D programs dedicated to the maritime sector due to its geographical position as a landlocked country without coastal access or maritime ports. Consequently, the traditional maritime sector infrastructure, including shipbuilding, port operations, and marine transportation, is not present in the national economy. However, the country maintains significant interests in water resource management, freshwater ecosystems, and aquatic environmental protection, which share conceptual and technological overlaps with blue economy principles as they relate to sustainable water management and aquatic biodiversity conservation.

Funding related to water management is channeled through environmental protection, river basin management, climate adaptation, irrigation systems, wastewater treatment, flood prevention, and compliance with EU directives, particularly the Water Framework Directive and Floods Directive. These funding

streams, while not classified as maritime or blue economy programs, address critical water sustainability challenges and may support innovation in aquatic monitoring technologies, water quality assessment systems, and ecosystem restoration approaches that have broader applicability to blue economy contexts.

1.2 Innovation Funding Framework Transition

Until August 2025, innovation funding for SMEs and research groups was primarily supported through the **Fund for Innovation and Technology Development (FITD)**. FITD operated as the country's main innovation financing instrument, providing grants and financial support for research, development, and technology commercialization across various sectors. While FITD did not maintain a dedicated "maritime" or blue economy funding line, it financed environmental technologies, clean-tech pilots, and water innovation projects including aquatic monitoring systems, pollution reduction technologies, and waste management solutions. These activities represented the closest approximation to blue economy innovation support within the national funding framework.

FITD was officially closed in 2025 and is being replaced by the newly established agency **INOVA**, which is scheduled to assume responsibility for the national innovation portfolio starting in January 2026. At this transitional stage, INOVA's operational framework, thematic priorities, and specific funding instruments have not been fully defined or publicly announced. No dedicated maritime or blue economy funding lines have been confirmed for the new agency's initial programming period. The expectation among stakeholders is that INOVA, once fully operational, might introduce thematic windows or sector-specific calls in future funding rounds, potentially including environmental technologies and water management innovations. However, this remains speculative and subject to the agency's strategic planning and budget allocation decisions once operational governance structures are established.

1.3 Tax Incentives and Horizontal Support Mechanisms

North Macedonia does not offer specific tax incentives exclusively for maritime

technologies or blue economy enterprises. General incentives exist for renewable energy investments, energy efficiency improvements, circular economy initiatives, and research and development activities, but these are horizontal policy instruments applicable across all economic sectors rather than maritime-specific measures. Enterprises working on water-related environmental technologies or aquatic monitoring systems would access these general incentive schemes under the same conditions as companies in other sectors, without preferential treatment or recognition of blue economy-related activities as a distinct category.

The absence of maritime-specific fiscal incentives reflects the country's geographical context, and the limited scale of water-related technology development compared to other economic priorities. As the innovation funding framework evolves under INOVA's management, there may be opportunities to develop more targeted support mechanisms for environmental and water technologies, but such developments would depend on policy priorities and available resources.

2. Programs Supporting Innovation and SMEs

2.1 Absence of Dedicated Blue Sector Startup Programs

There are no dedicated blue sector startup programs or acceleration initiatives operating at the national level in North Macedonia. SMEs and startups working on environmental technologies, water quality monitoring, aquatic ecosystem management, or related areas would typically apply through general innovation instruments and horizontal support schemes rather than accessing maritime-specific or blue economy-focused programs.

During the period when FITD was operational, companies could potentially secure funding for water-related innovation projects through the agency's general technology development and commercialization programs, provided their proposals met standard eligibility criteria and demonstrated innovation potential and market viability. With the transition to INOVA, the specific mechanisms through which water and environmental technology companies will access innovation support remain to be clarified. The new agency may introduce thematic focus areas or sector-specific

windows that could potentially encompass water technologies and environmental innovations, but no such arrangements have been confirmed at this stage.

2.2 General Innovation Support Infrastructure

North Macedonia maintains a general innovation support infrastructure that includes university technology transfer offices, occasional business incubators and accelerators focused on information and communication technologies or general startup support, and participation in European innovation networks such as EIT Regional Innovation Scheme (EIT RIS) activities. These horizontal platforms provide basic business development support, mentoring, and networking opportunities to early-stage companies across sectors, but they lack the specialized expertise, industry connections, and technical resources that would be required to effectively support blue economy or maritime technology ventures.

For entrepreneurs or SMEs working on water-related technologies or environmental innovations with potential blue economy applications, the practical pathway involves accessing general innovation support services while independently developing sector-specific knowledge, market connections, and technical partnerships. This places additional burden on enterprises to navigate challenges without dedicated sector support mechanisms.

3. Regional and Local Funding Opportunities

3.1 Water Resources Management and Local Support

At the local and regional level, support mechanisms are primarily tied to water resources management, irrigation system development and modernization, urban wastewater treatment infrastructure, and management of significant lake ecosystems including Lake Ohrid, Lake Prespa, and Lake Dojran. These initiatives are typically funded through a combination of municipal budgets, national environmental programs, and international donor programs supported by organizations such as the Green Climate Fund (GCF), United Nations Development Programme (UNDP) focused on climate resilience, European Bank for Reconstruction and Development (EBRD), and bilateral development cooperation

arrangements.

These local and regional initiatives are not structured or promoted as "funding programs" in the innovation financing sense, meaning they do not operate through competitive grant calls specifically targeting innovative enterprises or technology developers. However, they can potentially host pilot projects or demonstration activities if external technical partners, technology providers, or research institutions bring co-financing, technical expertise, and implementation capacity to specific projects. In such cases, innovative solutions for water quality monitoring, ecosystem restoration, pollution control, or climate adaptation could be integrated into larger infrastructure or environmental management initiatives.

For SMEs or technology developers seeking to engage with these local opportunities, the approach typically involves identifying specific municipal or regional water management challenges, establishing partnerships with local authorities or international implementing organizations, and proposing integrated solutions that combine technology provision with financing mechanisms. This requires proactive relationship building and the ability to navigate complex multi-stakeholder project development processes rather than responding to clearly defined funding calls.

3.2 EU and International Donor Programs

North Macedonia's status as an EU candidate country provides access to **Instrument for Pre-Accession Assistance (IPA III)** funding, which supports various sectors including environmental protection, climate action, and infrastructure development. While IPA III programs are not specifically oriented toward blue economy or maritime technologies given the country's landlocked status, they do support water-related infrastructure, environmental compliance with EU directives, and climate resilience initiatives. Technology providers and innovative SMEs may find opportunities to participate in IPA-funded projects as contractors, technology suppliers, or technical partners, particularly in areas such as water quality monitoring systems, wastewater treatment technologies, flood early warning systems, and ecosystem monitoring solutions.

International donor programs from organizations including UNDP, GCF, World Bank, EBRD, and bilateral development agencies periodically launch initiatives related to water resources, climate adaptation, and environmental protection in North Macedonia. These programs typically operate through government counterparts and civil society organizations rather than directly funding private enterprises, but they create market opportunities for technology providers and create demand for innovative solutions that can be commercialized through project participation.

4. Maritime Clusters and Infrastructure

4.1 Absence of Maritime Clusters

No maritime clusters exist in North Macedonia due to the country's landlocked geographical position and absence of maritime industry. The national cluster landscape includes industrial clusters focused on sectors such as information and communication technology, agriculture and food processing, automotive components, and textiles, as well as thematic innovation hubs connected to EU programs including EIT Regional Innovation Scheme activities. However, nothing equivalent to an Adriatic or coastal maritime cluster operates within the country, and there are no organized networks specifically addressing water technologies, freshwater ecosystems, or blue economy concepts adapted to inland water contexts.

