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Water security for the planet

European Partnership

ATLAS OF WATER-ORIENTED LIVING LABS

2024

Co-funded by
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ACKNOWLEDGEMENTS

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Particularly, Water Europe, Leader of the Pillar D, wishes to acknowledge the invaluable contribution in all the different stages of the development progress of the ATLAS of Water-Oriented Living labs, the Partners of Task D.1 of Pillar D of Water4All: **IFD (co-leader), VITO, MENDELU Brno, SYKE, BRGM, CNRS, CMM, CNR, EWA, CEW, INews, NIVA, LNEC, UEvora, WRC, ZINNAE, FORMAS, City of Mechelen, PTEA, DTU**.

We would also like to thank the European Commission, the participating Member and non-Member States for funding this ambitious programme and ANR for the outstanding coordination of the Partnership.

INTRODUCTION

In alignment with the mission of the EU co-funded Water4All Partnership and the vision of Water Europe for a Water-Smart Society, the initiative to produce the ATLAS of Water-Oriented Living Labs (WOLLs) represents a pivotal progress towards fostering collaboration and innovation within the water sector. As part of Pillar D within Water4All, this endeavour aims to create a comprehensive map of WOLLs, both within Europe and globally, underlining their critical role in addressing pressing water-related challenges.

Water Europe, at the forefront of advocating for a Water-Smart Society, supports the transformative potential of Water-Oriented Living Labs in driving sustainable water management practices. Through the publication of the ATLAS and subsequent documentation, Water4All Partnership aims to provide instrumental resources and guidelines for WOLLs to align their efforts to contribute securing water for all.

By establishing a Network of WOLLs, Water4All seeks to catalyse collaborative endeavours that transcend geographical boundaries, uniting stakeholders from diverse backgrounds to co-create a dynamic platform for testing and validating technologies, policies, and business models, contributing significantly to the realisation of a more resilient and sustainable water future.

Embedded in the Water4All Partnership, the ATLAS of WOLLs represents the collective commitment to advancing water resilience and promoting cross-sectoral collaboration. Through strategic initiatives such as these, we work to accelerate progress towards a Water-Smart Society, where water resources are managed efficiently, sustainably, and equitably for the benefit of all inhabitants of our planet.

Figure 1: Water Europe WoLL Logo

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WATER4ALL'S PARTNERSHIP AND ITS STRATEGIC RESEARCH AND INNOVATION AGENDA

The Water4All Partnership was launched in June 2022 to **enable water security for all in the long term by boosting systemic transformations and changes across the entire research – water innovation pipeline**. Co-funded by the European Commission through the Horizon Europe Programme, Water4All adopts a stakeholder-inclusive approach in which specific matchmaking activities between problem owners and solution providers are encouraged.

Moreover, and with the purpose of tackling water challenges in a holistic manner, the Partnership will take a "source to sea" perspective allowing the full recognition of the interconnectedness of upstream and downstream water resources as well as the promotion of integrated and sustainable management practices. Specific objectives of Water4All are:

- Provision of knowledge, methodologies and tools for water management and planning.
- Demonstration and implementation of innovative solutions for the conservation, restoration, regeneration, and best use of water resources.
- Support to European and international policies, strategies and frameworks related to water.
- Improved collaboration in R&I activities.
- Enhanced open access to water knowledge.

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As of June 2024, Water4All will gather 90 partners from 33 countries (from Europe and beyond), and representing the whole R&I chain, including national research funders, research performing organisations, associations, and clusters. Water4All is a programme open to the world, which is reflected by the presence of partners from 10 non-EU countries (Brazil, Georgia, Israel, Moldova, Norway, South Africa, Switzerland, Turkey, Tunisia and the United Kingdom).

Running for seven years, although some actions will extend till 2032, the programme will support a wide portfolio of multi-national and cross-sectoral activities, from physical and biological sciences to human and social sciences. All these activities have been grouped into different categories, leading to the structuring of Water4All into six different work packages or pillars:

- Pillar 0, responsible for the overall management and coordination of the programme.
- Pillar A, whose aim is to define Water4All's strategic orientations.
- Pillar B, seeking to generate knowledge through the pooling of financial resources from funding agencies participating in the programme.
- Pillar C, which promotes the uptake of results from research and innovation activities through science-policy interface actions and capacity building.
- Pillar D, whose remit is to support demonstration activities and enhance access to the market of R&I solutions.
- Pillar E, dedicated to increasing the international portfolio of Water4All's activities.

The overall budget may attain up to 400 M€, including the EU co-fund. Detailed information on the aim of Water4All and its activities can be found at https: ***//www.water4all-partnership.eu/***

Water4all's SRIA

Coordinated by Pillar A, the Water4All Partnership published its Strategic Research and Innovation Agenda (SRIA) in September 2022. The SRIA is a strategic document that offers a comprehensive understanding of specific areas in which knowledge gaps persist and for which further research and innovation is recommended.

All the knowledge gaps listed in the SRIA are presented as water topics for research and innovation and grouped into different themes according to the domain they pertain.

The Water4All's SRIA identifies then seven key themes, shown in the **Figure I**.

The SRIA also identifies drivers and enablers, as specific factors that may play a major role in the delineation of Water4All's thematic orientations.

Figure 2: Water4All's R&I themes, drivers and enablers.

The content of the SRIA results from a two-year activity that involved an exhaustive analysis of the strategic agendas of other water-related initiatives (e.g. Water Joint Programming Initiative – Water JPI, EurAqua, Water Europe, EurEau), a public consultation that generated almost 100 responses from all over Europe, targeted interviews with stakeholders, and discussions with partners of Water4All and the Advisory Boards of the Water JPI.

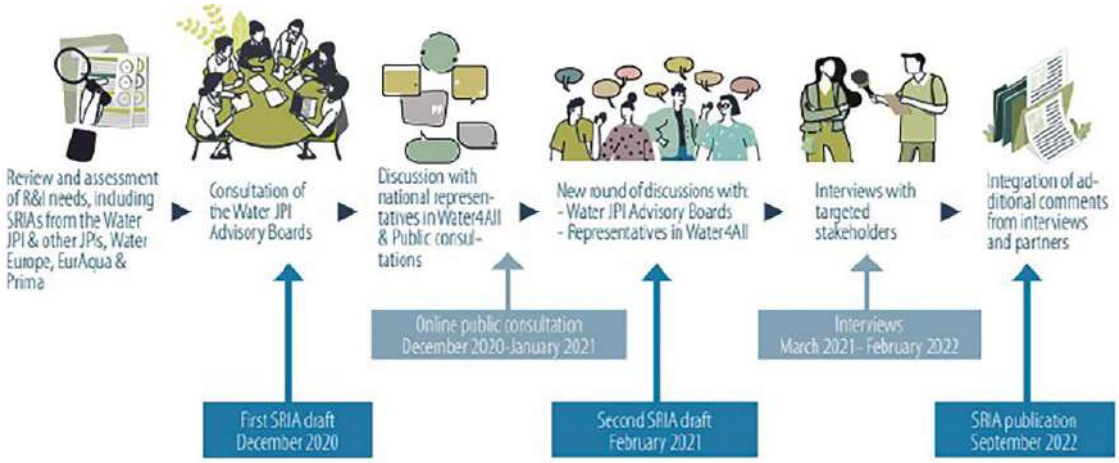


Figure 3: Water4All's SRIA development process.

Being the main strategic document of Water4All, the SRIA guides the thematic activities of all other Pillars. Hence, the SRIA has been instrumental in the development of the scoping text of the two calls already launched by the programme in 2022 and 2023. It will continue to be so in future calls. But the role of the SRIA is not restrained to the preparation of calls for proposals; it is equally relevant in:

- Supporting partners in the development of annual implementation plans.
- Analysing thematic synergies with other European initiatives, especially other Horizon Europe Partnerships and Missions.
- Offering a better understanding of specific European policies and international frameworks which Water4All could contribute to through its different activities.
- Promoting to the European Commission and other international funders the water topics that should be further supported through R&I programmes to address the grand challenge of securing water for all.
- Widely communicating on the scientific direction of Water4All's activities, other than calls for proposals, e.g. demonstration, capacity building, international cooperation.

