



OUTLOOK OF EXISTING FINANCIAL / DEVELOPMENT PROGRAMMES

Deliverable D4.8 - May 2024



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List of acronyms

Acronym	Full title
CF	Cohesion Fund
EAFRD	European Agricultural Fund for Rural Development
EFTA	European Free Trade Association
EIB	European Investment Bank
EIC	European Innovation Council
EIF	European Investment Fund
EIT	European Institute of Innovation and Technology
EMMF	European Maritime and Fisheries Fund
ERC	European Research Council
ERDF	European Regional Development Fund
ESI	European Structural and Investment Funds
ESG	Environmental, Social, and Governance factors
EU	European Union
HEU	Horizon Europe
ICT	Information and Communications Technology
JTF	Just Transition Fund
JTM	Just Transition Mechanism
KIC	Knowledge and Innovation Communities
MS	Member State
NIA	National Innovation Agency
PRIMA	Partnership for Research and Innovation in the Mediterranean Area
R&D	Research and Development
R&D&I	Research, Development and Innovation
RRF	Recovery and Resilience Facility
SFDR	Sustainable Finance Disclosure Regulation
SME	Small and medium-sized enterprise
SRIA	Strategic Research and Innovation Agenda
TRA	Technology Readiness Assessment
TRL	Technology Readiness Level
Water4All	European Partnership on Water Security for the Planet
WFD	Water Framework Directive

Glossary¹

Bank lending: a form of financing whereby a company borrows funds from a bank and commits to repay them in full over a defined period at a specified interest rate. Bank lending can be presented in different forms and products. However, for the purpose of this report it is being classified into two key areas of financing: financing investment costs and financing working capital.

Bootstrapping: a process that involves establishing and building a business with personal savings, earnings from initial sales, and borrowed or invested money from family and friends. This is a way to build a small business without giving up equity or taking out substantial bank loans.

Business angel: a private individual, often with a high net worth, and usually with business experience, who directly invests part of their assets in new and growing private businesses. Business angels can invest individually or as part of a syndicate where one angel typically takes the lead role.

Crowdfunding: an emerging alternative source of financing. It refers to open calls to the public, generally via the Internet, to finance a project through either a donation, or a monetary contribution in exchange for a reward, product pre-ordering, lending, or investment. Any type of project can launch a crowdfunding campaign: Small and Medium-sized Enterprises (SMEs), artists, innovative start-ups, and social entrepreneurs may all benefit from different forms of crowdfunding. Crowdfunding – this alternative form of fundraising that is collective, participatory, and interactive – is becoming increasingly important. It has the potential to bridge the financing gap many start-ups face and to stimulate entrepreneurship.

Delegated act: a legal instrument that is subordinate to an EU (European Union) regulation or directive. Delegated Acts are used to specify and implement the technical details of legislation, providing more specific rules and guidelines on how a particular law should be applied. These acts are typically used to fill in the gaps or provide further clarification on the provisions of the main legislation. Delegated Acts are a way for the European Commission, which is responsible for proposing and implementing EU legislation, to have the authority to adopt rules or measures that are needed to ensure the effective application of a given regulation or directive. However, these acts are subject to control and scrutiny by the European Parliament and the Council of the European Union, which can object to a Delegated Act within a specified period if they believe it exceeds the Commission's implementing powers or is not in line with the EU's.

EU Green Bond Standard: This initiative aims to establish a unified standard for green bonds within the EU. Green bonds are to be used to finance environmentally friendly projects, and a common EU standard under development is expected to increase transparency and trust among investors.

Grants: a type of financial assistance typically given by a government or an organisation to a wide range of beneficiaries such as private individuals, companies, public institutions, or non-profit organisations. Grants are typically awarded in support of a specific policy or purpose that serves some larger good. For example, education, research, innovation, culture, social welfare, environment, economic development, or humanitarian aid. Grants assistance is channelled for projects that are characterised by high-risk and/or long-term benefits. Unlike loans, grants do not have to be repaid. Increasingly, grant funding is combined with a variety of other public and private finance (so-called 'blended finance').

¹ This glossary will be updated and completed in further deliverables. It provides standard definitions to support dialogue between innovators and investors.

Greenwashing refers to the practice of making misleading or false claims about the environmental benefits of a product, service, or company in order to present it as more environmentally friendly or sustainable than it actually is. This deceptive marketing tactic is used to capitalize on the growing consumer demand for eco-friendly and sustainable products and services. In essence, it involves painting a false "green" image to attract environmentally conscious consumers and boost sales.

Growth capital: a form of venture capital used to consolidate the company's financial structure for the next stage of its growth, including acquisitions, internationalisation, or the development of new product ranges, for example. Growth capital funds will only invest in companies with a recurring cash flow.

Net zero: net zero emissions describe the state where emissions of carbon dioxide due to human activities and removals of these gases are in balance over a given period.

Private equity: refers to capital that is directly invested in private companies. Private equity consists of taking minority or majority stakes in private companies (which are not listed on stock exchanges). The two most common types of private equity investment are Growth capital and venture capital.

Startup: an independent organization, which is younger than five years and is aimed at creating, improving, and expanding a scalable, innovative, technology-enabled product with high and rapid growth.

Scaleup: a company seeing accelerated growth after demonstrating a product or service-market fit, which is looking to grow in market access, revenues, and the number of employees.

Spinoff: not a company or an independent organization but a part of an institutional organization, e.g. university, school of economics, or an organization.

Sustainable Finance Disclosure Regulation: The Sustainable Finance Disclosure Regulation (SFDR) is an EU regulation designed to enhance transparency and disclosure of sustainability-related information within the financial sector. It requires financial market participants, including investment managers, to disclose the Environmental, Social, and Governance (ESG) factors that may impact their investment decision-making processes. The SFDR also establishes specific disclosure obligations for financial products, such as funds and investment portfolios, to inform investors about the sustainability characteristics of those products. By providing this information, the SFDR aims to ensure that investors can make informed decisions and allocate capital to investments that align with their sustainability preferences. It is part of the EU's broader efforts to promote responsible and sustainable financial practices and increase the flow of investments into sustainable activities and projects.

Taxonomy Regulation: The Taxonomy Regulation is a regulatory framework within the EU that aims to establish a unified and standardized classification system for economic activities that can be considered environmentally sustainable. It provides clear criteria and definitions for what constitutes a "green" or environmentally friendly activity. The Taxonomy Regulation serves as a foundation for sustainable finance by helping investors, companies, and financial institutions identify and promote investments that align with the EU's environmental and sustainability objectives. It contributes to the EU's goal of facilitating sustainable economic growth and transitioning to a more environmentally responsible financial sector by providing clarity on which activities are considered sustainable.

Technology Readiness Level (TRL): a method for estimating the maturity of technologies during the acquisition phase of a program. TRLs enable consistent and uniform discussions of technical maturity across different types of technology. TRL is determined during a Technology Readiness Assessment (TRA) that examines program concepts, technology requirements and demonstrated technology capabilities. TRLs are based on a scale from 1 to 9 with 9 being the most mature technology.

Venture capital: Venture capital can take several forms, for example from seed funding to scale from a prototype to a product or service, to early-stage funding to help entrepreneurs grow a company and expand working capital, to late-stage to contribute to market expansion. This type of investment is mainly directed at spinoffs and startups seeking financing, primarily for new, innovative, and disruptive technologies and services.

Abstract

This deliverable is the fourth release of a biannual series of regular **updates on the Outlook of the Financial Programmes for Water Investments**. The outlook is part of the demonstration activities included in **Water4All's Pillar D** aimed at connecting innovators to development/investment programmes to support an enabling environment for a wider and faster implementation of water innovations.

