

NORTH MACEDONIA

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

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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.

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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.

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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

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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.

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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

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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

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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.