

Water Quality Network Conference Report

Bengaluru, Feb 2026





Addressing Water Quality Challenges in India

The 4th edition of the Water Quality Network Conference was held by INREM Foundation on the 24th and 25th Feb 2026 in Bengaluru at the Bangalore International Centre (BIC). This edition of the conference focused on themes of Landscapes, Stories, and Open Networks around water quality.

These themes were designed to address the complexities of water quality across rural, urban and the river ecosystems. The conference brought together sector practitioners, researchers, and changemaking organizations. Through a sequence of sessions, the participants dived into landscape scanning, interactive storytelling, and performed role plays within Connecting the Drop Game to understand the open data infrastructure. The event moved from identifying challenges to building a collaboration needed for Water Safety. The conference has been supported by IBM, Tata trusts and Azim Premji Foundation.





Session 1 : Scanning the Landscape

The session invited participants to reflect on water quality realities across villages, cities, and rivers, and to collectively examine the landscape: Why does contamination persist? Where are current responses falling short? And how can stakeholders work together to address these challenges more effectively?

To deepen the discussion, participants were divided into three groups focusing on different water contexts: Villages – led by Viji John (Aarushya Foundation), Cities – led by Sachin Tiwale (ATREE), Rivers – led by Madhuri Mandava (Paani Earth Foundation) and facilitated by Anurag Rathore (INREM Foundation). Each group began with a short framing by the lead presenter, followed by an open discussion where participants shared experiences, insights, and challenges from their work.

The second half of the session featured an interactive “Challenges and Solutions” exercise, where participants identified key challenges and proposed possible solutions within their respective contexts. Through a structured exchange, the proposed solutions were tested against identified challenges, encouraging participants to critically examine their practicality and relevance.

Villages: Community-Level Water Quality Challenges

The Villages group discussion focused on the realities of ensuring safe drinking water in rural areas. Viji John shared field-based insights into the challenges communities face in accessing safe water despite the expansion of infrastructure. Participants discussed the continued dependence on groundwater sources such as borewells and handpumps, which are often vulnerable to contamination. Even where water supply schemes exist, challenges remain in ensuring consistent monitoring, maintenance of infrastructure, and sustained community engagement.

The discussion also reflected on the implementation of programmes such as the Jal Jeevan Mission, highlighting both progress and ongoing challenges in translating infrastructure expansion into reliable water quality assurance. During the interactive activity, participants identified several recurring challenges at the village level, including: Irregular water quality testing and monitoring, Limited awareness about contamination risks, Infrastructure gaps and maintenance challenges, Difficulties in sustaining community participation and Groundwater contamination and source vulnerability. Participants suggested a range of possible responses, such as strengthening community awareness programmes, improving the use of field testing kits, encouraging behavioural change at household and village levels, and strengthening coordination between local governance institutions and technical agencies.



Cities: Governance and Infrastructure Challenges

The Cities group explored the systemic challenges associated with urban water management, including infrastructure planning, governance structures and water quality monitoring. Participants highlighted the lack of coordination between urban planning authorities and water supply departments. For example, rapid urban redevelopment and increasing building density often occur without corresponding adjustments in water infrastructure capacity.

Water metering was identified as a key step toward improving water management in cities, as it enables utilities to monitor consumption, audit supply, and manage demand. However, policy gaps and institutional challenges continue to limit widespread implementation. Another issue raised was the large volume of private groundwater extraction in cities, which remains poorly documented and regulated. This makes it difficult to accurately assess water demand and plan sustainable supply systems. Participants also discussed the limited availability of real-time water quality data, especially compared to other environmental indicators such as air quality. Some participants suggested developing data platforms that could link water quality information with public health indicators to improve decision-making.

The discussion also highlighted the difference between permissible water quality standards and desirable potable water standards, noting that many urban systems aim only to meet minimum regulatory limits. Concerns were also raised about contamination during storage and distribution, particularly in low-income settlements where storage tanks and supply points may be poorly maintained. Participants



suggested strengthening governance frameworks, improving transparency in water quality data, and encouraging decentralized monitoring efforts at the community or housing society level.



Rivers: Monitoring, Pollution and Ecological Stress

The Rivers breakout session focused on the growing pressures faced by river ecosystems and their implications for water quality.

Participants discussed examples from river systems such as the Arkavathi River, a tributary of the Cauvery originating from Nandi Hills. In many regions, rivers continue to serve multiple functions including drinking water supply, irrigation, and industrial use despite growing concerns about pollution and declining water quality. Monitoring efforts in several locations have included water quality testing across multiple sites and across pre-monsoon and post-monsoon seasons. These monitoring efforts provide important insights into seasonal variations in pollution levels.