This absence of specialized clustering mechanisms means that enterprises working on water-related technologies, aquatic monitoring systems, or environmental innovations lack access to the benefits that maritime clusters typically provide in coastal regions, including coordinated research and development activities, facilitated access to funding opportunities, networking and partnership development support, shared technical infrastructure and testing facilities, and advocacy for sector-specific policy support.

4.2 Infrastructure Development and Green Transition

North Macedonia has no maritime ports, coastal infrastructure, or marine transportation systems. Infrastructure development priorities focus on road networks, railway modernization, logistics terminals, and border crossing facilities.

Some of these infrastructure projects may incorporate green transition elements, energy efficiency measures, or environmental sustainability components, particularly when funded through IPA III programs or international financial institutions with environmental safeguards and sustainability requirements. However, these infrastructure investments operate entirely outside the maritime sector scope and do not create specific opportunities for marine or blue economy technologies.

The country's major lakes (Ohrid, Prespa, Dojran) represent significant environmental and economic assets, supporting fisheries, tourism, and biodiversity conservation. Infrastructure related to these lake systems, including water quality monitoring networks, wastewater treatment facilities serving lakeside communities, and tourism infrastructure, may offer limited opportunities for water-related technology deployment, but these are managed through environmental protection and tourism development frameworks rather than blue economy or maritime sector logic.

5. Public-Private Partnerships

Public-private partnerships (PPPs) involving water infrastructure exist in North Macedonia, primarily in the areas of urban water supply systems, wastewater treatment plants, irrigation system modernization, and municipal utility services. These PPPs operate under utility sector frameworks and municipal service delivery models rather than maritime sector or blue economy logic. The partnerships typically involve long-term concession arrangements or performance-based contracts for infrastructure construction, operation, and maintenance, with private sector partners assuming operational responsibilities and investment obligations in exchange for revenue collection rights or availability payments from public authorities.

From a technology innovation and blue economy perspective, these water sector PPPs represent limited opportunities. They primarily involve conventional infrastructure development and operation using established technologies and standard engineering approaches rather than creating demand for innovative water management solutions, advanced monitoring systems, or novel environmental technologies. The procurement processes for water sector PPPs typically prioritize

technical reliability, operational track record, and financial capacity rather than innovation potential or environmental performance beyond regulatory compliance requirements.

For SMEs or technology companies seeking to engage with water infrastructure PPPs, the realistic pathway involves serving as technology suppliers or specialized subcontractors to major infrastructure developers and operators rather than directly participating in PPP arrangements. This requires establishing relationships with large engineering firms, international water utilities, and construction companies that serve as primary PPP partners and demonstrating technical reliability and cost-effectiveness of proposed solutions.

6. Private Funding and Investment

6.1 Absence of Blue Economy-Specific Private Funds

No private investment funds specifically focused on blue economy or maritime technologies operate in North Macedonia. The country's venture capital and private equity landscape remains relatively underdeveloped compared to EU markets, with limited specialized sectoral funds of any kind. Private investment that does exist tends to focus on information and communication technology startups, retail and consumer services, real estate development, and established manufacturing businesses rather than environmental technologies or water-related innovations.

SMEs working on water technologies, environmental monitoring systems, or aquatic ecosystem management typically rely on traditional commercial bank financing, including working capital loans, equipment financing, and occasionally longer-term investment loans. Access to bank financing depends on standard creditworthiness criteria, collateral availability, and business track records rather than recognition of blue economy or environmental innovation potential. Interest rates and collateral requirements often make bank financing challenging for early-stage technology companies or enterprises pursuing innovative but commercially unproven solutions.

6.2 EU-Backed Guarantee Schemes and Development Finance

Enterprises may access financing supported by EU-backed guarantee schemes and

development finance institutions, including European Bank for Reconstruction and Development (EBRD) credit lines and guarantee facilities, European Investment Bank (EIB) intermediated lending programs, and European Investment Fund (EIF) guarantee instruments provided through local financial institutions. These instruments provide partial risk coverage that enables commercial banks to offer more favorable terms to SMEs, including longer repayment periods, lower collateral requirements, and reduced interest rates.

While these EU-backed financing mechanisms do not specifically target blue economy or maritime technologies, they are accessible to enterprises in all sectors that meet eligibility criteria, including environmental technology companies and water-related innovation ventures. Some programs incorporate sustainability criteria or offer enhanced terms for green investments, energy efficiency projects, or climate adaptation activities, which could potentially benefit water technology companies if their projects align with these thematic priorities.

6.3 Diaspora Investment and Alternative Capital Sources

Occasionally, North Macedonian enterprises, including those working in environmental and technology sectors, receive investment from diaspora entrepreneurs or international investors with personal or family connections to the country. This informal investment channel operates outside structured venture capital mechanisms and depends on personal networks, trust relationships, and individual investment decisions rather than systematic sector analysis or portfolio strategies. Diaspora investment can provide crucial early-stage capital for startups and growth financing for established SMEs, but it is unpredictable, relationship-dependent, and not accessible through transparent market mechanisms.

Sustainability-linked financing, when available through commercial banks or development finance institutions, is typically generic environmental financing at most, covering energy efficiency, renewable energy, or waste management investments without specific recognition of water technologies, aquatic ecosystem protection, or blue economy concepts adapted to inland water contexts.

7. Venture Capital and Acceleration Programs

7.1 General Venture Capital Landscape

Venture capital instruments exist in North Macedonia but are not sector-tailored or specialized by thematic areas such as blue economy, maritime technologies, or even environmental innovations broadly. The venture capital ecosystem remains at an early stage of development, with limited fund sizes, small numbers of active investors, and investment activities concentrated primarily in information and communication technology sectors. Compared to EU markets, the North Macedonian venture capital industry operates at significantly smaller scale and lower maturity levels, with fewer exits, less developed secondary markets, and limited track records of successful technology company growth and internationalization.

For entrepreneurs working on water technologies or environmental innovations, the absence of sector-specialized venture capital means they must compete for attention from generalist investors who may lack the technical expertise, market knowledge, or network connections to properly evaluate blue economy-related opportunities or support companies in these sectors effectively. This structural gap in the investment ecosystem creates barriers to scaling innovative water and environmental technology ventures beyond proof-of-concept stages.

7.2 Accelerators and Incubation Programs

Accelerators operating in North Macedonia are predominantly horizontal platforms supporting general startup development across sectors, with particular concentration on information and communication technology, digital services, and occasionally consumer-facing businesses. These programs typically provide standard startup support services including business model development, pitch training, basic mentoring, and introductions to potential investors. Some acceleration activities are tied to EU programs, university-based innovation hubs, or EIT Regional Innovation Scheme (EIT RIS) supported initiatives.

However, nothing specifically maritime-focused, blue economy-oriented, or even substantially dedicated to environmental technologies exists within the country's

acceleration infrastructure. For entrepreneurs working on water-related innovations or environmental technologies with potential blue economy applications, this means accelerator programs can provide only generic business development support without access to sector-specific technical expertise, industry mentoring, market intelligence, regulatory guidance, or specialized networks that would significantly enhance chances of commercial success.

The absence of specialized acceleration infrastructure creates challenges for ventures requiring longer development timelines, regulatory approvals, pilot testing with public sector clients, or technical validation processes characteristic of environmental and water technology innovations. General accelerator programs optimized for rapid prototyping and digital product launches may not align well with the development pathways and commercialization requirements of blue economy-adjacent technologies.