The **first deliverable**² presented an **overview of perspectives of investments in water development and water innovation** and, after making the balance of the size of the effort required in the current decade, presented an **analysis of the opportunities and challenges these financial perspectives represent for the progressive uptake of innovative solutions**.

The **second deliverable**³ took stock of the **challenges** presented in the previous one and continued with **mapping the main financial opportunities available for water innovations from idea to market uptake and scaleup**. This report explored the connection between financial tools and strategies with water innovation, highlighting key financial methods and opportunities available for innovators to progress through the innovation process, starting from the seed stage and advancing to market uptake and scale-up. Among these opportunities, the second outlook update provided a map of funding opportunities for water-related investment projects, within the framework of the European Union's recovery instrument Next Generation EU (e.g., the Recovery and Resilience Facility, the Programme InvestEU -including the new Strategic Investment Facility, the European Fund for Strategic Investment and Structural Funds -and Cohesion policy programmes).

The **third deliverable**⁴ assessed the recent developments in **EU Sustainable Water Financing**, offering a comprehensive framework and strategy to align investor priorities with **EU Green Deal objectives**. The key aims of the **EU Sustainable Finance Agenda** are to incentivize the mobilization of private financial resources, in conjunction with public funds, to support the EU's sustainability objectives, particularly in the sustainable use and protection of water and marine resources. The report provided an overview of the **EU sustainable financing agenda** and its primary initiatives, including the **EU taxonomy**, highlighting its significance in mobilizing financial resources in the water sector, reducing financing for environmentally and socially detrimental activities, and improving transparency and disclosure of sustainability-related information for informed investment decisions.

This **deliverable**, the fourth Outlook of Existing Financial/Development Programs, offers a general map and a comprehensive overview of the **financial instruments accessible for innovation within the water sector**, delineated across three key dimensions: their **function in the innovation process, geographic applicability, and thematic scope**. The map presented in this report will be instrumental for forthcoming releases of the Outlook of Financial/Development Programs. These future editions aim to categorize existing financial opportunities for innovation within the water sector across the three aforementioned dimensions.

Utilizing the framework provided by this map, subsequent editions of the outlook/development programs will systematically analyse individual financial instruments, presenting their key characteristics within a unified structure. By encompassing a wide range of financial opportunities, upcoming editions of the Outlook aspire to furnish innovators and living labs, in particular, with comprehensive insights into available avenues and potentials. Furthermore, this mapping exercise will facilitate an assessment of currently accessible funding opportunities and guide discussions toward suggesting adaptations to better align them with enhancing the

² [OUTLOOK OF EXISTING FINANCIAL/ DEVELOPMENT PROGRAMMES. Deliverable D4.1 - November 2022](#)

³ [OUTLOOK OF EXISTING FINANCIAL/ DEVELOPMENT PROGRAMMES. Deliverable D4.2 - May 2023](#)

⁴ [OUTLOOK OF EXISTING FINANCIAL/ DEVELOPMENT PROGRAMMES. Deliverable D4.1 - November 2023](#)

development, market adoption, and dissemination of crucial innovations necessary for fostering a resilient water future.

About Water4All

Water4All is a Research and Innovation Partnership set up in Horizon Europe. It aims at enabling water security for all in the long term by boosting systemic transformations and changes across the water research and innovation pipeline, fostering the matchmaking between problem owners and solution providers. In addition to the launch of calls for research and innovation proposals, **Water4All** offers a portfolio of additional activities including the alignment of water programmes, demonstration projects, international cooperation, the wide transfer and dissemination of activities and results, networking, and capacity building.

The Partnership will provide relevant outcomes for a better understanding of water processes in several scientific fields and it will support European and international policy-oriented initiatives, notably the European Green Deal and the United Nations Sustainable Development Goals. At the date of publication of this deliverable, the consortium counts over 80 partners stemming from national research funding agencies, public authorities including local authorities, research performing organisations, water associations, and networks at European, national, or regional levels. Partners have decided to join forces to address the big challenge of water for all. The Partnership is structured around five operational pillars looking at strategic issues (Pillar A), development of knowledge through calls for proposals (Pillar B), science – policy – end-users' interface (Pillar C), demonstration (Pillar D), and international cooperation (Pillar E).

OUTLOOK OF EXISTING FINANCIAL / DEVELOPMENT PROGRAMMES

Presentation

The three previous Outlooks of Existing Financial/Development Programmes deliverables evaluated the financial challenges faced by the water sector on mobilizing the investments required to reach the policy objectives (**Deliverable D4.1**), established a map of the financial instruments and opportunities available to support the innovation process from the creation of the idea to the full deployment in the market (**Deliverable D4.2**) and studied the efforts to align investors priorities with the priorities of the sustainable use and protection of water resources through the EU Sustainable Water Financing initiative (**Deliverable D4.3**).

Building on these important pieces of analysis this new Outlook of Existing Financial/Development Programmes aims at developing a comprehensive map of the increasingly complex set of financial instruments and programmes available.

A comprehensive map should encompass at least three crucial dimensions. Firstly, the geographical dimension: What is the geographical scale at which the instrument is applicable? Financial/development programs and opportunities are designed to operate across various geographical scales, ranging from the EU level down to national, regional, and even local levels. Secondly, the process-oriented dimension: At which phase of the innovation process is the instrument relevant? As evidenced in previous deliverables, different instruments are suitable for different stages of innovation. These range from grants to foster initial idea development, to voucher schemes encouraging collaboration with SMEs for innovation development, and various other financial sources facilitating market uptake and scalability. Lastly, the thematic or output-oriented dimension: Which water-related policy objectives does the financial instrument or development program aim to contribute to? How does it align with the sustainable finance framework and the transitional objectives outlined in the EU Green Deal and regional development agendas?

Characterizing all financial instruments and development programs along these three dimensions is an ambitious task. Moreover, we must not overlook the dynamic nature of the financial landscape within the water sector, leading to an increasingly complex ecosystem of instruments and opportunities. This landscape has rapidly evolved over the last two decades, presenting a multifaceted and ever-changing array of possibilities⁵.

This deliverable represents the first step on the objective of building a comprehensive and updated map of the financial instrument and development programmes that appear as the main opportunities for innovators in the water sector in the EU.

To this mapping exercise we propose to start with the innovation process, with the research and innovation grants and programs, at the highest level encompassed by the Horizon EU programme reflecting the overarching EU policy priorities. In successive deliverables we will advance along these three lines

⁵ In just a few years, certain financial instruments aimed at fostering innovation within the EU have become increasingly complex. Voucher schemes, absent from the EU's innovation toolkit just two decades ago, are now employed by over 30 national agencies and are a fundamental component of Horizon EU initiatives. They have evolved from mere subsidies to encompass loans and credit facilities, seamlessly integrated into the financial ecosystem. For further insights, refer to the Water4All deliverable on the **Voucher Scheme Feasibility Report** ([Deliverable D4.7](#)).

progressively including financial instruments that support collaboration for innovation development and market uptake, that go down to national, regional and local development programs when relevant for water innovations as well as to advance in the water challenges and policy priorities at these levels. This is why next section focuses on EU funding programmes.

The deliverable is structured as follows: the next section (**section 1**) presents the **funding opportunities at the EU level** at both the **research and innovation and the structural and development funds**.

The **second section** builds on the previous one and on the Deliverable D4.2 and introduces the **financial instruments available along the innovation process development program**. The geographical and thematic restrictions of these instruments are also included in this section.