Participants raised several concerns regarding river water quality management, including industrial effluent discharge, sewage inflows, weak enforcement of environmental regulations, and limited monitoring data. Other challenges included encroachment and the narrowing of river channels, as well as the transformation of



many rivers into open drains in urban areas. Organic pollution and high biological oxygen demand (BOD) levels were identified as key indicators of deteriorating river health.

Participants emphasized the need for stronger monitoring systems, improved enforcement of environmental regulations, and updated water quality parameters to better reflect current pollution realities.





Connecting as a Network

The final segment of Session 1, titled “Connecting as a Network,” brought participants back together in the main hall for a collective reflection on the discussions.

The session featured an interactive dialogue with Gopal Garg from Ashoka India. He supports organizations in redesigning their strategies through the use of technology, data, and ecosystem approaches, while encouraging them to move beyond siloed approaches and work as networks. The discussion began by reflecting on the solutions proposed during the breakout sessions. Gopal invited participants to consider an important question: ***who actually implements the solutions that are designed to address water challenges?***

Participants reflected that many of the individuals designing solutions working in NGOs, government institutions, or research organizations are often not the ones directly experiencing the water quality challenges. Communities affected by contamination frequently adapt to existing conditions rather than shaping the solutions intended for them.

Another insight that emerged was that solutions are often designed before the problem has been fully understood. When implementation begins, the nature of the problem may evolve or reveal new complexities. This highlights the importance of grounding solutions in real-world contexts and learning continuously from community experiences.

Participants also discussed the role of markets in shaping responses to water challenges. The rapid spread of household RO filtration systems was cited as an example of how market-driven solutions often emerge when public systems fail to ensure safe water. While these solutions address immediate concerns, they also raise questions about long-term sustainability and equity.

The conversation ultimately returned to the role of networks. Water quality challenges cut across villages, cities, and river systems, and no single organization or sector can address them alone. Working as a network allows stakeholders including governments, civil society organizations, researchers, and communities to share knowledge, align strategies, and collectively address systemic challenges.

The session concluded with a reflection that if water challenges are interconnected, the responses must also be interconnected. Building collaborative networks can help ensure that solutions are more inclusive, grounded in local realities, and capable of addressing the complex nature of water quality challenges.

Three landscapes of Rivers, Villages and Cities, merged into one single mosaic when the connections between one’s upstream problem, and other’s downstream realities emerged.



When we take 3 different problem scenarios here:

Rural aquifers are running out of shallow water. Deeper aquifers are chemically contaminated. The only recourse being river water to be supplied.

River waters have city drainage and industrial waste running through them, and even they are not the go-to they were for water needs.

Cities themselves, though able to harness far away water, suffer from decaying underground systems, leakages and epidemics.

When we put these three perspectives together, the landscapes become one. Each of our work has a valuable place for the “System” problem of polluted water bodies, suffering ecosystems, and health epidemics for human societies. When we bring our problems together, they seem to merge into one common mosaic that puts the need forward for mutually interdependent work.

Three action points emerge from here:

How do we make information and data as something that citizens can generate, share and actions thrive on such data?

How can learning experiences be enhanced with our collective experiences and structured and informal learning be facilitated between all of us?

Are there opportunities for mutually beneficial regional, place-based collectives that can build on our complementary viewpoints, and help each other’s own work?

Here, we call for ideas on each of the above, and will reach out to participants for their participation, based on interest.

Session 2 : Alive Practice Studio

Alive Practice Studio is an interactive storytelling session held as a part of the Water Quality Network (WQN) Conference. Changemaking organizations were paired with Storytelling support from INREM, and other participants, within small groups. The purpose of the groups was to share their impact and challenge story, within a visual storytelling template that has been created to help stimulate narratives and sense-making from experiences. The Studio was held in 3 parts: Create, Share and Dialogue. This entire session was full of vibrant energy with rich conversations between participants about the impactful stories.



How do field stories come Alive ? What value do they add when stories are not presented like a “readymade” suit, but more like a patched art work built from the sweat of together-labour. More than the 16 Storyboards that got created, were the dialogues and questions that came in when randomly matched participants asked changemakers, “So, why do you work in *this* place?”.



The Combinatorics that emerge from 70 participants interacting with 16 stories, create numerous new connections and possibilities at emergent collectives. Not all collectives are geographical or “thematic”. They come together because of values and traits that are recognized by each other, and not necessarily imposed by an “orchestrator”.

System orchestration therefore took on an emergent lens of discovery, with the orchestrator being absent in the room, and instead the agency of the changemakers and their partners themselves creating the connections.