8. Crowdfunding and Alternative Financing

North Macedonia does not have formal institutional or national crowdfunding schemes specifically designed for blue economy projects, environmental innovations, or any other sector-specific purposes. Crowdfunding, when utilized by entrepreneurs or organizations in the country, typically occurs through international platforms rather than domestic infrastructure. Project promoters may access global reward-based crowdfunding platforms such as Kickstarter or Indiegogo for product launches, or donation-based platforms for social and environmental initiatives.

The absence of domestic crowdfunding infrastructure means that North Macedonian projects do not benefit from local regulatory frameworks, payment system integration, domestic investor communities, or institutional support mechanisms that facilitate crowdfunding success in more developed markets. Projects seeking to raise capital through international crowdfunding platforms face challenges including limited visibility to international investor communities, currency conversion and payment processing complications, potentially lower credibility due to less familiar jurisdiction, and difficulties in fulfilling rewards or delivering products across international borders.

For water-related environmental projects or community-based ecosystem restoration initiatives around the country's lakes, donation-based crowdfunding through international platforms or direct fundraising appeals may occasionally succeed in mobilizing small-scale capital from diaspora communities, international environmental supporters, or tourism-connected donor networks. However, these efforts remain informal, project-specific, and unsupported by institutional frameworks or capacity-building programs that could enhance effectiveness and scale.

MONTENEGRO

Montenegro's coastal location provides a strong conceptual foundation for blue economy development, yet the current funding landscape remains underdeveloped from an innovation perspective. National and regional funding instruments do not specifically target maritime technologies or blue economy innovation, and private investment remains limited and risk-averse. Opportunities for maritime technology deployment exist mainly through infrastructure projects, international donor programs, and cross-border cooperation initiatives rather than through dedicated innovation funding schemes.

Key challenges include the absence of structured maritime innovation clusters, limited access to pilot and demonstration funding, and weak integration between research, industry, and public authorities. At the same time, Montenegro's EU accession process, participation in IPA III and territorial cooperation programs, and growing emphasis on environmental protection and green transition create potential entry points for strengthening blue economy innovation support in the future.

1. National Context and Maritime Sector Funding

1.1 Maritime Sector Context

Montenegro is a coastal country with direct access to the Adriatic Sea and a maritime sector that plays a relevant role in its national economy, particularly through ports, maritime transport, fisheries, coastal tourism, and marine environmental protection. Key maritime assets include the Port of Bar, smaller commercial and leisure ports, and an extensive coastline that supports tourism-related maritime activities. Despite this geographical advantage, Montenegro does not yet have a fully articulated national innovation framework specifically dedicated to blue economy or maritime technologies.

The maritime sector in Montenegro is traditionally oriented toward infrastructure operation, transport services, tourism, and fisheries, with limited integration of research-driven innovation, advanced maritime technologies, or structured R&D

ecosystems. As a result, funding related to maritime activities is often embedded within broader transport, environmental protection, tourism development, or infrastructure investment programs rather than being framed explicitly as blue economy or maritime innovation funding.

National policy priorities increasingly reference sustainability, environmental protection, decarbonisation of transport, and alignment with EU environmental acquis, which creates indirect relevance for blue and green maritime technologies. However, these priorities have not yet translated into dedicated funding instruments targeting maritime R&D, pilot projects, or technology deployment.

1.2 National Innovation and Research Funding Framework

At the national level, Montenegro's innovation and research funding landscape remains relatively limited in scale and scope. Public funding for research and innovation is primarily channelled through horizontal instruments managed by national ministries and agencies responsible for science, education, economy, and sustainable development. These instruments typically support academic research, capacity building, and general innovation activities rather than sector-specific technological development.

No national R&D programmes dedicated explicitly to maritime technologies, marine robotics, smart ports, or blue economy innovation were identified during the mapping exercise. Innovation funding opportunities that could potentially be relevant for maritime technologies are generally accessible only indirectly, for example through calls supporting environmental technologies, digitalisation, energy efficiency, or climate adaptation, provided that proposed projects can demonstrate alignment with these broader thematic priorities.

Stakeholder feedback indicates that national innovation funding instruments tend to prioritise early-stage research or general business development, with limited support for demonstration, piloting, or first-of-a-kind deployment of technologies in real maritime environments. This constrains the ability of maritime technology developers to progress beyond conceptual or laboratory-based stages.

1.3 Tax Incentives and Horizontal Support Measures

Montenegro does not provide tax incentives specifically tailored to blue economy or maritime technology activities. Existing fiscal incentives apply horizontally across sectors and may include general measures for investment promotion, employment creation, renewable energy, and energy efficiency improvements. Companies operating in the maritime sector or developing marine-related technologies can access these incentives under the same conditions as enterprises in other sectors, without preferential treatment for blue economy-related activities.

The absence of targeted fiscal measures reflects both the relatively small scale of the national innovation ecosystem and the limited recognition of maritime technologies as a distinct innovation domain within national economic policy. While alignment with EU standards and green transition objectives may create space for future policy development, no concrete plans for maritime-specific tax incentives have been announced to date.

2. Programs Supporting Innovation and SMEs

2.1 Lack of Dedicated Blue Economy Startup Programs

No dedicated startup, acceleration, or incubation programs focusing on blue economy or maritime technologies currently operate at the national level in Montenegro. SMEs and startups active in maritime services, environmental technologies, or coastal management typically rely on generic SME support schemes, entrepreneurship programs, or international project-based funding rather than accessing sector-specific innovation support.

Existing SME support instruments generally focus on business development, access to finance, export promotion, or basic innovation activities without specialised technical mentoring, testing infrastructure, or industry-specific expertise relevant to maritime technologies. As a result, maritime-focused enterprises face structural barriers when attempting to develop innovative solutions that require field testing, regulatory approvals, or collaboration with public maritime authorities.

2.2 General Innovation Support Infrastructure

Montenegro's innovation support infrastructure includes universities, research institutes, business support organisations, and chambers of commerce that provide horizontal support services such as training, advisory services, and limited incubation activities. Participation in EU-funded projects and regional cooperation initiatives represents an important channel for exposure to international innovation networks and knowledge exchange.

However, these structures do not offer specialised facilities or services tailored to maritime innovation, such as marine testing sites, pilot infrastructures, or sector-specific technology validation platforms. Consequently, enterprises seeking to develop or scale maritime technologies often need to rely on partnerships with foreign research institutions, technology providers, or innovation hubs located in neighbouring coastal EU Member States.

3. Regional and Local Funding Opportunities

3.1 Coastal and Port-Related Initiatives

At the regional and local level, funding opportunities related to maritime activities are primarily linked to coastal development, port infrastructure, tourism, environmental protection, and marine spatial planning. These initiatives are usually financed through municipal budgets, national infrastructure programs, and international financial institutions rather than competitive innovation funding schemes.

Local authorities may implement projects related to port modernisation, coastal protection, wastewater management, or tourism infrastructure, occasionally creating opportunities for the deployment of maritime or environmental technologies. However, these opportunities are typically embedded within large infrastructure or service delivery projects and do not operate as open calls for innovative SMEs or technology developers.

3.2 EU and International Donor Programs

As an EU candidate country, Montenegro has access to **IPA III** funding and participates in various EU and international cooperation programmes. These

instruments support environmental protection, climate adaptation, transport infrastructure, and institutional capacity building, all of which may indirectly benefit maritime-related activities.

International financial institutions such as the EBRD, EIB, World Bank, and bilateral donors play a significant role in financing coastal infrastructure, port development, environmental protection, and transport projects. While these programs are not explicitly designed to support maritime innovation, they can generate demand for modern technologies in areas such as port operations, environmental monitoring, pollution control, and energy efficiency. Access for SMEs and technology providers typically occurs through procurement processes or subcontracting arrangements rather than direct innovation grants.

