

19th - 23rd May 2025
Parma, Italy



Implementation of EU Water Directive (WFD) at the level of national & transboundary basins: The Interest of Integrating Water, Energy, Food, and Ecosystems

Inviting authorities:



In partnership with:



(FOR THE WATER RESILIENCE &
ECOSYSTEMS WORKSHOP)



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I. Introduction



4
days



220
on-site
participants



3
cultural and
technical visits



3
interactive workshops



37
countries

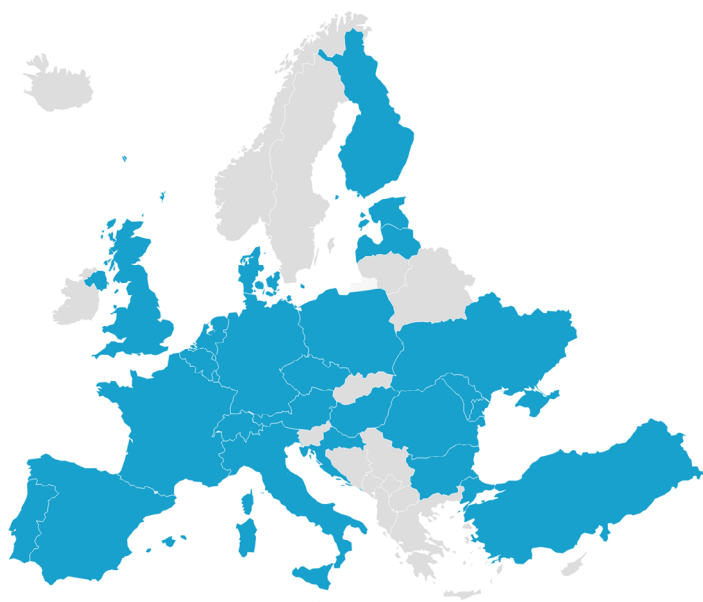


3
languages : English,
French, Italian



5
thematic sessions

European Countries:



Other Non-European countries: Algeria, China (People's Republic), Egypt, Guinea, India, Israel, Morocco, Tunisia (interested in testing and adapting tools and methodologies of the Water Framework Directive for basin management).

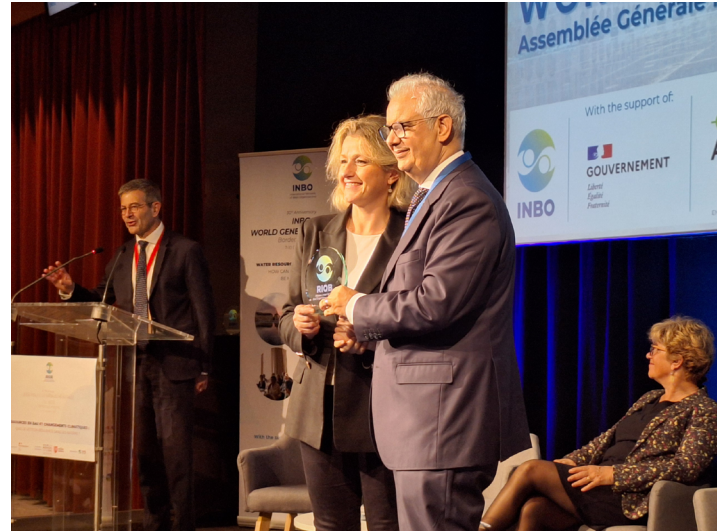
The EURO-INBO presidency was handed over from Spain, represented by Mr. Ramiro Martinez, Coordinator of the Mediterranean Network of Basin Organizations (MENBO), to Italy, represented by Mr. Alessandro Bratti, Secretary General of the Po River District Basin Authority.

II. Discussion panel on current EU policies related to basin management

The panel emphasized a strategic shift in EU water governance, marked by the upcoming European Water Resilience Strategy (EWRS), which aims to adapt basin management to climate change and integrate it across sectors: agriculture, industry, urban planning, and biodiversity. Mr. Joachim D'Eugenio, Policy Adviser for Zero Pollution, Water Resilience & Green Urban Transition at the Directorate-General for the Environment (DG ENV) of the European Commission underlined the evolution from the Water Framework Directive (WFD) toward systemic, cross-sectoral resilience, focusing on implementation, innovation, and international cooperation.

National representatives echoed the urgency. France stressed territorial specificity, reduction of withdrawals, and source pollution control, while highlighting nature-based solutions and water as a pillar of ecological stability. Portugal emphasized efficiency, reuse, and governance reform to combat chronic drought. The Rhine-Meuse basin promoted “no-regret” ecological solutions and multi-benefit approaches like wetland restoration. Spain’s Segura Basin advanced desalination and wastewater reuse to confront structural water deficits.

