

WATER GYAN

ICCW Newsletter - Edition 2



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From the CEO's Desk

Well into its seventh year of existence, ICCW has moved significantly from “Lab to Market.” All our efforts—whether translational or applied research—are focused on addressing real-world problems.

Take for example, sensor development. It is not enough to simply develop affordable sensors that can efficiently replace lab-based water quality testing. Equally important is how we enable appropriate and timely actions. Hence, the sensors are combined with IoT dashboards to relay information to the cloud with GIS and time coordinates. The cloud data is analyzed and reported through intelligent and responsive dashboards to support instant decisions and actions. Further analytics of the data can send early warning signals of failures or even initiate actions autonomously.

Applied R&D takes problem statements from communities and industries and not only develops solutions in the lab but also works with partners to implement them at scale. Simulated conditions in the lab are a far cry from real-world situations—a lesson we have learnt repeatedly and continue to learn. Moving technologies from TRL-4 to TRL-5, 6, and 7 is a non-linear journey, but one filled with a-ha moments.

Simultaneously, we have learnt that technology plays a minor role in solving real-world problems. The issues are complex and require consensus among various stakeholders. This is achieved by first collecting hard evidence and then building a common vision inclusively, leaving no one behind. Community awareness and capacity-building programmes then contribute to greater inclusivity and ownership. Ownership of the solution is the key to its long-term viability and sustainability.

We have noted that classroom education alone is not enough to leverage our demographic dividend. Our internship and skill-building workshops are designed to bridge this gap and help students take up careers that are meaningful to them. We are happy to see many of them pursue career paths suited to their capabilities and potential.