Our world is rapidly changing. Climate change seems to accelerate at great pace and recent geopolitical and health events call for new measures to guarantee water supply for all. The Water4All's SRIA needs to take on-board these emerging needs as well as latest scientific breakthroughs. It is for this reason that partners are currently working on an updated version of the SRIA that will be released at the end of 2025. This update process will be based on a participatory approach in which different types of stakeholders and experts will be invited to provide their insights and views on the water topics that should be listed in the SRIA or that merit particular attention.

Amongst other actions, partners have planned the organisation of consultative workshops, a comprehensive review of water information sources, a foresight exercise and a public consultation that will be largely disseminated in Europe and beyond.

The WOLL network will naturally be consulted and definitely represents a relevant opportunity to consult more citizens and end-users.

WATER EUROPE

Water Europe (WE), established in 2004 as the European Research and Technology Platform (ETP) for water has been set-up as an industry-led technology and innovation platform that represents the whole value-chain of water including industry, academia, research and technology organisations, utilities, equipment manufacturers, infrastructure and service providers, public authorities, and civil society organisations.

As an ETP all Water Europe' activities are guided by its Water Vision **"The Value of Water"** with the ultimate ambition to achieve a Water-Smart Society in which:

- the value of water is recognised and realised to ensure water security, sustainability, and resilience.
- all available water sources are managed so that water scarcity and pollution are avoided.
- water and resource loops are largely closed to foster a circular economy and optimal resource efficiency.
- the water system is resilient against the impact of climate and demographic change.
- all relevant stakeholders are engaged in guaranteeing sustainable water governance.

To realise the transformation into a Water-Smart Society, Water Europe has identified 5 innovation areas:

- Circular Water (loops)
- Multiple Waters (use)
- Digital Water (management)
- Inclusive Water (governance)
- Resilient Water (infrastructure)

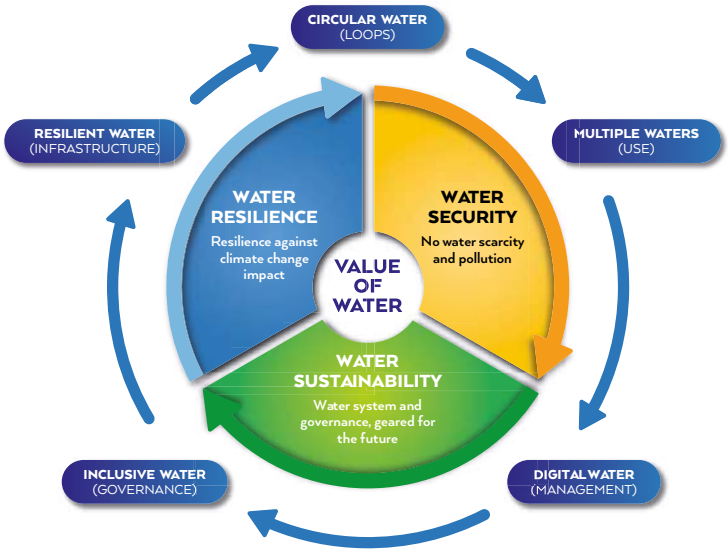


Figure 4: The Water-Smart Society model. Source: Water Europe

To drive the transition to a Water-Smart Society, Water Europe has developed the Water-Oriented Living Lab (WOLL) concept, articulated in a **series of publications**[1].

Water Europe leads with the Innovation Fund Denmark (IFD) Pillar D of Water4All to support demonstration activities and enhance access to the R&I solutions market through Water-Oriented Living Labs to provide dynamic platforms for testing, refining, and deploying, refining and deploy innovative water solutions in real-world environments to achieve a Water-Smart Society.

Water-Oriented Living Labs, as core component of the Water4All initiative, are founded upon the Quadruple Helix principle, embodying a collaborative framework involving government, industry, academia, and civil society. This principle underscores the holistic approach of WOLL initiatives, aiming to address complex water challenges through multi-stakeholder engagement, innovation, and co-creation.

[1]Water-Oriented Living Labs: Definitions, practises and assessment methods Series #1
How to assess and evolve Water-Oriented Living Labs Series#2

WATER4ALL PILLAR D: DEMONSTRATION ACTIVITIES

The **Pillar D – Demonstration activities** – of Water4All plays a fundamental role within the Water4All Partnership, serving as the cornerstone for demonstrating innovation in real-world environments. It aligns with the partnership's overarching vision of advancing water security for all by boosting systemic transformations and fostering the matchmaking between problem owners and solution providers.

Pillar D consists of 3 main Tasks:

- **Task D1** in Pillar D aims to establish a lasting engagement with existing operating Water-Oriented Living Labs fostering collaboration and overcoming innovation barriers. It aims at creating a network of WOLLs to strengthen cooperation, foster best practices sharing, and facilitate the market uptake of innovations in EU and beyond. In this phase WOLLs are engaged in further activities. This engagement generates a knowledge base of successful models and strategies also to supporting the establishment, development, and management of new WOLLs.

- **Task D2** is dedicated to supporting the further development of non-mature Living Labs having the potential to become WOLLs to increase their maturity level, preparing them for inclusion in engagement activities under Task D1. The goal is for these upcoming mature WOLLs to be part of the next versions of the WOLLs ATLAS and to be actively involved in the Network engagement activities. This task involves identifying needs, engaging stakeholders, proposing new value-adding approaches, and providing support activities to develop new WOLLs. Additionally, it includes sharing best practices and lessons learned to deliver up-to-date action plans.

- **Task D3** focuses on exploring financial opportunities in the market related to WOLLs. It evaluates the technology readiness of WOLLs and maps their innovations to assess their maturity and the aim is to provide them with innovative financial models. The task aims to support the market uptake of innovation by identifying available business opportunities and recommending sustainable business models. Additionally, it (i) showcases innovations ready for market uptake, (ii) facilitates matchmaking between problem owners, solution providers, and investors, (iii) connects WOLLs to development/investment programs, and (iv) informs them about access to funds. The overarching goal is to improve the financial sustainability of WOLLs and promote the adoption of innovations in the market.

The ATLAS of Water-Oriented Living Labs represents a significant milestone in collaborative efforts toward sustainable water management and embodies the vision of the Water4All Partnership to support the achievement of the United Nations' Sustainable Development Goals and contribute to the EU's competitiveness and growth as outlined in the EU Green Deal. This initiative lays the groundwork for establishing an innovation network aimed at fostering synergies and enhancing collaboration among WOLLs.

Context and WOLL definition

Pillar D within Water4All is focused on creating a comprehensive map of Water-Oriented Living Labs operating not only in Europe but also globally. This initiative serves as an initial step towards establishing a network of WOLLs aimed at fostering synergies and facilitating collaboration within the water sector. The methodology utilised for evaluating the maturity of submitted WOLL candidates relies on a comprehensive assessment tool developed by Water Europe. Water Europe has embraced the Living Lab approach as the central element of its implementation strategy to realise a Water-Smart Society. Following the publication of the first edition of the ATLAS on Water-oriented Living Labs in 2019, Water Europe has released two publications that explore deeper into the WOLL concept and methodology. The first document, "Water-Oriented Living Labs: Notebook Series #1. Definitions, practices, and assessment methods" (Series #1) provides an overview of the history of the Living Labs concept.