The experience of Alive Practice Studio was tentatively agreed by us to experiment, but now having gone through it, what is clear is this:

- a) We need more such studios that bring in a “semantic river” of telling a story differently each time
- b) The product is not the story, but the conversations and the connections, themselves creating new meaning
- c) System orchestration need not be visible and upfront, but can be something more “atmospheric”, that builds the layer of trust and space for creating together

One of our partner Mr Eklavya Prasad from Megh Pyne Abhiyan had a following observation on the format of this session

“ The Alive Practice Studio turned out to be far more than a session space, it became a living canvas where stories unfolded slowly, visually, and collectively.

At the studio, the experience of working with communities grappling with Water contamination was narrated by Changemakers from participating organizations not through slides or a formal presentation, but through a carefully arranged visual journey. Photographs, handwritten notes, media clippings, and process snapshots together told the story of a struggle that has been long, layered, and deeply complex.

What made the studio especially powerful was its format. Instead of a one-directional presentation, it invited dialogue. Participants walked up to the board, paused at different images, asked questions, shared reflections, and few connected the story to their own experiences. The narrative evolved through conversation rather than a prolonged monologue, allowing curiosity and engagement to shape the flow.

This approach proved particularly meaningful for a subject like water contamination, where the issue is not merely technical but deeply social, ecological, and institutional. The visual fragments helped reveal the many layers of the story: the early signs of contamination, the health impacts, the community concerns, the evolving responses, and the gradual efforts to build local awareness and action.



In many ways, the Alive Practice Studio demonstrated how storytelling in the development sector can move beyond PowerPoint and statistics. By placing visual narration and interaction at the centre, it created a space where complexity could be communicated with honesty and nuance, and where participants could engage with the story at their own pace.

The studio therefore felt less like a “presentation” and more like a shared exploration. It allowed a long-drawn struggle to be seen not as a static case study, but as a living process, one shaped by people, persistence, and place.

As an exercise, it was both refreshing and inspiring. The Alive Practice Studio showed the immense potential of visual dialogue as a medium of knowledge exchange, reminding us that sometimes the most meaningful conversations emerge not from speaking more, but from creating spaces where stories can be seen, felt, and discussed together”.



Session 3 : Open Data Exchange

Day 2 of the Water Quality Network Conference focused on a very important challenge i.e. lack of appropriate data that hinders the decision making process to deliver the goal of water safe communities. The opening session was delivered by Sunderrajan Krishnan, Executive Director, INREM Foundation focused on the gaps on the Water Quality Data. He quoted from the research study conducted by Balachander T, which examined and evaluated a carefully selected collection of the most important water quality data sources that are pertinent to India as of January 2026 in order to determine their scope, advantages, disadvantages, and general suitability for use in research, policy, and civil society initiatives.



The review opened up very important questions regarding how different initiatives are needed to close this gap and offer opportunities for a coordinated action on water safety. Some of these questions were taken in the panel discussion post this context setting.



Panel Discussion on Open Data, Networks and Algorithms



This session focused on approaches for making Water Data more open and accessible for making decisions on safe water easier. The speakers shared their experiences on how technology is being leveraged to make data more accessible, bring more trust through collaborations and build a digital public infrastructure that allows for various data sources to talk seamlessly for a coordinated decision making on water quality. Shipra Sharma, CSR Lead for IBM India and South Asia echoed the principle of Drinking Water being a basic human right and hence the importance of water safety information is required by each citizen. Manu Srivastava from Arghyam stressed the importance of building the digital public infrastructure for water which will remove the gaps mentioned earlier and bring more transparency into the decision making process. Sayan Roy from Sattva mentioned that the initiative of Water Data Exchange will help in creating processes and protocols that will help in opening the water advisory for communities for the public good.



Connecting the Drops : Simulation of the Open Data Network



The conference brought together a diverse set of participants, whose roles and expertise varied, one common thread connected them all: each relied, in some form, on information generated from data in their work. Data today plays a critical role in informed decision-making. It brings structure, credibility, and evidence to the decision-making. Yet an important question emerges: who is able to make decisions using this data? Who are the stakeholders involved in this ecosystem, and how can complex data systems be simplified for wider access and meaningful social impact?

With these questions as a starting point, a simulation game titled “*Connecting the Drops: Building the Water Web*” was conducted during the second day of the Conference. The activity aimed to simulate the journey of data, from generation to interpretation and finally to real-world decisions, while helping participants reflect on the issue of “*dark data*”: information that exists but remains inaccessible or unusable for those who need it most.

In the game, participants were divided into groups of 2 each and assumed one of three roles that represent key actors in a data ecosystem: Data Sources (Blue cards), Intelligence Layers (Green cards), and Users (Yellow cards).

Data sources represent institutions or systems that generate raw data such as laboratory reports, groundwater monitoring datasets, sensor readings, or community-generated information.