NANDAKUMAR E

Chief Executive Officer

International Centre For Clean Water

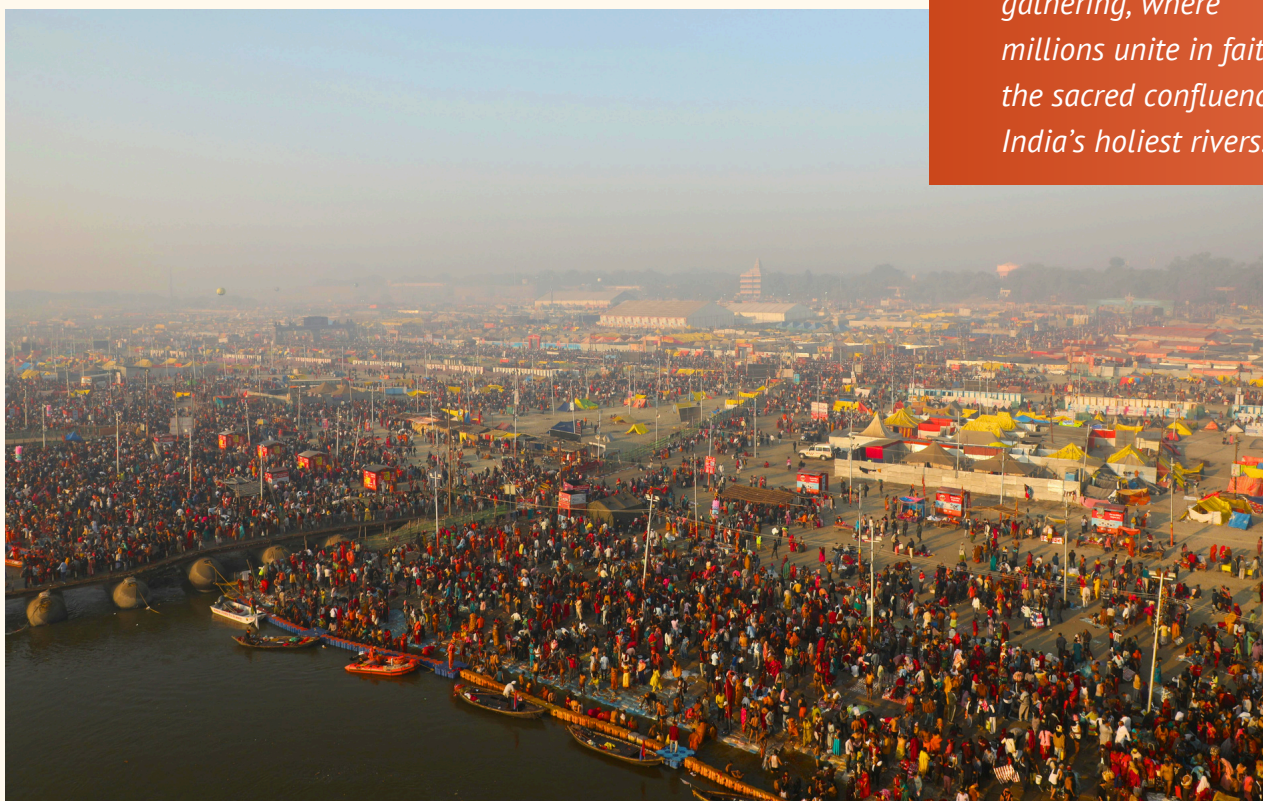
Water Monitoring at Maha Kumbh 2025

Clean Water for a Sacred Gathering

The Maha Kumbh Mela 2025, held in Prayagraj from January 13 to February 26, was an extraordinary spiritual and logistical undertaking, attracting millions of pilgrims from across the globe. Organized by the Government of Uttar Pradesh, the event prioritized large-scale infrastructure, sanitation, and especially water management to ensure the safety and hygiene of all attendees. A robust water supply and treatment framework was established, incorporating Tubewells, Standposts, Water ATMs, Geo Tubes, STPs, and Stabilization Ponds.



“ Maha Kumbh 2025 is the world’s largest gathering, where millions unite in faith at the sacred confluence of India’s holiest rivers.



The International Centre for Clean Water (ICCW) undertook a comprehensive assessment of water and wastewater management across the Mela area. The ICCW team, working in collaboration with the Public Health Engineering Department and MNNIT volunteers, carried out systematic water sampling, on-site testing using IoT-enabled field kits, and laboratory analysis at a temporary facility set up at Salori STP.

Over 1,100 water samples were collected from 25 sectors, including key drinking water sources and river points. Drinking water quality was largely within Indian Standards and was consistently maintained throughout the event. River water quality showed expected variations during peak days but remained within safe limits overall.



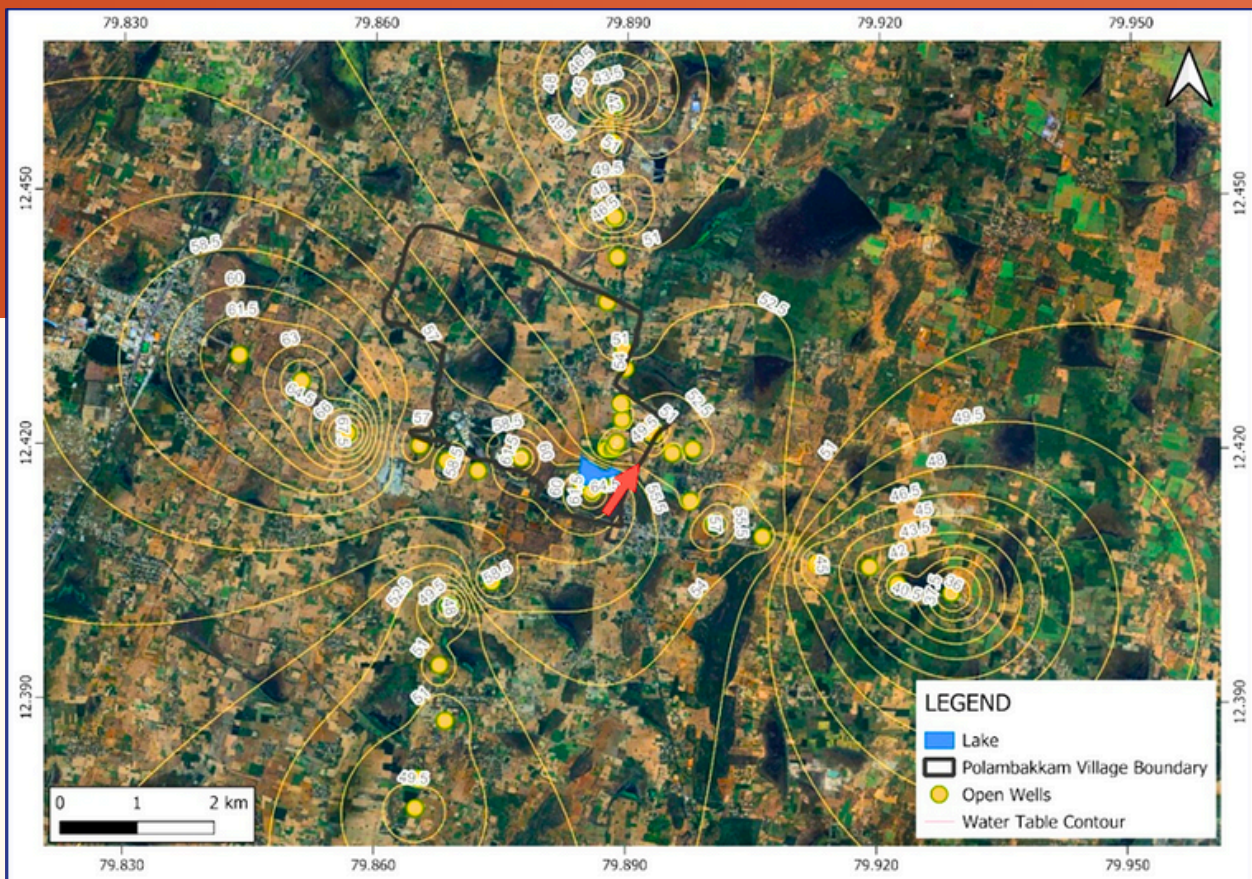
A social survey conducted with 65 participants highlighted general satisfaction with water availability, accessibility, and the overall arrangements. These findings reflect the effectiveness of the water management strategy during the Mela and provide insights for strengthening future planning and execution at events of this scale.