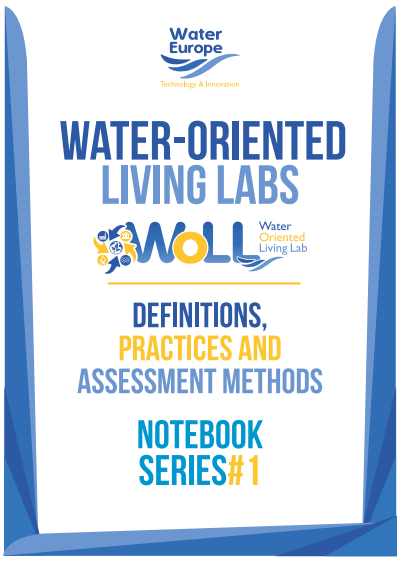


Figure 5: WoLL: Definitions, practices and assessment methos. Water Europe Publication

The second document, "Water-Oriented Living Labs: Water-Oriented Living Lab Notebook Series #2. How to assess and evolve towards a network of Water-Oriented Living Labs" (Series #2) elaborates on a methodology that enables the comparison of WOLLs across numerous attributes and their assessment using a quantitative tool. A third document, in the form of Advanced Guidelines, is currently in preparation and will offer a tailored approach for WOLLs to progress toward WELLs, building upon the WE Vision.

Establishing a shared understanding of what Water-Oriented Living Labs entail is crucial for grasping the significance of innovation demonstrations in real-life contexts.

In the Series #2 publication, Water-oriented Living Labs are defined as "relevant innovation ecosystems that promote the co-creation, testing, and evaluation of innovations in representative real-life environments, with the ultimate aim of realising a 'Water-Smart Society'.

The Living Lab concept is highly relevant to the innovation process leading towards a Water-Smart Society. It removes research and development from laboratories and places it in real-life contexts. This allows for a better understanding of what triggers innovations and which innovations prove successful in different environmental, social, and cultural contexts. A Living Lab is not only a network of infrastructures and services, but also a collaborative ecosystem established to sustain community-driven innovations in a multi-stakeholder context. It offers an effective research methodology for sensing, prototyping, validating, and refining complex solutions in multiple and evolving real-life contexts, which surpass the researcher's perspective." **Water Europe defines WOLLs as "real-life, water-oriented and demo-type and platform-type environments with a cross-sector nexus approach, which involve and commit multiple stakeholders (including water authorities) and provide a 'field lab' to develop, test, and validate a combination of solutions as defined in the WE Vision, which include technologies, their integration as well as combination with new business models and innovative policies based on the value of water"**.

Water-Oriented Living Labs are recognised as a key driver for the future strategic agenda in the water sector. Therefore, it is imperative for WOLLs to adopt a harmonised approach in their establishment and practices, enabling the generation and sharing of innovations and best practices in a coordinated manner to expedite the innovation process aimed at addressing key societal challenges such as pollution and the impact of climate change. The chosen methodology for developing the assessment process for WOLLs is the Living Lab assessment Method known as the 'Harmonization Cube,' tailored to the water sector. This assessment method facilitates coordinated assessment, analysis, synergic development, harmonisation, and networking of WOLL initiatives.

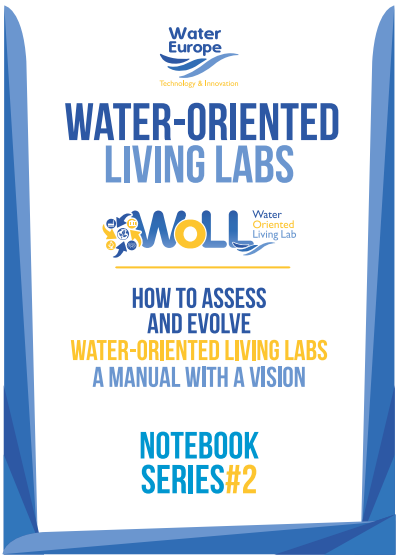


Figure 6: WOLLs assessment Manual Water Europe Publication

Assessment methodology

The methodology outlined in the WE Series #2 publication has been employed to select and evaluate the Water-Oriented Living Labs featured in this Atlas. Based on the Harmonisation Cube, this methodology comprises three steps designed to conduct a comprehensive analysis of WOLLs: **Mapping, Assessment, Evaluation**.

• The Harmonization Cube

What is the Harmonization Cube? It is referred to as the best available methodology today, that brings harmonization of methods and tools in the Living Lab analysis. It provides detailed evaluation criteria for the six foundational elements of any Living Lab: (1) governance, (2) service creation, (3) infra-structures, (4) methods & tools, (5) user involvement and (6) innovation outcomes. The tool determines the measure of the WOLLs' maturity. This assessment method allows for co-ordinated assessment, analysis, synergic development, harmonisation and networking of WOLLs initiatives.

How does this apply to WOLLs? To assess the maturity level of Water-Oriented Living Labs (WOLLs), a customised version of the Cube and a practical tool have been developed. This tool tailors the 3x3=9 evaluation criteria to align with the fundamental requirements of Research, Development, and Innovation in the water sector, referred to as "WOLL metrics." These metrics enable exploration of the landscape and facilitate a detailed examination focused on the water sector. This process is carried out separately for three categories: urban, rural and industrial. The Harmonization Cube proves particularly valuable for evaluating and analysing the six foundational elements, identifying opportunities for development, and fostering a participatory approach.

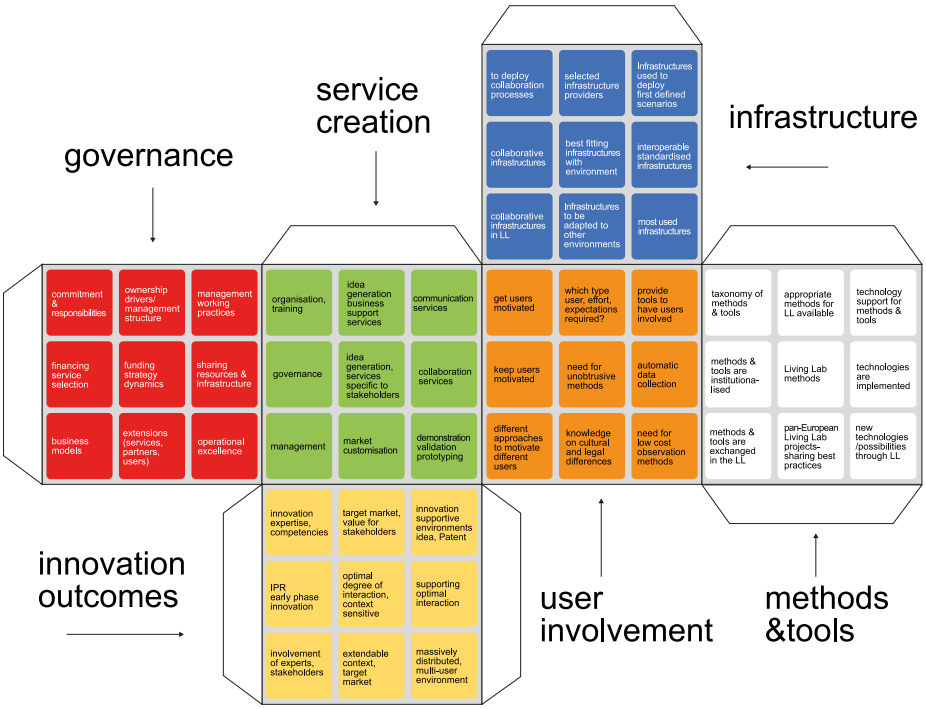


Figure 7: Visualization of the Harmonization Cube.

• The three steps process

STEP 1. MAPPING
The mapping activities consist in compiling two main tools. The first tool involves assessing the potential WOLL's maturity level using the Harmonization Cube model. This model employs a 3x3 metrics evaluation criteria applied to six foundational elements. It aims to derive a percentage score reflecting the WOLL's maturity level.

