

The Road to Bari Framework

Knowledge and solutions for
water challenges



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DRIVING CHANGE MANAGEMENT IN THE ERA
OF DIGITAL WATER AND GLOBAL TRANSITION

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Facing the great water challenges of our times

The populations and environments of our world's cities and river basins face rising water-related challenges. This demands fit-for-purpose solutions and innovations based on the best available science and arising from the collective global knowledge of the world's solutions community. The priority challenges and solutions include:

- Climate change adaptation and mitigation
- Resilience to water hazards and disasters
- Energy transition, food security, and nature

Across all of this is today's digital reality - almost all the world's data (90%) has been produced in the last two years. This unprecedented explosion of data, the availability of sensors and computing power supported by communication networks, means that digitalisation and emerging technologies such as artificial intelligence will shape the way that water is managed, delivering much needed productivity gains, water savings and operational efficiencies.

Water engineering underpins and impacts almost every aspect of our lives. It gives rise to options and solutions for improved policy settings, economic growth, as well as physical, social and environmental well-being as we strive for global water security. As countries accelerate the implementation of Sustainable Development Goal 6 (SDG6), the most critical and the costliest solutions all involve water infrastructure, technologies and innovations. It is estimated that water infrastructure alone will require most countries to invest 1-2% of national GDP over the period 2015-2030.



Decision-makers, practitioners, innovators, researchers and scientists are duty-bound to stay abreast of the wider context, future trends, and be able to understand and deliver the most appropriate solutions.

The Road to Bari is more than just a meeting of colleagues. It brings together tracks of logic and discussion from now until 2027 with the intent at Bari to result in a definitive set of outcomes and a plan for how to implement what we have learned from now to 2027 regarding Digital Transformation across Climate Change, Resilience and Disasters, and water for the energy transition, food security, and nature.

Notably, the Road to Bari delivers on:

- Key technical and policy challenges for Cities, Basins and Nations
- The science and solutions that are required
- Forums for meaningful stakeholder and public engagement
- An understanding of the options that the future may require

What is the Road to Bari Framework?

IAHR, Politecnico di Bari, jointly with the University of Enna “Kore” and the University of Chieti – Pescara “G. D’Annunzio”, and Acquedotto Pugliese along with key strategic partners aim to respond to these challenges by providing a global platform for results-oriented exchange amongst peer experts, decision makers, engineers, and solution providers.

The world’s water authorities in cities, basins and nations are responsible for addressing constantly evolving water issues. The distinguishing feature of the Bari Framework is that it is a continuous process. It seeks to identify the very specific real-world need for solutions; its goal is to develop peer-to-peer exchange to support and solve those issues; and importantly to bear the collective knowledge and expertise of thousands of the world’s top experts, innovators, scientists and engineers to address those issues.

The Road to Bari Framework was launched during the IAHR World Congress and Singapore Spotlight in June 2025, where over 2000 leaders, experts, solution providers, researchers, innovators and scientists, along with 50 cities from around the world came together to exchange on Innovative Engineering for Sustainable Development.

The journey at hand now incites lasting partnerships, friendships and action over the coming two years, culminating in June 2027 at the IAHR World Congress in Bari, Italy. The rallying theme of the Bari Framework is: Drive the change: Management in the era of digital water and global transitions. Beyond Bari 2027, the aim is to continue the biennial cycle as the world congress is hosted by different cities around the world.

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Three tracks for action towards Bari

IAHR 2027 in Bari will be a meeting place, a place for sharing, and a common vision among the key scientific, institutional and commercial players in the water and engineering sector. This will be implemented via three Action Tracks:

Science, Research and Innovation

Technical and Policy Challenges of Cities, Basins and Nations

Solutions, Practice, and Implementation



Three tracks for action towards Bari

Science, Research and Innovation

IAHR brings together some 30 technical committees, working groups that focus on specific engineering challenges in the field of water. In addition, IAHR's regional divisions in Africa, Asia-Pacific, Europe, Latin America, North America and MENA face unique and common challenges that must be addressed. Collectively, they bring together over 5,000 of the world's eminent experts and more than 120 of the major water institutes (research entities, water and energy sectors, major industries, water service providers, companies, and public managing institutions).