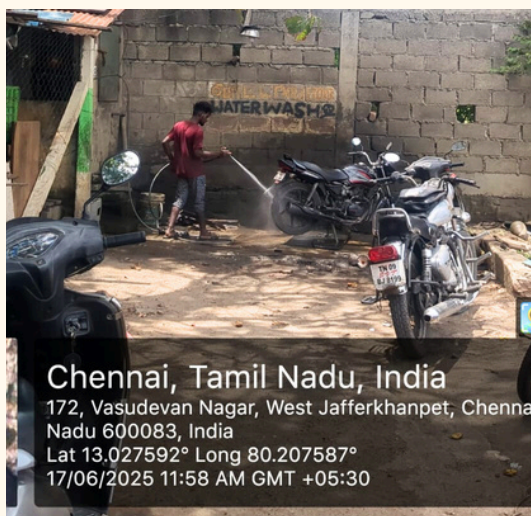
Groundwater Assessment Polambakkam

The Nelvoy tank in Polambakkam village was studied as part of a groundwater assessment initiative. Situated near a surface water divide, the tank influences the local groundwater flow, which naturally moves towards the north and northeast from the lake's water spread area into the downstream command region.

The assessment revealed that the tank serves as a vital groundwater recharge source, significantly contributing to the replenishment of groundwater in the downstream areas, particularly within the command zone. These findings highlight the tank's crucial role in maintaining water security for the region.



Baseline Assessment of Water Use in Vehicle Wash Facilities



Driving Towards Sustainability

With increasing stress on water resources, efficient water use and responsible wastewater management in vehicle wash facilities have become pressing concerns.

These centres, often overlooked, consume significant volumes of water and, if not properly managed, contribute to environmental degradation. Recognizing the need for sustainable practices, a study is being carried out to evaluate the current status of vehicle wash systems across India.

The focus is on understanding their alignment with regulatory norms, assessing the adoption of automated and eco-friendly technologies, and identifying opportunities for improving water use efficiency.

The insights from this study will help inform policy recommendations and strategies to encourage the large-scale transition to environmentally responsible and regulation-compliant vehicle wash practices.

Commemorating World Water Day 2025

Drawing Inspiration: Chennai School Event



ICCW marked World Water Day 2025 with two vibrant, youth-focused events in Chennai and Salem—each fostering awareness, creativity, and action around water sustainability. ICCW marked World Water Day 2025 with two vibrant, youth-focused events in Chennai and Salem—each fostering awareness, creativity, and action around water sustainability.

