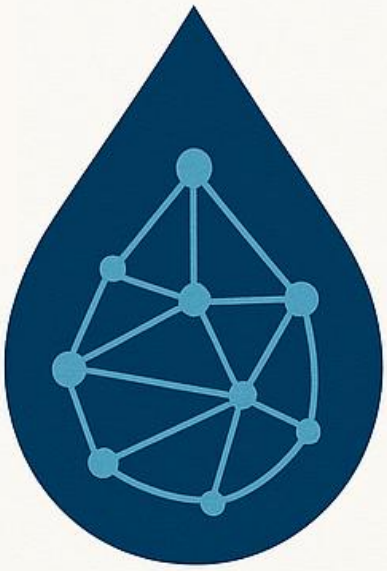
Webinar on

AI-Driven Digital Water Systems: Strategic Digital Governance and Policy in a WEFE Nexus approach



Wednesday, 11 March 2026
09:30-11:45 CET
ONLINE

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ZOOM LINK

Background:

Digitalization for natural resources management refers to the strategic adoption and integration of conventional and innovative digital policies and technologies in sectoral and cross-sectoral domains that contribute to sustainable development objectives. Digital solutions, like Artificial Intelligence (AI), can provide substantial benefits to water management as well as to the management of interconnected systems of Water-Energy-Food-Ecosystems (WEFE) in a Nexus approach applied at the Mediterranean Source to Sea continuum. Digital transformation for introducing such solutions at all levels involves, among others, leveraging advanced digital tools, data analytics, innovative technologies and related governance and managerial approaches to optimize the efficiency, sustainability, and resilience of related resources.

The Union for the Mediterranean (UfM) agenda prioritizes the Digital Transformation of the Water Sector, with a strong emphasis on Strategic Planning and Capacity Development. Closely aligned with the objectives set forth towards the 2nd UfM Ministerial on Water, this strategic initiative seeks to leverage digitalization technologies and innovative solutions to enhance water management, improve operational efficiency, and foster greater resilience in water resources. Based on these, the UfM Regional Platform on Water (UfM RPW) approved at its 15th Meeting (5-6 November 2025, Barcelona), welcomed the related Strategic Framework Report and adopted its recommendations.

Furthermore, a regional consultation process is ongoing, aiming to promote digital transformation for advancing WEFE Nexus in the Mediterranean, particularly under evolving climate change impacts. After defining the consultation content and establishing the core cooperation team (February 2024/Tunis), the process included so far two Regional Roundtables (Lisbon/June 2024 and Malta/February 2025). The consultation includes the identification of related Strengths, Weaknesses, Opportunities, and Threats (SWOT). Based on these, recommendations are being developed for promoting digital transformation as a contribution to the upcoming Action Framework of the 'Strategy on WEFE Nexus in the

Mediterranean Source to Sea continuum'.[1] This science-driven consultation involves regional and national decision makers and stakeholders in a Living Lab approach. It is facilitated by the PRIMA ACQUAOUNT, TALANOA-WATER and H2020 TRANSCEND projects, in service of and with the support of UfM and other institutional partners. The process is also supported by the WEFE Nexus Community of Practice in the Mediterranean that is facilitated by the PRIMA WEFE4Med project. A milestone 3rd Regional Roundtable of the process will take place on 23-24 March 2026, in Rome, also serving as the final event of the PRIMA ACQUAOUNT project.

In this context, the Webinar will contribute to sharing best practices with emphasis on AI and seek feedback to guide further action. It will also align the related technical work lines and regional consultations by providing updates and advancing steps towards establishing a related thematic work line within the WEFE Nexus Community of Practice. The Webinar contributes to the 6th Euro-Mediterranean Water Forum (29 September–2 October 2026, Rome).

The Webinar is part of a series of consultations and capacity building activities and follows up the Webinar on 'AI-driven digitalization solutions for Water and WEFE Nexus in the Mediterranean' organized on 30 June 2025. It is organized within UfM and PRIMA in synergy with GWP-Med and IME. HYDROC GmbH provides technical content. The activity is supported by the Swedish International Development Cooperation Agency (Sida).

Objectives:

- Strengthen institutional readiness for digital transformation and AI adoption in the Water sector, including within an integrated WEFE Nexus approach in the Mediterranean Source to Sea continuum.
- Understand governance implications of AI.
- Explore financing mechanisms and regulatory frameworks that support sustainable AI integration.
- Discuss strategic approaches to managing both online and offline AI systems (e.g., GPT OSS).
- Equip participants to design digital water strategies aligned with ethical, legal, and financial safeguards, within a WEFE Nexus approach in the interlinked spatial dimensions from the source to the sea.