Wetland conservation was positioned as central to resilience. Dr. Musonda Mumba, Secretary General of the Convention on Wetlands (Ramsar) advocated for restoration laws and improved urban wetland integration. Dr. Li Lifeng, Director of the Land and Water Division at the Food and Agriculture Organization of the United



Nations (FAO) warned of weak integration between agriculture and water governance, calling for stronger intersectoral dialogue at the basin level.

Panelists broadly agreed that the 2027 WFD good status objective is a milestone, not a finish line, and that maintaining ambition is critical despite varied progress. EU’s basin management approach must remain adaptive, inclusive, and globally aligned to address rising climate and pollution pressures. Joachim D'Eugenio (EC) concluded that innovation is essential for the European Water Resilience Strategy, and sustainable development depends on our ability to separate resource consumption from prosperity.

[Detailed report](#)



Mr. Joachim D'Eugenio, Policy Adviser for Zero Pollution, Water Resilience & Green Urban Transition, Directorate-General for the Environment (DG ENV), European Commission

“European Water resilience Strategy is launching debate for next generation of water management in Europe”



Dr. Musonda Mumba, Secretary General, Convention on Wetlands (Ramsar)

“Wetland ecosystems are nature’s most effective water managers”

III. Thematic sessions

A. Session 1 - Towards more water-efficient agriculture for more resilient food security: Water-Energy-Food-Ecosystems (WEFE) nexus approach



This session highlighted that agriculture is both vulnerable to and a major player in managing the water challenges posed by climate change and increasing demand. The problems are complex, ranging from physical water stress and direct climate impacts to structural, political, and governance barriers. These problems are exacerbated by climate change. The solutions presented by the speakers show a range of actions from technological modernization and diversification of water sources to more profound changes in landscape management and agricultural practices. A holistic approach to achieving sustainable water use appears essential.

This means that the agricultural sector must fulfill its productive functions while preserving and improving the state of water, air, and biodiversity. Recommendations converge on the need for a vision of structural change, improved water governance based on integrated basin-level approaches, appropriate incentives, and adequate support to enable a long-term shift towards more water-efficient and resilient agriculture. The experience of different regions, different basins and the FAO highlights that cooperation, innovation (technical and in practices), and political will are essential to achieve sustainable food security within the WEFE nexus.

[Detailed report on session 1](#)



Ms. WANG Han, Engineer, River Basin Planning & Policy, Research Center, Songliao River Water Resources Commission, Ministry of Water Resources of the People's Republic of China

“Improving agricultural water efficiency cannot rely on single-point technological breakthroughs. Instead, it requires adherence to a systemic, collaborative, and strategic perspective”



Mr. Ernst Überreiter, Directorate General I - Water Management, Federal Ministry of Agriculture and Forestry, Climate and Environmental Protection, Regions and Water Management, Austria

“Variations in the water cycle due to climate change are affecting all sectors. Therefore an integrated approach and collaboration with water as a cross-cutting issue to be considered in all relevant political decisions are needed to solve future water challenges.”

B. Session 2 - Adapting to climate change: how to better manage and prevent floods?



This session highlighted the need to manage floods through long-term planning rather than emergency response, presenting solutions to five key challenges.

While the cost of inaction is immense, investment in prevention is still insufficient. Italy spends around €3 billion annually on flood damage but far less on prevention. In contrast, the Netherlands invests €1.6 billion per year in proactive flood protection, illustrating the long-term benefits of consistent funding.

Integrating hydroclimatic data and forecasting is essential to reflect changing flood patterns. Efforts to harmonize early warning systems across countries, while preserving national flexibility, are already underway in the Sava and Danube transboundary river basins.

Effective flood management requires coordination across sectors and borders. In France, water committees help build trust and consensus among water users. The Sava River Basin Commission enables neighbouring countries to jointly forecast floods and coordinate planning.

While grey infrastructure, such as levees, remains important, it is increasingly evident that their capacity to cope with a greater frequency and intensity of floods must be supplemented by nature-based solutions (NBS). Floodplain restoration, for example, helps to manage extreme weather events while improving water quality and biodiversity.

Past land-use choices—urban sprawl on floodplains and river straightening—have increased our vulnerability to floods. However, restoring space for rivers often requires land acquisition, affecting farmers and residents. Speakers stressed that financial incentives and dialogue are more effective than legal coercion.

Overall, to evolve beyond crisis response, managing floods requires long-term vision, shared responsibility and sustained funding.

[Detailed report on session 2](#)



Ms. Laura Sustersic, Project Director of “Support to Ganga Rejuvenation”, German Agency for International Cooperation (GIZ)

“Floods aren’t just emergencies to control—they’re part of how rivers naturally behave. We must recognise this in how we plan and manage our river systems.”