The **third section** presents the **financial instruments map** including the above-mentioned dimensions that will be progressively completed and updated in the following outlooks of financial/development programmes during the second Water4All Grant Agreement.

Finally, the deliverable shows the way forward in the work on mapping financial instruments.

1. The financial instruments and programs for water innovation in the EU

This initial section contains the different European financial instruments that can be used to obtain financial resources during the innovation development process. This section will briefly comment on the different financial instruments, serving as the starting point for the on-going mapping exercise.

A. Horizon Europe

Horizon Europe (HEU) is the European Union's flagship research and innovation funding program for the period 2021-2027. It aims to drive scientific excellence and technological innovation across Europe by funding collaborative research projects, supporting the development of cutting-edge technologies, and addressing societal challenges. For the current period, one of the most important missions is "Prepare Europe for climate disruptions and accelerate the transformation to a climate resilient and just Europe by 2030". The total funding available for the period 2021-2027 is 95.5 billion current euros and among its main objectives are scientific and technological advancement, green and digital transition and gaining economic competitiveness, focused on meeting the needs of citizens. Among the projects funded are those whose risk is too high for private investors (see **Box 1** for further details).

BOX 1. HORIZON EUROPE'S WATER-RELATED CLUSTERS

Through **Horizon Europe**, research is funded on various topics, including "**Climate, Energy & Mobility**" (**Cluster 5**, budget of €15.123 billion) and "**Food, Bioeconomy, Natural Resources, Agriculture & Environment**" (**Cluster 6**, budget of €8.952 billion), as shown by the current objectives of adapting to climate change and improving the health of all water bodies.

- The main information of the **Cluster 5** is⁶:
 - a) Goal: fight climate change by better understanding its causes, evolution, risks, impacts and opportunities, and by making the energy and transport sectors more climate and environment-friendly, more efficient and competitive, smarter, safer and more resilient.
 - b) Areas of intervention:
 - Climate science and solutions

⁶ [Cluster 5: Climate, Energy and Mobility - European Commission \(europa.eu\)](https://ec.europa.eu/euro-iss/cluster5)

BOX 1. HORIZON EUROPE'S WATER-RELATED CLUSTERS

- Energy supply
- Energy systems and grids
- Buildings and industrial facilities in energy transition
- Communities and cities
- Industrial competitiveness in transport
- Clean, safe and accessible transport and mobility
- Smart mobility
- Energy storage
- The main information of the **Cluster 6** is⁷:
 - a) Goal: reducing environmental degradation, halting and reversing the decline of biodiversity on land, inland waters and sea and better managing natural resources through transformative changes of the economy and society in both urban and rural areas.
 - b) Areas of intervention:
 - Environmental observation
 - Biodiversity and natural resources
 - Agriculture, forestry and rural areas
 - Seas, oceans and inland waters
 - Food systems
 - Bio-based innovation systems in the EU's bioeconomy
 - Circular systems

In addition to its main research fund, Horizon Europe includes several other funding mechanisms. Some of these are:

- European Research Council (ERC)⁸: The ERC provides funding to support investigator-driven frontier research projects carried out by individual researchers or research teams across Europe. It aims to promote scientific excellence and innovation in any field of research.
- European Innovation Council (EIC)⁹: The EIC supports innovators, entrepreneurs, and small and medium-sized enterprises (SMEs) in developing breakthrough innovations with the potential for societal and economic impact. It offers funding, coaching, and networking opportunities to help bring innovative ideas to market (See **Box 2** for further details).

BOX 2. FINANCIAL INSTRUMENTS OF THE EUROPEAN INNOVATION COUNCIL (EIC)

The **EIC (European Innovation Council)** provides funding, mentoring, networking opportunities, and other forms of support to help innovative companies scale up and bring their ideas to market in the context of Horizon Europe. The EIC's funding portfolio, is form by three programs catering to different stages of innovation and different types of beneficiaries, including researchers, innovators, startups, and SMEs. The **EIC Fund** is the venture arm of the EIC. Its targets are deep tech innovators that disrupt the markets they are entering, with mainly startups, SMEs and mid-caps being funded under the **EIC Accelerator**. The primary purpose of the EIC Fund is to provide additional financial resources to complement the grant funding provided through the EIC Accelerator program. It aims to attract private investors and mobilize private capital to support the growth and development of high-potential European startups and SMEs.

The three funding programmes of EIC are:

- **EIC Pathfinder**¹⁰ supports collaborative research and innovation projects focused on exploring new and emerging technologies with the potential for disruptive innovation. It provides grants for early-stage

⁷ [Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment - European Commission \(europa.eu\)](#)

⁸ [ERC at a glance | ERC \(europa.eu\)](#)

⁹ [About the European Innovation Council - European Commission \(europa.eu\)](#)

¹⁰ [EIC Pathfinder - European Commission \(europa.eu\)](#)

BOX 2. FINANCIAL INSTRUMENTS OF THE EUROPEAN INNOVATION COUNCIL (EIC)

research and innovation activities aimed at exploring high-risk, high-reward ideas. The EIC Pathfinder offers support to research teams by:

- Funding research to develop the scientific basis to underpin breakthrough technologies.
- Supporting the earliest stages of scientific, technological or deep-tech R&D.
- Aiming to build on new, cutting-edge directions in science and technology to disrupt a field and a market or create new opportunities.
- Realising innovative technological solutions to identify, develop and scale up breakthrough technologies and disruptive innovations in Europe.
- **EIC Transition**¹¹ targets innovation activities that goes beyond the experimental proof of principle in laboratory. This program aims to bridge the gap between research and the market by supporting projects that demonstrate the feasibility and scalability of breakthrough innovations. It provides funding for activities such as prototyping, testing, validation, and demonstration to help bring innovations closer to market readiness. The EIC Transition offers support to SMEs, start-ups and organisations that:
 - Have identified EU-funded project result(s) with promising commercial potential that could be the basis for innovation and promising new businesses.
 - Envision novel promising technology that is ready for the next steps towards its maturation and validation, to be further developed and validated for some specific, high potential, commercial applications.
 - Have conducted a preliminary market research to identify potential markets for their innovation and explored potential competitors.
 - Envisage building a motivated and entrepreneurial team with a mix of skills, including researchers, business people, marketers etc. to develop and drive the idea towards commercial success.
- **EIC Accelerator**¹² is designed to support innovative startups and SMEs in developing and scaling up breakthrough innovations with high market potential. It offers grant funding as well as equity investment to support companies at different stages of development, from concept validation to commercialization. The EIC Accelerator is a funding programme under Horizon Europe that offers support to start-ups and SMEs that:
 - Have an innovative, game changing product, service or business model that could create new markets or disrupt existing ones.
 - Have the ambition and commitment to scale up.
 - Are looking for substantial funding, but the risks involved are too high for private investors alone to invest.
- European Institute of Innovation and Technology (EIT)¹³: The EIT aims to promote innovation and entrepreneurship by integrating higher education, research, and business sectors in thematic Knowledge and Innovation Communities (KICs). Each KIC focuses on a specific societal challenge, such as climate change, digitalization, or sustainable energy (See **Box 3** for further details).

BOX 3: EIT KNOWLEDGE

The **European Institute of Innovation and Technology (EIT)**¹⁴ is an independent body of the European Union and was established in 2008 to strengthen Europe's ability to innovate. Its objectives are tied with those of Horizon Europe and the contribute in Pillar 3 "Innovative Europe" with a budget of €3 billion for the period 2021-2027. The activities of EIT are:

- Strengthen sustainable innovation ecosystems across Europe.
- Foster the development of entrepreneurial and innovation skills in a lifelong learning perspective.
- Support EU universities in integrating more entrepreneurial education.