Expected webinar outcomes:

- Understand the governance requirements for integrating AI technologies into national and institutional water management frameworks in a WEFE Nexus approach.
- Recognize the implications of offline versus cloud-based AI systems, including issues of data sovereignty, security, and operational control.

[1] The Strategy was adopted by the 15th Meeting of the UfM Regional Platform on Water (5-6 November 2025, Barcelona), and is part of the Mediterranean Strategy for Sustainable Development (MSSD, 2026-2035) Flagship Initiative which was adopted at the 24th Conference of the Parties (COP24) of the Barcelona Convention (2-5 December 2025, Cairo)

- Identify key components of institutional readiness, such as digital literacy, change management, and internal coordination mechanisms.
- Gain familiarity with the main legal and regulatory aspects of AI use in public institutions - from data ownership to accountability and transparency
- Receive updates on progress and next steps in digital transformation for the WEFE Nexus.
- Provide input to engagement mechanisms and priority topics for a thematic group on Digital Transformation for Water and WEFE Nexus within the WEFE4Med Community of Practice.

Participants:
Representatives from Mediterranean member states, including:

- National water and other (energy, agriculture, environment, international cooperation) ministries and related regulatory authorities
- Water utilities and basin agencies
- ICT and cybersecurity departments
- Academic and research institutions
- Regional and national stakeholder organizations and practitioners
- Private sector entities involved in water management and technology
- Development partners and donors

Agenda **All times presented are in Central European Time**	
Time (CET)	**Session/Topic** ***Presentations will be followed by brief Q/A/. For time efficiency, participants are requested to share their questions in the chat***
09:30-09:50	**Opening session** ***Speakers: Frederic de Dinechin, UfM, Represenative of PRIMA, Alain Meyssonnier, Institut Méditerranéen de l'Eau (IME), Vangelis Constantianos, Global Water Partnership-Mediterranean (GWP-Med)*** • The importance of digital governance and policy for sustainable AI in the water sector in a WEFE Nexus in the source to sea continuum approach
09:50-10:10	**Institutional readiness for AI adoption** ***Speaker: Dr. Georg Petersen, HYDROC GmbH*** • Assessing organizational capacity for AI deployment • Integrating AI into existing institutional structures • Change management and workforce digital literacy • Balancing central control with innovation flexibility
10:10-10:45	**Legal and regulatory frameworks for AI and data use** ***Speaker: Dr. Georg Petersen, HYDROC GmbH*** • Legal implications of AI: ownership, liability, and data rights • Governance for AI systems (auditability, transparency) • Locally deployed vs cloud-based AI systems • National data protection laws and international standards

10:45-10:55	**Data protection frameworks in digital water systems** ***Speaker: Cristi Constantin, HYDROC GmbH*** • Offline AI deployment for data-sensitive environments • Building resilience: encryption, redundancy, response plans • Compliance with GDPR and national cybersecurity frameworks
10:55-11:15	**AI financing and policy instruments for digital water strategies** ***Speaker: Cristi Constantin, HYDROC GmbH*** • Financing digital and AI transitions in water utilities • Leveraging international funding • Structuring PPPs for digital infrastructure • Long-term cost-benefit frameworks for AI adoption
11:15-11:25	**Strategic digital water governance: from vision to implementation** ***Speaker: Dr. Georg Petersen, HYDROC GmbH*** • Aligning AI projects with national digital strategies • Coordination between ministries, regulators, and utilities • Case study: successful institutional integration of AI tools • Governance lessons from early adopters
11:25-11:30	**Overview of the next training modules** ***Speaker: Dr. Georg Petersen, HYDROC GmbH*** • **Module B:** Foundations of digital water systems (sensors, SCADA, telemetry, real-time data, data backbone for AI/ML). • **Module C:** AI-driven analytics and decision support (cloud databases, GIS, open-access platforms like Google Earth Engine for hydrological analysis). • **Module D:** Emerging technologies for the water sector (digital twins, AI-powered leak detection, computer vision, smart irrigation, blockchain, cost reduction, resilience). • **Module E:** Operations, maintenance, and cybersecurity in the digital era (predictive maintenance, digital asset management, field digitization, cybersecurity threats, data protection). • **Module F:** Case studies and practical applications (real-world examples, scenario-based simulations, reviewing successful AI implementations in the water sector)
11:30-11:45	**Closing session and next steps** ***Speaker: Frederic de Dinechin, UfM, Represenative of PRIMA, Alain Meyssonnier, IME, Vangelis Constantianos, GWP-Med*** • Brief summary of webinar conclusions • Closing remarks