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In collaboration with Jeevan India Missions, ICCW organised a drawing competition at Hindu Senior Secondary School, engaging 100+ students through art and dialogue. The session featured “Water Talk” by Yadu K Damodaran and Neeraja S, who introduced students to real-world water challenges and everyday solutions

The young participants expressed powerful ideas through their artwork—depicting rivers, rainwater harvesting, and a deep emotional connection with nature. The event offered a creative platform to nurture water awareness at a young age.



Commemorating World Water Day 2025

Nature & I Stand Together : Quiz and Dialogue in Salem



In Salem, We joined hands with Sona College of Technology and Sona Medical College of Naturopathy and Yoga for a full-day event titled “Celebrating Water”, aligned with this year’s World Water Day theme: “Nature & I Stand Together.”

Highlights included keynote sessions by institutional leaders and Mr. Nandakumar E, CEO of ICCW, who emphasized science-based and community-driven water solutions. The quiz competition, hosted by **X Quiz It**, saw the enthusiastic participation of 500+ students, bringing energy and insight to the day.

The event also featured a moving performance by AGAI – Theatre of Voices, blending art and advocacy to celebrate the human-nature connection.

Rooted in art and inquiry, both events reflected ICCW’s belief in early engagement and youth-led change. Whether through sketches or quizzes, World Water Day 2025 reminded us that young voices are key to building a water-secure future.



World Environment Day 2025

To commemorate World Environment Day 2025, ICCW, in collaboration with Bottles for Change (Bisleri India Pvt. Ltd.), organized a spirited beach cleanup drive at Elliot's Beach, Besant Nagar, on the morning of June 1st.

The event saw enthusiastic participation from individuals, student volunteers, and partner organizations, with a special presence by Thiru. R. Vidyadhar, IFS, Tamil Nadu Wetlands Mission, as Guest of Honour. Students from Queen Mary's College brought remarkable energy to the initiative, while Suzhal Arivom conducted an engaging marine awareness session that deepened participants' understanding of shoreline ecosystems and plastic pollution.



The collective effort led to the cleanup and recycling of significant plastic waste, reinforcing action toward environmental sustainability. With hands in the sand and hearts in the cause, the morning stood as a quiet but powerful reminder that lasting change begins with simple, collective steps.

“



Let's keep our shores as clean as the peace we seek from them.

On this World Environment Day, let's remember—nature gives us a place to breathe; it's our turn to keep it unspoiled.

AARU - A Musical Tribute to the Rivers of Tamil Nadu



Music has the power to stir memory, awaken pride, and give voice to what's often forgotten. That's the spirit behind 'AaRu', a newly released music video celebrating the rivers of Tamil Nadu — conceived, composed, and produced by Dr. Kanniks Kannikeswaran, a distinguished alumnus of IIT Madras.

Named after the Tamil word for river, 'AaRu' is a melodic journey featuring the names of over 125 rivers across the state. While rivers like Kaveri, Vaigai, and Tamraparani are well known, many others — once vital to the land and its people — have faded from memory.

“The song brings them to life through vibrant, folk-inspired music that is as nostalgic as it is powerful.”

Rivers in Tamil Nadu are more than water bodies, they are cultural lifelines, shaping language, traditions, and livelihoods. But modern development and shrinking catchments have threatened their flow and visibility. 'AaRu' revives that lost connection, not with reports or statistics, but through the universal language of song.



**Dr. Kanniks
Kannikeswaran**

He is a globally acclaimed music composer, educator, and cultural visionary, known for his pioneering work in Indian choral music and cross-cultural productions. An alumnus of IIT Madras, he blends classical Indian traditions with global music forms to tell powerful stories of heritage, environment, and unity.

Through his compositions, Dr. Kanniks doesn't just create music—he builds bridges between the past and present, tradition and innovation. His works often carry deep messages of ecological awareness, cultural pride, and collective harmony.