¹¹ [EIC Transition - European Commission \(europa.eu\)](https://eic.europa.eu/eic/en/eic-transition)

¹² [EIC Accelerator - European Commission \(europa.eu\)](https://eic.europa.eu/eic/en/eic-accelerator)

¹³ [European Institute of Innovation & Technology \(EIT\) | EIT \(europa.eu\)](https://eic.europa.eu/eic/en/eit)

¹⁴ [Welcome to our Knowledge Centre | EIT \(europa.eu\)](https://eic.europa.eu/eic/en/welcome-to-our-knowledge-centre)

BOX 3: EIT KNOWLEDGE

- Bring new solutions to global societal challenges to the market.
- Create synergies and added value within Horizon Europe.

EIT have launched, under their agenda 2021-2027, the **EIT Knowledge and Innovation Communities (KICs)**. These communities launch their own calls and it is possible to invest with them, be partners or ask for grants. They also organize events and webinars.

Taking into account that water is a transversal issue, these opportunities can be available mostly from:

- **EIT Climate-KIC**¹⁵.
- **EIT Food**¹⁶.
- **EIT Raw Materials**¹⁷.
- **EIT Manufacturing**¹⁸.
- **EIT Digital**¹⁹.
- **EIT InnoEnergy**²⁰.

- **Innovation Fund**²¹: The Innovation Fund is part of Horizon Europe. It is a financial instrument that supports projects aimed at reducing greenhouse gas emissions and promoting innovative low-carbon technologies. The fund focuses on projects that have the potential to bring significant reductions in greenhouse gas emissions and contribute to the EU's climate objectives. It provides grants and financial assistance to projects in areas such as renewable energy, energy efficiency, and carbon capture and storage. It is one of the world's largest programs for the implementation of innovative net zero technologies.

B. European Structural and Investment Funds

As one of the largest investment instruments under the EU budget, the European Structural and Investment (ESI) Funds support the territorial, economic and social cohesion of Europe's regions, as well as their resilience and recovery from the crisis faced in the past years. They comprise of²²:

- **The European Regional Development Fund (ERDF)**²³. The ERDF provides funding to public and private bodies in all EU regions to reduce economic, social and territorial disparities. The Fund supports investments through dedicated national or regional programmes. The budget for the period 2021-2027 is €226.05 billion and the objective is to make Europe and its regions:
 - More competitive and smarter.
 - Greener.
 - More connected.
 - More social.
 - Closer to citizens.
- **The Cohesion Fund (CF)**²⁴. The fund provides support to EU Member States (MS) with a gross national income per capita below 90% (EU-27 average) to strengthen the economic, social and territorial

¹⁵ <https://www.climate-kic.org/>

¹⁶ <https://www.eitfood.eu/>

¹⁷ <https://eitrawmaterials.eu/>

¹⁸ <https://www.eitmanufacturing.eu/>

¹⁹ <https://www.eitdigital.eu/>

²⁰ <https://www.innoenergy.com/>

²¹ [What is the Innovation Fund? - European Commission \(europa.eu\)](#)

²² [Inforegio - 2021 Summary Report on the Implementation of the European Structural and Investment Funds \(europa.eu\)](#)

²³ [European Regional Development Fund \(ERDF\) - European Commission \(europa.eu\)](#)

²⁴ [Cohesion Fund \(CF\) - European Commission \(europa.eu\)](#)

cohesion of the EU. The Cohesion Fund has a budget of €48.93 billion for the period 2021-2027, of which €11.29 billion are transferred to the Connecting Europe Facility.

- **The European Agricultural Fund for Rural Development (EAFRD)**²⁵. The fund finances the EU's contribution to Rural Development Programmes (RDPs) with a budget of €95.51 billion for the period 2021-2027 and its objectives are:
 - Improving the competitiveness of agriculture.
 - Encouraging sustainable management of natural resources and climate action.
 - Achieving a balanced territorial development of rural economies and communities.
- **The European Maritime and Fisheries Fund (EMFF)**²⁶ runs from 2021 to 2027 and supports the EU Common Fisheries Policy (CFP), the EU maritime policy and the EU agenda for international ocean governance. The fund helps, with its €6.108 billion budget for the period 2021-2027, achieve sustainable fisheries and conserve marine biological resources. This leads to:
 - Food security through the supply of seafood products.
 - Growth of a sustainable blue economy.
 - Healthy, safe and sustainably managed seas and oceans.
- **The Just Transition Mechanism (JTM)**²⁷ is a key European tool to ensure that the transition towards a climate-neutral economy happens in a fair way. This funding instrument addresses the social and economic effects of the transition, focusing on the regions, industries and workers who will face the greatest challenges. The three pillars of this mechanism are:
 - **The Just Transition Fund (JTF)**: a budget for primarily grants for the period 2021-2027 of €19.2 billion and it is expected to mobilise around EUR €25.4 billion in investments with national co-financing and voluntary transfers from other funds.
 - **InvestEU Dedicated Just Transition Scheme**: a financial guarantee of the European Union, increasing the risk-bearing capacity of the private investors. The **InvestEU Advisory Hub**²⁸ complements the guarantee serving as the central entry point for project promoters and intermediaries seeking advisory support and technical assistance related to centrally managed EU investment funds.
- **Public Sector Loan Facility**: a combination of €1.5 billion of grants financed from the EU budget and €10 billion of loans to support public sector entities to meet their development needs in the transition towards a climate-neutral economy from the European Investment Bank.
- **The Recovery and Resilience Facility (RRF)**²⁹ is a temporary instrument that is the centrepiece of NextGenerationEU, the EU's plan to emerge stronger and more resilient from the current crisis. A map with the projects financed by this program is available on the main web page of this program. Within each project there are a series of lines of action for which an institution in the country receiving the funding is responsible. As a minimum, investment in green projects must be 37%.

²⁵ [European Agricultural Fund for Rural Development \(EAFRD\) - European Commission \(europa.eu\)](https://ec.europa.eu/eafrd/)

²⁶ [EMFF - European Commission \(europa.eu\)](https://ec.europa.eu/emff/)

²⁷ [The Just Transition Mechanism - European Commission \(europa.eu\)](https://ec.europa.eu/just-transition/)

²⁸ [InvestEU Advisory Hub - European Union \(europa.eu\)](https://investeu.advisoryhub.eu/)

²⁹ [Recovery and Resilience Facility - European Commission \(europa.eu\)](https://ec.europa.eu/recovery/)

C. EIB Group

The **European Investment Bank (EIB)**³⁰ is the lending arm of the European Union. It is one of the biggest multilateral financial institutions in the world and one of the largest providers of climate finance, with the following priority areas:

- Climate and environment.
- Cohesion.
- Innovation, digital and human capital.
- Small and medium-sized businesses.
- Sustainable cities and regions.
- Sustainable energy and natural resources.

The EIB offers diverse services³¹:

- Loans to clients of all sizes to support sustainable growth and job creation. This support is often central to attracting other investors.
- Equity: stimulation and catalysation private capital through investment in equity and funds.
- Guarantees covering the risks of large and small projects. Loan portfolios to make the projects more attractive to other investors.
- Advisory: technical and financial expertise available to the clients to develop and implement investment projects and programmes and to improve institutional and regulatory frameworks.
- The EIB Mandates and partnerships allow it to serve existing clients find new partners and enter new markets.