The Road to Bari Framework seeks to address two basic questions:

- What are the main challenges the various technical fields are currently facing?
- What are we going to achieve in the coming two years to advance and deliver solutions?

The innovation space and related sessions bring together the latest knowledge, research and innovation, packaged for decision makers and solution providers. Project results can be efficiently disseminated to decision makers.

The scientific framework below shall be overseen by the International Scientific Committee. The scientific programme will be held in parallel with activities that promote the integration of all three Action Tracks.

DRIVE THE CHANGE MANAGEMENT IN THE ERA OF TRANSITIONS	IMPROVING RESILIENCE AGAINST WATER HAZARDS AND DISASTERS						
	CLIMATE CHANGE, ADAPTATION AND MITIGATION			WATER FOR THE ENERGY TRANSITION, FOOD SECURITY & NATURE			
	Deltas, Coastal & Maritime Engineering [1]	Inland Water Bodies (Rivers, Lakes, Groundwater) [2]	Climate Change & Nature-based solutions in water engineering [3]	Hydropower & Water-related renewable energies [4]	Irrigation, drainage, and pollution control [5]	Large Water Infrastructures [6]	Urban water cycle, industrial water, water & wastewater treatment [7]
[A] Artificial intelligence, big data, and technical knowledge	1A	2A	3A	4A	5A	6A	7A
[B] Data Management, Sensing and Internet of Things	1B	2B	3B	4B	5B	6B	7B
[C] Digital twin and advanced Modelling (including Physically based)	1C	2C	3C	4C	5C	6C	7C
[D] Uncertainty and Reliability	1D	2D	3D	4D	5D	6D	7D
[E] Optimization and decision-making	1E	2E	3E	4E	5E	6E	7E
[F] System Assessment and Forecasting	1F	2F	3F	4F	5F	6F	7F

Active involvement of the IAHR community

An action roadmap over two years is proposed by each of IAHR's Technical Committee, Working Group and Regional Division, with milestones to be met in 2026 and concrete deliverables to be presented in Bari, Italy, at dedicated sessions, events and actions during the 42nd IAHR World Congress in 2027.

Starting in Autumn 2025, the organisers and the TC, RD, and WG leadership teams will start a collaboration based on the following steps and milestones:

State the challenge and the message (by December 2025): all the committed communities should focus on defining their challenge and the contribution that they can provide to the common IAHR Vision "Drive the change: Management in the era of digital water and global transitions"

Define the formula (by February 2026): the organisation will accommodate different activities and session structures. The communities can deliver keynotes, panel discussions, white papers, and monograph presentations, among other formats. Once they have been provided with the general session structure, communities will have the possibility of choosing their format. Sessions will be run in parallel (outside of the main programme slots).

Involvement of stakeholders (by February 2026): depending on the challenge and the formula, this is the time to involve stakeholders (policy track and/or industry track) to be part of the delivered message. A list of potential stakeholders should be offered for early involvement and participation in the policy and industry track.

During specialised and regional conferences (2026): special sessions and meetings will be held to prepare the message to be delivered in Bari in continuity with future actions on the road to this goal.

Build the sessions and actively involve participants (by October 2026): once the organisation of the event has been defined, the communities will provide a minimum (confirmed) list of contributions and participants to deliver abstracts to the sessions, panels, and other activities. Start involving communities on social media.

Involving the future organisers (by Jan - Feb 2027): definition of the primary focus for the next conference 2029; identification of the follow-up message; highlight the most active communities to deliver a follow-up programme and help the organisers in defining the next main theme; create an early connection with the industry and policy tracks.