Lead Vocals



Srinivas



Sharanya



Unnikrishnan



Uttara

This is the third in a growing series of music-led awareness efforts, following

🎵 'Rivers of India' (2021) – a tribute to India's major river systems

🎵 'Monsoon' (2022) – celebrating the bond between rain and Indian arts.

Now, 'AaRu' turns the spotlight homeward, singing of Tamil Nadu's rivers with clarity, rhythm, and reverence.

▶ [**Watch the video here**](#)

More than entertainment, the video is a call to remember, to reflect, and to protect. May this song rekindle pride in our rich river heritage—and renew our responsibility to safeguard it.

COLLABORATION AND PARTNERSHIP



Puthiya Thalaimurai Foundation fosters rural development through education, healthcare, and environmental initiatives. It empowers communities with sustainable solutions and support systems.

Patiala Foundation works to empower communities through sustainable livelihoods, road safety awareness, environmental action, and cultural preservation.



Breathe Green India pvt.Ltd is an Odisha-based company focused on developing eco-friendly chemicals and machinery for environmental protection. Established in 2022, it aims to support sustainable industrial practices.

Dedicated to climate resilience through nature-based solutions like soil erosion control, water body rejuvenation, biodiversity restoration, and urban air quality enhancement.



Atribs Software Systems Private Ltd, powered by Shield International Group, is driving innovation and empowerment through technology. Under the brand SHIELD SKILL HUB, it is committed to enabling future-ready skills and workforce development.

From Innovation to Implementation

A Story of Collective Resolve in Water Purification



In a world where the demand for clean water grows more urgent by the day, ensuring safe and sustainable water access is no longer a choice, it is an imperative. Water is life. Yet millions still lack access to water that is safe for drinking, cooking, or everyday use.

The challenge is multifaceted. Our water sources are increasingly burdened by microbial pathogens, heavy metals such as arsenic, fluoride, and iron, hazardous chemicals like nitrates and pesticides, and a new class of emerging threats including PFAS, pharmaceuticals & microplastics that often evade conventional treatment methods.

It is in this critical context that the Compendium of Water Technologies was developed, with a special focus on indigenously developed solutions. This compendium brings together a diverse array of technologies, offering a comprehensive view of both time-tested practices and cutting-edge innovations in water purification and wastewater management.

More than a catalogue, this compendium is a strategic knowledge tool carefully curated to support researchers, policymakers, engineers, and implementation partners. Technologies are categorized by type, function, and deployment readiness, providing a clear, structured overview of what works, where, and how. Real-world case studies illustrate practical applications, ranging from rural households to industrial settings. The inclusion of Technology Readiness Levels (TRLs) adds depth, enabling stakeholders to assess the maturity and scalability of each solution for their unique contexts.



Behind every technology lies the commitment of scientists, innovators, institutions, and government agencies working tirelessly to safeguard this essential resource. This initiative was made possible through the inputs from the technology developers, field implementers, and domain experts whose insights and experiences have shaped the content. This program was initiated under A2K+ studies of water technologies by Department of Scientific and Industrial Research (DSIR), Government of India.

As water security emerges as one of the defining challenges of our time, this compendium stands not only as a testament to our collective progress but also as a call to action. It is a resource designed to bridge the gap between the laboratory and the field, between scientific research and practical solutions, and between innovation and long-term impact.

Together, through sustained collaboration and informed decision-making, we can transform the vision of clean and safe water for all from aspiration to reality.

A Thirsty Dog Changed My Perspective

A Blog by Ms. Neeraja S

Until recently, I never gave water much thought. I drank clean water every day without worrying about what was in it—whether it had the right minerals or dangerous substances like arsenic or fluoride. I considered that normal.

That changed when I joined ICCW. For the first time, I began learning about the staggering reality so many people live with: unsafe, untreated water... or no water at all. It was eye-opening, but still, I think my understanding remained a little distant—until one hot summer afternoon. I was visiting a lake for a study.

The sun was harsh, the heat almost unbearable, and I was parched. My mouth was dry, and I kept looking around for some shade or water. That's when I saw a dog.



It was wandering near the lake, looking just as desperate as I felt—only worse. I watched as it slowly approached a patch of water and bent down to drink. But it wasn't water. It was sewage. My heart broke.

“But it wasn't water. It was sewage. My heart broke.”