The **European Investment Fund (EIF)**, which is part of the EIB Group, supports Europe's micro enterprises and small and medium-sized enterprises (SMEs) by helping them to access risk finance to start-up or expand their activity. Through the EIF, SMEs carry out their activities using either EIF's own resources or those provided by the EIB, the EC, EU Member States or other third parties such as public and private banks, funds, guarantee and microfinance institutions (intermediaries) across Europe and in non-EU countries³². Finance to SMEs includes loans and micro-loans (€<25.000)³³ through EIF's financial intermediaries, equity and venture capital by fund management companies (in which EIF's has invested)³⁴ and those in the European Fund for Strategic Investments (EFSI SME and RCR-EFSI)³⁵, and from the SME Initiative³⁶ (uncapped portfolio guarantee instrument and a securitisation instrument, via intermediaries) in adhering MS (Bulgaria, Finland, Italy, Malta, Romania and Spain).

³⁰ [Who we are \(eib.org\)](https://www.eib.org/who-we-are)

³¹ [What we offer \(eib.org\)](https://www.eib.org/what-we-offer)

³² EIF information on finance intermediaries for SMEs (for EU and non-EU SME'S -candidate countries EFTA countries, Western Balkans, InnovFin Participating countries): https://www.eif.org/what_we_do/where/index.htm

³³ Finance (loans, venture capital, equity and guarantees) supported by EU (intermediaries) for EU SME's (by country): <https://youreurope.europa.eu/business/finance-funding/getting-funding/access-finance/search/en>

³⁴ https://www.eif.org/EIF_for/venture_capital_equity_funds/eif-funds-investing-smes.pdf

³⁵ https://www.eif.org/what_we_do/efsi/equity-deals.pdf

³⁶ https://www.eif.org/what_we_do/guarantees/sme_initiative/index.htm

D. Eureka Network: a collaborative platform to steer intergovernmental cooperation

The **Eureka Network**³⁷ is an intergovernmental network aimed at supporting market-oriented R&D (Research & Development) and innovation project³⁸. Eureka operates outside the European Union's framework, although it collaborates with the EU on various initiatives. It primarily focuses on fostering international cooperation between European countries and other participating countries to promote cross-border innovation and commercialization of technologies.

The main programs hosted by the Eureka Network are Network projects, Innowwide and clusters, while Eurostars is derived from Horizon Europe and Globalstars is a funding programmes with calls for projects with countries outside the network. The details of every programme are:

- **Eurostars**³⁹: Eurostars is a joint program between Eureka and the European Commission, specifically the European Union's Horizon 2020 framework program for research and innovation. It focuses on supporting R&D-performing SMEs in developing innovative products, processes, or services that can be rapidly commercialized. The Eurostars program provides funding to SMEs for collaborative international projects led by innovative companies⁴⁰.
- **Innowwide**⁴¹: Innowwide is another initiative under the Eureka Network, supported by Horizon 2020. Its main objective is to provide funding and support to European SMEs that seek to internationalize their innovative solutions and expand into new markets outside Europe. Innowwide offers a range of services, including coaching, mentoring, and financial support, to help SMEs develop their internationalization strategies and explore business opportunities in target.
- **Clusters**⁴²: thematic networks or communities that focus on specific technological or industrial areas. These clusters bring together companies, research organizations, and other stakeholders from different countries to collaborate on innovative projects within their respective domains. The Eureka Clusters facilitate collaboration and innovation in various sectors such as ICT (Information and Communications Technology), energy, manufacturing, health, and transportation. Each cluster has its own focus area and objectives, and they often organize joint funding calls to support collaborative R&D projects among their members. By participating in Eureka Clusters, organizations can access funding, expertise, and networking opportunities to accelerate the development and commercialization of innovative products, services, and technologies within their sector⁴³.

³⁷ Founded in 1985, Eureka is a global network, with 48 MS plus the EC. It includes nearly all countries of the European continent as well as international members (Israel, Turkey, Korea, Canada, Singapore, South Africa, Argentina and Chile). More info: <https://www.eurekanetwork.org/>

³⁸ The **Eureka Investment Readiness Programme** (also part of the HE European Partnership on Innovative SMEs - **InnovativeSMEs**) offers different kind of support: it is aimed at developing and enhancing business relationships by participating international missions (for connecting SMEs with non-EU investors and key strategic partners) and corporate activities (helping SMEs approach multinational corporate investors for business partnerships -many of the key partners include water as a corporate challenge-).

³⁹ [Eurostars - Eureka \(eurekanetwork.org\)](https://www.eurekanetwork.org/)

⁴⁰ For supporting SME-led international R&D projects whose results can be introduced into the market. Large companies, universities and research organisations can participate too and benefit from funding if there is national or regional support available. More info: <https://www.eurekanetwork.org/programmes/eurostars/guidelines>

⁴¹ [Innowwide - Eureka \(eurekanetwork.org\)](https://www.eurekanetwork.org/)

⁴² [Clusters - Eureka \(eurekanetwork.org\)](https://www.eurekanetwork.org/)

⁴³ The 5 existing Clusters (low-carbon energy; advanced manufacturing and production; electronic components and systems; software innovation; and next-generation communications) launch regular bottom-up calls for projects (including some Joint Calls for RD&I Projects on Sustainability) to meet market needs and solve technological and societal challenges.

- **Globalstars**⁴⁴ is actually a joint funding initiative between Eureka and partner countries outside of Europe. It aims to support international collaboration in innovation by funding joint projects between European companies and companies from partner countries. Therefore, Globalstars is not a specific program within the Eureka Network like Eurostars or Innowide.

As for **network projects**⁴⁵, they refer to collaborative R&D projects initiated and managed by Eureka Clusters. These projects bring together companies, research institutions, and other stakeholders from different countries to work on specific technological or industrial challenges within the thematic focus of the respective cluster. Network projects are a key mechanism for fostering international collaboration and innovation within the Eureka Network.

E. Programme Europe LIFE

The European Union's **LIFE program** is the Union's instrument for environmental and climate action. Europe LIFE is a separate program from Horizon Europe. The LIFE program is the EU's funding instrument for the environment and climate action. It has been running since 1992 and provides financial support for projects related to nature conservation, biodiversity, climate action, and environmental sustainability. While both Horizon Europe and LIFE are EU funding programs, they serve different purposes and focus on different areas of research and development. The LIFE program has different sub-programs, such as "Nature and Biodiversity", "Circular economy and quality of life", "Climate change mitigation and adaptation" and "Clean Energy Transition". The objectives of each subprogram are:

- **Nature and Biodiversity**⁴⁶: the protection and restoration of Europe's nature and halting and reversing biodiversity loss.
- **Circular economy and quality of life**⁴⁷: facilitating the transition toward a sustainable, circular, toxic-free, energy-efficient and climate-resilient economy and at protecting, restoring and improving the quality of the environment, either through direct interventions or by supporting the integration of those objectives in other policies.
- **Climate change mitigation and adaptation**⁴⁸: shift towards a sustainable, energy-efficient, renewable energy-based, climate-neutral and resilient economy, thereby contributing to sustainable development.
- **Clean Energy Transition**⁴⁹: support the delivery of EU policies in the field of sustainable energy, in particular, the European Green Deal, the Energy Union (2030 energy and climate targets) and the European Union's 2050 long-term decarbonisation strategy.

The total budget of this programme for the period 2021-2027 is 5.43 billion.