The second tool comprises a comprehensive documentation and interactive process. This documentation collects essential information about the candidate WOLL, including its name, location, spatial scale, governance structure, perceived maturity level, and specific attributes related to start-ups, sustainability, and scalability. Additionally, it gathers the WOLL's mission, focus areas, organisational settings,it includes a SWOT analysis, and the strategy of the candidate WOLL.

STEP 2. ASSESSMENT
The assessment procedure consists of the examination of four fundamental criteria to determine the candidates' maturity for inclusion as WOLLs. The four fundamental criteria considered during the assessment phase include:

• **Local Territory Connection Assessment:** the candidates must be geographically situated within the territory and must tackle a territorial water challenge.

• **Quadruple Helix Assessment:** Evaluation of the involvement of the quadruple helix actors and the extent of stakeholder engagement.

• **Sustainability Assessment:** Examination of candidates regarding the presence of a stable governance, structured collaboration, and the presence of a long-term strategy, encompassing financial planning and organisational governance.

• **Innovation Demonstration Assessment:** Evaluation of how the potential WOLL showcases innovation within its framework.

STEP 3. EVALUATION
WOLL candidates are deemed suitable for inclusion in the ATLAS when they meet all four fundamental assessment criteria. Based on the evaluation results, candidates meeting the maturity criteria are identified as WOLLs and contextually integrated into the ATLAS of WOLLs, as well as included in subsequent engagement activities of the Network of WOLLs. Candidates that do not meet all four criteria but demonstrate potential for evolution into WOLLs undergo further investigation through a needs analysis and are engaged in additional activities supported by Task D.2 of Pillar D of Water4All. However, candidates failing to meet all four criteria and lacking the foundations for evolving into WOLLs within a reasonable timeframe are no longer considered for further support or investigation.

STRATEGY OF THE NETWORK OF WATER-ORIENTED LIVING LABS

The Network establishment of Water-Oriented Living Labs represents a pivotal moment in the mission of sustainable water management. Born out of the Pillar D of the EU partnership Water4All, the WOLLs Network represents a unified front in the quest for water security, resilience, and sustainability. It embodies the collective commitment of stakeholders from various territories where the members WOLLs are based, including academia, industry, government, and civil society, to address the complex challenges facing water resources locally and scaling up to globally.

The Water-Smart Society entails a paradigm shift in the way the value of water is recognised and realised, water-smart solutions are developed and deployed, and our future society organised and managed regarding water. This shift calls for bold and courageous decisions, investments, changes, and new types of stakeholder partnerships at all levels of society, involving citizens, public authorities at all levels, scientists, industries, and farmers, as well as stewards of the natural environment. This is the concept on which the Water-Oriented Living Lab roots it rationale to support territories in achieving long-term water security.

The strategy of the Network of WOLLs is multifaceted and comprehensive, aiming to address the various dimensions of water management challenges while advancing the vision of a Water-Smart Society to achieve water security for the planet. Key elements of the strategy include:

1. **Creating a collaborative Ecosystem:**
   Central to the strategy of the Network is the creation of a collaborative ecosystem that brings together stakeholders from various WOLLs. By fostering cross-sectoral partnerships and collaboration, the network aims to leverage the collective expertise, resources, and creativity of its members to develop holistic and innovative solutions to water-related challenges. This collaborative ecosystem will serve as a platform for sharing knowledge, exchanging best practices, and co-creating sustainable water management models and solutions.

   To reach a critical mass and effectively call on the European Commission (EC) to address the long-term Research and Innovation (R&I) needs for efficient water management, it's imperative for the Network to represent the entire European Union from the grass-roots level. This representation should encompass diverse geographic, economic, and policy development perspectives. By ensuring representation from various regions and sectors, the Network can accurately reflect the real-life environment and articulate the changes needed to manage water efficiently.

   Through its diverse representation, the Network can advocate for R&I initiatives that address the specific challenges and needs of different EU regions and stakeholders. By uniting stakeholders at the grass-roots level and engaging in collaborative R&I efforts, the Network can drive impactful changes in water management practices and policies. This bottom-up approach empowers local communities and organisations to actively participate in shaping the future of water management in Europe, ultimately contributing to the development of more resilient and sustainable water systems across Europe.

2. **Promoting Knowledge Exchange and Innovation:**
   A cornerstone of the network's strategy is the promotion of knowledge exchange and innovation among its members. Through various platforms such as annual conferences, workshops, and collaborative projects, the network provides opportunities for stakeholders to share best practices, lessons learned, and innovative ideas. These meetings will provide opportunities for stakeholders to discuss progresses, challenges, and opportunities, ultimately enhancing the effectiveness of the collaborative efforts. By facilitating an environment of continuous learning and innovation, the network aims to catalyse the development and adoption of cutting-edge water management solutions.

3. **Advocating for Policy Reform:**
   Another key aspect of the network's strategy is advocacy for policy reform to support sustainable water management practices. By engaging policymakers and government representatives, the network seeks to influence policy decisions and promote the adoption of regulations and incentives that incentivise sustainable water management practices. Through targeted advocacy efforts, the network aims to create an enabling policy environment that supports the implementation of innovative water solutions at scale. To facilitate policy development and regulatory learning at the local level, the network will

establish sandboxes, which are controlled environments where innovative water management practices can be tested under regulatory supervision. These sandboxes provide a platform for experimentation with new approaches to water management while ensuring compliance with local regulations. By leveraging sandboxes, stakeholders can gather valuable insights and data to inform policy decisions and regulatory frameworks.

In addition to sandboxes, the network will produce white papers and position papers to articulate key policy recommendations and insights derived from regulatory learning experiences. These papers will serve as valuable resources for policymakers, providing evidence-based guidance on effective approaches to sustainable water management.

Furthermore, the network will prioritise harmonisation with the EU agenda to effectively influence legislation and regulatory frameworks. By aligning policy advocacy efforts with EU priorities and initiatives, the network can amplify its impact and enhance collaboration with EU institutions and member states. This strategic alignment will facilitate the adoption of harmonised regulations and standards across European countries, driving progress towards sustainable water management goals.

4. Building Resilient Communities:

The network recognises the importance of building resilient communities that are equipped to adapt to the challenges posed by climate change and water scarcity. By focusing on community engagement and capacity building, the network aims to empower local communities to take ownership of their water resources and implement sustainable water management practices. Through initiatives such as community workshops, training programs, and outreach campaigns, the network aims to build a network of empowered and resilient communities committed to safeguarding their water resources for future generations.

5. Leveraging Emerging Technologies and Multiple Waters:

The Water-Smart Society will leverage both the dramatically increased manageability made possible by the emerging cyber-physical environment and 'digital water' technologies, as well as the increased availability of 'multiple waters' to complement freshwater sources. It will also be characterised by much deeper levels of awareness, integration, and collaboration between organisations and citizens.

To support the transition for market uptake of innovative solutions in achieving this vision, Water Market Europe (WME) roadshows will play a vital role. These roadshows serve as platforms for showcasing cutting-edge water technologies, facilitating networking among industry professionals, policymakers, and stakeholders, and providing opportunities for knowledge exchange and collaboration. By participating in WME roadshows, stakeholders can explore and promote innovative solutions that contribute to building a Water-Smart Society. This engagement fosters the adoption of advanced technologies and approaches, driving progress towards sustainable water management practices and the realisation of the Water-Smart Society.