Blue Cards — Data Sources	Blue Cards — Data Sources
<p>Data Source Govt. Drinking Water Data</p> <p><u>Source Of Data</u></p> <p><u>What information this data source provides</u></p>	<p>Data Accessibility</p> <p>Paid Access <input type="checkbox"/> Open Access <input type="checkbox"/> Publicly Downloadable <input type="checkbox"/></p> <p>Data Format</p> <p>Digital <input type="checkbox"/> Readable <input type="checkbox"/> PDF <input type="checkbox"/> Handwritten <input type="checkbox"/></p>

Intelligence layers represent analytical or interpretive systems that transform raw data into meaningful insights. Examples included in the game were village water safety tools, urban water safety tools, Crop safety tools and Data Analytics Business.

GREEN CARDS — Intelligence Layer	GREEN CARDS — Intelligence Layer
<p>Village Water Safety Tool</p> <p><u>What does this intelligence layer offer</u></p>	<p><u>Data needed for the intelligence to work</u></p> <p><u>Users - Who will use this intelligence</u></p>

Users represent individuals or institutions who need information to make real-world decisions, such as farmers, city planners, or concerned citizens.

YELLOW CARDS — Users	Yellow Cards — Users
<p>You are a Rural Household Water User</p> <p><u>Write more about you</u></p>	<p><u>Write about your challenges and needs</u></p> <p><u>What Water Quality data you need</u></p>

Initially the participants explored their assigned roles and defined their needs: data sources described the type of data they generate, intelligence layers outlined the data they require and the users they could support, and users articulated their real-world questions or decision problems related to water.



The simulation had multiple rounds - with a variation planned with each round.

Open Interaction: Participants interacted freely without a defined system. The basic persona was defined, but they were not guided to what should be flow of the data flow, whom they have to interact to fulfill their needs. Users often approached data sources directly, asking for reports or values. Intelligence actors attempted to help but without clear requirements, while data sources shared raw numbers or reports without context. This phase demonstrated that raw data exchange alone does not lead to decisions, often leaving users confused and unable to act.



Structured Interaction: The system was then organized into a clear flow: User → Intelligence → Data Source. Users explained the information they needed to make decisions to the intelligence layer, they translated these needs into specific data sources, and data sources provided relevant datasets while providing their limitations. This round increased structure and more plausible flow of data in the ecosystems. Though, there were conflicts and arguments on specificity of the requirements.



Limitation Round: Real-world constraints were introduced. Data sources were asked to give importance to the factors such as equity, benefit to data contributors, and sustainability. Intelligence actors had to justify data use and ensure results reached both users and communities. This round emphasized that ethical and responsible data systems are essential for meaningful decision-making.



Reflection

- One of the most interesting moments during the simulation emerged organically. Two intelligence layers, *Crop Safety* and a *Village Water Safety tool*, collaborated and merged their approaches to address the needs of both data sources and users. This spontaneous collaboration illustrated how real-world data ecosystems often evolve through interaction and adaptation, revealing possibilities that initial system designs may overlook.
- During the reflection discussion, a participant representing the Data Analytics Business intelligence layer raised an important perspective. They noted that while most services have a cost, there is often an expectation that water-related data—especially critical information about safety—should always be free. However, sustaining high-quality data systems also requires resources, raising important questions about how such systems should be funded while ensuring equitable access.



- Participants who played the role of users shared that the exercise helped them deeply empathize with the challenges faced by decision-makers. The game required users to define their own scenarios and articulate the decisions they needed to make. As they attempted to navigate the system—approaching intelligence actors, negotiating with data providers, and interacting with multiple stakeholders—they often found that their needs were still unmet. This experience led to a strong sense of how overwhelming and fragmented data systems can feel for people trying to make urgent decisions.
- For participants representing data sources, the exercise highlighted another dimension: the realization that much of the data generated within systems remains locked away and does not reach those who need it the most. The simulation helped them reflect on the importance of not only producing data but also ensuring that it flows through accessible and interpretable channels so that it can support real-world decision-making.

Overall, the activity provided a tangible demonstration of how a functional open water data ecosystem requires coordination between data generators, interpreters, and users. It showed that the challenge is rarely the absence of data, but rather how that data moves, who can access it, and whether it ultimately returns to people as meaningful guidance for action.





Conclusion

Water Quality Network Conference 2026 had about 83 participants from 37 organisations coming together. The diverse group of consultants, practitioners, philanthropy, private sector, academic researchers and various others contributed to the overall participation to the event. The conference was entirely 50% pre-designed and 50% created by participants. All put together, it was a set of willing participants ready to be part of the experience.



Annexure

Moments of the Conferences can be accessed through photos at this [link](#)