4. Maritime Clusters and Infrastructure

4.1 Absence of Structured Maritime Clusters

Despite Montenegro's coastal geography, no formal maritime innovation clusters or blue economy networks were identified during the mapping exercise. Maritime stakeholders operate in a fragmented manner, with limited coordination between academia, industry, port authorities, and public institutions. This fragmentation reduces opportunities for joint project development, coordinated access to funding, and collective advocacy for sector-specific support measures.

The lack of organised clustering mechanisms also limits knowledge exchange, skills development, and the creation of innovation pipelines linking research activities with commercial deployment in maritime contexts.

4.2 Infrastructure and Green Transition

Port infrastructure and maritime transport systems in Montenegro are undergoing gradual modernisation, often supported by international financing and EU-aligned environmental requirements. Green transition elements such as energy efficiency, emissions reduction, and environmental safeguards are increasingly incorporated into infrastructure projects. However, these initiatives focus primarily on compliance and infrastructure upgrading rather than serving as testbeds for innovative maritime

technologies or experimental solutions.

5. Public-Private Partnerships

Public-private partnerships in Montenegro are primarily used for infrastructure development and service provision in sectors such as transport, utilities, and tourism. In the maritime domain, PPPs may be applied to port operations, marina development, or coastal infrastructure projects. These arrangements prioritise financial sustainability and operational efficiency rather than innovation or technology experimentation.

For maritime technology developers, PPPs offer limited direct opportunities. Engagement typically occurs as suppliers or subcontractors within larger infrastructure projects, rather than as innovation partners contributing novel technological solutions.

6. Private Funding and Investment

6.1 Limited Availability of Sector-Specific Private Capital

No private investment funds specifically targeting blue economy or maritime technologies operate in Montenegro. The domestic private investment landscape is relatively small, with limited venture capital activity and a strong focus on real estate, tourism, and traditional service sectors. Environmental and maritime technology ventures struggle to attract private investment due to perceived technological risk, long development timelines, and limited domestic market size.

6.2 Development Finance and Bank Lending

Commercial banks and development finance institutions provide financing primarily in the form of loans for established businesses and infrastructure projects. EU-backed guarantee instruments and IFI credit lines may improve access to finance for SMEs, including those operating in maritime-related sectors, but these instruments are not tailored to innovation or early-stage technology development.

GREECE

Greece benefits from a strong maritime base and formal inclusion of blue economy priorities within national and EU-linked funding frameworks. However, delays in programme implementation, limited innovation-specific focus, and uneven access to regional support reduce the effectiveness of available funding for maritime technology developers and SMEs.

The funding landscape is characterised by reliance on EU programmes, blended finance instruments, and project-based opportunities rather than stable national innovation schemes dedicated to the blue economy. Private investment is present but fragmented, with significant disparities in stakeholder awareness and access.

Future opportunities lie in improving coordination between national and regional instruments, accelerating the implementation of innovation calls, strengthening links between ports and innovation ecosystems, and leveraging international blue economy investment platforms to complement domestic funding gaps.

1. National Context and Maritime Sector Funding

1.1 Maritime Sector Context

Greece is a major maritime nation with an extensive coastline, a strong shipping and port sector, and long-standing economic, cultural, and strategic ties to maritime activities. The national blue economy encompasses shipping, ports, fisheries and aquaculture, maritime tourism, offshore energy, and marine environmental protection. As a result, maritime and blue economy considerations are formally embedded in national strategies and EU-aligned programming frameworks.

Despite this strong structural position, stakeholder feedback highlights a gap between strategic recognition of the maritime sector and the effective implementation of innovation-oriented funding instruments. While several national and EU-linked programmes nominally address maritime or blue economy themes, delays in call implementation and limited innovation-specific focus have reduced their practical impact on technology developers and SMEs.

1.2 National R&D and Blue Economy Funding Framework

At the national level, Greece's primary public funding instruments relevant to maritime technologies include:

- **European Maritime, Fisheries and Aquaculture Fund (EMFAF) 2021–2027**, which supports fisheries, aquaculture, and broader blue economy actions, with thematic priorities related to sustainability, environmental protection, and green transition in maritime activities.
- **National Recovery and Resilience Plan (PNRR)**, which finances infrastructure, digitalisation, and energy transition projects, including investments in coastal and port infrastructure, renewable energy integration, energy efficiency measures, and green port initiatives.
- **Horizon Europe and the Sustainable Blue Economy Partnership (SBEP)**, through which Greek research organisations, universities, and SMEs participate in transnational collaborative projects addressing digital twins, blue bioresources, multi-use offshore infrastructures, and marine environmental monitoring.

However, stakeholder interviews consistently report delays and uncertainty in the activation of national innovation instruments. In particular, the flagship programme **“Research–Create–Innovate”** has experienced prolonged delays, limiting access to national R&D funding for maritime technology developers. Similarly, the **Fisheries, Aquaculture and Maritime Programme 2021–2027 (ΠΑΛΥΘ)** has not been fully operationalised at the time of data collection, and when active, it has rarely prioritised innovation-oriented projects. Calls issued by the General Secretariat for Research and Technology have supported R&D activities but have not been explicitly dedicated to maritime or blue economy technologies.

1.3 Tax Incentives and Financial Support Mechanisms

Greece does not operate tax schemes exclusively dedicated to clean maritime or blue economy technologies. Financial support is primarily provided through subsidies, financial instruments, and blended finance mechanisms rather than sector-specific

tax legislation.

Key horizontal instruments include:

- **Green Co-Financing Loans offered by the Hellenic Development Bank (HDB)**, combining loans and grants to support investments related to green transition, energy efficiency, and environmental sustainability.
- **General R&D tax incentives** applicable across sectors, which may indirectly benefit maritime technology companies but do not provide targeted incentives for blue economy activities.

Overall, fiscal support for maritime innovation remains fragmented and embedded within broader green and innovation policy frameworks.

2. Programs Supporting Innovation and SMEs

2.1 Blue Economy and Maritime Startup Support

Several national and EU-linked initiatives provide indirect support to startups and SMEs operating in the blue economy:

- **Blue Growth innovation competitions** (e.g. *Blue Growth Piraeus*), which promote entrepreneurship and early-stage innovation in maritime and blue economy sectors.
- **EquiFund and EquiFund-II**, EU co-financed fund-of-funds mechanisms that support venture capital and private equity funds in Greece, including investments aligned with sustainability and blue technology themes.
- **EU-level platforms such as BlueInvest**, which offer mentoring, investor matchmaking, and international networking opportunities for blue economy startups.

While these instruments provide valuable support for entrepreneurship and scaling, stakeholders note that they do not fully compensate for the lack of stable, dedicated national programmes supporting applied maritime R&D and pilot deployment.

2.2 General Innovation Support Infrastructure

Greece maintains a relatively developed innovation support ecosystem, including research centres, universities, technology transfer offices, and business support organisations. Structures such as **PRAXI Network**, research institutions (e.g. ITE), and regional innovation agencies provide advisory services, networking, and project development support for startups and SMEs, including those active in maritime and environmental technologies.

However, access to these services is uneven across regions, and awareness among SMEs of available opportunities remains limited. Innovation support for blue economy activities is often driven by participation in EU-funded projects rather than sustained national or regional programmes.