6. Ensuring Human Rights to Water:

In alignment with SDG 6, the Network of Water Oriented Living Labs aims to ensure access to clean water and sanitation for all. By fostering partnerships and collaborations (SDG 17) among stakeholders, including local communities, government bodies, NGOs, and private sectors, we strive to address water-related challenges effectively. Through research, innovation, and community engagement, the Network of WOLLs seeks, fosters, and deploy sustainable solutions that promote water conservation, improve water quality, and enhance sanitation practices. By leveraging partnerships and collaborative efforts, the Network aims to maximise the impact of Water4All initiatives, ensuring that the human right to water and sanitation is upheld, irrespective of identity, location, or socioeconomic status. Through these concerted actions, we contribute to the broader goals of sustainable development, safeguarding public health, and fostering inclusive growth, leaving no-one behind.

[2]Figure 8: SDG 6 is strongly interlaced with many other UN Sustainable Development Goals and indirectly associated with all of them.

[2]United Nations Sustainable Development Goals web site (https://www.un.org/sustainabledevelopment/). The content of this publication has not been approved by the United Nations and does not reflect the views of the United Nations or its officials or Member States.

PROFILES OF THE WATER-ORIENTED LIVING LABS

In the following pages, we present the brief profiles of the 21 selected Water-Oriented Living Labs selected for this edition 2024 of the ATLAS.

These profiles offer insights into the diverse range of initiatives operating across various regions and sectors. Each profile provides a summary of the WOLL's mission, objectives, geographical scope, governance structure, key stakeholders, activities, achievements, and future plans.

Through these profiles, we aim to showcase the innovative approaches and impactful contributions of these WOLLs towards building a sustainable and resilient water future.

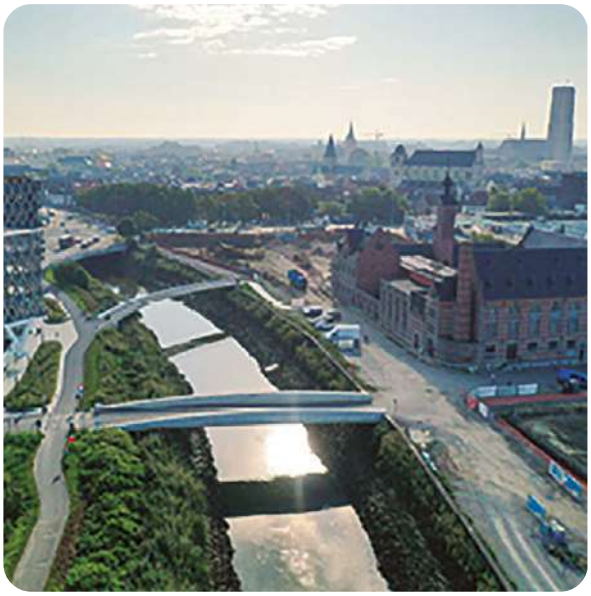
CITY OF MECHELEN

Mechelen, Belgium

Geographical scale Municipal
WOLL Type Urban
Year of establishment 2023

WOLL Introduction

In Mechelen, the drive toward a climate-resilient future is a collaborative effort involving the city and its citizens. The initiative emphasises extensive public participation to not only transform the urban infrastructure but also to shift the residents' mindset towards sustainability. The approach includes participatory roadworks, which allow for the separation of rainwater from wastewater, depaving projects, and the reopening of old water channels. These efforts are aimed at making the city's public domain more adaptable to climate challenges while fostering a participatory and transparent process. Engagement with the citizens extends beyond infrastructure, probing into personal practices like rainwater management, the greening of gardens, and the consideration of green roofs. To make the process enjoyable and to encourage the adoption of nature-based solutions, the city organises citizen-centric activities such as tile gardens and green garlands, along with playful elements like depaving championships and citizen science projects. This multi-faceted approach seeks to create a synergy between top-down and bottom-up efforts, converging towards a collaborative centre where everyone works together towards a climate-resilient city.



WOLL Representative

Alexandra Winderickx
Project manager Climate Adaptation

" The true challenge in tackling climate change is mindset. Once we recognize the urgency of adaptation, other obstacles will become easier to overcome with time and collective action."

HERK AND MOMBEEK LIVING LAB

Limburg, Belgium

Geographical scale Regional
WOLL Type Rural
Year of establishment 2023

WOLL Introduction

The Herk and Mombeek Living Lab targets a river basin in the upper part of the larger Demer basin, a region facing climate-related challenges typical for intensively used agricultural catchments in northwest Europe, such as droughts, flooding, and water quality issues. These challenges impact both the natural ecosystem and economic activities, for instance affecting fruit yields due to droughts. Organised by the Architecture Workroom Brussels, the Regionaal Landschap Herk en Mombeek and the river basin coordinator of the Demer basin (CIW/VMM), the Living Lab aims to transform the landscape into a 'sponge' by restoring the natural water system. It brings together regional stakeholders, including governments, farmers, citizens, the nature sector, NGOs, and researchers in a co-design process for measures to address flooding and drought. This social innovation process requires reaching a consensus on risks and societal trade-offs. Over a decade of innovative projects have experimented with different ways to contribute to a more robust water system, culminating in the formal establishment of the Living Lab in 2023. It is the ambition of the Living Lab to learn from these experiences and to combine local knowledge and hydrological and agricultural expertise, towards an impactful transformation of the river basin, enhancing water security, food production, and biodiversity within the river basin.

WOLL Representative

Jan Vanvelk
Demer River Basin Coordinator (VMM)

"Drought periods and flooding are increasingly important challenges for many agricultural regions. Sponge landscapes are an ideal nature-based solution for that. We can only achieve this by a positive collaboration between all rural stakeholders."

PORT OF ANTWERP-BRUGES

Antwerp, Belgium & Zeebrugge, Belgium

Geographical scale Port Area
WOLL Type Industrial
Year of establishment 1997

WOLL Introduction

The Port of Antwerp-Bruges, a global trade hub with an annual throughput of 272 million tonnes, aims to be the world's first port to harmonise economy, people, and climate. Home to 1,400 companies and Europe's largest integrated chemical cluster, it supports 164,000 jobs and generates €21 billion in added value. Prioritising sustainable growth, the port leads in transitioning to a circular and carbon-neutral economy, with a key focus on sustainable water management.

The Water Oriented Living Lab (WOLL) at the port focuses on maintaining dockwater levels to ensure ship passage during dry periods, promoting water conservation among industrial users by encouraging the shift from drinking water to recycled wastewater for industrial processes and cooling, and improving water quality in the docks. These initiatives underscore the Port's commitment to environmental responsibility and the vital role of water in its operations, aligning with its vision of sustainable development and community welfare.

WOLL Representative

Annelies Oeyen
Programme Manager Water

"The WOLL takes responsibility for sustainable water management in the port area. We cooperate on water quantity management, circular economy and water quality."

WATERCLIMATEHUB

West Flanders, Belgium

Geographical scale Regional
WOLL Type Mixed
Year of establishment 2021

WOLL Introduction

Established in Flanders, the WaterClimateHub seeks to decouple economic growth from water availability through the integration of cleantech and innovation in the water sector. Funded by a government agreement under the Flemish Blue Deal and an innovation agenda, the Living Lab invests in infrastructure, such as mobile technologies for wastewater treatment and Nature Based Solutions, to boost research, innovation, and economic return. Digital solutions are employed to enhance understanding and management of water challenges, promoting smarter, more flexible control for greater resilience.

The WaterClimateHub emphasises collaboration and trust, partnering with academic institutions and leading organisations to inspire new initiatives. International partnerships are also key, with the Hub strengthening ties with the European partnership 'Water4all', the Fluid Crew, and GSTIC, in support of the 'Sustainable Development Goals'. This collaborative effort between solution providers and water users is pivotal in fostering innovation and addressing global water challenges.

WOLL Representative

Inge Genné
Program Manager Water

"Trust between stakeholders is key when establishing a WOLL and takes time to build up together in cooperations where seed money is leveraged to win-win-wins for all the partners."