Even in that blazing summer heat, I froze. The kind of heat that makes your skin burn and your throat ache—and yet, in that moment, I felt a coldness rush through me. A living being—thirsty, helpless, trusting nature to provide—was drinking what we, humans, had turned into poison.

And we were the reason it ended up that way. That lake had become a dumping ground. It was foul, polluted, forgotten.

Until recently, I never gave water much thought. I drank clean water every day without worrying about what was in it—whether it had the right minerals or danger. At that moment, something in me shifted. We talk so much about human suffering—and yes, unsafe water is a crisis for millions. But what about the animals? The birds, dogs, frogs, fish—every silent creature we affect without even noticing? They don't have a voice. They don't get to protest, complain, or relocate. They just suffer—quietly, invisibly.

And it struck me: it's not always cruelty. Sometimes, it's ignorance. People don't know the damage they're doing. I didn't. Not until I saw it with my own eyes.

“It's not always cruelty. Sometimes, it's Ignorance.”



Since that day, I stopped treating waste casually. I don't throw garbage near drains. I speak up when I see sewage flowing into a lake. I care—deeply—because I've seen what indifference can do.

I still believe people are good. I believe if they knew the truth—if they saw what I saw—they would change. They would protect. They would pause before polluting. This blog is my way of telling them: **look closer**. There's more at stake than we realize.

This is a shout-out to the kindness in us all.

Let's not wait for a thirsty dog to show us what we've lost.

Rivers of India – Crossword Challenge

Explore India's iconic rivers in a fun, interactive way!

Scan the QR code or click the link below to play our Rivers of India crossword puzzle. This engaging Crossword features clues that touch on culture, history, geography, and ecology—perfect for curious minds of all ages.

Whether you're a student, a water enthusiast, or just love a good brain-teaser, this activity will make you appreciate India's lifelines even more.

Play Now: [Click here to solve the puzzle](#)

Or **scan the QR** code to begin!

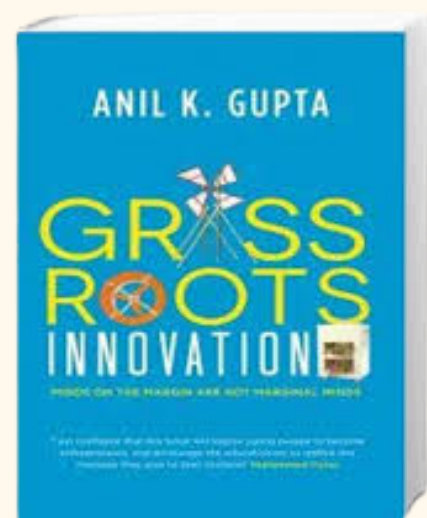


ICCW Picks : Books That Flow with Insight

Grassroots Innovation by Anil K. Gupta

Grassroots Innovation delves into the creative potential of local communities, highlighting how individuals in rural and resource-limited settings develop ingenious solutions to everyday challenges. Through real stories and case studies, **Anil K. Gupta** brings attention to the power of inclusive, bottom-up innovation and the importance of recognizing and supporting ideas that emerge from the ground level.

Read this to explore how innovation can thrive outside conventional labs and boardrooms.



[Read on Google Books](#)

Visitors



Ms RAJINI SESHADRI

DATE : 07.03.2025



MR MORTEN OVERGAARD &
MS LAURA HAMMERSCHMIDT -
TECHNICAL UNIVERSITY OF
DENMARK

DATE : 24.03.2025



MURUGAVEL BALA - SHIELD
GROUP -CHIEF SKILLS OFFICER

DATE : 29.05.2025



MR RISHABH
RAVICHANDRAN -
EKATVAM INNOVATIONS

DATE : 08.07.2025



MR VENKATA PRAKASH
PUTHIYATHALAIMURAI

DATE : 28.06.2025



DR.SUMAN MUKHOPADHYAY
INDIAN INSTITUTE OF
TECHNOLOGY INDORE

DATE : 21.07.2025



STUDENTS VISIT
DATE : 19.06.2025



STUDENT VISIT
DATE : 26.06.2025



**Clean water at
the turn of a tap
— empowering
lives, one village
at a time**



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