⁴⁴ [Globalstars - Eureka \(eurekanetwork.org\)](https://eurekanetwork.org)

⁴⁵ [Network projects - Eureka \(eurekanetwork.org\)](https://eurekanetwork.org)

⁴⁶ [Nature and Biodiversity - European Commission \(europa.eu\)](https://europa.eu)

⁴⁷ [Circular economy and quality of life - European Commission \(europa.eu\)](https://europa.eu)

⁴⁸ [Climate change mitigation and adaptation - European Commission \(europa.eu\)](https://europa.eu)

⁴⁹ [Clean Energy Transition - European Commission \(europa.eu\)](https://europa.eu)

F. PRIMA

The **Partnership for Research and Innovation in the Mediterranean Area (PRIMA)**⁵⁰ is a non-profit organization with a public service spirit, established under Spanish private Law. The mission of PRIMA is funding projects contributing to sustainable use of natural resources, economic growth and stability in the Mediterranean area. PRIMA has diverse lines of work, as follows:

- Integrated and sustainable management of water for arid and semi-arid Mediterranean areas.
- Sustainable farming systems under Mediterranean environmental constraints.
- Sustainable Mediterranean agri-food value chain for regional and local development.

PRIMA programme is supported by the European Union through the Horizon Europe Programme. While it is a collaborative effort involving EU and non-EU countries, it operates independently from the Horizon Europe program. The PRIMA call is divided into two sections. The first section is the general call for every of the three previous thematic areas, each one with its own budget (between €9 and €10 million for every thematic area). Inside these areas is included at least one subtopic indicating in a more precise way about what kind of project are they financing. The second section is multi-topic and the budget of approximately €35 million is for the three thematic areas. It is important to note that in PRIMA calls private companies cannot be financed.

G. Interreg Europe

Interreg Europe⁵¹ is an interregional cooperation programme co-funded by the European Union⁵². This programme helps local and national government across Europe to develop and deliver better regional development policies⁵³. The topics to which this programme contributes are:

- Smarter Europe.
- Greener Europe.
- More connected Europe.
- More social Europe.
- Europe closer to citizens.
- Better policy governance.

With a budget of €394 million for the period 2021-2027, Interreg Europe creates an environment and opportunities for sharing solutions to regional development issues and supports the exchange of good practices and policy learning among European regions in 36 countries⁵⁴.

⁵⁰ [Prima-med.org](https://prima-med.org)

⁵¹ [What is Interreg Europe? | Interreg Europe - Sharing solutions for better policy](#)

⁵² [Inforegio - Projects \(europa.eu\)](https://inforegio.europa.eu/projects)

⁵³ [List of Programmes and Regions • Interreg.eu](#)

⁵⁴ The EU27 plus Albania, Bosnia and Herzegovina, Moldova, Montenegro, North Macedonia, Norway, Serbia, Switzerland and Ukraine.

2. The increasingly complex ecosystem of Financial Instruments along the EU Innovation Process

This chapter of the deliverable will detail which financing instruments are available at each stage of innovation development, emphasizing their role in that stage, the scale of the intervention or the area to which they apply. First, the particularities of each instrument within each phase of the innovation process will be explained. For this purpose, the innovation process will consist of four stages:

- **Prototype design (phase 1):** initiation of the innovation process and preparation of the prototype.
- **Product development (phase 2):** product development and preparation of the business model.
- **Product commercially uptake (phase3):** finalization of the product and market entry.
- **Production scale-up and market consolidation (phase 4):** rescaling of production to adapt it to market conditions and take advantage of economies of scale.

In the initial stages of innovation development, i.e. in **phase 1**, obtaining funding is crucial but challenging. Several options exist, each with its own advantages and considerations:

1. **Business Angels**^{55, 56}: They provide both financial resources and advice in exchange for equity. Suitable when capital and guidance are needed.
2. **Startup Incubators**^{57,58}: Offer resources and support but not financial aid. Ideal when lacking infrastructure and resources, but not suitable for capital needs.
3. **Venture Capital Funds**^{59,60}: Offer direct financing in exchange for equity but do not provide additional support. Fast access to funds but may have strict conditions.
4. **Crowdfunding**^{61,62}: Flexible and adaptable, it allows various forms of consideration, including future profit shares. Offers access to a wide pool of investors but can be slower.
5. **Strategic Partnerships**⁶³: Involve agreements with other entities to cover needs and share future benefits. Offers long-term alliances but reduces autonomy. Reduces risks about future activities.
6. **R&D Grants**⁶⁴: Offer funding without consideration, but the process is laborious and slow, with no guarantee of success. Less availability of this instrument in this stage.

In the product development phase of the innovation process (phase 2), obtaining funding is still crucial but challenging, but the availability of funding and the conditions of the financing change. Again, several options exist with their own advantages and considerations:

1. **Business Angels:** not available once the first stage of innovation has been overcome, as these investors cover the initial necessities.
2. **Startup Incubators:** the infrastructure and resources are essential in the previous phase, so in this second stage are not necessary.

⁵⁵ [Business angels - European Commission \(europa.eu\)](#)

⁵⁶ [About us – EBAN](#)

⁵⁷ [What Is an Incubator? A Complete Guide - HubSpot for Startups](#)

⁵⁸ [InBIA: Global Network of Entrepreneurial Ecosystem Builders InBIA](#)

⁵⁹ [What Is Venture Capital? – Forbes Advisor](#)

⁶⁰ [Invest Europe - The Voice of Private Capital](#)

⁶¹ [Crowdfunding - European Commission \(europa.eu\)](#)

⁶² [Home - European Crowdfunding Network \(eurocrowd.org\)](#)

⁶³ [How To Evaluate And Execute Strategic Partnerships And Alliances \(forbes.com\)](#)

⁶⁴ [EU funding programmes - European Commission \(europa.eu\)](#)

3. **Venture Capital Funds:** same characteristics as in the previous stage. Fast access to funds but may have strict conditions, but the lower risk due to the overcome of phase one might change the conditions.
4. **Crowdfunding:** its flexibility and adaptability allow the use of this instrument in this stage of innovation with different conditions. It offers access to a different type of investors respect the first phase but keeps its slowness.
5. **Strategic Partnerships:** the agreements with other entities to cover needs and share future benefits remains viable. There are a lot of necessities to cover until the market consolidation that can be solved with a partner. Same loss of autonomy than before.
6. **R&D Grants:** the same characteristics respect to the initial stage. In the product development phase, there is a concentration of grants available compared to other stages.

The third phase of the innovation process finishes with the market uptake of the product, so there are big differences in financial terms compared to the stages one and two. The availability of funding and the conditions of the financing change, especially because in this phase the innovator starts to obtain revenues and the risk related to the innovation is reduced. Again, several options exist with their own advantages and considerations:

1. **Venture Capital Funds:** In this stage the technological risk is again reduced as the product is getting finished and ready to its commercialisation. The fast access to funds may be useful to finish the product development and the conditions are less strict due to the lower risk.
2. **Debt/Growth Capital:** At this stage there are already expectations of income, so loans are a possibility. They are a flexible alternative that does not imply a loss of autonomy but may involve a high cost depending on the interests to be paid.
3. **Crowdfunding:** Again, its flexibility and adaptability offers access not only to diverse types of investors, but also to potential clients. In this last case the process is faster.
4. **Strategic Partnerships:** As innovation progresses, the necessities to be covered by a partnership are decreasing. A strategic partnership in this stage is suitable in case of needing a producer or distributor partner. The loss of autonomy remains as an inconvenient.
5. **R&D Grants:** This phase finishes with the commercial launch of the innovation, so the grants are still available to give the almost last public support to the process. Being granted keeps slow.