WATER VALLEY DENMARK

Aarhus, Denmark

Geographical scale National
WOLL Type Mixed
Year of establishment 2021

WOLL Introduction

In Water Valley Denmark, the journey towards water innovation is a collaborative mission, uniting a diverse range of stakeholders including science institutes, startups, and global companies. The initiative champions the co-creation of water solutions that enhance quality of life, emphasising sustainability and efficiency within urban and industrial water systems. Through an open innovation framework, Water Valley Denmark fosters cross-sectoral creativity and problem-solving, aiming to overcome traditional barriers and mental models. This approach not only advances technological and digital solutions in water management but also aligns with the UN's Sustainable Development Goals, promoting a holistic vision of water-energy nexus and circular reuse. As a non-profit member organisation, it forms strategic alliances and networks, enriching the water sector with innovative practices and smart resource management. Through participatory involvement, it encourages a collective movement towards optimising water usage, safety, and sustainability, making it a model for future-focused water stewardship.

Water Valley Denmark aims to be a platform for connecting and engaging with Water-Oriented Living Labs in Denmark and is driven to build stronger relations with WOLLs internationally.

WOLL Representatives

Ulla Spare
CEO – Water Valley Denmark

Pia Jacobsen
Head of Innovation - Water Valley Denmark

"Water Valley Denmark collaborates with industry and utilities to develop sustainable water management solutions, leveraging living labs for real-world testing and innovation"

BLUE ECONOMY MIKKELI CENTRE OF EXCELLENCE

Mikkeli, Finland

Geographical scale Regional
WOLL Type Industrial
Year of establishment 2022

WOLL Introduction

In the heart of Finland, the Blue Economy Mikkeli Centre of Excellence (BEM) is on a mission to redefine water technology and business through the lens of a circular economy. With the City of Mikkeli's robust backing, BEM is on track to claim the title of "the capital of clean water," aligning with South Savo's regional strategy to prioritise water innovation. BEM leverages a dynamic network including LUT University and South-Eastern Finland University of Applied Sciences, offering cutting-edge R&D facilities within Mikkeli's state-of-the-art wastewater treatment plant.

Here, novel technologies and digital services for wastewater treatment and reuse are brought from concept to near-market readiness, in collaboration with industry partners like Operon and Mipro. As part of Finland's InnoCities program, funded nationally and supported by EU development funds, BEM is a beacon for sustainable water management solutions, aiming to influence EU-wide water management practices and legislation. By engaging a wide spectrum of stakeholders, BEM fosters a culture of innovation, driving forward its vision for a sustainable and economically vibrant water sector.

WOLL Representative

Juha Kauppinen
Coordinator of Blue Economy
Mikkeli Centre of Excellence

"Together, we are striving for global excellence in the circular economy of water and attracting global expertise and innovation."

FRESHWATER COMPETENCE CENTRE

Rivers Oulanka, Vantaa and Tana, Finland

Geographical scale Regional
WOLL Type Mixed
Year of establishment 2022

WOLL Introduction

The Freshwater Competence Centre (FWCC) is at the vanguard of hydrological and geospatial research in the boreal and subarctic realms, dedicated to unraveling the complexities of water systems from their origins to the sea. As a hub for advancing green and digital transitions in water management, FWCC integrates emerging technologies with traditional knowledge, fostering innovation and education in the water sector. With aspirations to join the European Research Infrastructure Roadmap by 2030 and to craft the first Finnish Living Water Strategic Research and Innovation Agenda by 2025, FWCC is setting the stage for groundbreaking advancements. It offers a robust research infrastructure and a platform for networking and innovation support, aiming to enhance efficiency, attract talent, and stimulate collaboration. Through engagement with a wide array of stakeholders, FWCC is supporting digital representations of water systems, shaping the future of water resource management, and sustainable use of water resources, contributing significantly to global water stewardship efforts.

WOLL Representative

Professor Petteri Alho
Head of Department - University of Turku

"The Freshwater Competence Centre strives to establish itself as the premier hub for scientific research, education, infrastructure development, and the promotion of green and digital transitions in freshwater ecosystems."

HYGLO

Finland

Geographical scale Regional
WOLL Type Mixed
Year of establishment 2023

WOLL Introduction

HYGLO, a Water Oriented Living Lab in Finland, explores the impact of global changes on groundwater resources across nine test sites in varied geological settings, particularly in subarctic and arctic regions. Managed by the Geological Survey of Finland (GTK), HYGLO is a nexus for research on water resource management, groundwater-surface water interaction, and the environmental effects of extreme weather phenomena. This initiative facilitates collaboration with local partners, including water companies, universities, municipalities, and citizen groups, to guide water resources governance.

Equipped with advanced monitoring technologies like observation wells and multiparameter sensors, HYGLO sites provide real-time data through LoRaWAN telemetry. This comprehensive approach supports the development of detailed hydrogeological models and aids in understanding phenomena such as flooding, droughts, and changes in groundwater recharge. As a platform for national and international research projects, HYGLO aims to become a leader in generating actionable insights for the sustainable management of groundwater resources, underscoring the importance of collaboration in addressing global environmental challenges.

WOLL Representatives

Kirsti Korkka-Niemi
Associate Research Professor in Hydrogeology - Geological Survey of Finland

Nina Hendriksson
Group Manager, Water and mining Environment Solutions - Geological Survey of Finland

"HYGLO, with its nine test sites, is an intensively monitored and cumulatively studied living lab where innovative, international research can be conducted in multiple projects together with local partners. It offers a research platform to study phenomes connected to global change."

WATER MANAGEMENT INNOVATION

Ruukki, Finland

Geographical scale Regional
WOLL Type Rural
Year of establishment 2017

WOLL Introduction

Water Management Innovation (WMI) Living Lab, operated by the Natural Resources Institute Finland (Luke), is a beacon of innovation for sustainable agricultural water management in northern climates. Focused on the development and testing of environmentally friendly, socially responsible, and economically viable solutions, the lab exemplifies the integration of advanced sensors and data analytics for smart water management. By analysing real-time data on water quality, quantity, and availability, WMI empowers farmers and businesses to make informed decisions on water use. Luke's Research infrastructure Ruukki demonstrates sustainable water management technologies, the lab hosts tours and workshops for a diverse audience, including farmers, policymakers, industry professionals, and students. This engagement fosters a shared understanding and adoption of best practices in water management, highlighting WMI's role in advancing sustainable agriculture through innovation and collaboration.

WOLL Representative

PhD Maarit Liimatainen
Researcher

"Agriculture with arctic attitude. Successful and sustainable agricultural water management in the future utilizes catchment scale approach and modern technological solutions."

PIREN-SEINE

Paris, France

Geographical scale Regional
WOLL Type R&D
Year of establishment 1989

WOLL Introduction

PIREN-Seine stands as a collaborative research endeavour aimed at understanding the intricacies of the Seine River ecosystem and its interplay with human society. Anchored by Sorbonne Université and CNRS, this collective unites academia and industry to unravel the river's ecological dynamics through advanced modelling, from microscopic bacteria to the fish populations. PIREN-Seine's comprehensive studies inform simulations that predict the river's ecological and biochemical shifts, facilitating holistic water management strategies for the Seine-Normandy basin. This synergy of public and private stakeholders under PIREN-Seine has enhanced local water knowledge, shaping policy and practice.

By championing transdisciplinary research, PIREN-Seine exemplifies the fusion of science and society, continuously enriching our understanding of aquatic ecosystems and guiding sustainable management practices across the region and beyond, setting a precedent for integrative water research in Europe.

WOLL Representative

Gabrielle Bouleau
Director for Phase 9 (2025-2028)

"PIREN-Seine aims to develop a comprehensive understanding of the Seine socio-ecosystem through an advanced and interdisciplinary (soon transdisciplinary) cooperation between the watershed's main operators and researchers."