3. Regional and Local Funding Opportunities

3.1 Regional Support in Crete and Coastal Regions

At the regional level, particularly in **Crete**, several funding and networking opportunities relevant to the blue economy have been identified:

- **Regional Operational Programme Crete 2021–2027 (ERDF / ESIF)**, which includes calls supporting SMEs, innovation projects, maritime tourism, fisheries, sustainable port development, and skills development.
- The **Innovation Business Observatory (IBO)** operated by the Region of Crete, which facilitates networking, monitoring of innovation activities, and internationalisation opportunities for SMEs and research laboratories.
- **Networking activities linked to INNOVABLUE**, including the launch of the *Networking Room for Blue Growth* following the INNOVABLUE workshop in Crete (October 2025).

Stakeholder feedback indicates mixed levels of awareness and accessibility of regional programmes. While some actors actively engage with RIS3 strategies and Interreg projects, others report limited visibility of regional funding actions or lack of dedicated blue economy calls.

3.2 Ports, Infrastructure and Cross-Border Cooperation

Ports in **Heraklion, Chania, and Rethymno** are implementing green and digital measures such as shore power (cold ironing), grid upgrades, energy efficiency improvements, and waste management systems. These investments are primarily funded through PNRR and ERDF/ESIF resources, often complemented by private participation.

Cross-border cooperation programmes, including Interreg, also support sustainable port development, maritime logistics, and environmental protection initiatives, creating indirect opportunities for technology deployment and pilot activities.

4. Public–Private Partnerships

Public–private partnerships are used in Greece primarily for port infrastructure and maritime investment projects, including port concessions (e.g. Heraklion port). These PPPs typically combine public funding (regional, national, and EU resources) with private capital and may incorporate green and digital infrastructure components.

From an innovation perspective, PPPs focus mainly on infrastructure delivery and operational efficiency rather than experimentation or technology testing. Opportunities for innovative maritime technologies usually arise through subcontracting or technology supply roles rather than as core innovation partners.

5. Private Funding and Investment

5.1 Private Investment Landscape

Private funding for blue economy and maritime technologies in Greece is available but uneven and highly fragmented. Key mechanisms include:

- **EquiFund and EquiFund-II**, which enable venture and growth equity investments through private fund managers.
- **Institutional investors and infrastructure funds** supporting renewable energy, ports, and maritime infrastructure projects.
- International impact and blue economy funds, which may invest in Greek opportunities on a project-by-project basis.

Stakeholder perceptions vary significantly: some identify active investors such as

Ocean 14 Capital and EU platforms like **BlueInvest**, while others report no visibility of private funding and describe the business environment as weak for maritime innovation.

5.2 Accelerators, Venture Capital and Crowdfunding

Greece hosts several local and sector-adjacent acceleration initiatives, including Blue Growth competitions, university-based innovation hubs, port-related innovation initiatives, and EU-supported platforms. International accelerators such as **BlueInvest** and **SEAFUTURE** provide mentoring, exposure, and investor matchmaking for Greek startups.

While no venture capital fund is exclusively dedicated to the blue economy in Greece, sustainability-oriented funds under EquiFund-II and international investors (e.g. *Katapult Ocean*, *BlueForward*) offer potential opportunities for scalable blue technology ventures.

Crowdfunding remains marginal but emerging. EU initiatives and Interreg-linked pilots have promoted crowdfunding skills and tools for blue economy projects, while Greek platforms enable limited equity- or reward-based crowdfunding for small-scale maritime or community-based initiatives.

SERBIA

Serbia does not have coastal maritime programmes, but it has strong blue economy relevance through **inland waterways** and Danube-related challenges. The funding landscape is anchored in national innovation instruments (Innovation Fund, Science Fund, accelerator and commercialisation initiatives), complemented by increasing access to EU and regional programmes.

The main strengths include a structured innovation pipeline supporting early-stage development and investment readiness. Key limitations relate to demonstration funding and the scaling of blue innovations that depend on regulated deployments and public-sector adoption. In this context, transnational programmes, macro-regional cooperation, and blended finance approaches are central entry points to strengthen the bankability and deployment readiness of blue economy solutions originating in Serbia.

1. National Context and Maritime/Waterway-Relevant Funding

1.1 Maritime Sector Context

Serbia is a landlocked country and does not have a traditional coastal maritime economy (ports on the sea, shipbuilding for marine contexts, coastal aquaculture). Nevertheless, Serbia has a strategically important role in the **Danube and Sava river corridors**, with a strong relevance for the blue economy when interpreted through **inland waterways**, river logistics, water quality management, flood resilience, biodiversity protection, and environmental monitoring.

In this context, funding opportunities relevant to “blue innovation” in Serbia are primarily framed under **innovation and entrepreneurship support, water/environmental technologies, digital solutions**, and **river-basin cooperation** rather than under explicitly maritime programmes. Many blue-economy-adjacent projects therefore develop through cross-sector innovation instruments and transnational programmes linked to Danube/macro-regional strategies.

1.2 National Innovation and R&D Funding Framework

Serbia's national ecosystem includes a relatively structured set of instruments supporting innovation, research commercialisation, and startup growth. While these instruments are not explicitly maritime, they can support blue-economy-relevant technologies (e.g., water monitoring sensors, AI for environmental risk, logistics optimisation for inland ports, circular solutions, aquaculture technologies exported to coastal markets).

Key national instruments include:

- **Innovation Fund of Serbia**, which provides support across the early-stage innovation pipeline, including proof-of-concept, prototype/MVP development, and scaling-oriented support. These instruments are particularly relevant for technology development in the mid-TRL range (prototype validation and early market readiness), including climate- and water-related solutions.
- **Katapult (Hybrid Accelerator)** under the Innovation Fund, supported by the Government of Serbia and international partners, combining mentoring, investment readiness, international exposure and investor matchmaking. Katapult is relevant for startups seeking to transition from grants to early equity and to improve bankability and investor readiness.
- **Katalitik**, an initiative aimed at strengthening innovative entrepreneurship and access to finance for technology-driven companies, with relevance for AI-enabled solutions that can apply to environmental monitoring and water-related technology domains.
- **Science Fund of the Republic of Serbia**, supporting research teams and R&D institutions through programmes such as **IDEAS** and **PRISMA**, and including pathways for commercialisation and technology transfer (e.g., proof-of-concept and applied research with innovation potential). These instruments can support earlier TRLs anchored in research organisations, including applied ecology, environmental science, and digital monitoring systems.

In addition to these, Serbia benefits from a broader innovation support infrastructure

(e.g., science and technology parks, proof-of-concept initiatives such as “Raising Stars”, and internationalisation support through networks like the **Enterprise Europe Network – EEN**). These mechanisms help strengthen innovation pipelines, partnerships, and market access, but do not constitute maritime-specific financing.

1.3 Tax Incentives and Horizontal Support Measures

No sector-specific fiscal incentives dedicated to maritime technologies or the blue economy were identified during the mapping exercise. Support is generally delivered through **programmatic grant schemes, acceleration instruments, and innovation financing**, rather than through tax laws specifically targeting clean maritime or blue technologies.

Enterprises developing blue economy-relevant solutions typically rely on standard national innovation instruments, combined with access to international programmes and financial intermediaries.

2. Programs Supporting Innovation and SMEs

2.1 Innovation Pipeline: From Pre-Seed to Series A

Stakeholder inputs describe Serbia’s innovation finance landscape as structured along a typical startup lifecycle:

- **Ideation / Pre-seed:** predominantly grant-based support and proof-of-concept instruments that help teams validate ideas, develop MVPs, and prepare for investment readiness. Public instruments (Innovation Fund calls, Science Fund PoC-type support) are particularly important at this stage.
- **Seed:** hybrid mechanisms and accelerators become central, especially those combining mentoring and early investor access (e.g., Katapult). At seed stage, technology startups increasingly seek equity financing from local or regional actors.
- **Series A / Growth:** financing transitions mainly to private capital and regional venture funds, with emphasis on scalability, international expansion, and revenue growth. For blue-economy-adjacent solutions, Series A typically

requires stronger market traction and clearer monetisation pathways, which is often challenging for technologies needing public-sector adoption or regulated deployments in environmental domains.