In the last phase of the innovation process the product has been launched into the market and now the barriers are the **production scale-up and the market consolidation**. The availability of funding and the conditions of the financing change significantly compared to the previous stages, mainly because the product development is finished and now the challenge is about production and revenues. The financial alternatives in this stage are:

1. **Venture Capital Funds:** The technological risk is overcome. The fast access to funds will cover specific productive necessities and the conditions will depend on the possibilities of consolidation of the product in the market.
2. **Debt/Growth Capital:** As there are already revenues, a loan is still suitable. This option is suitable if the innovator does not want to lose flexibility, the technical challenge of production scale-up is overcome and there is capacity to pay.
3. **Crowdfunding:** Once the product is commercialised, crowdfunding is not adequate to cover the financial needs of an innovator in the market consolidation process.
4. **Strategic Partnerships:** The last necessity to cover is the production scale-up and it will only be an option if the potential partner satisfy it.
5. **R&D Grants:** In this phase the product development has finished and there are no grants available. However, there are still structural and regional funds that seeks for the application of innovations than could be suitable for the innovation produced.

Choosing the right funding option depends on the specific needs and stage of innovation development. Each option has its advantages and trade-offs, requiring careful consideration to make the most appropriate choice.

3. A proposed map of the Financial Instruments and Programmes for Water Innovation in the EU

Drawing from the preceding sections and insights gleaned from the three earlier releases of the Water4All Outlook on existing financial and development programs, this section elaborates on a proposed map of instruments aligned with these dimensions. Future editions of the Outlook will refine and complete this map, incorporating a comprehensive view of financial instruments in the water sector.

All financial instruments available for innovation in the water sector can be categorized along three dimensions:

- Firstly, **the spatial or geographic dimension** denotes the territorial unit at which the instrument/program is implemented, ranging from the highest EU level down to the local level.
- Secondly, **the thematic dimension** indicates whether a specific instrument/program is applicable to a particular topic or policy thematic area. For instance, this can include calls aligned with research and innovation agendas or financial capital instruments that support mature innovations regardless of their thematic alignment within R&D&I priorities.
- Lastly, the third dimension pertains to **the phase of the innovation process** to which the instrument applies. This dimension spans from idea generation to the full deployment of the innovation, encompassing various stages of development and implementation.

The geographical dimension serves to delineate the spatial units where each instrument/program is accessible. It indicates the availability of each instrument across different regions. An instrument/program may be tailored to specific territorial units to which it is particularly suited or may have a geographically defined application. For instance, comprehensive programs like the EU Structural Funds or the EU Common Agricultural Policy are characterized by clearly defined policy objectives, financial allocations, and allocation rules. However, when these programs are implemented at the national level, adaptations are often necessary, leading to variations in rules and objectives across different regions.

In another scenario, calls from partnerships adhere to an overarching Strategic Research and Innovation Agenda (SRIA) that applies to the entire partnership area. However, they may be complemented with voucher schemes and other business support financial instruments that vary based on the priorities and regulations set by National Innovation Agencies (NIAs).

In essence, the spatial/geographic dimension aids in understanding the territorial units where each financial opportunity is available and the scope of the programs to which these opportunities are linked. This analysis facilitates comprehension of the interconnections between financial instruments across territories, including the EU, member countries, regions, and local units. Additionally, this analysis helps identify important gaps, such as the absence of National Innovation Agencies or the significance of innovation clusters, which may influence the speed of the innovation process in certain member states and regions.

The second dimension of the map of financial instruments and programs for water innovations refer to thematic or topical areas. These thematic areas are derived from policy priorities and delineate the objectives that water innovations are expected to contribute to. These priorities are aligned with EU policy initiatives

such as the EU Green Deal, Biodiversity Strategy, Farm to Fork Strategy, Water and Marine Strategy, and the Common Agricultural Policy.

These overarching priorities are further specified in various contexts, including research and innovation priorities (such as the Strategic Research and Innovation Agendas, SRIAs, guiding innovation partnership calls), sustainable finance priorities (aimed at aligning investments with EU-level policy objectives), and national challenges and priorities (evident in implementation plans associated with EU Structural Funds, the Water Framework Directive (WFD), decarbonization strategies, and climate change adaptation plans).

Mapping the thematic areas associated with available financial instruments or programs allows for the identification of not only financial opportunities specific to the water sector—such as those targeting water cycle enhancement or water system improvements—but also those where water-related innovations can contribute to broader policy objectives. These objectives may include advancing the energy transition, promoting conservation agriculture, enhancing biodiversity protection, or facilitating climate change adaptation, among others.

This mapping exercise supports water innovators in aligning their solutions with societal and market demands, enabling them to tailor their solutions to effectively address social priorities. Additionally, this mapping exercise is expected to assist other policy areas and sectoral policies, such as energy, tourism, agriculture, land planning, and others, in shaping their financial instruments and programs to better leverage potential water innovations. This enhances synergies and links across the water, energy, food, and climate change adaptation nexus, ultimately fostering more integrated and sustainable approaches to addressing pressing societal challenges (see **Box 4** for further details).

BOX 4. THEMATIC AND GEOGRAPHY SCOPE OF FINANCIAL INSTRUMENTS ALONG THE INNOVATION CYCLE

Financial market instruments are not confined to specific locations within the common market; however, their effectiveness hinges on convenient adaptation to address the particularities of a given territory (location or geographic dimension) and to tackle a specific water challenge (thematic dimension). This dual classification accounts for both the phase of the innovation process and the potential application area. Here are some basic characteristics in this regard:

- **Venture Capital Funds:** These funds are potentially available at any scale for any sufficiently mature innovation. This instrument is highly flexible, as it does not necessitate non-financial contributions, and funding can be sourced from other regions worldwide as long as they operate in the region where the innovation is being developed.
- **Debt/Growth Capital:** Applicable at any territorial scale and for any potential innovative solution, similar to venture capital, without non-financial contributions and with the availability of international investors, there are minimal limitations.
- **Crowdfunding:** While potentially available at any market scale and thematic area, practical applications benefit from knowledge of innovation types, economic sectors, and specific markets. The diverse range of international crowdfunding platforms ensures wide availability, making it possible to find a suitable platform for water innovation themes.
- **Business Angels:** The success of this instrument relies on the investor's guidance, which necessitates detailed knowledge of the problem and market characteristics in which the innovator will participate.
- **Strategic Partnerships:** Specifically designed to address problems in pre-defined territories, potential partners in strategic partnerships must possess knowledge of both the sector and the market of the innovation.
- **R&D Grants:** Applications are constrained by thematic and territories. Geographically, only entities from the defined geographical area in the calls can participate. Thematic constraints vary, with some grants

being specific, such as Horizon, LIFE, or PRIMA, while others are more flexible, such as the Innovation Fund or EIC instruments.

- **Structural and Investment Funds:** By definition, these funds apply to specific regional policy goals and are focused on geographical areas. Although not primarily for innovation, they can be useful in transmitting regional policy links thematically.
- **Startup Incubators:** The role of providing resources and infrastructure inherently links this instrument to a territory, making it a valuable support for market awareness and networking with other participants in the same sector.

The third dimension of the map refers to the phase in the innovation process at which the instrument is available. This aspect was examined in detail in the previous section. Promoting water innovations entails facilitating their advancement throughout the innovation process, necessitating the identification of bottlenecks and barriers. This typically requires a well-developed financial market in conjunction with a properly designed and implemented set of financial instruments.