Mr. Miguel Polo Cebellán, President of the Júcar Hydrographic Confederation (CHJ)

“Reducing flood risk isn’t just about preventing floods—it’s about limiting the damage. That means rethinking where we build and encouraging relocation from flood-prone areas.”

C. Session 3 - Adapting to climate change: how to better manage and prevent droughts?



This session addressed the pressing issue of adapting to climate change, focusing on drought risk prevention and management across European and Mediterranean regions. The panel highlighted how climate change is intensifying extreme events (droughts, floods, heatwaves), reducing water availability, increasing water demand and stressing natural ecosystems and economies alike. Presentations covered diverse geographic contexts—from France and Bulgaria to Malta and Poland—revealing both shared vulnerabilities and tailored responses.

Speakers emphasized the importance of integrated planning at river basin scale, nature-based solutions (NBS), and the use of data-driven models to inform policy. Representatives from Spain, Malta and Italy explained that their countries have been facing water stress for several decades already. They have showcased some of their successful drought planning, stakeholder engagement and coordinated governance. Drought is no longer a phenomenon affecting only Southern European countries: now all European regions are impacted. A combination of different solutions is required to meet the water demand, working on water

use efficiency is not enough. Technological innovations, reuse of treated wastewater and ecological restoration emerged as strategic measures, alongside calls for improved water storage, intersectoral policies, and financial investments. Concerns were raised about outdated legal frameworks, fragmented EU policies and sectoral governance structures, highlighting the need for systemic reform.

The session concluded with a shared message: building water resilience requires cross-border and inter-sectoral cooperation, strong local institutional governance, sustained public involvement and shared science-based knowledge. The urgency of climate adaptation can only be matched by efficient intersectoral governance, coherent policies, management based on scientific and local knowledge, and the implementation of measures combining demand efficiency and water resources mobilisation, supported by nature when possible.

[Detailed report on session 3](#)



Ms. Elodie Galko, Director General, Adour-Garonne Water Agency (AEAG), France

“Adapting to climate change means acting faster and harder, starting today, to reduce a region’s vulnerability, particularly where problems are likely to be most acute.”

D. Session 4 - Towards the good ecological status: fighting emerging pollutants with innovative solutions



This session brought together different perspectives on how to tackle the growing challenge of emerging pollutants in Europe and beyond. While the ambition to reach good ecological status is shared, the tools, contexts, and levels of maturity vary widely.

Mr. Bernard De Potter, General Administrator of the Flemish Environment Agency (VMM) of Belgium offered a comprehensive look at Flanders' response to PFAS contamination, illustrating how a crisis triggered the development of a coordinated action plan and new governance structures. He pointed to the need for innovation in both policy and practice.

Fernanda Moroni (Po River Basin Authority/ ADBPo) highlighted the link between extreme weather events and pollutant

distribution. She emphasized the value of local projects like Manta River and ACQUAPO, which aim to deepen understanding of microplastics and emerging micropollutants.

Benjamin Lopez introduced the Water4All partnership and its attempt to close the gap between research and implementation. He stressed the need for stronger science-policy interfaces.

Other contributions, like those from Ukraine and Lake Geneva (CIPEL), underscored either the institutional complexity of cross-border water management or the fragility of monitoring systems in conflict zones. While some basins are testing cutting-edge tools, others are just building foundational systems — but all are grappling with the same invisible threats in different ways.

[Detailed report on session 4](#)



Mr. Bernard De Potter,
General Administrator, Flemish Environment Agency (VMM), Belgium

“The treatment of PFAS (and other emerging substances) continues to evolve with ongoing research and optimization of current technologies”



Mr. Benjamin Lopez, Water4All Partnership CEO & Scientific Officer, Environment, Ecosystems, Biological Resources Department, French National Research Agency (ANR)

“We need to act on all fronts... transfer research results to policy; connect problem owners with solution providers”

E. Session 5 - Restoring free flowing rivers for humans and biodiversity: synergies with the WFD



European rivers have become highly fragmented due to the widespread presence of artificial barriers and the alteration of natural floodplains. This fragmentation has led to significant ecological impacts, including the loss of river connectivity, degradation of habitats, and a decline in biodiversity. While many barriers are obsolete, their removal presents a major opportunity for restoration. Key EU frameworks—like the Water Framework Directive (WFD), the EU Biodiversity Strategy, and the Nature Restoration Law (NRL)—emphasize the importance of restoring 25,000 km of free-flowing rivers. However, operational criteria and practical metrics are still needed.

Restoring free-flowing rivers requires strong scientific grounding in hydromorphology and ecology, full stakeholder engagement, policy coherence, and increased funding. Although benefits are well recognized, restoration investment is still limited. Raising public awareness and integrating restoration into River Basin Management Plans (RBMPs) and related policies are essential for scaling action. With coordinated efforts, river restoration can become a standard practice for ecological transition and societal resilience.