2.2 Access to EU and Regional Innovation Instruments

Serbian innovators increasingly leverage EU and regional instruments that are highly relevant for blue economy solutions, especially where inland waterways and water management are central:

- **Horizon Europe and the EIC Accelerator**, providing large-scale grant and blended finance options for high-risk, high-impact deep-tech innovations with strong market potential.
- **Western Balkans Enterprise Development and Innovation Facility (WB EDIF)**, supporting SMEs through equity and loan guarantee mechanisms at regional level.
- **Danube Region cooperation frameworks**, which facilitate multi-country project pipelines, policy alignment, and matchmaking opportunities with public authorities and strategic stakeholders.

These instruments are often more suitable than purely national tools when projects require cross-border pilots, river-basin cooperation, or integration with EU-level standards and markets.

3. Regional and Transnational Opportunities Relevant to the Blue Economy

3.1 Danube-Oriented Cooperation and Demonstration Opportunities

For Serbia, a particularly relevant pathway for blue economy innovation is participation in transnational programmes where inland waterways are a core thematic area. Cooperation initiatives can support demonstrators and pilots addressing:

- water quality and pollution reduction,
- biodiversity and ecosystem services,

- greener logistics and transport along the Danube corridor,
- flood risk prevention and resilience,
- circular economy solutions connected to waterways and ports.

These programmes are relevant not only for technology development but also for **market creation**, since they connect innovation actors with public authorities, utilities, and infrastructure owners that represent key “first customers” for water and environmental technologies.

3.2 Macro-Regional Strategies and Policy Alignment

Macro-regional strategies and policy-aligned initiatives can provide additional advantages by improving institutional access and matchmaking. For blue-economy-related projects, this is particularly relevant when engagement with public authorities is required for permitting, infrastructure access, or integration into basin-level management practices.

4. Public-Private Partnerships and Market Uptake

PPPs in Serbia are more commonly associated with infrastructure and utility services (municipal water, waste, energy, transport) rather than with innovation-focused maritime technology deployment. For blue economy-adjacent technologies, the more realistic engagement route is often:

- participation as technology suppliers or specialised subcontractors in infrastructure projects,
- piloting through donor/IFI-backed municipal programmes,
- project-based deployment enabled via transnational cooperation initiatives.

This pathway reflects a broader structural challenge in the region: pilot deployment and innovation procurement mechanisms remain limited, and market uptake often depends on large infrastructure programs rather than on innovation-driven procurement.

5. Private Funding and Investment

5.1 Availability of Private Capital for Blue-Relevant Technologies

While no **maritime-specific** private funding instruments were reported, Serbia does have **private and regional venture capital activity** that can be relevant for blue economy technologies when these are positioned as scalable “tech solutions” (AI/IoT/sensors/data platforms, logistics optimisation, ESG/environmental monitoring services).

Private investment is most accessible for solutions that:

- have a clear B2B business model,
- can scale across borders,
- are less dependent on long regulatory cycles or public procurement.

For blue economy innovations requiring extended testing, infrastructure access, or public-sector adoption, private investment can remain difficult to secure without blended finance or strong de-risking mechanisms.

5.2 Key Funding Gap: Demonstration and Deployment

Across the mapped instruments, a recurring structural gap emerges: while Serbia has support mechanisms for research and early-stage innovation, fewer instruments provide robust support for **real-world demonstration, pilot deployment, and first commercial roll-out** in waterway environments. This gap is particularly relevant for technologies requiring field validation, regulatory approvals, or integration with municipal/river-basin institutions.

SLOVENIA

Slovenia presents a focused and sophisticated funding landscape for blue innovation, characterized by its strategic positioning in the Northern Adriatic and its commitment to the European Green Deal. The sector's importance remains stable, driven by high-tech specialization in port logistics, smart shipping, and environmental protection.

The funding ecosystem is increasingly defined by the twin transition (green and digital), supported by nearly €2.8 billion in CEF transport funding for sustainable mobility and the Digital Slovenia 2030 strategy. Strategic coordination is managed by the Ministry of Cohesion and Regional Development and the Ministry of Higher Education, Science and Innovation, ensuring alignment between national smart specialization (S5) and European structural funds.

1. National Context and Maritime Sector Funding

1.1 Maritime Sector Context

Slovenia's maritime economy is a highly specialized sector, contributing approximately **0.7% of national GVA and 0.8% of employment**. The sector is anchored by the Port of Koper, the largest container port in the northern Adriatic, which handled 22 million tonnes of cargo in 2023. Port activities are the dominant economic driver, representing **47% of the GVA and 33% of the employment within the national blue economy**. Other vital sub-sectors include **coastal tourism** and marine living resources (aquaculture and fisheries), which have shown steady growth into 2026.

1.2 National R&D and Blue Economy Funding Framework

While Slovenia lacks a dedicated "maritime-only" national R&D program, support is provided through broad scientific and sectoral frameworks:

- **National Research Programme (ARRS)**: Managed by the Slovenian Research

and Innovation Agency (ARIS), it funds maritime-related topics such as marine biodiversity, coastal infrastructure, and transport safety within general research calls.

- **EMFAF (European Maritime, Fisheries and Aquaculture Fund) 2021–2027:** This is the primary sectoral instrument in Slovenia, supporting sustainable aquaculture, marine biodiversity protection, and the digitalization of port infrastructure.
- **Horizon Europe & SBEP:** Slovenia participates in flagship EU partnerships like the Sustainable Blue Economy Partnership (SBEP), which has a 2026 call focused on the digital transition of marine activities.

1.3 Tax Incentives and Financial Support Mechanisms

Slovenia utilizes horizontal fiscal measures applicable to the maritime sector:

- **R&D Tax Relief:** Companies can deduct up to 100% of eligible R&D expenses from their tax base.
- **Green/Digital Transition Relief:** Effective from 2022 and extending through 2026, companies can claim relief of 40% for investments in digital transformation and environmentally friendly technologies.
- **Investment Tenders:** In early 2026, the Ministry of Infrastructure published tenders specifically for the construction and equipment of new berths to modernize maritime administration infrastructure.

2. Programs Supporting Innovation and SMEs

2.1 Blue Economy and Maritime Startup Support

Support for high-growth maritime startups is integrated into the national ecosystem:

- **P2 Grants (SPS):** The Slovene Enterprise Fund (SPS) offers €72,000 grants for early-stage startups, with new calls expected in February 2026.
- **JR Startup Consortium 26-29:** A €3.2 million ERDF-funded call published in late 2025 provides mentoring, international market connections, and investor

matchmaking for startups through 2029.

2.2 General Innovation Support Infrastructure

The general innovation support infrastructure includes:

- **EDIH DIGI-SI:** A key national Digital Innovation Hub that provides a "test before invest" environment, enabling maritime SMEs to pilot AI and robotics before full-scale adoption.
- **SPIRIT Slovenia:** Offers Innovation Vouchers and digital transformation grants that help maritime companies enter global value chains.
- **Technology Park Ljubljana (TPLJ):** Serves as an incubator and innovation intermediary, assisting blue tech companies in accessing EU-level financing.