CANALE REALE RIVER CONTRACT

Brindisi, Italy

Geographical scale Sub-Regional
WOLL Type Mixed
Year of establishment 2021

WOLL Introduction

Facing the dual threats of groundwater overexploitation and salinisation, the Canale Reale river basin represents a critical ecological frontier within the Torre Guaceto natural reserve. The Canale Reale River Contract (CRRC) is pioneering a collaborative approach to sustainable land and water resource management, engaging a broad coalition of stakeholders in a voluntary, negotiated planning process. This initiative seeks not only to protect the fragile coastal wetland ecosystem but also to foster local development through innovative governance models. By marrying public interest with economic, social, and environmental goals, CRRC is crafting new paradigms for regional landscape and agriculture planning. Through its interdisciplinary community, CRRC develops research projects that push the boundaries of traditional water management, advocating for policies and practices that ensure the longevity and resilience of the region's natural resources. This approach underscores the potential for integrated, participatory governance to achieve lasting environmental stewardship and community wellbeing, contributing valuable insights to the broader European discourse on sustainable development.

WOLL Representative

Claudia Campana
CRRC Programme Manager - Apulia Region

"Participatory processes are the only way for a truly shared territorial vision and smooth implementation of measures aiming at more sustainable water management and conservation."

WISE IRRIGATION - WIRRI

North-eastern Italy

Geographical scale Regional
WOLL Type Rural
Year of establishment 2023

WOLL Introduction

In the agricultural heartlands of north-eastern Italy, WIrri represents a groundbreaking collaboration between academia, the farming community, and a wide spectrum of stakeholders. Spearheaded by researchers from the Universities of Padova and Udine, this initiative seeks to elevate water use efficiency in agriculture through climate-smart solutions. WIrri's approach is deeply collaborative, facilitating a dialogue between researchers and practitioners to co-develop and share innovative practices and technologies. By implementing on-farm demonstrations and On-Farm Experimentation (OFE), WIrri bridges the gap between cutting-edge research and practical application, enhancing technology readiness across diverse agricultural settings. Its network spans the regions of Veneto, Friuli Venezia Giulia, and Emilia Romagna, engaging land reclamation authorities, regional bodies, and companies in the irrigation and agrochemical sectors. WIrri's commitment to inclusive stakeholder engagement underscores its role as a pivotal force in advancing sustainable agriculture practices, with implications that resonate at the EU level and beyond, fostering a collective push towards water-wise farming futures.

WOLL Representative

Maurizio Borin
Full Professor in Agronomy and Field Crops - University of Padua

"Irrigation is indispensable to provide food and achieve the Zero hunger target of the 2030 UN Agenda without cropping new lands: better irrigation, less deforestation."

NATIONAL WATER TABLE EWA

Malta

Geographical scale National
WOLL Type Mixed
Year of establishment 2018

WOLL Introduction

The National Water Table EWA serves as a critical forum for advancing the goals of the River Basin Management Plan (RBMP) within the framework of the Water Framework Directive (WFD). Meeting biannually, this platform brings together an array of stakeholders, including government bodies, NGOs, and private sector representatives, to address water management challenges and promote collaborative action towards achieving the WFD's environmental objectives. The initiative plays a vital role in evaluating the progress of the LIFE Integrated Project and other complementary initiatives, ensuring a unified approach to water management across different sectors. Looking ahead, the National Water Table aims to broaden its impact by engaging with more private stakeholders, enhancing cross-sector collaboration, and hosting consultations to tackle key implementation challenges. This evolving forum exemplifies the power of collective engagement in shaping a sustainable water future, reflecting a broader commitment to environmental stewardship and collaborative governance.

WOLL Representative

Rachelle Riolo
Senior Policy Officer (Water)

"The protection and conservation of our natural water resources today is becoming increasingly urgent as our actions today will shape our future. Together through WOLLS, we can contribute to a better future and make this happen."

LISBON WATER SMART LIVING LAB

Lisbon, Portugal

Geographical scale Municipal
WOLL Type Urban
Year of establishment 2020

WOLL Introduction

The Lisbon Water Smart Living Lab represents an ambitious initiative aimed at enhancing the quality of life in Lisbon, in the face of climate change challenges such as droughts, heatwaves, and floods, through innovative green-blue infrastructure solutions. Central to its mission is the enhancement of the city's water-smartness, achieved by optimising water demand/supply management for non-potable uses and fostering water-energy-phosphorus efficiency alongside climate-resilient housing.

This initiative is the brainchild of a consortium led by Lisbon Municipality, with partners including LNEC, Águas do Tejo Atlântico, ADENE, Lisboa e-nova, Baseform, and ICS-UL, alongside a broad community of practice. Lisbon Water Smart Living Lab's strategy encompasses strategic, governance, and social frameworks, along with digital tools and technological solutions, to advance water circularity. Notably, its strategic agenda and the deployment of digital tools for safe water reuse mark significant strides towards sustainable urban water management. Moreover, the establishment of an urban water cycle observatory and the introduction of a climate-readiness certificate for buildings are indicative of Lisbon's proactive approach to engaging stakeholders and ensuring long-term sustainability. With ongoing innovation actions and EU missions, Lisbon Water Smart Living Lab is poised to continue its trajectory towards a water-smart future, serving as a model for urban centers globally.

WOLL Representative

Catarina Freitas
Municipal Director for Environment, Green Infrastructure Climate and Energy - Municipality of Lisbon

"Water reuse can help reduce pressure on strategic freshwater resources, support the transition to increased water security, and manage water-related risks through strong, long-lasting partnerships between researchers, technology developers and users."

SOUTH AFRICAN SANITATION TECHNOLOGY ENTERPRISE PROGRAMME (SASTEP)

Pretoria, South Africa

Geographical scale National
WOLL Type Mixed
Year of establishment 2018

WOLL Introduction

SASTEP stands at the forefront of South Africa's efforts to revolutionise sanitation, embodying a vision to reinvent the sanitation industry, create economic opportunities, and establish the country as a global leader in alternative sanitation technologies. Supported by the Water Research Commission, the Department of Science and Innovation, and international partners like the Bill and Melinda Gates Foundation, SASTEP is a beacon of innovation within the national system of innovation (NSI). Its objectives are multifaceted, aiming to showcase local and international sanitation technologies, integrate the emerging sanitation sector into the national economy, and facilitate partnerships between commercial entities and investors. Looking forward, SASTEP aspires to industrialise safe sanitation technologies, fostering industries that not only contribute to the GDP but also ensure access to dignified, environmentally friendly sanitation for all South Africans. This initiative exemplifies a proactive, collaborative approach to addressing sanitation challenges, promising significant impacts on public health, environmental sustainability, and economic development.

WOLL Representative

Akin Akinsete
SASTEP Manager

"SASTEP aims to increase the number of solutions for safe sanitation products and works with partners to advance technologies and innovations from development through demonstration to adoption."

CATALAN WATER PARTNERSHIP

Girona, Catalonia, Spain

Geographical scale Regional
WOLL Type Mixed
Year of establishment 2008

WOLL Introduction

The Catalan Water Partnership (CWP) epitomises a collective endeavour towards the sustainable use of water, established in 2008 as a non-profit entity uniting a diverse spectrum of stakeholders across the water value chain. This strategic association includes consultancies, knowledge centers, equipment manufacturers, utilities, public entities, end-users, and academic institutions, all dedicated to advancing sustainable water practices. CWP's core offerings encompass SME support, networking, R&D funding access, visibility enhancement, matchmaking, training, cross-sectoral collaboration, support in internationalisation, and specialised working groups. CWP's ambition extends to forming strategic alliances globally to elevate the water sector's stature on the international stage, facilitating the adoption of cutting-edge technologies for water quality and quantity assurance for various end-users. Key future initiatives include bolstering the growth and global competitiveness of the Catalan water industry, fostering innovative and sustainable solutions to meet worldwide water needs, and promoting research, development, and member competitiveness. CWP's strategy is anchored in end-user engagement, leveraging a robust network for international collaboration, emphasising digitalisation and the circular economy, and driving innovation, particularly through SMEs, across borders and sectors.