Deliver the message and discuss (June 2027 in Bari)



Technical and Policy Challenges for Cities, Basins and Nations

Cities, local and central governments, water authorities, river basins, supervision bodies and agencies have the duty and responsibility to effectively manage water resources for the benefit of their populations and environments. Action is instigated under policies and regulations that govern their application and implementation. The Road to Bari Framework brings together policymakers from around the world in order to identify the most critical policy, technical, engineering, social, and related implementation issues that they need to address as well as to discuss and exchange experience and information amongst peers from across the globe. The Congress is a neutral global platform for water authorities from cities, basins and nations to share experiences amongst peers, and exchange with the scientific and solutions communities.

The Policy track involves single stakeholders (Champions) and/or representative associations; the conference will provide a platform for discussion and for showing best practices but also a field for discussion with experts and policy makers participating and collaborating in the preparation of scientific sessions.

Under the patronage of the host city, Bari, as well as the General Directorate of Water of Italy, the host country, the leaders of the water policy stakeholders (Authorities, Cities, Basin and Nations etc.) are invited to participate and exchange on the key issues that they need to solve. Priority will be primarily given to policy, technical, engineering and technological solutions that can guide responsible investment and effective outcomes. The Road to Bari process will foster and facilitate strong links between authorities, and the scientific and solutions communities.

To foster fruitful progress, the main challenges identified by the cities will be communicated to the “solution community” before the World Congress in Bari (by mid 2026) and their contribution to the programme will be defined by October 2026. A dedicated programme of specialised engagement sessions may be organised between peer authorities to discuss specific problems or to deliver common messages, and the organisers will facilitate their engagement with experts and solution providers linked to technical sessions during the Congress so as to promote the exchange of experiences, information, and awareness of potential innovations and solutions.

As a major milestone on the Road to Bari 2027, a preparatory event for cities and related authorities will be organised in mid-2026. This event will frame and advance the focus issues of the cities and related authorities.

River basin authorities play a vital role in water management. The Road to Bari Framework shall similarly mobilise river basin authorities to identify key issues and work towards solutions based on available science and arising from the collective global knowledge of the world’s solutions community. A milestone event is the INBO World Basin Summit in Brazil, 2026 which will lead into dedicated sessions at the IAHR World Congress in Bari 2027.

Strategic partnerships will be sought with existing city and authority networks and other specific national or regional networks.

All IAHR TC and RD events held in various cities around the world will endeavour to mobilise the host cities and related authorities to hold a session at their event; and to join the Road to Bari Framework.

Solutions community

The solutions community represents the knowledge, experience and resources to implement fit-for-purpose solutions. The Road to Bari Framework provides a neutral global platform to match the world's solution providers with the highest priorities of public authorities as well as the latest game-changing research and innovation. A specific organisation will be created to follow the needs of exhibitors and of technology providers willing to participate in the conference. Again, the organisers will facilitate the contribution of solution providers to the scientific session to integrate the three tracks and obtain a lively and open discussion aimed at creating long-lasting connections following the conference and continuing in the next steps along the Road. To accelerate our capacity to do this the Road to Bari Framework shall organise:

- An Exhibition and Fair with a Solutions Space
- A Challenge by Authorities to the Solutions Community
- Country pavilions presenting the know-how and capabilities of their solutions community
- Sponsoring and visibility opportunities
- Dedicated technical sessions
- An industry leadership forum

Milestones

2025	2026	2027
Launch of the Road to Bari Framework at Singapore World Congress and Spotlight	IAHR Europe Congress: Lulea, Sweden	IAHR World Congress: Bari, Italy
Launch of TC/RD commitments to action	IAHR Asia-Pacific Congress: Incheon, Korea	
Launch the three action tracks	IAHR Congreso Latinoamericano Hidraulica: Valparaiso, Vina del Mar, Chile	
	IAHR Africa Congress: Kigali, Rwanda	
	INBO World Basin Summit: Rio de Janeiro, Brazil	
	Preparatory Event for City Authorities in Madrid, 2026	
	Launch of the global call for solutions	

Join the Bari Framework

Experts, authorities and solution providers from all over the world have begun the Road to Bari.

Join us too!

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