3. Regional and Local Funding Opportunities

3.1 Regional Support in Coastal Regions

Regional development for the blue economy is concentrated in the Coast-Karst region:

- **Regional Development Agencies:** Local authorities in coastal municipalities like Koper, Izola, and Piran manage Integrated Territorial Investments (ITI) to support coastal resilience and sustainable urban mobility.
- **Slovenian Maritime Cluster:** Hosted by the University of Ljubljana, this cluster facilitates trilateral cooperation (Slovenia-Italy-Croatia) and aligns local projects with macro-regional strategies like EUSAIR.

3.2 Ports, Infrastructure and Cross-Border Cooperation

The major infrastructures and cooperation initiatives in the Slovenian blue economy sector include:

- **Luka Koper Green Port:** The Port of Koper utilizes mixed funding for its green transition, including the RENEWPORT project (Interreg Euro-MED) for solar

energy installations, active through September 2026.

- **Interreg Italy–Slovenia:** Fosters cross-border SME collaboration in smart ports and eco-tourism.
- **BLUECRAB Project:** An active Interreg initiative in 2026 focused on monitoring Adriatic biodiversity through innovative technology.

4. Public–Private Partnerships

Public-private partnerships (PPPs) in the Slovenian maritime sector are typically project-specific:

- **Port-Logistics Pilots:** Luka Koper frequently partners with private ICT firms to test smart logistics and decarbonization technologies.
- **Public Procurement of Innovation (PPI):** National authorities use PPI to encourage the private sector to develop custom solutions for maritime surveillance and environmental monitoring.

5. Private Funding and Investment

5.1 Private Investment Landscape

Slovenia lacks a dedicated maritime venture capital fund, but blue innovation is supported through:

- **InvestEU & BlueInvest:** These platforms connect Slovenian maritime startups with pan-European equity investors and blended finance options.
- **Slovenian Technology Fund:** In 2025/2026, an additional €10 million was directed to Silicon Gardens Fund and Tivoli Partners to invest in high-growth tech startups.

5.2 Accelerators, Venture Capital and Crowdfunding

Slovenian private financing initiatives concern:

- **Accelerators:** The Razvojni Plus program by the Slovene Enterprise Fund

provides mentorship and growth capital specifically for scaling innovative companies.

- **Crowdfunding:** The market is dynamic, with platforms like Ronin (equity) and Meta Yield (decentralized fundraising) available for maritime-tech projects.
- **Tokenized Maritime Crowdfunding:** Specialized training tools from the Blue Crowdfunding initiative (Interreg Euro-MED) help project promoters utilize blockchain-based tokenized investments for maritime assets.

Conclusion

The comprehensive mapping of funding opportunities for blue and green maritime technologies across the IPA ADRION Programme area reveals a complex but increasingly supportive ecosystem for innovation in the sustainable maritime economy. This analysis, drawing on extensive desk research, partner consultations, and stakeholder engagement, identifies both significant opportunities and persistent structural challenges that must be addressed to accelerate the deployment of innovative maritime solutions.

Key Findings and Regional Patterns

The funding landscape demonstrates marked heterogeneity across participating countries, reflecting differences in EU membership status, institutional capacity, and strategic prioritization of maritime innovation. EU Member States (Italy, Croatia, Slovenia, Greece) benefit from comprehensive national operational programmes under EMFAF, structured access to Cohesion Policy funds, and established innovation support infrastructures. These countries have developed relatively sophisticated funding pathways that connect early-stage research through to commercial deployment, though implementation delays and coordination challenges remain significant barriers.

In contrast, non-EU countries (Serbia, North Macedonia, Montenegro, Albania) face more fragmented funding landscapes characterized by heavier reliance on

international financial institutions, donor-based programmes, and project-specific opportunities. For these countries, access to EU funding occurs primarily through transnational cooperation programmes like Interreg IPA ADRION and participation in Horizon Europe, creating strong incentives for cross-border partnerships but limiting autonomous capacity for domestic maritime innovation support.

The Critical Financing Gap

Across all countries, stakeholders consistently identify a critical financing gap at the demonstration and pilot deployment stage (TRL 6-8). While early-stage research and late-stage commercialization receive relatively adequate support through academic grants and commercial financing respectively, the "valley of death" between proof-of-concept and market entry remains particularly acute for capital-intensive maritime technologies. This gap is especially pronounced for innovations requiring real-world testing environments, extended validation periods, regulatory approvals, and integration with public maritime infrastructure—precisely the characteristics that define many blue economy technologies.

Strategic opportunities and recommendations

The analysis reveals several strategic opportunities for enterprises and innovation actors in the ADRION region. The multi-stage funding approach, combining regional pilots through Interreg programmes with larger-scale demonstrations under Horizon Europe and eventual commercialization through InvestEU and private capital, provides a viable pathway from concept to market. The Sustainable Blue Economy Partnership, with Italian leadership and substantial multi-year funding, represents a flagship opportunity particularly well-aligned with ADRION maritime priorities.

Regional cooperation programmes, especially Interreg IPA ADRION and Interreg Euro-MED, emerge as foundational instruments for building transnational consortia, validating technologies in diverse contexts, and creating the partnership networks essential for accessing larger European funding mechanisms. These programmes

serve not merely as funding sources but as critical ecosystem-building platforms that enable knowledge exchange and capacity development across the region.

Recommendations for Enhanced Access

To maximize the effectiveness of available funding and address identified gaps, several coordinated interventions are recommended. First, strengthening institutional coordination mechanisms—particularly inter-ministerial working groups and maritime innovation clusters—would reduce bureaucratic barriers and create clearer pathways for funding access. Second, developing specialized acceleration and investment readiness programmes tailored to maritime technologies would help enterprises navigate the complex landscape and improve their competitiveness for EU-level funding. Third, establishing dedicated demonstration facilities and living labs across the region would address the infrastructure gap limiting pilot deployment opportunities.

Finally, enhancing awareness and capacity-building initiatives, particularly in countries with less developed innovation support systems, would democratize access to available opportunities and strengthen the overall regional innovation ecosystem. The establishment of cross-border innovation networks, building on existing cluster initiatives like CLUSTER B.I.G. and Maritime Technology Cluster FVG, could facilitate knowledge sharing and joint proposal development, increasing the success rate of ADRION-based applications to competitive European funding programmes.

Looking Forward

The funding landscape for blue and green maritime technologies in the ADRION region is at a critical juncture. The combination of European Green Deal priorities, substantial recovery and resilience investments, and growing recognition of maritime sustainability as both environmental necessity and economic opportunity creates unprecedented momentum. However, realizing this potential requires not

only awareness of available funding but strategic coordination, institutional capacity building, and sustained commitment to overcoming structural barriers that currently limit the translation of maritime innovation from laboratory to market.

The INNOVABLUE project, through this comprehensive funding mapping and its broader ecosystem-building activities, contributes essential intelligence and coordination capacity to this regional challenge. By clearly articulating funding pathways, identifying persistent gaps, and facilitating connections between innovation actors and financing opportunities, this deliverable serves as both diagnostic tool and strategic guide for advancing the sustainable blue economy across the Adriatic-Ionian region.