WOLL Representative

Lucia Gusmaroli
European Projects Area Manager

"Climate change poses increasingly complex water-related challenges: we must seek alliances within the water sector and beyond to overcome shared environmental challenges and achieve a sustainable water management."

DESAL+ LIVING LAB

Las Palmas, Canary Islands, Spain

Geographical scale International
WOLL Type R&D
Year of establishment 2017

WOLL Introduction

In the face of increasing water scarcity, DESAL+ Living Lab ® emerges as a vital initiative, dedicated to pioneering sustainable desalination technologies. By integrating advanced maintenance, automation, big data, AI, and innovative approaches to membranes and pre-treatment, DESAL+ Living Lab ® is at the forefront of addressing the pressing challenges of water scarcity in its geographic context. The lab's commitment to the desalinated water-energy nexus, circular economy principles, green chemistry, and emerging technologies underscores its holistic approach to sustainable desalination. Offering a suite of services including project collaboration, access to technological data, consultancy, training, and testbed facilities, DESAL+ enables stakeholders to engage with cutting-edge desalination solutions. Looking to future growth, the lab aims to enhance governance and funding structures, adopting a pan-European perspective and exploring opportunities in Africa and Latin America. Aligned with the Atlantic Strategy, EU Digital Strategies, and Sustainable Development Goals, DESAL+ Living Lab ® activities underscore a global commitment to innovative water management solutions. This effort not only addresses the critical issue of water scarcity, but also fosters economic value and job creation, demonstrating the transformative potential of sustainable desalination on a local and global scale.

WOLL Representative

Baltasar Peñate Suárez
Technical coordinator

"A fully-equipped public-private research and innovation desalination hub located in the Canary Islands opens to develop, test and validate water desalination solutions."

SUSTAINABLE DESALINATION LIVING LAB

Almería, Andalucía, Spain

Geographical scale Regional
WOLL Type Mixed
Year of establishment 2022

WOLL Introduction

In the semi-arid landscapes of Almería, Eastern Andalucía, the challenge of water scarcity contrasts sharply with its thriving agriculture and tourism. The Sustainable Desalination Living Lab spearheads efforts to revolutionise the water-energy-food nexus, focusing on decarbonising desalination processes while pioneering circular economy practices through brine valorisation. This initiative harnesses the combined expertise of CIEMAT (Plataforma Solar de Almería) and CIESOL in solar desalination and material recovery from seawater, alongside the Provincial Council of Almería and the Central Board of Users of the Aquifers, incorporating farmers and municipalities for real-world application.

The WOLL is a crucible of innovation, where piloting and demonstrating cutting-edge technologies meet the collaboration of a diverse Community of Practice. This coalition spans academic, industrial, and governmental spheres, ensuring comprehensive stakeholder engagement. Aiming beyond technological advancement, the lab seeks to implement sustainable water resource management strategies, offering added value certifications to bolster the agriculture and tourism sectors. As it eyes expansion, the Sustainable Desalination Living Lab envisions sharing its model and fostering international cooperation with similar regions and Water Oriented Living Labs, positioning itself as a global leader in sustainable desalination solutions.

WOLL Representative

Guillermo Zaragoza
Director

"To improve the water-energy-food nexus, SUSDESA LL aims to implement a strategic management of new sustainable water resources that can be certified as an added value for agriculture and tourism."

ZINNAE

Zaragoza, Aragón, Spain

Geographical scale Regional
WOLL Type Mixed
Year of establishment 2010

WOLL Introduction

ZINNAE, the Cluster for the Efficient Use of Water, stands as a beacon of progress in the efficient use of water, driving forward solutions to ensure water security and resilience across rural, urban, and industrial landscapes. As a non-profit association, it embodies the principles of the circular economy and a smart society, focusing on enhancing the innovation capacity of its members and the broader region. The essence of ZINNAE's work lies in fostering a vibrant ecosystem of collaboration, facilitating cross-regional and cross-border partnerships, and nurturing synergies within the water sector at local, national, and European levels. The organisation is deeply rooted in a multi-stakeholder approach, involving academia, industry, businesses, public administration, and citizens, all aimed at advancing water-related innovations. By supporting water SMEs, enabling connections among water stakeholders, and identifying funding opportunities for innovation, ZINNAE catalyses market uptake and project continuity. Its efforts in promoting cross-sectoral collaboration and R&D projects contribute significantly to environmental conservation, economic collaboration, and the development of resilient, value-added solutions for water management, reflecting a comprehensive model for sustainable water stewardship.

WOLL Representative

Marisa Fernández
Cluster Manager

"Our purpose is to facilitate the connection between Q-helix stakeholders and especially between end-users and solution providers to promote the development of innovative solutions and facilitate their market uptake."

BLUEARK

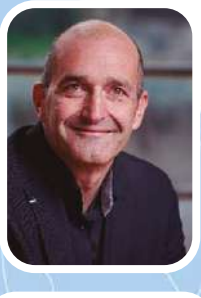
Le Châble,
Verbier - Switzerland

Geographical scale Municipal
WOLL Type Rural
Year of establishment 2018

WOLL Introduction

Nestled in the Swiss Alps' Valais region, BlueArk Entremont emerges as an avant-garde, open-air laboratory focused on pioneering water sector innovation. Born from the collaboration between local municipalities, the canton of Valais, and supported by Altis, an industrial partner, BlueArk is a crucible for start-ups and innovators striving to overcome water and climate change challenges. With a mission to fast-track the development of practical, innovative, and cost-efficient solutions, BlueArk plays a critical role in environmental stewardship and local stakeholder education. This Alpine hub envisions expanding its reach to include other Alpine territories, fostering a broader network of innovation and application. By facilitating pilot projects and new solutions in water management, BlueArk Entremont positions itself as a beacon of inspiration and action in environmental sustainability and community resilience. It stands as a testament to the power of collaboration, bridging local insights with regional aspirations, to address pressing water management issues, underlining the importance of adaptive, forward-thinking approaches in tackling environmental challenges.

WOLL Representative



Laurent Horvath
Deputy director

"BlueArk aims to transform water management with innovative solutions, striving for a sustainable and inclusive future for communities."

WATER CAMPUS LEEUWARDEN

Leeuwarden, The Netherlands

Geographical scale Sub-Regional
WOLL Type Mixed
Year of establishment 2003

WOLL Introduction

Water Campus Leeuwarden stands as a pioneering ecosystem within Europe, dedicated to fostering cooperation among companies, universities, and research organisations in water research and innovation. At its core, it thrives on the synergy between Wetsus, CEW, Water Alliance, and a network that encompasses the City of Leeuwarden, the Province of Fryslan, CIV, and WAC. This collaborative framework has successfully engaged over 300 companies, including SMEs, larger corporations, research entities, and ecosystem actors, all unified in their commitment to water technology advancements.

The campus excels in providing a comprehensive range of support for demonstration, testing, and pilot initiatives, underpinned by living labs that embody the spirit of co-creation within this vibrant water technology community. These labs, strategically located near technical expertise and facilities, are instrumental in exploring the water-energy-food nexus, circular reuse, and the smart management of resources. By maintaining an open ecosystem, Water Campus Leeuwarden facilitates innovations across all technology readiness levels (TRLs), making it a cornerstone for water-related research and development in Europe.

WOLL Representative

Pieter de Jong
EU Representative for Watercampus - Liaison Officer

" The importance of water is increasing. And another part is we hope that through Water4all we can achieve a lot more with the living labs. Long-term collaboration commitment is key."

COLOPHON

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