

# 4<sup>TH</sup> INTERNATIONAL RIVER SUMMIT

December 17-19 2025

Prayagraj, Uttar Pradesh, India

"Intelligent River-Basin Management  
in the age of Climate Change"

Organized by  
**International River-Basin Foundation**  
River water user Association (India)  
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## International River Basin Foundation

International River Basin Foundation and River Water User Association (India) are the key organizations working on UN Sustainable Development Goals under World Council of Professionals and Industries. Their analytical and discussion forums proposes to discuss the issues raised in past national and international conferences/workshops to encourage world focus on adoption and mitigation strategies to achieve the sustainable development goals.

Fourth International River Summit, India 2025, is an effort to bring concerned communities, scientists and researchers together in an international event to present their success and field initiatives, and to analyse, discuss and review their findings with world-renowned scientist, academicians and decision makers. The aim is to inform possible solutions and policies for a more sustainable world.

## About the Summit

Rivers are the life line of the civilizations, ecosystems and economies. However rapid climate change, urbanization and unsustainable water use have severely altered hydrological cycles and riverine health. The 21st Century calls for new paradigm- Intelligent River Basin Management (IRBM), that leverages Artificial Intelligence (AI), Internet of Things (IoT), Big Data and Remote Sensing for predictive, adoptive and Integrated Water Management. This Summit aims to create a global dialogue between scientists, technologists, policy makers, and community leaders to advance the use of smart data driven solutions for sustainable and climate resilient river basin. The summit will also hold the 3rd Asian Meet and Roundtable discussion, and 4th International Meet on water scarcity and Policy issues and an special meet on worldwide climatic change.

## Conference Objectives

1. To **showcase** the role of AI, IoT, and data analytics in improving river basin decision-making.
2. To **highlight** innovative technologies and frameworks for climate-adaptive water management.
3. To **promote** cross-sectoral partnerships among governments, academia, industry, and local communities.
4. To **strengthen** policy frameworks for integrated, trans-boundary river governance.
5. To **foster** knowledge exchange and build a roadmap toward *Sustainable*

## Expected Outcomes

1. **Adoption of a Policy Brief:** Recommendations on using AI and data-driven tools in river basin management.
2. **Publication of Proceedings:** A compendium of papers and presentations on intelligent water systems.
3. **Establishment of Collaborative Network:** Creation of the *International River Intelligence Consortium (IRIC)* under IRBF.
4. **Knowledge Exchange:** Cross-country partnerships for smart basin technologies.
5. **Capacity Building:** Training modules and open-access data tools shared with developing river basins.
6. **Outcome Document:** "Intelligent River Declaration 2025" outlining global strategies for climate-smart basin governance.



4th International  
**River Summit**  
Intelligent River Basin Management in the Age of Climate Change

## 4th International River Summit

**Intelligent River Basin Management in the Age of Climate Change**

### Theme-1: Digital and Intelligent Systems for River Basin Management

This theme focuses on integrating Artificial Intelligence (AI), Internet of Things (IoT), remote sensing and Big Data analytics into river basin management. It covers predictive flood forecasting, water quality monitoring, and digital twins for modeling river dynamics. By creating real-time, data-driven insights, intelligent systems can significantly

#### Key Focus Areas:

AI-driven hydrological and sediment modeling  
IoT based sensor networks for continuous monitoring  
GIS-based river mapping and visualization  
Data integration and cloud-based decision support systems.

### Theme-2: Climate Change, Water Security, and Resilience

This theme addresses the impacts of climate change on river systems — such as altered flow patterns, floods, and droughts — and explores strategies for building resilient water systems. Emphasis is on climate modeling, adaptive infrastructure, ecosystem restoration, and blue carbon initiatives that mitigate climate impacts while preserving bio-diversity.

#### Key Focus Areas:

Climate-resilient water infrastructure  
Flood and drought risk management  
Nature-based solutions (wetlands, riparian buffers)  
Blue carbon ecosystems and carbon-neutral watersheds.

### Theme3: Sustainable Agriculture and Horticulture

Theme focuses on climate-smart agriculture, precision irrigation, and sustainable horticulture practices linked to river basin health. Incorporates biotechnology and bio-informatics to improve crop water efficiency, soil health, and disease-resistant varieties, while maintaining ecological balance.

#### Focus Areas:

Precision irrigation and water-efficient farming  
Sustainable crop management  
Bio-informatics for crop and soil health monitoring  
Biotechnology for developing climate-resilient crops  
Integration of agriculture practices with river basin sustainability  
Agro-ecological solutions and Bio-diversity conservation

### Theme 4: Policy, Governance, and Transboundary Cooperation

This theme emphasizes the need for integrated water resource management (IWRM), effective policy frameworks, and transboundary collaboration among nations sharing river basins. It advocates science-informed governance, participatory decision-making, and transparent data-sharing mechanisms that foster peace, equity, and sustainable development.

#### Key Focus Areas:

River diplomacy and basin-level treaties  
Integration of AI tools in policy and regulation  
Water-energy-food-ecosystem (WEFE) nexus governance  
Participatory water management and stakeholder inclusion

### Theme 5: Community, Innovation, and Education

This theme focuses on community-driven and inclusive approaches to river management. It highlights citizen science, youth innovation, and capacity building as critical components of sustainable solutions. Empowering local communities with digital tools and environmental education ensures long-term stewardship of river ecosystems.

#### Key Focus Areas:

Citizen science and participatory monitoring  
Youth innovation labs and hackathons  
Water education and awareness campaigns  
Integrating traditional and indigenous knowledge.

## Call for Abstract Submission

Abstract of 200 to 300 words is invited for thematic sessions through following Google form (available at the website <https://www.rwua.org.in/Riversummit2025> or may be submitted at the Email: [rwuaconference@gmail.com](mailto:rwuaconference@gmail.com)

## Registration

Registration form and fee details are available at the website: <https://www.rwua.org.in/Riversummit2025>



**Related SDGs:**  
SDG 6: Clean Water and Sanitation;  
SDG 9: Industry, Innovation, and Infrastructure;  
SDG 11: Sustainable Cities and Communities;  
SDG 13: Climate Action

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SDG 6: Clean Water and Sanitation;  
SDG 13: Climate Action;  
SDG 14: Life Below Water;  
SDG 15: Life on Land

**Related SDGs:**  
SDG 2: Zero Hunger,  
SDG 6: Clean Water and Sanitation,  
SDG 12: Responsible Consumption and Production,  
SDG 13: Climate Action,  
SDG 15: Life on Land

**Related SDGs:**  
SDG 6: Clean Water and Sanitation;  
SDG 16: Peace, Justice, and Strong Institutions;  
SDG 17: Partnerships for the Goals;  
SDG 2: Zero Hunger (through water-food security linkages)

**Related SDGs:**  
SDG 4: Quality Education;  
SDG 5: Gender Equality;  
SDG 6: Clean Water and Sanitation;  
SDG 10: Reduced Inequalities;  
SDG 17: Partnerships for the Goals

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