X. Appendices

Appendix A: Key EU Funding Instruments for the Blue & Green Maritime Economy

<i>Fund Name</i>	<i>Typical TRL Focus</i>	<i>Primary Purpose</i>	<i>Key Relevance for Innovablue</i>
<i>Horizon Europe</i>	TRL 3-7 (R&I), TRL 6-8 (Demonstration)	Research & Innovation, Missions	Mission Ocean, Sustainable Blue Economy Partnership (SBEP) and Cluster 6 are direct fits. Ideal for transnational R&I projects and large-scale demonstrations.
<i>INTERREG Programs</i>	TRL 3-6 (Pilot/Living Labs)	Transnational/Cross-border Cooperati	Interreg IPA ADRION is the primary program for the Adriatic-Ionian area, excellent for pilots and regional consortium-building. Interreg Euro-MED is a broader alternative for Mediterranean-wide projects.

			on	
<i>LIFE Program</i>	TRL (Close-to-market)	6-8	Environment & Climate Action	Funds marine and coastal management pilots, particularly for technologies ready for real-world demonstration. Strong for projects with a clear environmental impact.
<i>InvestEU</i>	TRL (Scale-up)	7-9	Financial Instruments	Not a grant fund. Provides loans, guarantees, and equity through implementing partners (EIB Group) for commercial scale-up and market entry. Essential for capital-intensive projects.
<i>EMFAF</i>	TRL (Demonstration)	7-9	National Implementation	Supports sustainable fisheries, aquaculture, and the blue economy. Its implementation status is managed at the national level, so projects must align with specific country plans.

Appendix B: EMFAF Implementation Status in ADRION Partner Countries

<i>Country</i>	<i>EU Member State?</i>	<i>Status of National EMFAF Programme</i>	<i>Strategic Note for Innovablue</i>
<i>Italy</i>	Yes	Approved (November 4, 2022) 31	Viable funding source for projects aligning with national priorities in the fisheries and aquaculture sectors.
<i>Croatia</i>	Yes	Approved (November 23, 2022) 32	Viable funding source for projects aligning with national priorities.
<i>Slovenia</i>	Yes	Approved (December 2, 2022) 28	Viable funding source. The program specifically dedicates 38% of its budget to the "sustainable blue economy". ²⁸
<i>Albania</i>	No	Not applicable 32	EMFAF is a Member State-centric fund. Alternative funding must be sought, such as through the Interreg IPA ADRION program.

Montenegro
o

No

Not applicable 33

EMFAF is a Member State-centric fund. Alternative funding must be sought, such as through the Interreg IPA ADRION program.

Appendix C: Comparative summary table National funding scheme.

<i>Country</i>	<i>Public funding focus</i>	<i>Private funding presence</i>	<i>Main challenges / gaps</i>
<i>Croatia</i>	Main national R&D programs in the maritime sector in the Republic of Croatia are the following: a) European Maritime, Fisheries and Aquaculture Fund (EMFAF).	Croatia hosts emerging deep-tech private investment funds, such as Vesna Deep Tech Venture Fund, which, while not blue-economy-specific, can support maritime-relevant innovations including marine biotechnology and sensor technologies through its research spin-out and technology-transfer focus.	Life Programme are available. Speaking specifically of Croatia, listed below are the recent/ongoing Life projects with the focus on Marine Environment: Seabird Conservation Network in the Adriatic.
<i>Italy</i>	Italy has a mature maritime R&I ecosystem, led by its coordination of the Sustainable Blue Economy Partnership (Horizon Europe), supporting joint calls on offshore platforms, marine spatial planning,	Italy hosts a diverse ecosystem of investment funds and financial vehicles actively supporting blue economy development, ranging from specialized thematic funds to large-scale infrastructure	Beyond formal funding programmes, Italy's blue economy ecosystem is supported by strong public-private collaboration and networking initiatives, including Cluster BIG and Federazione del

	<p>aquaculture and bioresources, with strong involvement of national research institutions and a large multi-annual budget</p>	<p>investors and EU-backed platforms: Specialized Blue Economy Investment Funds:</p>	<p>Mare, which promote ecosystem-building and innovation in underwater and advanced maritime technologies.</p>
<p><i>North Macedonia</i></p>	<p>As a landlocked country, North Macedonia has no maritime R&D programmes; blue-relevant funding is embedded in environmental and water-management instruments, with innovation previously supported by FITD and currently in transition to the new agency INOVA, while local initiatives focus on water and lake management and may host pilots through donor-funded projects.</p>	<p>No private funds specifically active in blue economy. SMEs usually rely on traditional commercial banks, EU-backed guarantee schemes (e.g., EBRD, EIF, EIB lines), and occasionally outside/diaspora investment. Sustainability-linked financing is usually generic environmental at most. No. Accelerators in the country are horizontal ICT or startup platforms, occasionally tied to EU programs or university hubs. Some EIT RIS-supported activities exist, but nothing maritime-focused</p>	<p>North Macedonia's role in the blue economy is indirect. Our impact on Adriatic and Aegean systems is upstream (river basin health, wastewater discharge, drought cycles, sediment flow). The strongest alignment with blue innovation is through monitoring technologies, digital twins of lakes and rivers, nature-based solutions, and aquaculture resilience. Any roadmap should reflect this. From a financing point of view, the country relies on EU pre-accession instruments (IPA</p>

	so far.	III), multi.	
<p><i>Montenegro</i></p> <ul style="list-style-type: none"> o 	<p>Montenegro does not have a national R&D programme dedicated exclusively to the maritime sector. Maritime and blue economy projects are supported through broader, horizontal research and innovation instruments and strategic frameworks. At strategic level, Montenegro was the first non-EU country to adopt a Smart Specialisation Strategy (S3) 2019–2024, focusing on:</p>	<p>Montenegro currently does not have investment funds specialised in the blue economy. However, relevant private and hybrid financing channels include:</p>	<p>Montenegro's blue economy is strongly aligned with Smart Specialisation Strategy (S3) priorities (energy, environment, sustainable tourism). The upcoming S3 2025–2030 will increase emphasis on marine innovation, clean technologies, and sustainable tourism.</p>
<p><i>Greece</i></p>	<p>Main national R&D programs in the maritime sector in the Greece are the following: a) EMFAF (European Maritime, Fisheries and Aquaculture Fund) – Greece's national program</p>	<p>Main investment funds active in the blue economy: a) EquiFund and EquiFund-II – key national Fund-of-Funds mechanisms enabling venture and growth</p>	<p>Gaps in scaling, pilot deployment and access to finance for SMEs.</p>

	2021–2027 supports fisheries, equity funds. aquaculture, and blue economy actions, with specific priorities for sustainable and green transition in the maritime sector.		
<i>Serbia</i>	Stage 1: Ideation and Pre-Seed — Grant-Based Funding. At this early stage, most support comes from public and international sources aimed at fostering innovation, research commercialization, and entrepreneurial culture. The primary goal is to help founders validate ideas, develop MVPs, and prepare for investment readiness.	Private funding remains limited or non-specialised.	UNDP Ocean Innovation Challenge – pilots tackling SDG14 (pollution, fisheries, coastal resilience). GEF / GEF-Small Grants Programme – community-based pilots (waste, biodiversity, coastal/inland waters).
<i>Slovenia</i>	Slovenia supports blue innovation mainly through EMFAF 2021–2027 , Horizon Europe/SBEP calls, and the National Research	There is no dedicated maritime VC fund, but general tech funds like Silicon Gardens and Tivoli Partners invest in high-growth	Key gaps include the absence of a specialized blue economy VC fund, reliance on EU instruments for scale-up, and limited

Programme (ARIS). Major startups. Slovenian companies opportunities for large-scale infrastructure investments come access EU platforms such as demonstrations (TRL 6–8). from the **Connecting Europe InvestEU** and **BlueInvest**, Strengthening PPPs and **Facility (€2.8 billion)** and national accelerators (Razvojni innovation procurement is regional ITI schemes. Fiscal Plus), and emerging essential to accelerate smart port incentives include 100% R&D tax crowdfunding tools, including and decarbonization relief and 40% deductions for equity and tokenized models. technologies. green/digital transition projects.

Appendix D: Consolidated Official References

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