Case studies from Finland, Spain, Italy, France, and the Rhine basin show progress

through dam removal, fish passes, habitat restoration, and stakeholder cooperation. Finland's NOUSU program and the Po River project in Italy illustrate large-scale efforts with measurable results. Reconciling divergent societal goals takes time and requires discussion, but is feasible with combining voluntary and regulatory measures, partnership and co-operation. The Rhine's transboundary approach has restored hundreds of kilometers of connectivity and inspired global strategies. France emphasizes public engagement and knowledge sharing, while Spain demonstrates urban and rural restoration successes. India's Ganga River project highlights how EU approaches like integrated basin management can be adapted globally.

Major challenges include conflicting land use, lack of public awareness, and slow investments. However, restoration brings significant ecological and societal benefits, such as climate resilience and flood mitigation. A shared, integrated approach—based on cooperation, local adaptation, and long-term planning—is essential to meet restoration targets and foster a healthier riverine future across Europe and beyond.

[Detailed report on session 5](#)



Ms. Martina Bussetti, Head of unit, Italian National Institute for Environmental Protection and Research (ISPRA)

"The Nature Restoration Regulation provides a great opportunity to boost River restoration measures within the RBMP and the role of River Basin Authorities"

IV. A few words on the workshops

A. GOVAQUA on transition pathways to sustainable and equitable water governance in Europe



As part of its third EURO-INBO workshop, GOVAQUA gathered over 100 participants from Europe and beyond to explore transition pathways for water governance. The session introduced key concepts, shared case studies from across Europe, and fostered lively interaction on how governance innovations—legal, financial, participatory, and digital—can support sustainable and equitable water use in Europe.



B. Water4All



The EURO-INBO conference hosted the Water4All workshop, «Addressing EU Water Directive Governance Gaps: Solutions for Stakeholder Engagement,” which focused on identifying actionable solutions to support the implementation of the Water Framework Directive through better stakeholder involvement and policy alignment.

During the first part of the workshop, Benjamin López, the CEO of Water4All, presented the partnership’s mission to bridge the gap between research and policy. Other members of the partnership then presented the efforts of the Policy Support Working Group to address implementation gaps, as well as the strategic approach developed to align regional, national, and EU-level research and innovation (R&I) agendas. Then the Canale Reale River Contract (Puglia), an Italian case study, showcased practical



examples of stakeholder engagement and was commented on by the Val d’Orcia Water-Oriented Living Lab (Tuscany). This example illustrated successes and challenges in local water governance.

During an interactive session, participants proposed ideas for improved engagement, such as empowering youth, encouraging peer learning, and fostering local ownership. Insights from the workshop will inform Water4All’s forthcoming implementation guidelines.



The 'Water resilience and ecosystems' workshop brought together around a hundred participants to discuss the resilience of water and ecosystems. This workshop, co-organised with the ADBPo, in partnership with UNESCO and the French Office for Biodiversity, provided an opportunity to discuss some of the levers that promote water resilience. Two main themes were addressed through presentations and small-group discussions. The first theme concerned governance and collaboration, notably through UNESCO's Man and Biosphere Programme (MAB), which sees Biosphere Reserves as "open-air laboratories" for experimentation and stakeholder involvement. The second theme dealt with the integration of cutting-edge technological solutions (such as water reuse, desalination, filtration technologies or the digitalisation of water management)

with nature-based solutions, highlighting their complementarity for optimum resilience. Numerous exchanges between participants highlighted certain difficulties and solutions for improving the resilience of water in catchment areas, as well as sharing experiences.

V. INBO in brief

Year of creation: 1994

Status: Non-profit association under French law

Main Objective: Support all initiatives for the organization of Integrated Water Resources Management (IWRM) at the river basin level, whether national or transboundary, to reconcile economic growth, social justice, environmental protection, water resource conservation, and civil society participation.

Organization: This knowledge exchange platform is managed by its President and the Liaison Bureau, which organizes the permanent technical Secretariat provided by the International Office for Water (OiEau). Its General Assembly takes place every three years. Since the 2019 General Assembly, Morocco has held the RIOB Presidency, through 2024.

Actions: Experience exchange, partnerships, and events (with the OECD on water governance, with the UNECE on transboundary cooperation and climate adaptation). Providing the expertise of the permanent technical Secretariat (technical and institutional support, training, data, and information systems).

Network: 192 Member Organizations (river basin organizations, government agencies responsible for water, bi- or multilateral cooperation organizations) and Permanent Observers in 88 countries.

Implementation

8 regional networks to strengthen the ties between neighboring Member Organizations, develop collective activities in the region, and organize joint initiatives of general interest.

SAVE THE DATE

INBO invites you to its

2026

WORLD BASIN SUMMIT

**15th to 19th June - Rio de Janeiro
BRAZIL**