Information mapped along this dimension is expected to support ongoing efforts to identify the needs of water innovators, particularly those of Water Oriented Living Labs, in advancing their solutions to market uptake, deployment, and diffusion. It also aims to aid financial sources, ranging from commercial banks to public institutions like the EIB and National Innovation Agencies, in adapting financial innovation instruments to better support innovators in transitioning towards a more sustainable and water-secure future.

Throughout this process, the availability of instruments varies, as do the innovators' needs and resources. This variability is a crucial aspect of the instrument mapping exercise, as the availability of instruments changes along the innovation process. Furthermore, depending on the phase, different instruments may offer distinct advantages and disadvantages. Therefore, the classification of instruments should incorporate this temporal element to identify, at each stage of the process, which instruments are available, what functions they fulfil, and under what conditions they are applicable (see **Box 5** for further details).

BOX 5. THEMATIC AND GEOGRAPHY SCOPE OF FINANCIAL INSTRUMENTS ALONG THE INNOVATION CYCLE

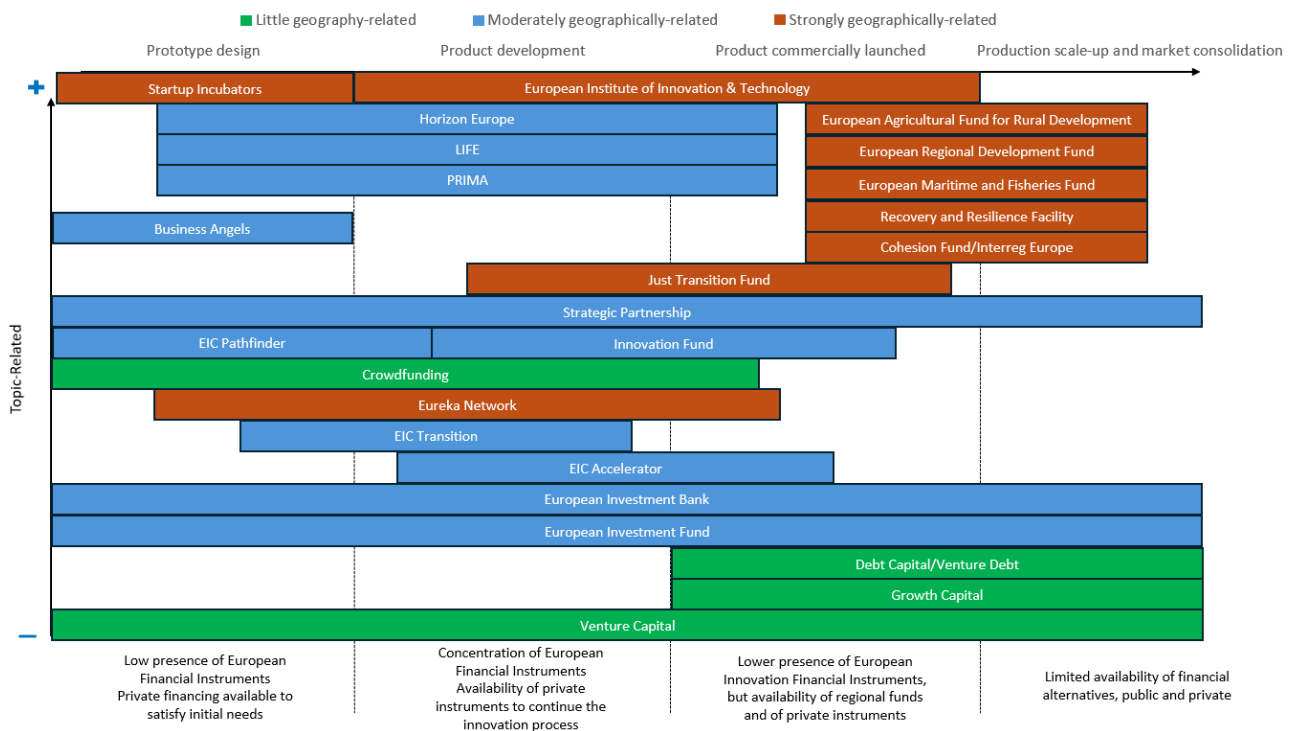
A relevant question the mapping of financial opportunities and programs will help to address is whether financial mechanisms to foster innovations are sufficiently developed to advance feasible innovations across the full deployment process at any location and for any relevant policy area. These are just some of the conclusions drawn from the information gathered thus far for the Water4All Outlooks of financial and development programs.

- **Prototype design (phase 1):** European instruments are limited in availability, but there is a wide variety of private instruments. However, the main disadvantage is the potential loss of company ownership and/or autonomy.
- **Product development (phase 2):** There is a large availability of European instruments and relatively fewer private instruments. This combination offers some diversity and alternatives.
- **Product commercially launched (phase 3):** While some European instruments, such as grants and structural funds, are still available, there is an increased availability of private instruments due to the start of revenue generation.
- **Production scale-up and market consolidation (phase 4):** European instruments are available primarily in the form of Structural Funds, while private instruments focus on Debt/Growth/Venture Capital. This phase presents the fewest financing alternatives.

The map of financial instruments problems will allow a detailed analysis a more detailed assessment of advances in financial instruments for water innovations in the EU, spanning various thematic areas and territories, as outlined in section 2 of this deliverable.

Figure 1 visually depicts the proposed map and a provisional classification of the financial instruments and programmes presented in this report. The x-axis represents the stages of the innovation process, ranging from the prototype design phase on the left to market consolidation on the right. The y-axis corresponds to the thematic aspect, with higher placement indicating a stronger relationship with the defined themes. Geographical restriction is categorized into three levels, distinguishable by color, ranging from less to more location-related according to the previous definition.

FIGURE 1: MAP OF THE FINANCIAL INSTRUMENTS FOR WATER INNOVATION



Source: own elaboration

When examining instruments with a well-defined region of application, we observe that their scope is closely tied to specific thematic areas. Conversely, instruments that can be utilized in any geographical area also tend to have a broad thematic scope, as they offer non-thematically linked forms of funding. Additionally, Business Angels exhibit a certain thematic and geographical scope, albeit not as specific or broad as other instruments. Similarly, R&D Grants, in the European context, apply to the EU territory and even external territories, with a varied thematic scope depending on the funding program.

4. Final Remarks and the Way Ahead

This deliverable has revealed the availability of innovation financing instruments according to the stage of innovation, emphasizing the significance of thematic and geographical criteria. However, it has become evident that much work remains to be done. There is a need to evaluate the network of instruments

thoroughly, delve into the specifics of different instruments, particularly Business Angels and Venture Capital, which often lack detailed public information compared to European funding lines, and make progress in compiling a comprehensive database on calls for proposals.

The objective of mapping financial instruments for innovation in the water sector requires significant advancement. While the current challenges of innovation and its financing have been elucidated, along with an overview of available instruments, their roles, advantages, and disadvantages, and an exploration of the new European vision of sustainable finance, the deliverables focused on mapping financial instruments have yet to deeply explore whether these instruments are not only suitable for financing innovative entities but also capable of meeting the current challenges outlined by the objectives of the EU "Water" category.

The map and database on European calls for proposals, which will be further developed over time to enhance accessibility for innovators, focuses on specific stages of the innovation process. The mapping work conducted in the four Outlooks of existing financial and development programs has largely concentrated on European funding lines and the characteristics of each financial instrument. However, further exploration of the complete financial map is needed once these instruments have been explained and integrated into the mapping work. The database on calls for proposals will be a component of the Data Sharing Strategy of Water4All, facilitating access to known instruments and keeping innovators updated on calls for proposals in the water sector.



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